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PeopleTools 8.52
Installation for DB2 for z/OS

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Installation for DB2 for z/OS
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Understanding This Documentation

This documentation is designed to direct you through a basic PeopleSoft installation. It is not a substitute for the database administration documentation provided by your relational database management system (RDBMS) vendor, the network administration documentation provided by your network vendor, or the installation and configuration documentation for additional software components that are used with PeopleSoft products.

This documentation is divided into two parts. The chapters in Part 1 include the information that is required to complete a basic PeopleSoft installation. The chapters and appendices in Part 2 include information for less common or optional tasks.

Required updates to this installation documentation are provided in the form of "Required for Install" incidents, which are available on My Oracle Support. In addition, addenda to the recent PeopleTools installation guides are periodically posted in My Oracle Support on the same page as the initial posting.

Instructions for installing Oracle's PeopleSoft PeopleTools are provided in PeopleSoft PeopleTools installation guides. Application-specific installation instructions are provided in a separate document for the PeopleSoft application. For instance, if you are installing Oracle's PeopleSoft Customer Relationship Management (CRM), you need both the PeopleSoft PeopleTools installation guide and the additional instructions provided for installing PeopleSoft CRM.

To find the installation documentation for PeopleSoft PeopleTools or for your PeopleSoft application, go to My Oracle Support and search for the installation guide for your product and release.

Note. Before proceeding with your installation, check My Oracle Support to ensure that you have the latest version of this installation guide for the correct release of the PeopleSoft product that you are installing.

Audience

This documentation is written for the individuals responsible for installing and administering the PeopleSoft environment. This documentation assumes that you have a basic understanding of the PeopleSoft system. One of the most important components in the installation and maintenance of your PeopleSoft system is your on-site expertise.

You should be familiar with your operating environment and RDBMS and have the necessary skills to support that environment. You should also have a working knowledge of:

- SQL and SQL command syntax.
- PeopleSoft system navigation.
- PeopleSoft windows, menus, and pages, and how to modify them.
- Microsoft Windows.

Oracle recommends that you complete training, particularly a PeopleSoft Server Administration and Installation course, before performing an installation.

See Oracle University, http://education.oracle.com

Typographical Conventions

To help you locate and understand information easily, the following conventions are used in this documentation:

Convention	Description
`Monospace`	Indicates a PeopleCode program or other code, such as scripts that you run during the install. Monospace is also used for messages that you may receive during the install process.
Italics	Indicates field values, emphasis, and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example: Enter the letter *O*. Italics are also used to indicate user-supplied information. For example, the term *domain* is used as a placeholder for the actual domain name in the user's environment. When two such placeholders are used together, they may be set apart with angle brackets. For example, the path <*PS_CFG_HOME*>/appserv/<*domain*> includes two placeholders that require user-supplied information.
Initial Caps	Field names, commands, and processes are represented as they appear on the window, menu, or page.
lower case	File or directory names are represented in lower case, unless they appear otherwise on the interface.
Menu, Page	A comma (,) between menu and page references indicates that the page exists on the menu. For example, "Select Use, Process Definitions" indicates that you can select the Process Definitions page from the Use menu.

Convention	Description
Cross-references	Cross-references that begin with *See* refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation. Cross-references under the heading *See Also* refer you to additional documentation that has more information regarding the subject.
“ ” (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meaning.
Note. Note text.	Text that begins with *Note.* indicates information that you should pay particular attention to as you work with your PeopleSoft system.
Important! Important note text.	A note that begins with *Important!* is crucial and includes information about what you need to do for the system to function properly.
Warning! Warning text.	A note that begins with *Warning!* contains critical configuration information or implementation considerations; for example, if there is a chance of losing or corrupting data. Pay close attention to warning messages.

Products

This documentation may refer to these products and product families:

- Oracle® BPEL Process Manager
- Oracle® Enterprise Manager
- Oracle® Tuxedo
- Oracle® WebLogic Server
- Oracle’s PeopleSoft Application Designer
- Oracle’s PeopleSoft Change Assistant
- Oracle’s PeopleSoft Change Impact Analyzer
- Oracle’s PeopleSoft Data Mover
- Oracle’s PeopleSoft Process Scheduler
- Oracle’s PeopleSoft Pure Internet Architecture
- Oracle’s PeopleSoft Customer Relationship Management
- Oracle’s PeopleSoft Financial Management
- Oracle’s PeopleSoft Human Resources Management Systems
- Oracle’s PeopleSoft Enterprise Learning Management
- Oracle’s PeopleSoft Pay/Bill Management
- Oracle’s PeopleSoft PeopleTools
- Oracle’s PeopleSoft Enterprise Performance Management

- Oracle's PeopleSoft Portal Solutions
- Oracle's PeopleSoft Staffing Front Office
- Oracle's PeopleSoft Supply Chain Management

Note. This documentation refers to both Oracle's PeopleSoft Portal Solutions and to PeopleSoft PeopleTools portal or portal technologies. PeopleSoft Portal Solutions is a separate application product. The PeopleSoft PeopleTools portal technologies consist of PeopleSoft Pure Internet Architecture and the PeopleSoft PeopleTools portal technology used for creating and managing portals.

See http://www.oracle.com/applications/peoplesoft-enterprise.html for a list of PeopleSoft Enterprise products.

Related Information

Oracle provides reference information about PeopleSoft PeopleTools and your particular PeopleSoft application. The following documentation is available on My Oracle Support:

- PeopleTools PeopleBook: Getting Started with PeopleTools for your release. This documentation provides a high-level introduction to PeopleTools technology and usage.
- PeopleSoft Application Fundamentals PeopleBook for your PeopleSoft application and release. This documentation provides essential information about the setup, design, and implementation of your PeopleSoft application.

To access PeopleSoft PeopleBooks, go to My Oracle Support and search for the PeopleSoft PeopleBooks for your application and release.

To install additional component software products for use with PeopleSoft products, including those products that are packaged with your PeopleSoft products, you should refer to the documentation provided with those products, as well as this documentation.

Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like changed about our documentation, PeopleSoft PeopleBooks, and other Oracle reference and training materials. Please send your suggestions to:

PSOFT-Infodev_US@oracle.com

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions. We are always improving our product communications for you.

PART 1

Mandatory Installation

The chapters in the first part of this installation guide cover only those tasks that are required for a basic PeopleSoft installation. Everyone carrying out an installation should use the tasks in Part 1. After setting up the Application Server, PeopleSoft Pure Internet Architecture, and Process Scheduler Server, you verify that you can sign into the PeopleSoft installation in a browser.

CHAPTER 1

Preparing for Installation

This chapter discusses:

- Understanding the PeopleSoft Installation
- Using Oracle E-Delivery to Obtain Installation Files
- Considering Project Planning
- Planning Your Initial Configuration
- Planning Database Creation
- Planning Multilingual Strategy
- Reviewing Updates and Fixes Required at Installation
- Verifying Database Server Sizing
- Defining DB2 for z/OS Subsystem Configuration
- Installing Supporting Applications
- Setting Up Database Connectivity
- Using Connect ID
- Setting Up z/OS User IDs
- Performing Backups
- Using PeopleSoft Change Assistant and PeopleSoft Change Impact Analyzer

Understanding the PeopleSoft Installation

This chapter will help you plan and prepare for a basic PeopleSoft installation. Before you begin the installation, please note:

- See *Getting Started on the PeopleSoft Installation*, for an overview of the installation and for information on obtaining the necessary documentation and software.

  You can find *Getting Started on the PeopleSoft Installation* on the same My Oracle Support page as this installation guide.

- Before you begin your PeopleSoft installation, use the hardware and software requirements documentation and My Oracle Support Certifications area to verify that you have the correct hardware and software in place to support a successful installation.

  See *PeopleTools 8.52 Hardware and Software Requirements,* My Oracle Support, (search for name and release number).

See Hardware and software requirements for your PeopleSoft Application on My Oracle Support.

See My Oracle Support, Certifications.

Warning! If you are unable to meet any of the criteria outlined in the hardware and software requirements and the certification information on My Oracle Support, contact Oracle before going forward with the installation. Attempting to complete an installation on an unsupported configuration can be a very costly decision, and Oracle will not provide support for such PeopleSoft installations.

- If you will be upgrading your current release after you perform this installation, you also need to install Change Assistant. The page on My Oracle Support containing your upgrade documentation and files includes information on which tool you need.
- For critical issues related to the installation process, see the My Oracle Support web site. Be sure to read the "Required for Installation or Upgrade" incidents on the Patches and Updates page for the PeopleSoft PeopleTools version that you are installing.
- For online technical support information, use the My Oracle Support web site. My Oracle Support includes tools for self-directed searches of information including reference documents and problem resolutions, as well as service request management tools.

  See My Oracle Support, https://support.oracle.com
- To download software and documentation, use the Oracle E-Delivery web site, and the Oracle Technology Network.

  See Oracle E-Delivery, http://edelivery.oracle.com

  See Oracle Technology Network, http://www.oracle.com/technetwork/index.html
- Be aware that not all application releases are certified and supported to run on all PeopleSoft PeopleTools releases. Please check the PeopleSoft policy information in article ID 1348959.1 on My Oracle Support for further details on the support policy for your particular application. If you are planning to do a PeopleTools-Only upgrade, do not continue until you have verified that your application is supported on the target PeopleSoft PeopleTools release.
- This installation guide may refer you to PeopleBooks for more information or instructions. If you install PeopleBooks, you can easily refer to the documentation during the installation process. You can also access Hosted PeopleBooks online.

See Also

"Installing PeopleBooks"

Hosted PeopleBooks, http://www.oracle.com/pls/psft/homepage

"Installing PeopleSoft Change Assistant"

Task 1-1: Using Oracle E-Delivery to Obtain Installation Files

Before beginning the installation, you should have obtained the PeopleSoft installation software by downloading the necessary zip files from the Oracle E-Delivery web site. Use the documentation available on E-Delivery to be sure that you obtain all the zip files required for your environment.

See Oracle E-Delivery, http://edelivery.oracle.com

In case you have not yet obtained the necessary files, this documentation includes sections on obtaining the files at appropriate points during the installation process.

Task 1-2: Considering Project Planning

Identify the maintenance schedule for upcoming PeopleSoft PeopleTools and PeopleSoft Application releases. These releases are typically on a regular schedule (for example, quarterly, biannually) and should be included in your project planning and budgeting processes. Maintenance schedules are posted on My Oracle Support. It is important to plan regular maintenance in your overall project plans. For example, for a year-long enterprise upgrade, development, and conversion project, make sure to set aside time for applying the PeopleSoft PeopleTools minor releases that ship during that time frame. Otherwise, if you fall behind, you may find that you need a fix shipped with one of the minor releases that cannot be backported as a patch.

Search for the term “maintenance schedules” on My Oracle Support. You can find schedules by year and quarter for PeopleSoft PeopleTools and PeopleSoft Applications. The schedules include of a list of bundles and maintenance packs for individual products.

Task 1-3: Planning Your Initial Configuration

This section discusses:

- Understanding Workstations
- Understanding PeopleSoft Servers and Clients
- Defining the PeopleSoft Client
- Defining the File Server
- Defining the Database Server
- Defining the Application Server
- Defining the Batch Server
- Defining Installation Locations
- Defining the Web Server
- Defining Server Domain Configurations
- Defining the PeopleSoft Pure Internet Architecture Installation Location
- Using Laser Printers

Note. Oracle supports a number of versions of UNIX and Linux in addition to Microsoft Windows for the PeopleSoft installation. Throughout this book, there are references to operating systems. Where necessary, this book refers to specific operating systems by name (for example, Solaris, HP-UX, or Linux); however, for simplicity the word UNIX is often used to refer to all UNIX-like operating systems, including Linux.

Understanding Workstations

This section discusses:

- Using the PeopleTools Development Environment (Windows-Based Clients)
- Using Workstations Equipped with Supported Web Browsers

Note. With the PeopleSoft Pure Internet Architecture, Windows-based clients are primarily used as a development environment. End users can use any machine equipped with a supported web browser.

Using the PeopleTools Development Environment (Windows-Based Clients)

Windows-based clients are referred to as the PeopleTools Development Environment. These clients—which run on supported Microsoft Windows platforms—can connect to the PeopleSoft database directly using client connectivity software (a two-tier connection) or through a PeopleSoft application server (a three-tier connection).

Three-tier connectivity offers great performance advantages over two-tier (especially over a WAN), reduces network traffic, and generally does not require that you install database connectivity on the client. However, any Windows-based clients that will be running Data Mover scripts against the database, or running COBOL or Structured Query Report (SQR) batch processes on the client, must have database connectivity installed.

Note. COBOL is not needed for PeopleTools or for applications that contain no COBOL programs. Check My Oracle Support for details about whether your application requires COBOL.

See Installing Supporting Applications.

You need to have the PeopleTools Development Environment set up to create your database. For more information on setting up the PeopleTools Development Environment, refer to the following PeopleBook.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Using PeopleSoft Configuration Manager."

For installation purposes, you must set up at least one Windows-based client for sign-on using a two-tier connection to the database, so that it can create and populate the PeopleSoft database. This documentation refers to this client as the install workstation. Depending on your installation plan, you may want to set up more than one install workstation so that you can perform asynchronous installation tasks in parallel.

Note. The Microsoft Windows machine that you use to perform your PeopleSoft PeopleTools installation must be running in 256-color mode or higher when running the PeopleSoft installation and database configuration on Microsoft Windows. This is not necessary for UNIX or console mode.

Using Workstations Equipped with Supported Web Browsers

To run the PeopleSoft Pure Internet Architecture, the client workstation only needs a web browser that is HTML 4.0 compliant. You may need an additional workstation for demonstration and testing purposes if you plan to use a browser running on a platform other than Microsoft Windows—such as Macintosh or UNIX.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*

Understanding PeopleSoft Servers and Clients

You use the PeopleSoft Installer to install PeopleSoft servers and the PeopleSoft Client. Here is a summary of the functionality included in each server or client installation:

- *File Server*

  All Client executables (such as PeopleSoft Application Designer and Configuration Manager), PS/nVision, Change Assistant, files and directories necessary to perform upgrade, and Client SQR.

See Defining the File Server

- *PeopleSoft Client*

  All Client executables (such as PeopleSoft Application Designer and Configuration Manager), PS/nVision, Change Assistant, Change Impact Analyzer, PeopleSoft Test Framework, PSEM Agent, and Client SQR.

  See Defining the PeopleSoft Client.

- *Application Server*

  PSADMIN, COBOL for remote call, Verity

  Note. There is a separate procedure for installing Verity.

- *Database Server*

  Scripts and data directories, files necessary to run Data Mover.

- *Process Scheduler Server*

  PSADMIN, COBOL, SQR, Verity.

- *Web Server*Windows PeopleSoft Pure Internet Architecture (PIA) installation, UNIX web files and shell scripts, Portal Search data files, and Verity.

Task 1-3-1: Defining the PeopleSoft Client

The PeopleSoft Enterprise media pack for PeopleSoft PeopleTools 8.52 includes a separate zip file to enable you to install only the components needed for the PeopleSoft Client. Keep in mind that the PeopleSoft Client can be installed *only* on Microsoft Windows.

The PeopleSoft Client is the environment repository for the PeopleSoft PeopleTools Development environment.

Task 1-3-2: Defining the File Server

The file server is the environment (or file) repository for the PeopleTools Development Environment, which is needed for the Database Configuration Wizard. The file server is also the repository for the files necessary to perform an upgrade. This includes Change Assistant and all of the executables and scripts that are necessary to perform an upgrade. You will apply patches and updates from My Oracle Support directly to the file server and then copy the updated files to your other servers. In addition, the file server is a source repository for COBOL and SQR.

Important! Remember, a COBOL compiler is not needed for PeopleSoft PeopleTools unless your application contains COBOL programs. If your application requires COBOL and you are running on Microsoft Windows, we require that you maintain a central repository of your COBOL source code on the Windows file server. See the task Installing Supporting Applications later in this chapter for details on where you should install your COBOL compiler.

For DB2 z/OS, the file server is used as a staging location to FTP files to the z/OS batch server only. If you are installing a file server on DB2 z/OS, when running the PeopleSoft Installer, you need to select *all* PeopleSoft Servers. This will ensure that all of the files needed by Server Transfer are installed to the PeopleSoft File Server.

If you follow the default procedures recommended in this documentation, the install workstations, Windows batch servers, and Windows report servers will access the PeopleSoft files on the file server by pointing to a directory referred to in this documentation as *PS_HOME* on a shared network drive. You can install SQR and Crystal Reports on the file server, or install them locally on Windows batch servers and on Windows-based clients that will be running these processes locally.

Setting up a file server applies to installations on both UNIX and Microsoft Windows. If you are doing an installation only for UNIX computers, you need a Microsoft Windows file server. If you are working only on Microsoft Windows, and you install the file server along with the other servers, you do not need to repeat the file server setup.

If you need to set up the file server on a separate Microsoft Windows machine, you should install PeopleSoft PeopleTools, any PeopleSoft applications, and the Multilanguage files.

In some cases you may choose to set up local copies of the PeopleSoft executables on the PeopleTools Development Environment and Windows batch servers, rather than mapping to a shared directory on the file server. You can use the instructions in the chapter "Using the PeopleSoft Installer" to perform such local installations.

Task 1-3-3: Defining the Database Server

The servers that host your PeopleSoft databases need sufficient processing, storage, and networking resources to process the database requests, store the data and transaction logs, and communicate freely to the clients of this data. These databases will include your own PeopleSoft database prototypes as well as any system and demonstration databases delivered directly from Oracle with the PeopleSoft installation media.

See Planning Database Creation.

Database sizes vary depending on the applications that you install. The size of your prototype PeopleSoft database will also depend on the amount of data to be converted from your legacy system. A good rule of thumb for estimating the size of your prototype PeopleSoft database is to estimate the amount of disk space needed for the data to be converted from your legacy system, add to this the size required for the PeopleSoft System database, and then add an additional 50 percent of this combined figure to allow for growth.

Note. If possible, you may want to separate your PeopleSoft applications into their own subsystem away from other applications. Most sites have separate subsystems for production, development, and testing.

Task 1-3-4: Defining the Application Server

The application server is the centerpiece of the PeopleSoft Pure Internet Architecture. It connects to the PeopleSoft database and handles almost all SQL-intensive interactions with the database server required during online transaction processing. Windows-based clients, in three-tier, communicate with the application server using Oracle Tuxedo messages. In the PeopleSoft Pure Internet Architecture, the application server interacts with user workstations through a web server.

The application server also provides functionality required for application messaging and for implementing the PeopleSoft Pure Internet Architecture. An application server is required in all PeopleSoft installations.

When installing the PeopleSoft software on the z/OS mainframe, you must install one or more dedicated UNIX or Windows application servers. You should plan to connect the application server to the database using the highest bandwidth connection available.

All application servers require database connectivity to the database server. Before beginning your installation, make sure that you can connect from the application server to the database server using a SQL client tool. This topic will be addressed later in this chapter.

See Also

PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook

Task 1-3-5: Defining the Batch Server

The term *batch server* is equivalent to the term *Process Scheduler server.* PeopleSoft batch processes, such as COBOL and SQR, are scheduled and invoked by a Process Scheduler server. In almost all configurations, batch server SQR and COBOL files are located and executed on the same computer as the database server.

For the DB2 z/OS batch server on the mainframe, the SQR and COBOL files must be transferred from the file server, and COBOL source files must be compiled.

Oracle supports setting up the batch environments on a dedicated server, an application server, or even on the database server.

For Windows-specific batch processes—such as Crystal Reports, nVision reports, Cube Builder, or Microsoft Word—you need to set up a Windows batch environment on a Microsoft Windows application server or on a dedicated Microsoft Windows workstation.

Any computer operating as a batch server must have database connectivity installed so that it can make a two-tier connection to the PeopleSoft database.

See Also

PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook

Task 1-3-6: Defining Installation Locations

As you proceed through the PeopleSoft PeopleTools installation, you are asked to specify several installation locations. This documentation uses the following terms to describe the installation locations used during the PeopleSoft PeopleTools installation:

- *PS_HOME*: Holds the PeopleSoft PeopleTools and PeopleSoft application files.

  Note. For information on setting up *PS_HOME* as a read-only environment, see *PeopleTools 8.52: System and Server Administration PeopleBook*, “Securing PS_HOME and PS_CFG_HOME.”

  See "Using the PeopleSoft Installer."

- *PS_APP_HOME*:

  Holds the PeopleSoft application files. Depending upon the PeopleSoft Application that you are installing, for PeopleTools 8.52 and later, the directory where you install the PeopleSoft application files does not have to be the same as the location where you install PeopleSoft PeopleTools, *PS_HOME*. You can select any writeable location on the file system.

  For details about whether this functionality is supported for your PeopleSoft Application, see the application-specific installation guide.

  If *PS_APP_HOME* is not the same as *PS_HOME*, there are extra configuration procedures required to associate the Application Server, Process Scheduler Server, and Search server domains with *PS_HOME*. For information on configuring Application Server, Process Scheduler, and Search domains for a *PS_APP_HOME* that is separate from *PS_HOME*, see *PeopleTools 8.52: System and Server Administration PeopleBook*.

- *PS_CFG_HOME*: Holds the configuration files for the application server, batch server and search server domains.

It also holds the configuration files for web server domains if *PIA_HOME*, defined below, is equal to *PS_CFG_HOME*.

See Defining Server Domain Configurations.

- *PIA_HOME*: Holds the webserv directory, and the files for the PeopleSoft Pure Internet Architecture installation. The directory where you install PeopleSoft Pure Internet Architecture, *PIA_HOME*, does not have to be the same as the location where you install PeopleSoft PeopleTools and the application software, *PS_HOME*.

  See "Setting Up the PeopleSoft Pure Internet Architecture (in GUI Mode and in Console Mode)."

  See Defining the PeopleSoft Pure Internet Architecture Installation Location.

In addition to these installation locations, there are home directories for the various supporting software, such as Oracle WebLogic, which are described in the appropriate chapters.

Task 1-3-7: Defining the Web Server

A web server is required to run the PeopleSoft Pure Internet Architecture. The PeopleSoft Pure Internet Architecture is certified to work with either of the following two J2EE web application servers (also commonly referred to as web servers):

- Oracle WebLogic Server
- IBM WebSphere Server

You can refer to the *PeopleTools 8.52 Hardware and Software Requirements* guide or the Certifications page on My Oracle Support for supported web server combinations.

In conjunction with Oracle WebLogic and IBM WebSphere, Oracle has also certified the use of the following HTTP servers as reverse proxy servers (RPS):

- With Oracle WebLogic, the certified HTTP servers are Microsoft IIS, Sun Java System web server, Apache HTTP server, and Oracle HTTP Server.
- With IBM WebSphere the certified HTTP servers is IBM HTTP Server (IHS).

Oracle WebLogic, IBM WebSphere, and the supported reverse proxy servers will provide out-of-the-box SSL support across all supported operating systems. Oracle WebLogic and IBM WebSphere provide demo digital certificates, but for production grade SSL you must purchase digital certificates from a Certificate Authority supported by the web server that you are using (for example, Verisign, Baltimore, Entrust, and so on).

Task 1-3-8: Defining Server Domain Configurations

When you install PeopleSoft PeopleTools 8.52 and the PeopleSoft application software, the PeopleSoft installer places the required files into the specified *PS_HOME* directory. When you create an application server, batch server, or search server domain, the configuration files associated with that domain are installed into a directory referred to as *PS_CFG_HOME*.

By default, the system separates the binary files (executables and libraries) stored in *PS_HOME* from the ASCII files (configuration and log files) associated with a domain stored in *PS_CFG_HOME*. This separation applies only to these servers:

- PeopleSoft Application Server
- PeopleSoft Process Scheduler Server
- PeopleSoft Search Server

When you use the PSADMIN utility, the system creates the *PS_CFG_HOME* directory based upon environment variables associated with the current user. This table lists the user environment variable and default directory by operating system:

Operating System	User Environment Variable	PS_CFG_HOME Default Location
UNIX	HOME	$HOME/psft/pt/<*peopletools_version*>
Microsoft Windows	USERPROFILE	%USERPROFILE%\psft\pt\<*peopletools_version*>

For example, if USERPROFILE is C:\Documents and Settings\asmith and the PeopleTools version is 8.52, by default *PS_CFG_HOME* would be C:\Documents and Settings\asmith\psft\pt\8.52. The configuration and log files for the application server, process scheduler server, and search server are installed below this directory.

Note. The *PS_CFG_HOME* directory is associated with the *PS_HOME* from which it was originally generated.

This server domain configuration allows for a more flexible installation. You also have the opportunity to place different security restrictions on the binary and configuration files. To take advantage of this flexibility, you have the option to specify a different location by setting a PS_CFG_HOME environment variable. Before doing so, however, consult the following reference for a more complete explanation of this feature.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configuration."

Task 1-3-9: Defining the PeopleSoft Pure Internet Architecture Installation Location

When you install the PeopleSoft Pure Internet Architecture, the files are installed in the *PIA_HOME* directory. The *PIA_HOME* directory does not have to be the same as the location where you install PeopleSoft PeopleTools, *PS_HOME*. You have the option to specify the installation location for the PeopleSoft Pure Internet Architecture by setting the environment variable PS_CFG_HOME.

The *PS_CFG_HOME* directory is created the first time that the PSADMIN utility starts. PSADMIN recognizes that *PS_CFG_HOME* is not present and creates it when necessary. This is done before any domains are created. When you invoke PeopleSoft Pure Internet Architecture, the installer checks your environment to determine the *PS_CFG_HOME*. If the environment variable PS_CFG_HOME is defined, the *PS_CFG_HOME* location is seen as the directory to which that environment variable points. If PS_CFG_HOME is not defined the default value is used.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations," Using the %V Meta Variable.

Task 1-3-10: Using Laser Printers

Along with the printer you will need a Windows printer driver to print the online reports that produce 180-character-wide reports using the HP LinePrinter font. Your printer must be configured with sufficient memory (typically 1.5 MB) to produce graphics images for page printouts.

See Also

Verifying Hardware and Software Requirements

PeopleTools 8.52 Hardware and Software Requirements

My Oracle Support, Certifications

Task 1-4: Planning Database Creation

This section discusses:

- Understanding Database Creation
- Using Multiple Databases
- Determining Databases and Database Names
- Using Standard Database Names
- Choosing Owner ID Processing Option

Understanding Database Creation

When performing a PeopleSoft installation, you will create these types of PeopleSoft databases:

- System (also called SYS) databases, which contain the PeopleSoft PeopleTools and product-specific metadata required for development of a production database.
- Demo (DMO) databases, which are populated with sample data for study, demonstration, or training purposes.

Note. When using the PeopleSoft installer to install PeopleSoft application software, one of the steps includes an option to select the System Database and the Demo Database. To properly install a Demo database, you must select *both* the System Database and the Demo Database options.

See "Using the PeopleSoft Installer."

The System and Demo PeopleSoft databases are installed using a *multiple-database strategy*, where the "logical" PeopleSoft database actually comprises multiple "physical" databases that share a common *owner ID*. This is explained in more detail in the following section.

Task 1-4-1: Using Multiple Databases

To facilitate optimal performance and minimal use of shared mainframe resources, Oracle employs a multiple-database strategy on DB2 z/OS. Oracle uses multiple DB2 databases for installing both Demo and System PeopleSoft databases.

This multiple-database strategy provides the following benefits:

- Reducing DBD size improves performance by easing virtual storage constraints.
- Avoids exceeding the DB2 restriction limiting DBD size to no more than 25 percent of EDM pool size.
- Improves DDL concurrency in certain PeopleSoft operations.

For instance, when Process Scheduler is invoked, it holds share locks on the DBD of the database where the Process Scheduler tables are located. Isolating these tables to its own database avoids potential lockouts of other processes running concurrently with Process Scheduler.

The installation process creates all of the DB2 objects with the same owner ID. The PeopleSoft reference to owner ID equates to the CREATOR field found in the SYSIBM SYSTABLES Catalog table. A PeopleSoft database is a logical concept that includes all of the PeopleSoft objects and application data belonging to a single PeopleSoft product line sharing the same owner ID, distributed across multiple physical DB2 databases. The owner ID common to all of these objects is stored in the PeopleSoft PeopleTools tables PS.PSDBOWNER and PSSTATUS.

Oracle defines a standard set of DB2 databases for each product line in a DDL script that you will be instructed to edit and run in the "Creating a Database" chapter.

Task 1-4-2: Determining Databases and Database Names

Before you begin the installation process, you should determine how many PeopleSoft databases (System or Demo) of which type you need and how you intend to use them. You should also determine the names of the databases at this point, using database names that:

- Are UPPERCASE.
- Capture information about the PeopleSoft product line and the type of database.

  For example, you may want to create two databases with the names PSHRDMO and PSHRSYS, using the two characters HR (for Human Resources) to indicate the product line.

  The PeopleSoft System and Demo databases are delivered with a seven-character database name that serves two functions. It serves as:

- The name of the PeopleSoft logical database (which, for the System and Demo databases is actually composed of multiple DB2 databases).
- The seven-character name of the "root" physical DB2 database, from which the names of the additional physical DB2 databases that comprise the single PeopleSoft logical database are derived.

  The DB2 database naming convention is explained in more detail in the following section.

Task 1-4-3: Using Standard Database Names

The PeopleSoft database naming convention for DB2 z/OS uses one seven-character DB2 database name for a database containing all of the PeopleSoft system tables except for tables used by Process Scheduler. We refer to this database as the *root* database. A second database name with an eighth character of *T* is reserved just for Process Scheduler due to persistent share locks. The remaining DB2 database names have an eighth character, appended to the root database name, identifying a specific application group within a PeopleSoft product line.

Later in this guide, you will run a Data Mover Import script that requires you to select a database name to identify this PeopleSoft database. This database name is actually nothing more than a label that serves two purposes. It enables the DB2 Connect connectivity software to identify the appropriate configuration to connect to your DB2 subsystem, and it is the high-level key on the table PS.PSDBOWNER from which the owner ID of the objects in the PeopleSoft database is derived during the sign-on process. When users sign on to a PeopleSoft database from a client workstation, they enter this database name in the PeopleSoft sign-on panel. The database name must be catalogued in the IBM DB2 Connect connectivity software in order to complete the database connection.

See "Creating a Database."

Task 1-4-4: Choosing Owner ID Processing Option

This section discusses:

- Understanding Owner ID Processing
- Using Primary Authorization ID Processing
- Using Secondary Authorization ID Processing

Understanding Owner ID Processing

Each PeopleSoft database that you create must have a valid owner ID. All of the objects in a PeopleSoft database will share the same owner ID. Besides being found in the CREATOR field of the SYSIBM system catalog tables, such as SYSIBM.SYSTABLES, this value is stored in the OwnerID field of the PS.PSDBOWNER and PSSTATUS PeopleSoft PeopleTools tables.

Oracle recommends that you not use an owner ID used by a non-PeopleSoft application, because this can create problems when auditing your database.

There are two security-related processing options to choose from when establishing the owner ID:

- Primary authorization ID processing
- Secondary authorization ID processing

There is an additional PeopleSoft ID (known as the access ID) that is directly linked to the decision to use primary or secondary authorization ID processing. Functionally, this is the ID that has the DB2 access and authorities to perform the bulk of the SQL processing within the PeopleSoft database. Individual user IDs would not be granted the level of DB2 authority that the access ID possesses. There will either be a direct relationship between the name of this ID and the owner ID, or an indirect one, depending on which authorization method is chosen.

Using Primary Authorization ID Processing

The primary authorization ID is the simplest implementation of table ownership. The primary authorization ID and the DB2 owner ID of the PeopleSoft database objects are the same ID. In this option, the owner ID defined in DB2 will be the same name as the PeopleSoft access ID defined in the PeopleSoft PeopleTools tables. The PeopleSoft access ID is the DB2 owner ID.

The following table summarizes the roles and authorities of the DB2 owner ID, primary and secondary authorization IDs and the access IDs for primary authorization ID processing:

Roles and Authorities	Primary Authorization ID	Secondary Authorization ID
Same ID as DB2 Object Owner ID (CREATOR)	Yes	NA
Database Log On Access	Yes	NA
DB2 Object Access	Yes	NA
Same ID as PeopleSoft Access ID	Yes	NA
SET CURRENT SQLID statement required?	No	NA

Using Secondary Authorization ID Processing

Most PeopleSoft customers use secondary authorization ID processing to establish an owner ID.

The DB2 owner ID of the PeopleSoft database objects is established as an external security system group, referred to as a "secondary authorization ID," rather than a primary authorization ID. A secondary authorization ID is not given direct logon access to the database, but because it is the DB2 owner ID, it has direct access to the PeopleSoft database objects. Logon access is generally granted to a primary authorization ID, but with secondary authorization ID processing, the primary authorization ID has no direct access to the PeopleSoft database objects.

By issuing the SQL command

```
SET CURRENT SQLID = <secondary authorization ID>
```

A primary authorization ID can "transform" itself into the secondary authorization ID, and thereby acquire all of the database object permissions owned by the secondary authorization ID. The mainframe security maintenance package (for example, RACF, Top Secret, ACFII) keeps track and monitors what secondary authorization IDs can be used by a primary authorization ID.

When setting up a PeopleSoft application using secondary authorization ID processing, the access ID is established as a primary authorization ID that has the authority to issue a SET CURRENT SQLID statement setting itself equal to the secondary authorization ID.

The following table summarizes the roles and authorities of the DB2 owner ID, primary and secondary authorization IDs and the access IDs for secondary authorization ID processing:

Roles and Authorities	Primary Authorization ID	Secondary Authorization ID
Same ID as DB2 Object Owner ID (CREATOR)	No	Yes
Database Log On Access	Yes	No
DB2 Object Access	No	Yes
Same ID as PeopleSoft Access ID	Yes	No
SET CURRENT SQLID statement required?	Yes	NA

In secondary authorization ID processing, at sign on, PeopleSoft PeopleTools, under authorization of the access ID, issues the SET CURRENT SQLID statement to the DB2 owner ID. This also occurs when you run COBOL on either the client or the host, or when you run SQR on the client or host.

Note. The access ID *does not* need SYSADM authority to the DB2 subsystem.

With SYSADM authority, the access ID may issue a SET CURRENT SQLID statement to any authorization ID. If you do not have SYSADM authority, you may issue SET CURRENT SQLID only to your valid authorization IDs. Your z/OS ID has a certain RACF (or equivalent) profile and that profile contains all your assigned secondary authorization groups, which are used as valid authorization IDs. You can SET CURRENT SQLID only to the authorization IDs assigned to you.

At Oracle, we create secondary authorization groups that are equal to the owner of the tables. The access ID is added to this secondary authorization group, and thus the access ID can issue a SET CURRENT SQLID statement only to the owner of the tables (remember owner = RACF group). Using this approach, it is not necessary to grant SYSADM authority to the access ID. The bottom line is that the access ID must have proper security to issue SET CURRENT SQLID to the owner of the PeopleSoft tables but this does not require SYSADM authority to the DB2 subsystem.

Task 1-5: Planning Multilingual Strategy

This section discusses:

- Understanding Multilingual Issues
- Choosing a Base Language
- Selecting Additional Languages
- Selecting a Database Character Set

Understanding Multilingual Issues

Before beginning your installation, you should determine which languages your PeopleSoft system will need to support. If multiple languages are required, determine which language will be used most often. These decisions will affect tasks at various stages of the installation, including file server setup, database creation, and the ability to change the base language of the PeopleSoft database after it is created. Even if you do not plan on running your system in more than one language, you should decide the following information before completing this task:

- Database base language
- Additional languages (if any)
- Database character set

The current languages provided by Oracle and their language codes are listed in the following table, as well as the corresponding database character sets for that language. These are the languages for which Oracle provides pretranslated products. If you plan to provide users access to your applications in these languages, Oracle recommends that you install the translations during your initial installation. This approach will keep you from having to perform an upgrade if you decide to add the Oracle-provided translations at a later date. After installation, you also have the option of performing your own translations, and adding additional languages.

In considering which languages to include, whether for pretranslated objects or for your own application development, keep in mind that certain languages require a Unicode database.

See Selecting a Database Character Set.

Language Code	Language	Database Character Set
ARA	Arabic	Unicode
CFR	Canadian French	Unicode or non-Unicode
CZE	Czech	Unicode
DAN	Danish	Unicode or non-Unicode
DUT	Dutch	Unicode or non-Unicode
ENG	US English	Unicode or non-Unicode
FIN	Finnish	Unicode or non-Unicode
ESP	Spanish	Unicode or non-Unicode
FRA	French	Unicode or non-Unicode
GER	German	Unicode or non-Unicode
HUN	Hungarian	Unicode
ITA	Italian	Unicode or non-Unicode

Language Code	Language	Database Character Set
JPN	Japanese	Unicode
KOR	Korean	Unicode
NOR	Norwegian	Unicode or non-Unicode
POL	Polish	Unicode
POR	Portuguese	Unicode or non-Unicode
RUS	Russian	Unicode
SVE	Swedish	Unicode or non-Unicode
THA	Thai	Unicode
UKE	United Kingdom English	Unicode or non-Unicode
ZHS	Simplified Chinese	Unicode
ZHT	Traditional Chinese	Unicode

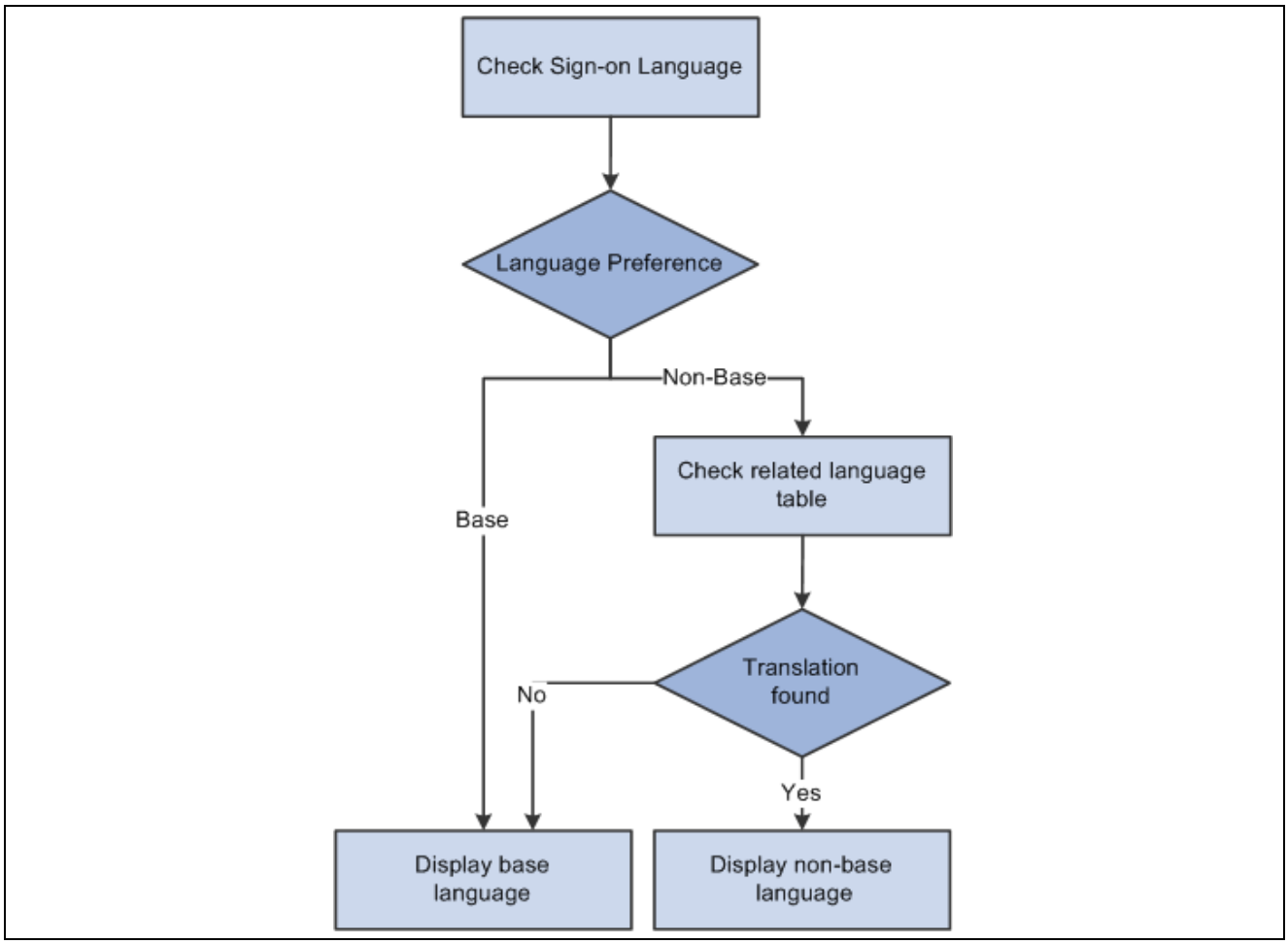
See Also

PeopleTools 8.52: Global Technology PeopleBook

Task 1-5-1: Choosing a Base Language

Each PeopleSoft database can have only one base language. PeopleSoft databases ship with English as the default base language. Typically, the base language of your database should match the language most commonly used by your organization, as it affects the performance of PeopleSoft applications.

When PeopleSoft PeopleTools attempts to open language-sensitive objects (such as pages and menus), it first compares the operator's preferred language to the base language of the database. If the preferred language matches the base language, PeopleSoft PeopleTools immediately loads the required definition from the base language PeopleSoft PeopleTools tables. However, if the user's preferred language differs from the database's base language, PeopleSoft PeopleTools must first query the related language tables for the object. Should a translation of the object not be found in the operator's preferred language, a query is then performed on the base language tables. The following process flow illustrates the selection of the language used for language-sensitive objects, beginning with the language selected when the user signs in to the PeopleSoft application:



Language selection process using the base language and the preferred language

While these queries typically occur very quickly, they still take up valuable processing time. To optimize performance you can set the base language of your database as the language that is used most often by your users. Another consideration is that because PeopleSoft databases are shipped with a base language of English, maintenance is simpler if English remains the base language. Both configurations are supported by Oracle.

Task 1-5-2: Selecting Additional Languages

Because more than one language can coexist in a single PeopleSoft database, you should decide which languages to install. Oracle provides translations of all end-user objects with the Global Multi-Language installation files. It is much easier to install additional languages upon initial database creation than to add them later in your implementation process, so we recommend that you choose which additional languages may be required now. There is no limit to the number of languages that can coexist in a single PeopleSoft database; however, remember that each language will require additional storage space, primarily for PeopleSoft PeopleTools objects.

Task 1-5-3: Selecting a Database Character Set

This section discusses:

- Understanding Character Sets
- Using Unicode Databases

- Using Non-Unicode Databases

Understanding Character Sets

Depending on the languages that you have selected for installation, you need to determine which character set can represent these languages. There are two main steps in selecting a character set. First, if your database supports Unicode, you should decide whether to use it. Second, if you choose not to or cannot yet use Unicode, you should decide which legacy character set is appropriate for the language combination that you've selected.

Please refer to the discussion of CCSID later in this chapter for further information regarding character sets.

See Defining DB2 for z/OS Subsystem Configuration.

The following table gives the supported CCSIDs and the supported languages. On DB2 for z/OS, the PeopleSoft software supports the following CCSIDs:

CCSIDs	Languages Supported
CCSID 37	EBCDIC English
CCSID 500	EBCDIC International
CCSID UNICODE	Unicode

See *PeopleTools 8.52: Global Technology PeopleBook,* "Selecting and Configuring Character Sets and Language Input and Output."

Using Unicode Databases

In addition to supporting several legacy character sets, the PeopleSoft software supports creating Unicode databases using DB2 for z/OS v8.1 New Function Mode. Unicode enables you to maintain data in virtually any modern language in a single database. Prior to Unicode, many languages could not coexist in one database, as they did not share a common character set.

See "Setting Up a Unicode Database."

To create a DB2 for z/OS Unicode database, you must specify the CCSID UNICODE option of the CREATE DATABASE statement.

Unicode databases are required if the languages that you selected do not share the same character set. Typically, a single character set can encode all languages written in a single script. For example, English, French, and Spanish all share the same script (Latin), so they can coexist in a non-Unicode database. However, Japanese does not share the same script as French, so if you need to have Japanese and French coexist in a single system, you need a Unicode database.

If you decide to use Unicode for your database, you do not need to select a character set.

See Understanding Multilingual Issues.

See Understanding Character Sets.

Using Non-Unicode Databases

You can safely use a non-Unicode character set only if your selected languages share the same character set. In this case, you need to decide in which character set your database should be created.

See the section Understanding Multilingual Issues to determine whether a language is supported on Unicode or non-Unicode databases. See the section Understanding Character Sets for supported character sets.

Task 1-6: Reviewing Updates and Fixes Required at Installation

Before beginning the installation, check the Patches and Downloads page on My Oracle Support to identify any updates and fixes required at installation that you will need to apply, based on the products, product version, and PeopleTools version that you are installing. Specific instructions for applying the updates and fixes are included in each listed incident.

Make note of all the updates and fixes, and plan to apply them at appropriate stages during the installation procedure. For example, a replacement for a PeopleTools executable would be applied after installing the media pack to the appropriate server, and so on.

The following procedure describes how to access the Updates and Fixes database. Contact Oracle if you don't have a user ID and password for My Oracle Support.

To review updates and fixes required at installation:

1. Go to My Oracle Support at https://support.oracle.com.
2. Enter your user name and password to log in.

   Note. Be sure to log on, or you will not see all of the menu options.

3. Select Patches & Updates.
4. Select PeopleSoft Products.
5. Select Required for Install or Upgrade.
6. Select PeopleTools as the product line, PeopleTools as the product, and select the appropriate PeopleTools release.

   Make sure that the Required for Install option is selected and click the search button (the arrow).
7. Note any PeopleTools updates and fixes that apply to your installation.
8. Return to the Updates and Fixes search page and search for any application-related incidents by selecting the appropriate product line, product, and release.

   Make sure the Required for Install option is selected and click the search button (the arrow).
9. Note any application-specific updates and fixes that apply to your installation.

Note. Keep in mind that your installation may require additional software components. In this case you will also need to check for updates and patches for the additional component software. Later chapters cover this topic in detail.

After this installation, you can upgrade your Java Runtime Engine (JRE) to a newer version without upgrading PeopleTools, as long as the new JRE is certified.

See Also

"Installing Web Server Products"

"Installing Additional Components"

"Operating System, RDBMS, and Additional Component Patches Required for Installation PeopleTools," My Oracle Support (search for the article title)

Task 1-7: Verifying Database Server Sizing

On your database server, the direct access storage device (DASD) volume(s) making up your storage group(s) should have sufficient space for the demo database. If you plan to substantially increase the size of tables in your demo database, ensure that these volumes have plenty of space, or add additional volumes, so that your file systems have ample space to accommodate growth. You must also alter the primary and secondary quantities of the tablespaces and indexes that you expect to expand. In addition to space requirements, the Database Administrator should verify that ample VTOC directory space is available to avoid problems during installation.

Note. Because many PeopleSoft tables are delivered empty, they take up no physical space in the tablespace, whereas indexes, even those created on an empty table, require a minimum of one track each.

Task 1-8: Defining DB2 for z/OS Subsystem Configuration

This section discusses:

- Understanding DB2 Configuration Requirements
- Defining EDM Pool Considerations
- Defining Decimal Arithmetic
- Using DSMAX
- Using CMTSTAT/IDTHTOIN
- Using CCSID and DB2 z/OS Database Storage Encoding Schemes
- Using DECIMAL

Understanding DB2 Configuration Requirements

The following information provides recommendations for the configuration of the DB2 subsystem that will house the PeopleSoft database. We recommend dedicating a DB2 subsystem to your PeopleSoft application. This will allow you to customize the DB2 ZPARM settings for the subsystem without having an impact on your existing applications.

Task 1-8-1: Defining EDM Pool Considerations

The PeopleSoft installation procedure places all tables for the product you are installing into multiple physical databases using a shared tablespace methodology. Depending on the applications you are installing, the DB2 subsystem could have a minimum EDM Pool Size of 10 to 30 MB.

If the pool size is too small, the database administrator should either increase it or manually edit the DDL scripts provided to create additional databases. If you use DB2 Dynamic SQL Cache, you will need to increase the EDM pool size. It is difficult to recommend an optimum size for the EDM pool. Like buffer pools, there is a tradeoff between performance and memory usage. It also depends very heavily on the mix of transactions versus batch processes executing at a point in time. Customers traditionally allocate between 50 and 100 MB when Dynamic SQL Cache is enabled.

Place the DB2 Dynamic SQL Cache in a Data Space. This will allow for separating the cache from the EDM pool, which and results in less competition for EDM space. It also allows for a larger Dynamic SQL Cache (up to 2 GB).

Task 1-8-2: Defining Decimal Arithmetic

Arithmetic operations involving decimal numbers in the PeopleSoft system require a greater decimal precision than earlier versions of PeopleSoft software. DEC31 rules allow a maximum precision of 31 digits in a result rather than only 15. This allows for a greater number of digits in the scale (digits to the right of the decimal), resulting in more accurate calculations, particularly when the "unrestricted" result contains many digits to the right of the decimal. DB2 truncates any digits beyond the calculated scale of the result, without rounding. For example, the number 1.45697, the result of multiplying or dividing another number by 1.456 (assume a scale of 3) will be significantly different from 1.4569 (assume a scale of 4). In addition, in further support of greater accuracy in decimal operations, the PeopleSoft system is utilizing new functionality that permits calculation of a minimum scale of 6 digits in decimal division operations. In prior releases, 3 digits was the maximum, minimum scale.

In past releases, the PeopleSoft system had specific requirements for the DB2 zparms DECARTH, DECDIV3 and MINDVSCL. Through a joint development effort with IBM, functionality has been enhanced to enable control of the functionality provided by these zparms at the DB2 connection level, without impact to other applications running within the same DB2 subsystem.

PeopleSoft code executes the statement *SET CURRENT PRECISION = "D31,6"* for each connection into the database, which will have the effect of running the application in a DB2 subsystem with zparm settings of DECARTH=31 and MINDVSCL=6, overriding what the actual zparm settings may be. DECDIV3 is overridden by MINDVSCL so whether DECDIV3 is YES or NO has no impact on the PeopleSoft application.

Task 1-8-3: Using DSMAX

To reduce the open and close activity of data sets, it is important to set DSMAX correctly. DSMAX should be larger than the maximum number of data sets that are open and in use at one time. For best performance, leave enough margin in your specification of DSMAX that frequently used CLOSE YES data sets can remain open after they are no longer referenced. If data sets are opened and closed frequently, such as every few seconds, you can improve performance by increasing DSMAX. DB2 v6.1 has increased the 10000 limit.

See "Important PTFs for PeopleSoft on DB2 for z/OS," My Oracle Support, (search for the article title).

Task 1-8-4: Using CMTSTAT/IDTHTOIN

We recommend setting the CMTSTAT parameter to INACTIVE and set the IDTHTOIN parameter to 0 (i.e. the IDTHTOIN zparm is ignored when CMTSTAT=INACTIVE). PeopleSoft two tier and three tier will function properly regardless of the values of CMTSTAT and IDTHTOIN. CMTSTAT is set in DSNTIPR and it specifies whether to make a thread active or inactive after it successfully commits or rolls back and holds no database locks or cursors. ACTIVE threads use memory resources as well as contributing to the MAXDBAT limit.

Task 1-8-5: Using CCSID and DB2 z/OS Database Storage Encoding Schemes

PeopleSoft PeopleTools supports only EBCDIC and Unicode data storage encoding schemes (*not* ASCII) on the z/OS database server. Be careful to set the default system encoding scheme (SCCSID as specified in DSNHDECP) in your subsystem for valid EBCDIC translation. PeopleTools Unicode installations will override the SCCSID value by explicitly specifying Unicode as the CCSID when creating the individual databases that will compose a Unicode installation. Consult the DB2 zOS Installation and SQL Reference guides for assistance in setting the default CCSID for your subsystem.

Note that unexpected results may occur when a binary sort is deployed from, or when the collating sequence on a remote machine is different from the host—such as when running COBOL from a Windows or UNIX based platform, and accessing DB2 for z/OS. In house, PeopleSoft has tested with CCSIDs of 37 and 500. For more information, and especially if you use a CCSID other than 37, consult the PeopleBooks for more details about the use of %BINARYSORT and PSOPTIONS.

Also, never change the CCSID in your subsystem without first consulting IBM technical support. Corruption and loss of data could result.

See Also

Enterprise PeopleTools 8.52 PeopleBook: Global Technology

Enterprise PeopleTools 8.52 PeopleBook: System and Server Administration, "Using PeopleTools Utilities"

Task 1-8-6: Using DECIMAL

PeopleSoft PeopleTools supports zparm settings of both DECIMAL=PERIOD and DECIMAL=COMMA. The PeopleTools API is able to identify the zparm value on your particular subsystem. For those subsystems with zparm DECIMAL=PERIOD, no additional logic is invoked. For those subsystems with DECIMAL=COMMA, a parsing routine is invoked to “reformat” any necessary SQL statements to avoid confusion by the DB2 parser in distinguishing a decimal point from a comma. For COBOL programs running on the mainframe, a message is displayed in the job log indicating whether the parsing routine has been activated. Customers running with zparm DECIMAL=COMMA should verify that the parsing function has indeed been activated. Customers running with zparm DECIMAL=PERIOD, should verify that the parsing function *is not* activated, as it is unnecessary and could have negative performance implications.

While PeopleSoft PeopleTools fully supports either setting for zparm DECIMAL, not all product lines support both settings. SQR does not go through the PeopleTools API interface, and therefore each program must be inspected for compliance. Product lines that do not use SQR would support both zparm DECIMAL settings by default (for example, CRM). Product lines that only support one setting will support DECIMAL=PERIOD. Refer to the product line specific Installation addenda for information on whether your product line supports zparm DECIMAL=COMMA.

Task 1-9: Installing Supporting Applications

Oracle requires that a number of supporting applications be installed for the PeopleSoft installation on batch servers and on any Windows-based client on which batch processes will be run locally. (Throughout the rest of this section we refer to these Windows-based clients as *two-tier clients*.) Be sure to check My Oracle Support, Certifications to ensure that you are installing software versions that are certified by Oracle.

COBOL

- Consult the PeopleSoft information on My Oracle Support to verify whether your application requires COBOL. Remember that COBOL is not needed for PeopleSoft PeopleTools or for applications that do not contain COBOL programs.

  See "PeopleSoft Enterprise Frequently Asked Questions about PeopleSoft and Micro Focus COBOL Compiler," My Oracle Support, (search for the article name).

  See "PeopleSoft Enterprise Frequently Asked Questions about PeopleSoft and the IBM COBOL Compiler," My Oracle Support, (search for the article name).

- For PeopleSoft applications written in COBOL, install the appropriate version of the COBOL compiler on the server where you will compile.

  See "Installing and Compiling COBOL on Windows."

  See "Installing and Compiling COBOL on UNIX."

  - For UNIX servers, install Micro Focus Server Express or IBM Compiler for IBM AIX.
  - For Microsoft Windows servers, install the appropriate version of Micro Focus Net Express or IBM Rational Developer for System Z.
  - For z/OS servers, install the appropriate version of IBM Enterprise COBOL for z/OS and OS/390.
- If all your servers are on Microsoft Windows operating systems, Oracle recommends that you install a COBOL compiler on the file server.

  You can install PeopleSoft PeopleTools plus any patches on the file server, compile your COBOL there, and then copy the COBOL binaries to your application and batch servers.
- If your application and batch servers are on UNIX or Linux, we recommend that you designate a single server as the compile server, so that you can compile COBOL from this central location and then distribute it to the rest of your application and batch servers.

  If you use this approach, you only need to copy patches or customizations over to the compile server. In this case, you would install a COBOL compiler on the master (or compile) server and either the COBOL compiler or runtime on the rest. You can also copy patches or customizations from the file server to all of your UNIX servers and compile the COBOL on each machine.

  Note that the compile server must have the same operating system as any destination application or batch servers. For example, if your compile server is an HP-UX machine, you can only copy COBOL compiled there to other HP-UX application and batch servers. Oracle recommends this approach. It will help you keep your COBOL source code in sync and only requires that you install COBOL in a single location.
- The format of COBOL source file names of patches or customizations on the file server should always be UPPERCASE.cbl to ensure compatibility with your UNIX servers.
- The PeopleSoft Installer installs COBOL source code from the installation directory to your Microsoft Windows file server and to all UNIX servers, but not to the rest of your Microsoft Windows servers.

SQR

- You must install SQR on any non-Windows batch server.
- On Microsoft Windows batch servers and two-tier clients, you have the option of installing SQR locally, or mapping to a copy installed on the file server.
- Because SQR does not require any local registry settings, you can execute SQR from any Microsoft Windows batch server or two-tier client once SQR has been installed to a shared directory. Installing SQR locally will result in improved performance; over a slow network connection the improvement will be significant.

JRE

- z/OS customers should install the appropriate IBM z/OS Java to support JDK/JRE requirements for PeopleSoft software.
- The minimum support level required for PeopleSoft PeopleTools 8.52 is JRE 1.6.

Microsoft Office

Install Microsoft Office (Excel and Word) on any Windows batch server or two-tier client that will be running PS/nVision or Microsoft Word batch processes.

Microsoft Office must be installed locally, because it requires registry settings.

See Also

PeopleTools 8.52 Hardware and Software Requirements

Task 1-10: Setting Up Database Connectivity

As part of preparation, you may wish to set up database connectivity components on the mainframe, set up TCP/IP on database clients (including application servers and any dedicated batch servers), and install software for the DB2 Connect Gateway.

However, it makes sense to wait until after the PeopleSoft database has been created before configuring the DB2 Connect Gateway—using either Client Configuration Assistant (NT) or the Command Line Processor (UNIX)—so that the connection to the database can be tested.

Note. The LDAP client (FMID HRSL180) is required for PSAE on z/OS. On z/OS, the LDAP client resides as a DLL named GLDCLDAP in /usr/lib. Note that /usr/lib must be part of the LIBPATH environment variable.

Note. Before you can run the Process Scheduler from z/OS UNIX System Services, the DB2 systems programmer must have installed DB2 ODBC.

See Also

"Creating a Database"

"Installing and Configuring DB2 Connect"

IBM DB2 Connect documentation

IBM DB2 Installation Guide (for DB2 ODBC)

Task 1-11: Using Connect ID

This section discusses:

- Understanding Connect ID
- Using Connect ID

Understanding Connect ID

All two-tier connections use the PeopleTools connect ID feature.

Two-tier connections include both client workstations and application servers. The connect ID feature allows customers to associate multiple PeopleSoft operators with the same connect ID. The connect ID is granted the minimum privileges required to connect to the database—that is, it has only SELECT privileges on specific PeopleTools tables. After connection, PeopleSoft Security uses the PeopleSoft user ID to control access to objects in the database. The PeopleSoft sign-on process validates the connect ID on the database server, rather than the user ID. Connect ID simplifies database security maintenance. It is not necessary to define and maintain individual user IDs within the database server security. For DB2 z/OS implementations, only the connect ID must be defined in the z/OS security management software (for example, RACF, ACF2, TopSecret), with logon capabilities. The connect ID option eliminates the need to set up each user ID as a valid z/OS ID. One z/OS ID can be created and then many PeopleSoft operators can use this ID as the connect ID to sign on to the PeopleSoft system. This arrangement may be an appropriate choice at customer sites where the PeopleSoft user's only required access to the mainframe is to use the PeopleSoft applications.

The connect ID is granted access using the following steps:

- Define the connect ID as an ID with logon capabilities to the z/OS server in the z/OS security management software.
- Execute script Grant.sql against the database, after the table objects have been created. Grant.sql grants SELECT access to the PeopleTools tables PS.PSDBOWNER, PSSTATUS, PSACCESSPRFL, and PSOPRDEFN.

In addition, the connect ID and connect ID password must be defined in either the Configuration Manager setting to allow a two-tier connection from the client workstation, or in the application server configuration setting, to allow connection to the database from the application server.

Task 1-11-1: Using Connect ID

As an example, when logging into a PeopleSoft database in two-tier mode, the user enters a database name, PeopleSoft operator ID, and password in the PeopleSoft Signon dialog box.

After making the initial connection to the database, the sign-on process performs SELECT statements against a series of PeopleTools tables to obtain data required for sign-on and security. The PeopleSoft user ID and password are validated against the PSOPRDEFN table, regardless of the sign-on option. The access ID and password, which are encrypted, are obtained from the PSACCESSPRFL table.

The sign on process disconnects, and then connects again as the access ID, which has all DML authorities and certain DDL authorities on the PeopleSoft database. If you are using the Secondary Authorization ID option, the sign-on process then sets the current SQLID equal to the owner ID obtained from the PS.PSDBOWNER table.

The example below details the log on and connection process to the PeopleSoft database on z/OS. For clarity, we are using the following parameter values:

- Database Name: PT84
- User ID/Pswd: PSUSER1/PSUSER1
- Connect ID/Pswd: PSCONCT/PSCONCT
- Access ID/Pswd: PSACCES1/PSACCESS1
- Object Owner ID: PSDBOWNR

Activity	Parameter Value and/or Underlying Statements
User initiates log on by entering the database name, user ID and password.	PT84/PSUSER1/PSUSER1
The connection is established to DB2 z/OS using the database name, the connect ID, and the password (not the user ID).	Connect to PT84 user PSCONCT using PSCONCT
Get PeopleSoft Database owner ID.	SELECT OWNERID FROM PS.PSDBOWNER WHERE DBNAME = :1 :1 = PT84, value returned for OWNERID = PSDBOWNR
Check PSSTATUS.	SELECT OWNERID, TOOLSREL, LASTREFRESHDTTM, LASTCHANGEDTTM FROM PSDBOWNR.PSSTATUS
Validate the user ID and password.	SELECT VERSION, OPERPSWD, ENCRYPTED, SYMBOLICID, ACCTLOCK FROM PSDBOWNR.PSOPRDEFN WHERE OPRID = :1 :1 = PSUSER1. The OPERPSWD retrieved is validated against the value entered when the user initiated the log on.
Get the access ID and password.	SELECT ACCESSID, ACCESSPSWD, ENCRYPTED FROM PSDBOWNR.PSACCESSPRFL WHERE SYMBOLICID = :1 The ACCESSID and ACCESSPSWD retrieved into the buffer are PSACCES1/PSACCES1
The current connection with the connect ID is disconnected	Disconnect
A new connection is established logging on with the access ID.	Connect to PT84 USER PSACCES1 USING PSACCES1
The "Set Current SQLID" statement is issued to permit access to the PeopleSoft tables via the access ID without requiring explicit qualification of the SQL statements with the Object Owner ID (PSDBOWNR).	Set CURRENT SQLID = :1 :1 = PSDBOWNR

At this point, access within the PeopleSoft application is governed by PeopleSoft security, based on the permissions defined in the PeopleTools security tables for the user ID that was entered when the logon was initiated (PSUSER1).

Task 1-12: Setting Up z/OS User IDs

This section discusses:

- Understanding User ID Setup
- Creating PeopleSoft User IDs

Understanding User ID Setup

Once you have determined your sign-on strategy, as described in the preceding task, you are ready to create a set of z/OS user IDs required for the PeopleSoft PeopleTools sign-on process and database table access.

Note. All IDs that you create must be in UPPERCASE.

Task 1-12-1: Creating PeopleSoft User IDs

Use this following procedure to create new user Ids for the application.

To create PeopleSoft user IDs:

1. Create a mainframe user ID for connecting to the PeopleSoft database. This mainframe user ID needs to match the PeopleSoft connect ID.

   Note. Once your PeopleSoft connect ID is created, you can specify the ID in either the Configuration Manager Startup tab for Windows client connections or the Startup section in the application server configuration file for application server connections. This is done so the client or the application server pass the correct ID to connect to the database.

   You must explicitly grant SELECT authority to this mainframe user ID on specific PeopleSoft PeopleTools tables, before attempting to connect to the PeopleSoft database.

2. Create a second mainframe user ID to be used as the PeopleSoft access ID.

   The access ID, which is stored in encrypted form in the PeopleSoft database, should either be granted all DML authorities and certain DDL authorities on the PeopleSoft database if using Primary Authorization ID access, or associated with a Secondary Authorization ID with this access, if using Secondary Authorization ID access (the next step). The access ID and access password must be tightly controlled. Both are encrypted in the PeopleSoft database.

   Oracle recommends that you set up the access ID in z/OS with a non-expiring password. If company standards mandate that you periodically change the access ID's password, or if the access ID is set up in the z/OS security system with a password that will expire, special processing will be necessary. You must ensure that PeopleSoft databases are updated with the access ID's new password before the password changes in the z/OS security system. The PeopleSoft Security Administrator provides the functionality to change the access ID's password stored in the security tables.

   If the mainframe password for the access ID has expired or has been changed before the PeopleSoft database has been updated with the new password, no one will be able to access the PeopleSoft online system.

3. If you are using the Secondary Authorization ID option, set up an external security system group as the owner ID. Make the access ID a member of this group, with authority to SET CURRENT SQLID = <Owner ID>.

4. Grant SELECT authority to owner ID on SYSIBM DB2 catalog tables.

   There are certain PeopleSoft processes that perform queries against the SYSIBM DB2 catalog tables. For this reason you must grant SELECT authority on these catalog tables to the owner ID that you choose for the PeopleSoft database. The following table lists DB2 catalog tables used by the PeopleSoft system, with the corresponding PeopleSoft processes.

Table	PeopleSoft Process
SYSIBM.SYSTABLES	Application Designer DDDAUDIT.SQR SETDBNAM.SQR SETSPACE.SQR SETTMPIN.SQR %UpdateStats MetaSQL function
SYSIBM.SYSTABLESPACE	SETSPACE.SQR SETDBNAM.SQR
SYSIBM.SYSTRIGGERS	Application Designer DDDAUDIT.SQR
SYSIBM.SYSCOLUMNS	Application Designer
SYSIBM.SYSINDEXES	Application Designer DDDAUDIT.SQR SETBUFF.SQR
SYSIBM.SYSKEYS	Application Designer
SYSIBM.SYSINDEXPART	SETINDEX.SQR
SYSIBM.SYSDATABASE	NA
SYSIBM.SYSVIEWS	NA

If the Owner ID does not have proper authority to the SYSIBM tables, 551 SQL codes will result and it will mostly occur when you are attempting to SQL Create or Alter a table using Application Designer. If you are running the listed SQRs outside of PeopleSoft, the ID used to run the SQR will need Select access to the listed tables.

See Also

"Creating a Database"

Enterprise PeopleTools 8.52 PeopleBook: PeopleTools Portal Technologies

Enterprise PeopleTools 8.52 PeopleBook: Data Management

Task 1-13: Performing Backups

Before proceeding, you should back up all servers and workstations that are set up for installation so you can recover to this point if necessary. Do the following:

- Back up any changes you made to the database server in setting up your PeopleSoft system.
- Back up any changes you made to your file server while setting aside space for your PeopleSoft system and setting up access privileges.
- Once you set up your install workstations to access the file server and database server simultaneously, back up the workstations.

Task 1-14: Using PeopleSoft Change Assistant and PeopleSoft Change Impact Analyzer

After you have completed the tasks in this book to install PeopleSoft PeopleTools, including installing any necessary patches and fixes, you need to install PeopleSoft Change Assistant. PeopleSoft Change Assistant is a standalone application that enables you to assemble and organize all of the steps necessary to apply patches and fixes for maintenance updates.

PeopleSoft Change Assistant gathers all the necessary information for a maintenance update from the Environment Management Hub and uploads it to My Oracle Support. With the environment data available, My Oracle Support can determine what updates are applicable to your environment. PeopleSoft Change Assistant carries out the following tasks:

- Uploads environment
- Finds required updates
- Downloads updates
- Applies all change packages

You can also install PeopleSoft Change Impact Analyzer, either as part of the PeopleSoft Change Assistant installation, or separately from the installation executable provided with PeopleSoft PeopleTools. PeopleSoft Change Impact Analyzer is a Microsoft Windows-based tool that you can use to evaluate the effect of changes you make on your installation.

See Also

"Installing PeopleSoft Change Assistant"

"Installing PeopleSoft Change Impact Analyzer"

PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook

PeopleTools 8.52: Change Impact Analyzer PeopleBook

CHAPTER 2

Installing Web Server Products

This chapter discusses:

- Installing Oracle WebLogic Server
- Installing IBM WebSphere Application Server

Task 2-1: Installing Oracle WebLogic Server

This section discusses:

- Understanding the Oracle WebLogic Installation
- Reviewing Troubleshooting Tips
- Obtaining Oracle WebLogic Installation Files from E-Delivery
- Installing JDK for Oracle WebLogic
- Installing Oracle WebLogic on Microsoft Windows
- Installing Oracle WebLogic on Linux or UNIX
- Installing Oracle WebLogic on Linux or UNIX in Silent Mode
- Configuring JDK for Daylight Savings Time Change
- Removing the Oracle WebLogic Installation on Microsoft Windows
- Removing the Oracle WebLogic Installation in Console Mode

Understanding the Oracle WebLogic Installation

PeopleSoft PeopleTools 8.52 supports 64-bit Oracle WebLogic Server 10.3.4. Oracle provides installation files for Oracle WebLogic on the Oracle E-Delivery site.

See Obtaining Oracle WebLogic Installation Files from E-Delivery.

To familiarize yourself with the most current support information and information about any required Oracle WebLogic service packs based on operating system platform or PeopleSoft PeopleTools versions, consult My Oracle Support or the hardware and software requirements guide.

You must install an operating-system specific Java Developers Kit (JDK) before beginning the Oracle WebLogic installation.

See Installing JDK for Oracle WebLogic.

See Also

Oracle E-Delivery, http://edelivery.oracle.com

PeopleTools 8.52 Hardware and Software Requirements

My Oracle Support, Certifications

"Clustering and High Availability for Enterprise Tools 8.5x," My Oracle Support, (search for the article title)

"Operating System, RDBMS, and Additional Component Patches Required for Installation PeopleTools," My Oracle Support, (search for the article title and release number)

Reviewing Troubleshooting Tips

If you have trouble with the installation, review these tips:

- It can require up to 800 MB space to install Oracle WebLogic. If there is not enough space, the installer displays an error with information about the space limitation. You will need to exit the installation and create some space under your home directory before starting over.
- The Oracle WebLogic installer makes use of the default system temporary space. It will stop and display an error message if the temporary space is not sufficient. Clean up the default system temp space and try again. If you don't have the privilege to clean up that directory and need to proceed, the workaround is to set aside a directory under your Home directory and use it as the temporary space. This can be achieved by setting `-Djava.io.tmpdir` in the command for launching the installer. For example, the following command will use the "temp" directory under your Home directory to launch the installer in console mode:

  ```
  ${JAVA_HOME}/bin/java -jar ./wls1034_generic.jar -mode=console -Djava.io.tmpdir=⇒
  ~/temp -log=./logs/Wls1034Install.log
  ```

  Note. This workaround may not applicable on all platforms. If you tried and the installer still errors out due to temp space, contact your system administrator to clean up the system temp space before proceeding.

- If the installation fails, and the directory that you specify for the Oracle WebLogic 10.3.4 installation is one in which other BEA products have been installed, *BEA_HOME* in previous releases, (for example c:\bea folder in Microsoft Windows), it may indicate corruption in the registry.xml file inside your existing *BEA_HOME*. Pick a different location for the Oracle WebLogic 10.3.4 installation directory and try the installation again.
- If you are installing onto Microsoft Windows operating system using GUI mode and the installation fails without any message, run the installer from the command prompt using console mode. It will show you more detailed error messages indicating the problem area.

  The command to run on Microsoft Windows in console mode is:

  ```
  %JAVA_HOME%\bin\java -jar wls1034_generic.jar -mode=console -log=logs⇒
  \Wls1034Install.log
  ```

- If you are installing onto an UNIX or Linux environment, refer to the log file Wls1034Install.log under the installation logs directory to see what events happened if your installation failed.
- If you encounter the following error message while running in console mode on a Microsoft Windows operating system, it means an environment variable *_JAVA_OPTIONS* has been set in your system. It causes the Java process initiated by the Oracle WebLogic installer to fail.

  ```
  ERROR: JVMPI, an experimental interface, is no longer supported.
  Please use the supported interface: the JVM Tool Interface (JVM TI).
  ```


To resolve the problem, remove the environment variable *_JAVA_OPTIONS* from your system and rerun the installation.

- If you encounter the following error message while installing on an Oracle Solaris operating system, it means there is a problem with access to the temporary directory:

  ```
  *sys-package-mgr*: can't write cache file
  ```

  This message appears because the Oracle WebLogic installer creates a temporary directory (for example, on Oracle Solaris it is /var/tmp/wlstTemp) that is shared by all users, and it is unable to differentiate between users. As a result, access to the directory is blocked when the user accessing the directory is not the one who originally created the directory. The workaround for this problem is to remove the installation and install it again after manually adjusting the temporary directory permissions. A user with superuser privileges can use the following command to adjust the permissions:

  ```
  chmod -R 777 /var/tmp/wlstTemp
  ```

  For more information, search the Oracle's BEA documentation for Oracle WebLogic.

- If you see the following message while installing in console mode, this is because some existing Oracle WebLogic Server 10.3.x had been installed into the same box. You can safely ignore the message, input the new location where you want to install WebLogic Server 10.3.4, and continue.

  ```
  <--------------------Oracle Installer - WebLogic 10.3.4.0----------->
  Choose Middleware Home Directory:
  --------------------------------

  "Middleware Home" = [Enter new value or use default
  "/home/ms23546/Oracle/Middleware"]

  ** The product maintenance level of the current installer (WebLogic
  ** Server:10.3.4.0) is not compatible with the maintenance level of
  ** the product installed on your system (WebLogic Server:10.3.1.0).
  ** Please obtain a compatible installer or perform maintenance on your
  ** current system to achieve the desired level.

  Enter new Middleware Home OR [Exit][Previous][Next]> /home/ms23546/32Bit⇒
  Wls1034GA_Onrnora12
  ```

Task 2-1-1: Obtaining Oracle WebLogic Installation Files from E-Delivery

The initial portion of the procedure to log in to Oracle E-Delivery was described earlier. At this point you should have already downloaded the necessary files. This section includes additional information on finding and using the files for Oracle WebLogic if necessary.

Note. Only the Oracle WebLogic installation files provided as part of the PeopleTools 8.52 media pack on Oracle E-Delivery are certified for use with PeopleSoft PeopleTools 8.52.

See "Preparing for Installation," Using Oracle E-Delivery to Obtain Installation Files.

To obtain the files for Oracle WebLogic installation:

1. After logging in to Oracle E-Delivery, on the Media Search Pack page, select *Oracle Fusion Middleware* from the Select a Product Pack drop-down list.

2. Select the operating system you are running on from the Platform drop-down list, and click Go.

   The following operating systems are supported:

   - AIX
   - HP-UX Itanium
   - Linux
   - Microsoft Windows
   - Oracle Solaris on SPARC
   - Oracle Solaris on x86–64

3. Select the radio button for the Oracle Fusion Middleware 11g media pack for your platform and click Continue.

   Note. The part numbers vary by platform.

4. Select Oracle WebLogic Server 11gR1 (10.3.4) Generic and Coherence for your platform, and click Download. Save the zip file to a temporary directory on your local system.

   The directory where you save the zip file is referred to in this documentation as *WLS_INSTALL*. You must extract (unzip) the file on the platform for which it is intended. For example, if you download the zip file for Oracle Solaris, you must unzip it on Oracle Solaris to avoid problems. If you unzip the file to a staging directory on a Microsoft Windows computer and copy the staging directory to an Oracle Solaris, the stage area files may be corrupt.

   Note. The part numbers are not the same as those for the media packs in the previous step.

5. Extract the files into *WLS_INSTALL*.

   The Oracle WebLogic installer file is wls1034_generic.jar.

   Note. If you need to ftp the downloaded file, make sure to FTP it in Binary mode.

Task 2-1-2: Installing JDK for Oracle WebLogic

This section discusses:

- Understanding the JDK Requirement for Oracle WebLogic
- Installing JDK for AIX
- Installing JDK for HP-UX IPF
- Installing JRockit for Microsoft Windows or Linux
- Installing JDK for Oracle Solaris on SPARC
- Installing JDK for Oracle Solaris on x86-64

Understanding the JDK Requirement for Oracle WebLogic

Before beginning the Oracle WebLogic installation you must install the 64-bit Java 1.6 JDK. The specific JDK or JRockit required depends upon the operating system and vendor, as described in this table:

Operating System Platforms	JDK or JRockit	64-bit or Mixed Mode*	Comments
AIX	IBM JDK	64-bit	none
HP-UX	Hewlett-Packard JDK	Mixed mode	Use "-d64" to turn on 64–bit mode
Linux	Oracle JRockit	64-bit	none
Microsoft Windows	Oracle JRockit	64-bit	none
Oracle Solaris on SPARC	Oracle's Sun JDK	Mixed mode	Requires two installers. Use "-d64" to turn on 64-bit mode.
Oracle Solaris on x86–64	Oracle.'s Sun JDK	Mixed mode	Install the X86 JDK installer first and then the one for X64. Use "-d64" to turn on 64 bit mode.

* The mixed mode installers run in 32-bit by default. The parameter *-d64* is required to run them in 64-bit mode.

Installing JDK for AIX

To install 64-bit IBM JDK for AIX:

1. Go to the IBM JDK download site:

   http://www.ibm.com/developerworks/java/jdk/aix/service.html

   Note. You need a user name and password for downloading IBM JDK. If you don't have the required credentials, your AIX support personnel should be able to help.

2. In the table under Java 6, 5.0, and 1.4.2: User guides and download links, select the Fix Info link under the Java 6 64-bit column.
3. Register and log in to download.
4. Download 64-bit IBM JDK SR9 or higher.
5. Install the JDK on the AIX computer where you will install the Oracle WebLogic server.

   The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.

Installing JDK for HP-UX IPF

To install Hewlett-Packard JDK for an Oracle WebLogic installation on HP-UX IPF:

1. Go to the Hewlett-Packard download web site:

   http://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXJDKJRE60
2. Select the link for Version 6.0.09 – December 2010 or later.
3. Provide the login credentials.
4. In the Product Specification combo box, select Itanium(R) JDK 6.0.09 - Dec 2010.
5. Provide the required information.
6. Click Next and download JDK.

7. Install the JDK on the computer where you will install the Oracle WebLogic server.

   The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.

Installing JRockit for Microsoft Windows or Linux

To install 64-bit JRockit for an Oracle WebLogic installation on Microsoft Windows or Linux:

1. Go to the My Oracle Support web site:

   https://support.oracle.com
2. Log in with your Oracle support account ID and password.
3. Select the Patches & Updates tab.
4. Select Product or Family (Advanced Search) in the Patch Search area.
5. On the Advanced Search page, specify the following search criteria:
   - Product:

     Oracle JRockit
   - Release:

     Oracle JRockit 28.1.1 or higher.
   - Platform:

     For Microsoft Windows, select Microsoft Windows X64 (64-bit).

     For Linux, select Linux x86-64.
   - Click Search.
   - On the search results page, download the JDK160 file locally.
   - If the JRockit release you pick is password protected, it might indicate the file is too old. Choose a later release.
6. Unzip the downloaded file, and install the JRockit on the computer where you will install the Oracle WebLogic server.

   The directory where you install the JRockit is referred to in this documentation as *JAVA_HOME*.

Note. When choosing the location to install, select a directory with no spaces in the name.

If you do not yet have access to My Oracle Support, you can download JRockit from the Oracle software download site:

1. Go to the Oracle Technology Network (OTN):

   http://www.oracle.com/technetwork/software/products/jrockit/index.html
2. Download Oracle JRockit JDK 28.1 or higher release for Java 6, for the 64-bit operating systems. For example:
   - For Linux, download the product for Linux x86-64.
   - For Microsoft Windows, download the product for Microsoft Windows x86-64
3. Install the JRockit on the computer where you will install the Oracle WebLogic server. The directory where you install the JRockit is referred to in this documentation as *JAVA_HOME*.

Installing JDK for Oracle Solaris on SPARC

To install JDK for an Oracle WebLogic installation on Oracle Solaris on SPARC:

1. Go to the Oracle's Sun JDK download site:

   http://java.sun.com/javase/downloads/index.jsp

2. Download the Sun Java 6 update 23 or higher 64 Bit JDK for Solaris SPARC.

   Be sure to get both files needed for 64-bit JDK for Solaris. The JDK is mixed mode, and the second installer enables the JDK to be run in 64-bit mode, which is triggered by the "-d64" parameter.

3. Install the JDK on the computer where you will install the Oracle WebLogic server.

   The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.

Installing JDK for Oracle Solaris on x86-64

To install JDK for an Oracle WebLogic installation on Oracle Solaris on x86-64:

1. Go to the Oracle's Sun JDK download site:

   http://java.sun.com/javase/downloads/index.jsp

2. Download the Sun Java 6 update 23 or higher 64 Bit JDK for both Oracle Solaris x86 and Oracle Solaris x64.

   Oracle Solaris x64 requires users to first install the JDK for Oracle Solaris x86 and then run the JDK installer for Oracle Solaris x64. The JDK is mixed mode, and the second installer enables the JDK to be run in 64-bit mode, which is triggered by the "-d64" parameter.

3. Install the JDK on the computer where you will install the Oracle WebLogic server.

   The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.

Task 2-1-3: Installing Oracle WebLogic on Microsoft Windows

The following procedure assumes that you saved the installation file wls1034_generic.jar from Oracle E-Delivery in the directory *WLS_INSTALL*. Installation in GUI mode is normally used for Microsoft Windows operating systems. You should have installed the appropriate JRockit to *JAVA_HOME* before beginning this installation.

See Installing JDK for Oracle WebLogic.

Note. Previous releases of Oracle WebLogic Server, such as 9.2 MP*X*, 10.3.2, and 10.3.3, can coexist with 10.3.4 on a single machine. The best practice is to install Oracle WebLogic 10.3.4 for PeopleSoft PeopleTools 8.52 into an empty directory, or at least one that does not contain other Oracle WebLogic (previously BEA) products.

If you choose, however, to install this version of Oracle WebLogic in an existing *WLS_HOME* directory (for example, c:\bea), you must shut down all instances of Oracle WebLogic Server running in that *WLS_HOME* before performing this installation.

To install Oracle WebLogic Server 10.3.4:

1. Open a command prompt and go to *WLS_INSTALL*.
2. Set the environment variable JAVA_HOME to be the location where you installed the JRockit. For example, if you installed JRockit to C:\jrockit-jdk1.6.0_22, use this command:


```
set JAVA_HOME=C:\jrockit-jdk1.6.0_22
```

3. Use the following command to launch the installer:

```
%JAVA_HOME%\bin\java -jar wls1034_generic.jar -mode=GUI -log=logs⇒
\Wls1034Install.log
```

If your *JAVA_HOME* has spaces in the name, you can use double quotes around the name in the command line. For example:

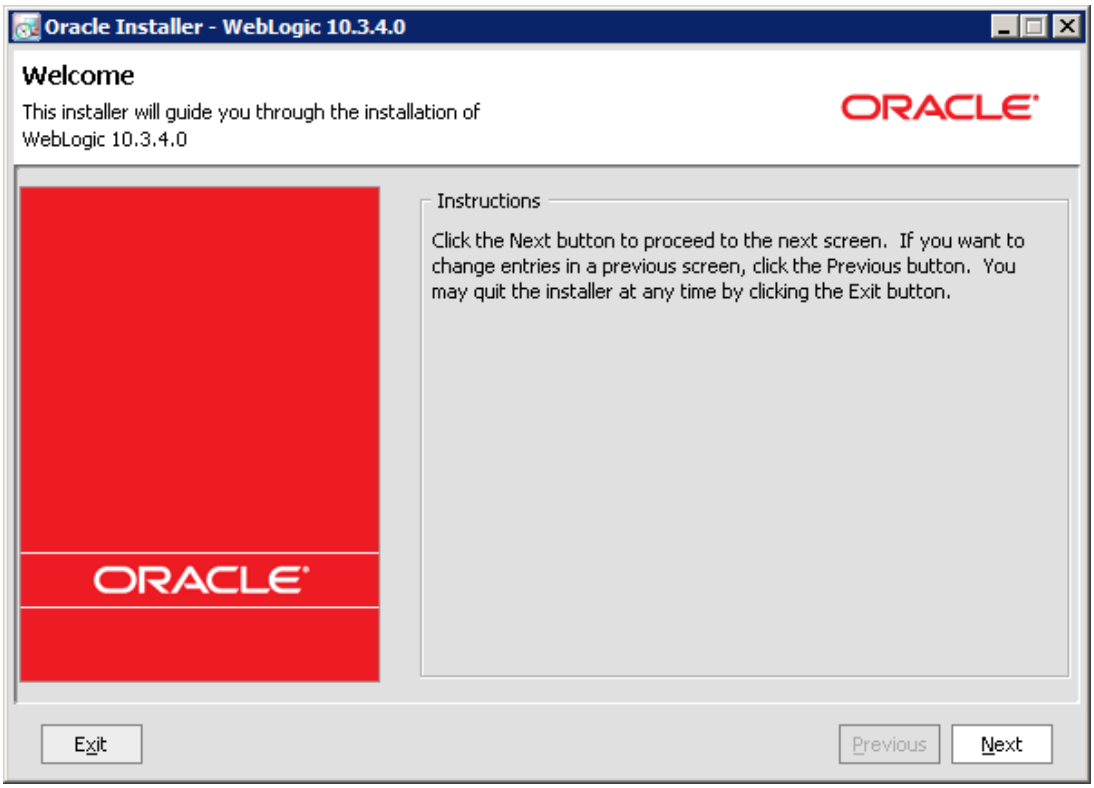
```
set JAVA_HOME=C:\Program Files\jrockit-jdk1.6.0_22
"%JAVA_HOME%\bin\java" -jar wls1034_generic.jar -mode=GUI -log=logs⇒
\wls1034Install.log
```

Note. It may take up to five minutes to extract the installer. The Welcome window appears when the extraction is complete.

---

4. Click Next on the Welcome window.

The window includes the informational text: "Click the Next button to proceed to the next screen. If you want to change entries in a previous screen, click the Previous button. You may quit the installer at any time by clicking the Exit button."



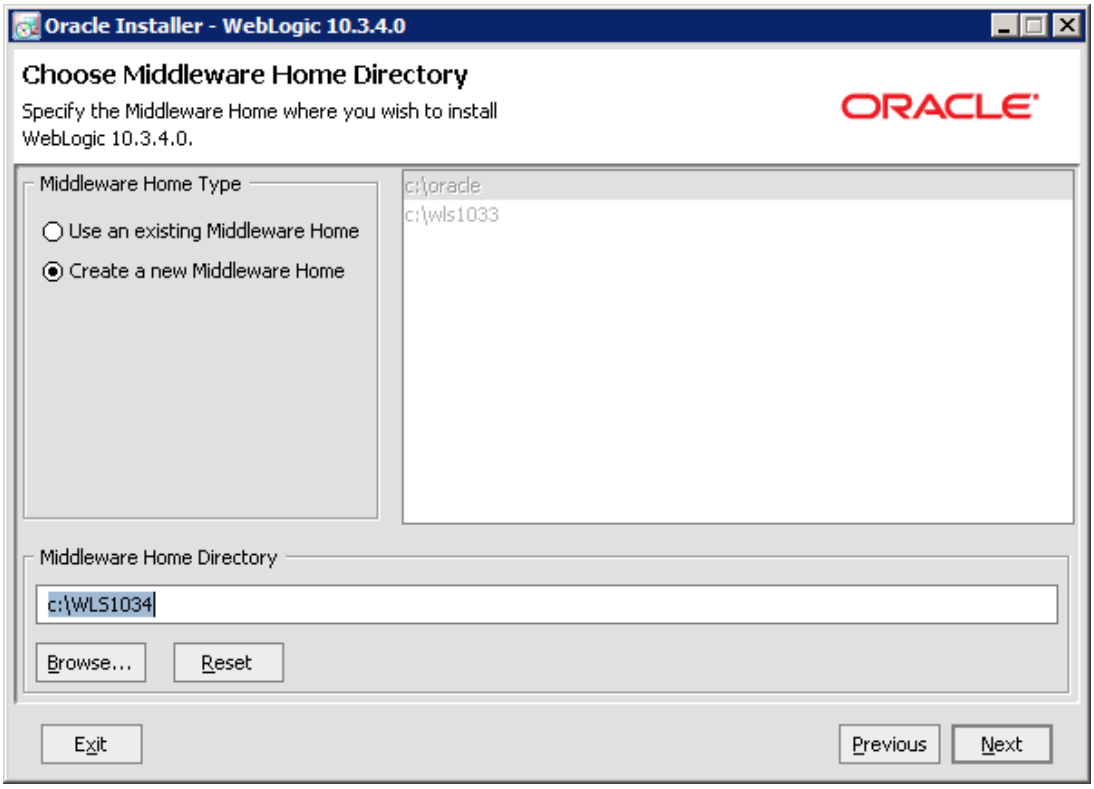
Welcome window for Oracle WebLogic 10.3.4.0 installer

5. Select the option to Create a new Middleware Home, and enter a name or browse to an existing directory.

Do not choose a directory that contains an existing installation of Oracle Web Logic.

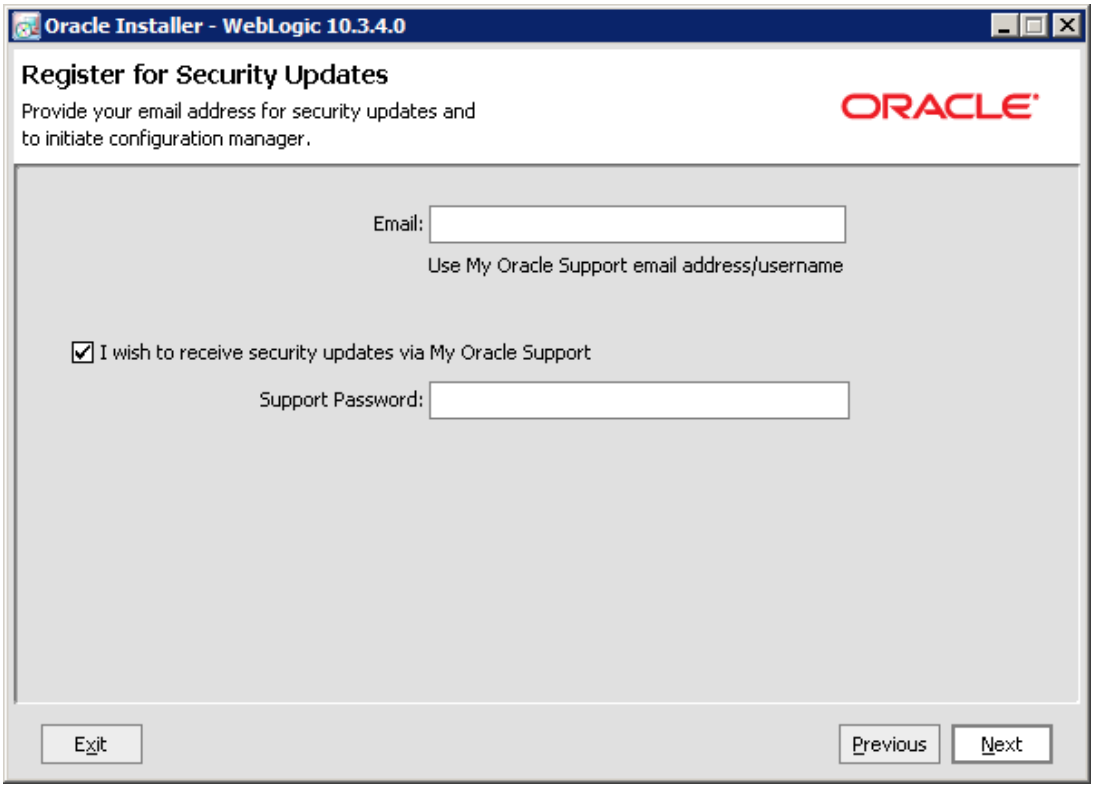
If the directory does not exist, the Oracle WebLogic installer creates it. The directory where you install Oracle WebLogic is referred to as *WLS_HOME* in this documentation. In this example *WLS_HOME* is C:\WLS1034.

Click Next to continue.



Choose Middleware Home Directory window

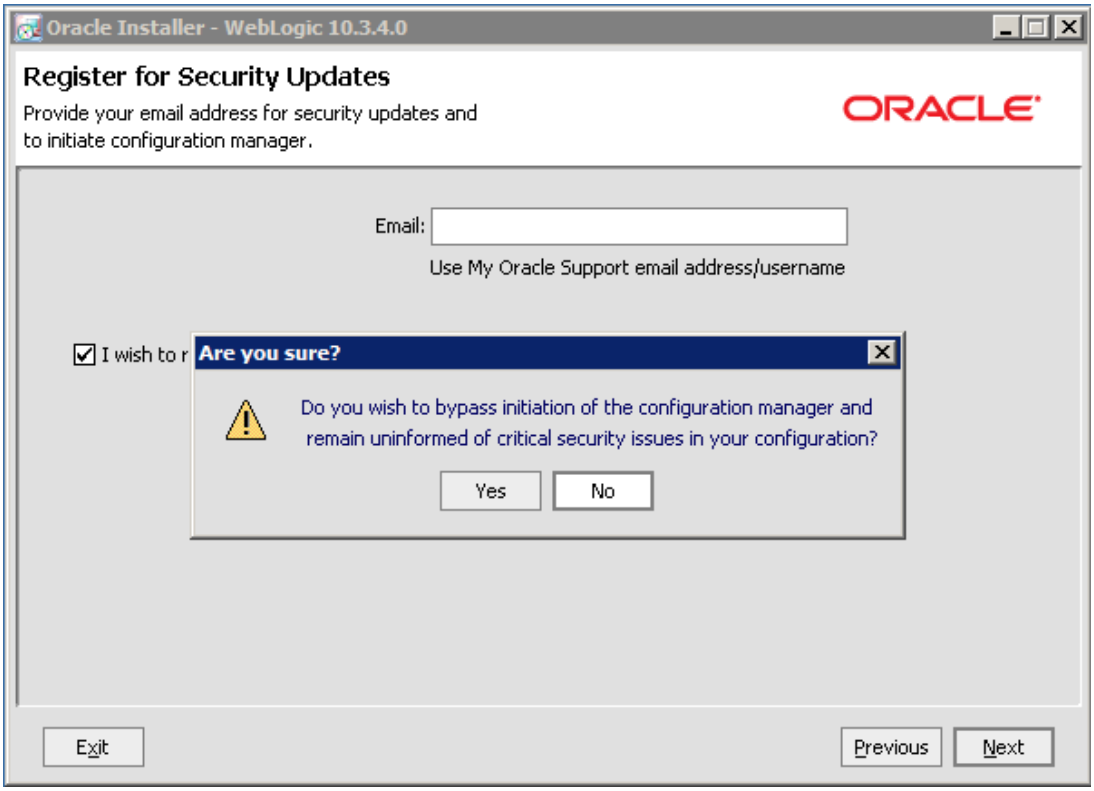
6. Clear the option I wish to receive security updates via My Oracle Support on the Register for Security Updates window.



Register for Security Updates window

A dialog box labelled “Are you sure?” appears, as shown below, asking for confirmation with this query: “Do you wish to bypass initiation of the configuration manager and remain uninformed of critical security issues in your configuration?”

Click Yes in the "Are you sure?" dialog box.



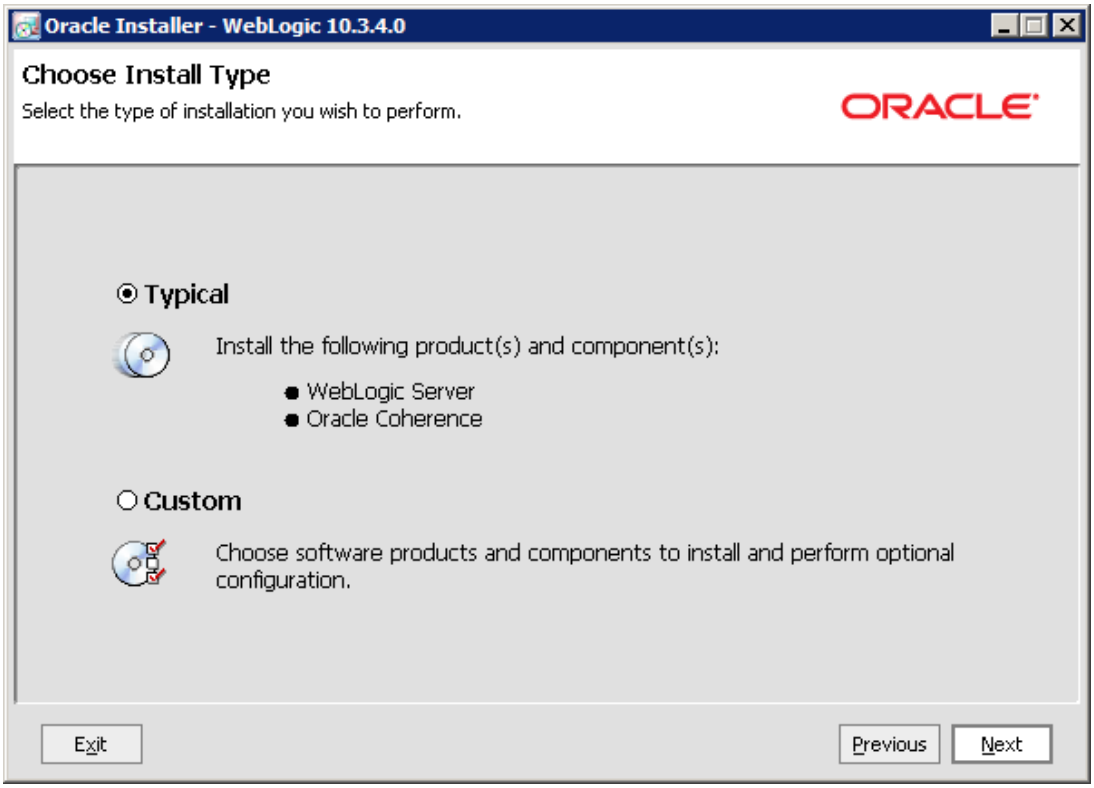
Confirming that you wish to bypass security update registration

A dialog box labelled “Email Address Not Specified” appears; click Yes to confirm that you wish to remain uninformed of critical security issues:

Email Address Not Specified dialog box

The “Are you sure?” dialog box appears again; click Yes, and then click Next on the Register for Security Updates window to continue.

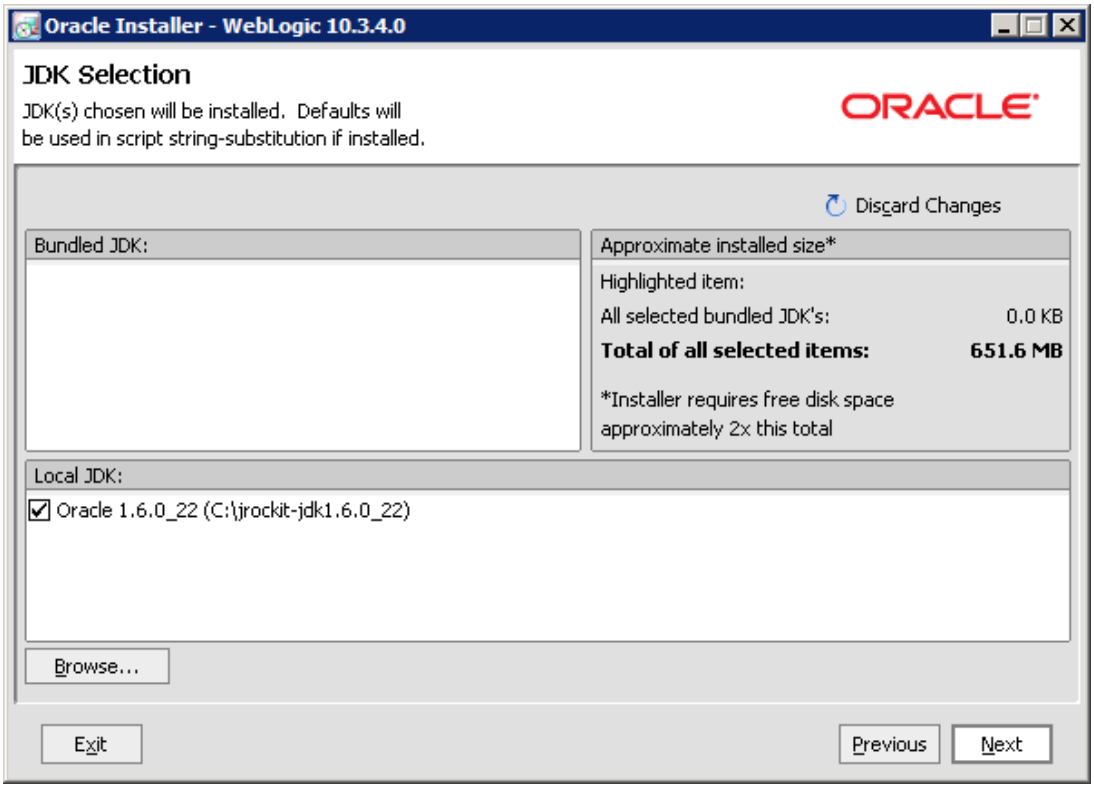
7. Verify that the default option Typical is selected and click Next.



Choose Install Type window

8. Accept the location where you installed the JRockit, and then click Next on the JDK Selection window.

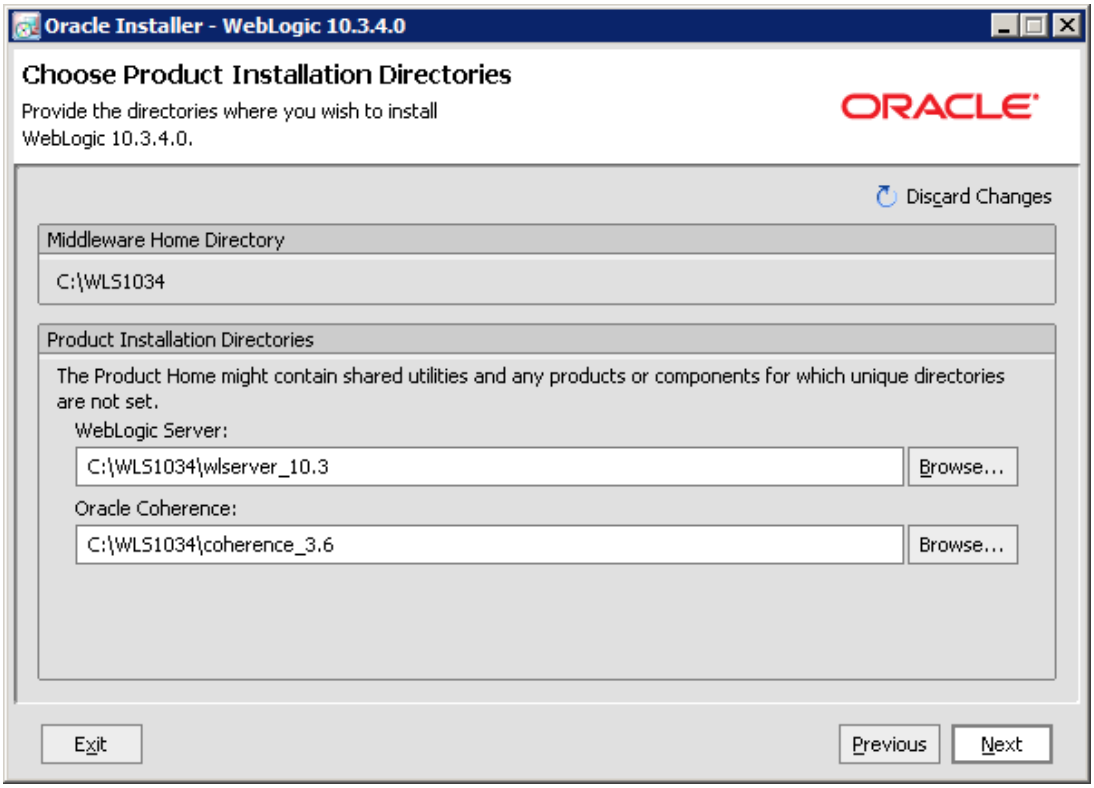
   In this example the JDK selected under Local JDK is Oracle 1.6.0_22 (C:\jrockit-jdk1.6.0_22).



JDK Selection window

9. Accept the default selection in the Choose Product Installation Directories window, and click Next.

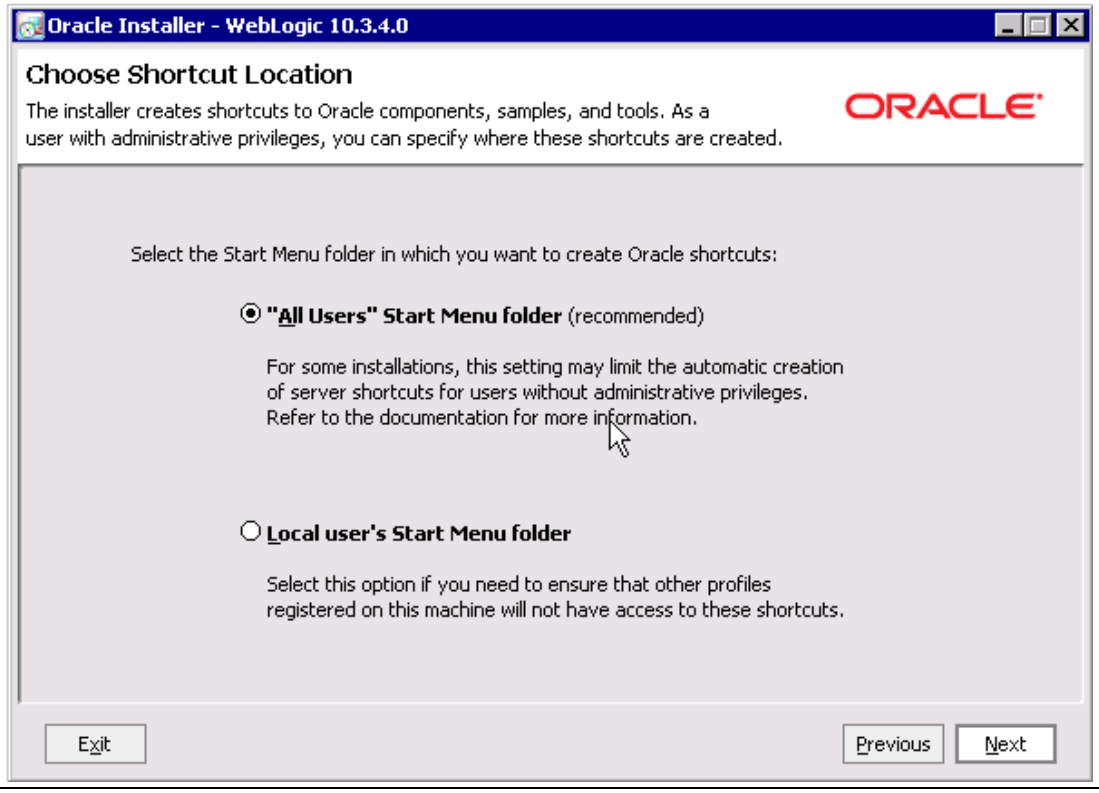
Note. Be sure to accept the default directory. This is important for interaction with Oracle support. In this example, the Middleware Home Directory is C:\WLS1034, and the default product installation directory is C:\WLS1034\wlserver_10.3.



Choose Product Installation Directories window

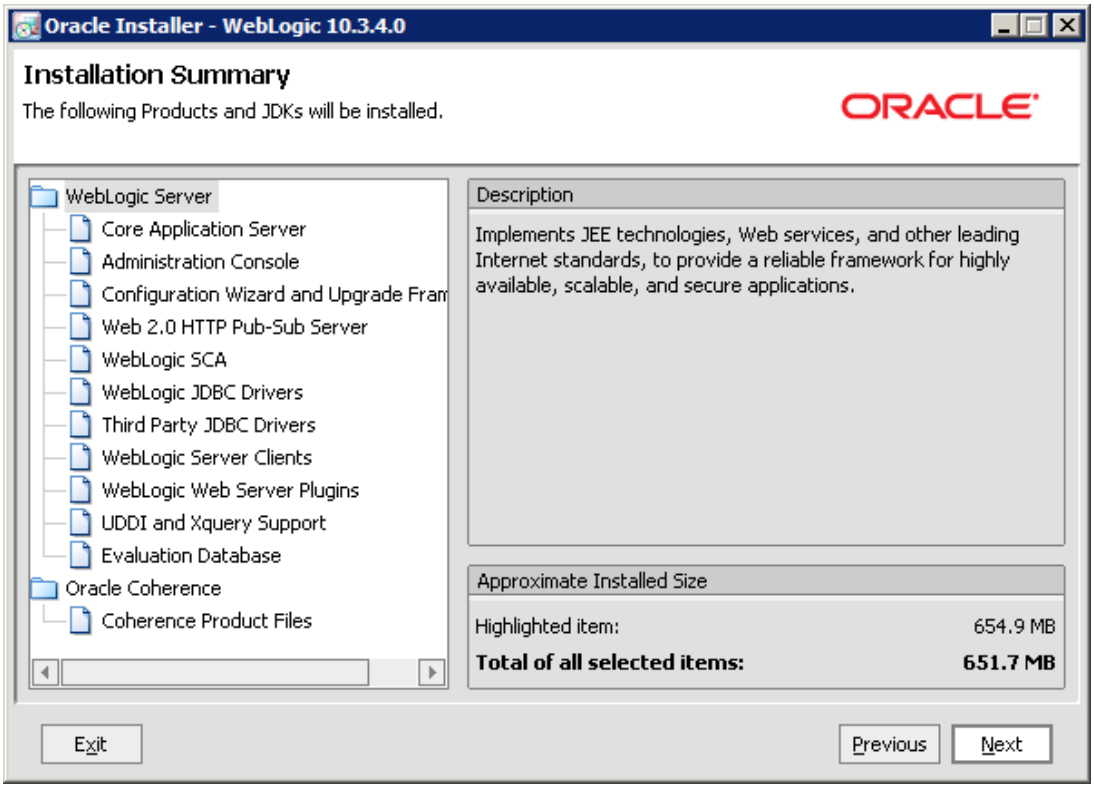
10. Accept the default selection, “All Users” Start Menu folder (recommended), on the Choose Shortcut Location window, and click Next.

Note. This window may not appear, depending upon your environment.



Choose Shortcut Location window

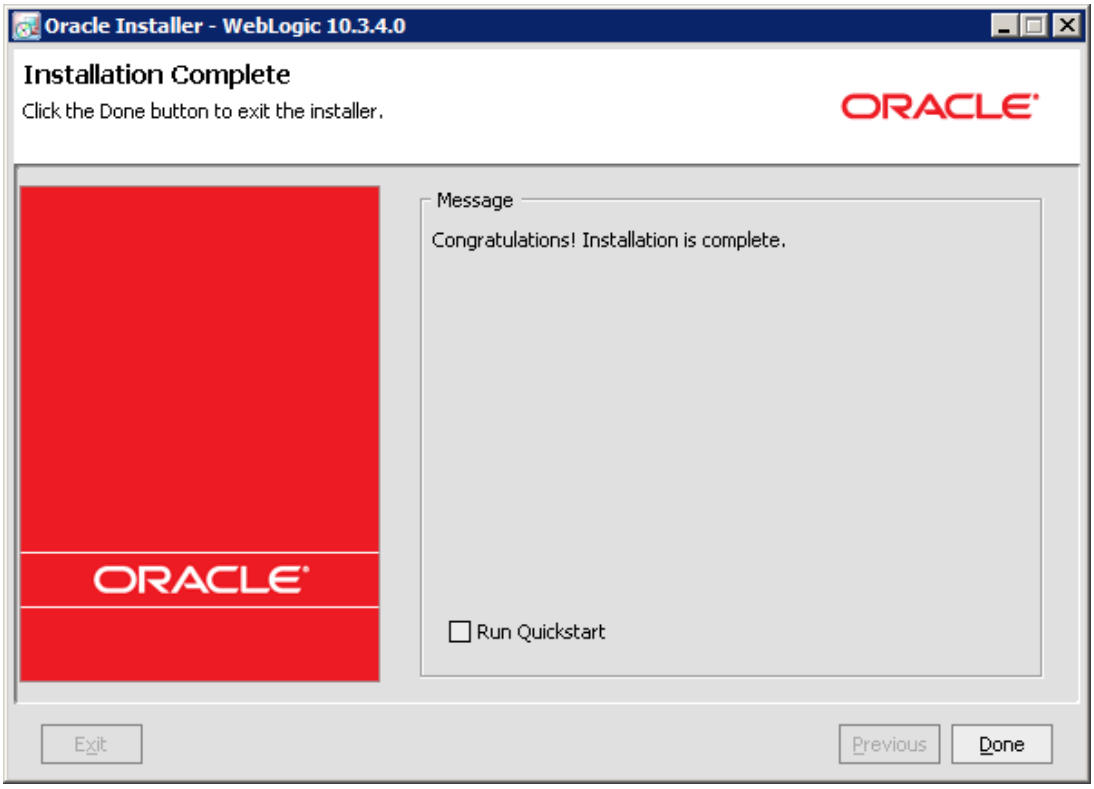
11. Verify your choices in the installation summary, and click Next to begin the installation.



Installation Summary window

A window appears tracking the progress of the installation.

12. When the installation has completed successfully, clear the Run Quickstart option, and click Done.



Installation Complete window

Task 2-1-4: Installing Oracle WebLogic on Linux or UNIX

The following procedure assumes that you saved the installation file wls1034_generic.jar from Oracle E-Delivery in the directory *WLS_INSTALL*. Installation in console mode is normally used for Linux and UNIX operating systems. You should have installed the appropriate JDK to *JAVA_HOME* before beginning this installation.

See Installing JDK for Oracle WebLogic.

To install Oracle WebLogic in console mode:

1. Change directory to *WLS_INSTALL* and make the installer file executable using the following command:

   ```
   chmod a+x wls1034_generic.jar
   ```

   If you downloaded the zip file for the Oracle WebLogic installation from Oracle E-Delivery to a Microsoft Windows computer, FTP the zip file in binary mode to your Linux or Oracle Solaris computer before unzipping it into *WLS_INSTALL*.

2. In a shell window, change directory to the location where you saved the installer:

   ```
   cd WLS_INSTALL
   ```

3. Set the environment variable JAVA_HOME to be the location where you installed the JDK.

   For example, if you installed the JDK to “/usr/java6_64” use these commands:


```
JAVA_HOME=/usr/java6_64
export JAVA_HOME
```

4. Use the following command to launch the installer and specify a log file:

Note. The installer creates a log file named wls1034Install.log in the directory *WLS_INSTALL*/logs. Be sure you have write permission to the *WLS_INSTALL* directory.

- For AIX or Linux:

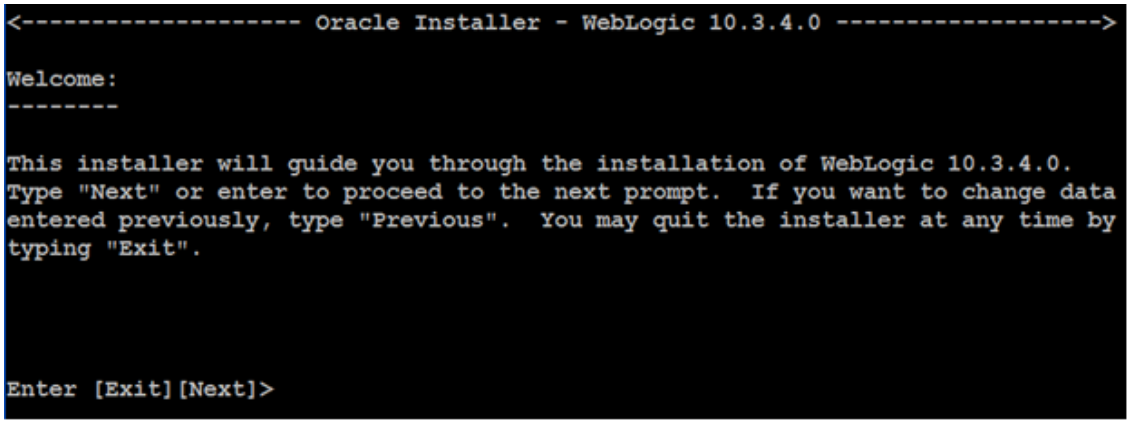
```
${JAVA_HOME}/bin/java -jar ./wls1034_generic.jar -mode=console -log=./logs⇒
/Wls1034Install.log
```

- For HP-UX or Oracle Solaris:

```
${JAVA_HOME}/bin/java -d64 -jar ./wls1034_generic.jar -mode=console -log=.⇒
/logs/Wls1034Install.log
```

Note. The JVM parameter `-d64` is required for Oracle Solaris and HP-UX platforms.

5. Type Next and press ENTER after the welcome message shown in this example:



Oracle WebLogic Welcome prompt

The prompt includes the following information:

```
This installer will guide you through the installation of WebLogic 10.3.4.0.
Type "Next" or enter to proceed to the next prompt.  If you want to change data⇒
 entered previously, type "Previous".  You may quit the installer at any time⇒
 by typing "Exit".
```

6. Accept the option to Create a new Middleware Home at the next prompt.

You see this prompt only if there are existing Oracle WebLogic installations on your computer. If the installer does not find an existing Middleware Home on your computer, it skips this step.

The installer lists the existing Oracle WebLogic installations on your computer. The selection arrow should point to *Create a new Middleware Home*. Type Next to accept this default option.

Note. Do not type a number; simply type Next.


```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Choose Middleware Home Directory:
---------------------------------

 ->1|* Create a new Middleware Home
   2|/home/ms23546/64BitWls1034OnJRT40160007




Enter index number to select OR [Exit][Previous][Next]> 1
```

Choose Middleware Home Directory prompt

7. Enter the full path where you want to install Oracle WebLogic, and press ENTER.

   Install Oracle WebLogic Server 10.3.4 into a new location, different from where you installed your previous versions of Oracle WebLogic Server including Oracle WebLogic Server 10.3.3. In this example, *WLS_HOME* is /home/ms23546/64bitWls1034GA_Consolerno104. The default in the prompt is /home/ms23546/Oracle/Middleware.

   The directory where you install Oracle WebLogic is referred to as *WLS_HOME* in this documentation. If the directory does not exist, the installer creates it for you.

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Choose Middleware Home Directory:
---------------------------------

    "Middleware Home" = [Enter new value or use default
"/home/ms23546/Oracle/Middleware"]




Enter new Middleware Home OR [Exit][Previous][Next]> /home/ms23546/64BitWls1034G
A_Consolerno104
```

Entering the Middleware Home Directory

8. Type Next at the confirmation prompt displaying the Middleware Home directory, and press ENTER.

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Choose Middleware Home Directory:
---------------------------------

    "Middleware Home" = [/home/ms23546/64BitWls1034GA_Consolerno104]

Use above value or select another option:
    1 - Enter new Middleware Home
    2 - Change to default [/home/ms23546/Oracle/Middleware]




Enter option number to select OR [Exit][Previous][Next]> Next
```

Middleware Home Directory confirmation prompt

9. At the prompt to register for security updates, type *3* for Receive Security Update, and press ENTER.

Note. In the next few steps, you will bypass the security updates registration.

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Register for Security Updates:
------------------------------

Provide your email address for security updates and  to initiate configuration m
anager.

   1|Email:[]
   2|Support Password:[]
   3|Receive Security Update:[Yes]



Enter index number to select OR [Exit][Previous][Next]> 3
```

Register for Security Updates prompt

10. Type *No* when asked to provide your email address and press ENTER at the following prompt, "Receive Security Update":

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Register for Security Updates:
------------------------------

Provide your email address for security updates and  to initiate configuration m
anager.

    "Receive Security Update:" = [Enter new value or use default "Yes"]



Enter [Yes][No]? No
```

Provide email address for security updates prompt

11. Type *Yes* and press ENTER to confirm your choice to bypass the registration at the prompt with this question: "Do you wish to bypass initiation of the configuration manager and remain uninformed of critical security issues in your configuration?"

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Register for Security Updates:
------------------------------

Provide your email address for security updates and  to initiate configuration m
anager.

    "Receive Security Update:" = [Enter new value or use default "Yes"]


    ** Do you wish to bypass initiation of the configuration manager and
    **  remain uninformed of critical security issues in your configuration?


Enter [Yes][No]? Yes
```

Confirming the choice to bypass registration for security updates

12. Type Next at the following prompt and press ENTER.

    Note that the value *No* is now populated for item 3, “Receive Security Update”.

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Register for Security Updates:
------------------------------

Provide your email address for security updates and  to initiate configuration m
anager.

   1|Email:[]
   2|Support Password:[]
   3|Receive Security Update:[No]



Enter index number to select OR [Exit][Previous][Next]> Next
```

Verifying the choice to bypass the security updates

13. Enter *1* to select a Typical installation at the Choose Install Type prompt:


```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Choose Install Type:
--------------------

Select the type of installation you wish to perform.

 ->1|Typical
    |  Install the following product(s) and component(s):
    | - WebLogic Server
    | - Oracle Coherence

   2|Custom
    |  Choose software products and components to install and perform optional
    |configuration.




Enter index number to select OR [Exit][Previous][Next]> Next
```

Choose Install Type prompt

14. Type Next and press ENTER to confirm the JDK location at the JDK Selection prompt.

    The location in this example is /usr/java6_64.

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

JDK Selection (Any * indicates Oracle Supplied VM):
---------------------------------------------------

JDK(s) chosen will be installed.  Defaults will be used in script string-substit
ution if installed.

   1|Add Local Jdk
   2|/usr/java6_64[x]



   *Estimated size of installation:  721.0 MB


Enter 1 to add or >= 2 to toggle selection  OR [Exit][Previous][Next]> Next
```

JDK Selection prompt

15. Accept the default selection at the Choose Product Installation Directories prompt, and type Next.

Note. Be sure to accept the default directory. This is important for interaction with Oracle support.

The Middleware Home Directory in this example is /home/ms23546/64BitWls1034GA_Consolerno104, and the product installation directory is /home/ms23546/64BitWls1034GA_Consolerno104/wlserver_10.3.

```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Choose Product Installation Directories:
----------------------------------------

Middleware Home Directory: [/home/ms23546/64BitWls1034GA_Consolerno104]

Product Installation Directories:


   1|WebLogic Server:
[/home/ms23546/64BitWls1034GA_Consolerno104/wlserver_10.3]   2|Oracle
Coherence:
    |[/home/ms23546/64BitWls1034GA_Consolerno104/coherence_3.6]




Enter index number to select OR [Exit][Previous][Next]> Next
```

Choose Product Installation Directories prompt

16. Verify your choices in the installation summary, and type Next to begin the installation.

```
<-----------------------------------------------------------------------------
The following Products and JDKs will be installed:
---------------------------------------------------

    WebLogic Platform 10.3.4.0
    |_____WebLogic Server
    |     |_____Core Application Server
    |     |_____Administration Console
    |     |_____Configuration Wizard and Upgrade Framework
    |     |_____Web 2.0 HTTP Pub-Sub Server
    |     |_____WebLogic SCA
    |     |_____WebLogic JDBC Drivers
    |     |_____Third Party JDBC Drivers
    |     |_____WebLogic Server Clients
    |     |_____WebLogic Web Server Plugins
    |     |_____UDDI and Xquery Support
    |     |_____Evaluation Database
    |_____Oracle Coherence
          |_____Coherence Product Files

    *Estimated size of installation: 721.1 MB



Enter [Exit][Previous][Next]> Next
```

Installation summary prompt

A progress indicator appears.

17. Type Exit when the installation is complete.


```
<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Configuring OCM...

0%          25%          50%          75%          100%
[------------|------------|------------|------------]
[**************************************************]


Creating Domains...




<-------------------- Oracle Installer - WebLogic 10.3.4.0 ------------------->

Installation Complete


Congratulations! Installation is complete.


Press [Enter] to continue or type [Exit]>
```

Installation Complete prompt

If the installation fails, review the events in the log file *WLS_INSTALL*/logs/Wls1034Install.log.

Task 2-1-5: Installing Oracle WebLogic on Linux or UNIX in Silent Mode

Installation in console mode is normally used for Linux and UNIX operating systems, but you also may use the silent mode installation. The following procedure assumes that you saved the installation file wls1034_generic.jar from Oracle E-Delivery in the directory *WLS_INSTALL*. You should have installed the appropriate JDK to *JAVA_HOME* before beginning this installation.

To run the Oracle WebLogic installation in silent mode:

1. Download the Oracle WebLogic installation file and save it in a local directory, referred to here as *WLS_INSTALL*.

   If you downloaded the zip file for the Oracle WebLogic installation from Oracle E-Delivery to a Microsoft Windows computer, FTP the zip file in binary mode to your Linux or Oracle Solaris computer before unzipping it into *WLS_INSTALL*.

2. Change directory to *WLS_INSTALL* and make the installer file executable using the following command:

   ```
   chmod a+x wls1034_generic.jar
   ```

3. In a shell window, change directory to *WLS_INSTALL*:

   ```
   cd WLS_INSTALL
   ```

4. Set *JAVA_HOME* to be the location where you installed the JDK.

   For example, if the JDK had been installed under “/opt/java6”, use the following commands:

   ```
   JAVA_HOME=/opt/java6
   export JAVA_HOME
   ```

5. Copy the following content into a text editor and save it in XML format as *installer.xml*:

Note. Review the text and remove the line-continuation arrows, (⇒) before saving. The name "installer.xml" will later be used in the command to launch the Oracle WebLogic installer.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Silent installer option: -mode=silent -silent_xml=/home/me/silent.xml -->
<domain-template-descriptor>
<input-fields>
  <data-value name="BEAHOME" value="ToBeReplacedWithWL1034HOME" />
  <data-value name="WLS_INSTALL_DIR" value="ToBeReplacedWithWL1034HOME/wlserver_⇒
10.3" />
  <data-value name="COMPONENT_PATHS" value="WebLogic Server/Core Application⇒
 Server|WebLogic Server/Administration Console|WebLogic Server/Configuration⇒
 Wizard and Upgrade Framework|WebLogic Server/Web 2.0 HTTP Pub-Sub Server|Web⇒
Logic Server/WebLogic JDBC Drivers|WebLogic Server/Third Party JDBC Drivers|Web⇒
Logic Server/WebLogic Server Clients|WebLogic Server/WebLogic Web Server⇒
 Plugins|WebLogic Server/UDDI and Xquery Support|WebLogic Server/Workshop Code⇒
 Completion Support|WebLogic Server/WebLogic SCA|WebLogic Server/Evaluation⇒
 Database|Oracle Coherence/Coherence Product Files" />
  <data-value name="INSTALL_NODE_MANAGER_SERVICE" value="no" />
</input-fields>
</domain-template-descriptor>
```

6. Create a local directory to install Oracle WebLogic, referred to here as *WLS_HOME*.
7. Using the text replacement utility in your text editor, replace all occurrences of the string: "ToBeReplacedWithWL1034HOME" with the actual directory path you created for the Oracle WebLogic 10.3.4 installation.

Note. Install Oracle WebLogic 10.3.4 to a location different form the location where you installed previous versions of Oracle WebLogic, including version 10.3.3.

In this example, *WLS_HOME* is /home/ms23546/64BitWls1034GASilent:

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- Silent installer option: -mode=silent -silent_xml=/home/me/silent.xml -->
<domain-template-descriptor>
<input-fields>
  <data-value name="BEAHOME" value="/home/ms23546/64BitWls1034GASilent" />
  <data-value name="WLS_INSTALL_DIR" value="/home/ms23546/64BitWls1034GASilent⇒
/wlserver_10.3" />
  <data-value name="COMPONENT_PATHS" value="WebLogic Server/Core Application⇒
 Server|WebLogic Server/Administration Console|WebLogic Server/Configuration⇒
 Wizard and Upgrade Framework|WebLogic Server/Web 2.0 HTTP Pub-Sub Server|Web⇒
Logic Server/WebLogic JDBC Drivers|WebLogic Server/Third Party JDBC Drivers|Web⇒
Logic Server/WebLogic Server Clients|WebLogic Server/WebLogic Web Server⇒
 Plugins|WebLogic Server/UDDI and Xquery Support|WebLogic Server/Workshop Code⇒
 Completion Support" />
  <data-value name="INSTALL_NODE_MANAGER_SERVICE" value="no" />
```



```
</input-fields>
</domain-template-descriptor>
```

8. Save the installer.xml file in ASCII mode in *WLS_INSTALL*.

   If it is necessary, FTP it in ASCII mode into the *WLS_INSTALL* directory.

9. Run the following command in the *WLS_INSTALL* directory to launch the installer:

   For AIX or Linux:

   ```
   ${JAVA_HOME}/bin/java -jar ./wls1034_generic.jar -mode=silent -silent_xml=.⇒
   /installer.xml -log=./logs/Wls1034Install.log
   ```

   For HP-UX or Oracle Solaris:

   ```
   ${JAVA_HOME}/bin/java -d64 -jar ./wls1034_generic.jar -mode=silent -silent_xml=⇒
   ./installer.xml -log=./logs/wls1034Install.log
   ```

   Note. The JVM parameter "-d64" is required for HP-UX or Oracle Solaris.

   A progress indicator tracks the installation.

10. When the installation is complete, open the *WLS_INSTALL*/logs/wls1034Install.log file with a text editor to confirm that the installation was successful.

    At the end of the log file, you should see the message "The installation was successful!"

Task 2-1-6: Configuring JDK for Daylight Savings Time Change

The version of JDK mentioned in the previous section Installing JDK for Oracle WebLogic includes the Daylight Saving Time (DST) rules available at the time of packaging. If new rules are implemented after this time, you should use the instructions in this section to update the time zone definition files.

You can skip this section unless a change to the DST rules has happened near or after the general availability date of Oracle WebLogic or PeopleSoft PeopleTools. Consult the information on configuring PeopleSoft timezone definitions in the Global Technology PeopleBook.

See *PeopleTools 8.52: Global Technology PeopleBook*

This section provides an example of how the time zone updater utility (TZUPDATER), supplied by each of the four JDK vendors can be used to update the time zone definition files contained in the JDK used by Oracle WebLogic server.

1. Identify and shut down any JVM processes that are using the JDK that you will be updating.
2. For future reference or restoration, back up the location where the targeted JDK is located.

   The JDK being used for different operating systems is different. For Oracle WebLogic 10.3.4, refer to the commEnv.cmd (for Windows), or commEnv.sh (for UNIX) file under *WLS_HOME*\wlserver_10.3\common\bin to determine the setting for JAVA_HOME and the exact name and location for the JDK being used by your Oracle WebLogic server. *WLS_HOME* is the directory where Oracle WebLogic is installed.

3. Download the appropriate updater utility for your operating system from the JDK vendor, as listed in this table:

Operating System	Vendor	Time Zone Updater URL
HP-UX	Hewlett Packard	http://www.hp.com/go/java (Select the "DST" link.)
IBM AIX 5L	IBM	http://www-128.ibm.com /developerworks/java/jdk/dst /index.html
Linux	Oracle	http://www.oracle.com/technology /software/products/jrockit /index.html
Microsoft Windows	Oracle	http://www.oracle.com/technology /software/products/jrockit /index.html
Oracle Solaris (on SPARC and x86–64)	Oracle	http://java.sun.com/javase /tzupdater_README.html

Each tzupdater provided by the vendor comes with instructions (typically in a readme file) describing how to:

- Locate the correct JDK.
- Apply classes using the tzupdater or provided scripts.
- Check tzupdater versions.

Read the instructions carefully as the steps and instructions are vendor-specific. Keep in mind that these instructions and versions may be updated when the vendor finds it necessary.

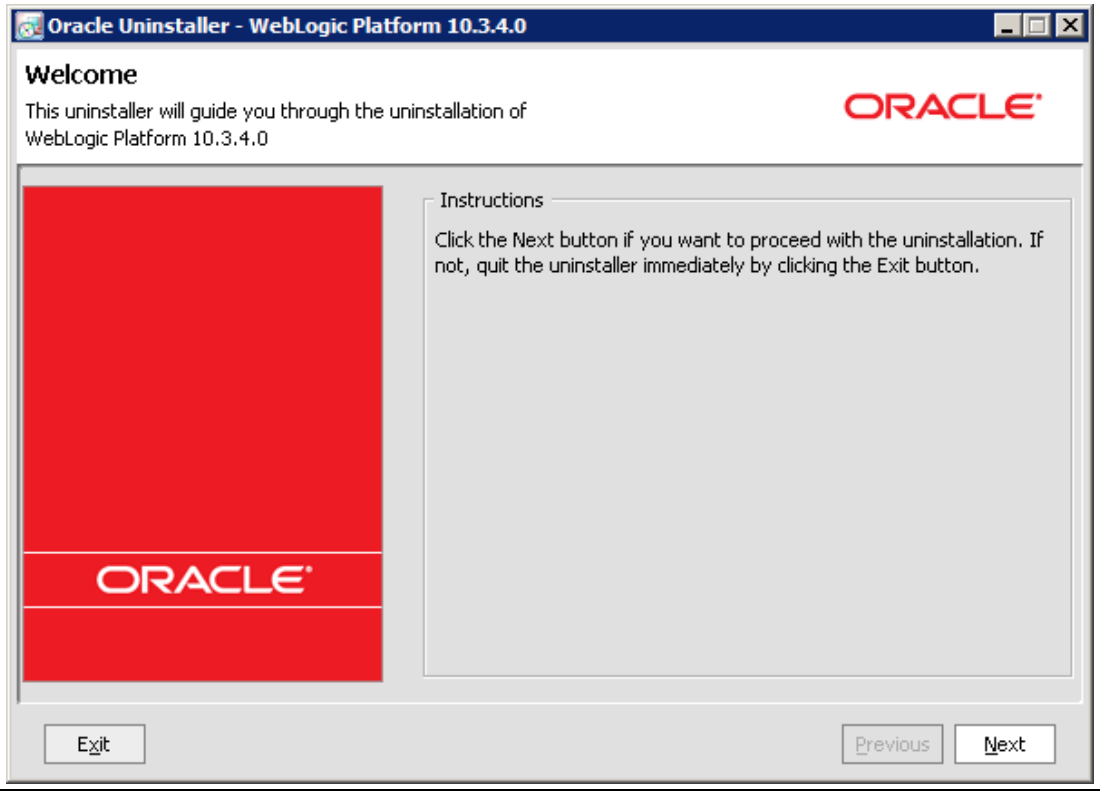
Note. After successfully running the TZUPDATER to update a JDK location, the changes will take effect only for newly started Java processes from that location. In the event that you did not identify and stop all Java processes running from this location, it will be necessary to stop and restart these for the changes to take effect.

Task 2-1-7: Removing the Oracle WebLogic Installation on Microsoft Windows

To remove the Oracle WebLogic installation on Microsoft Windows (GUI mode):

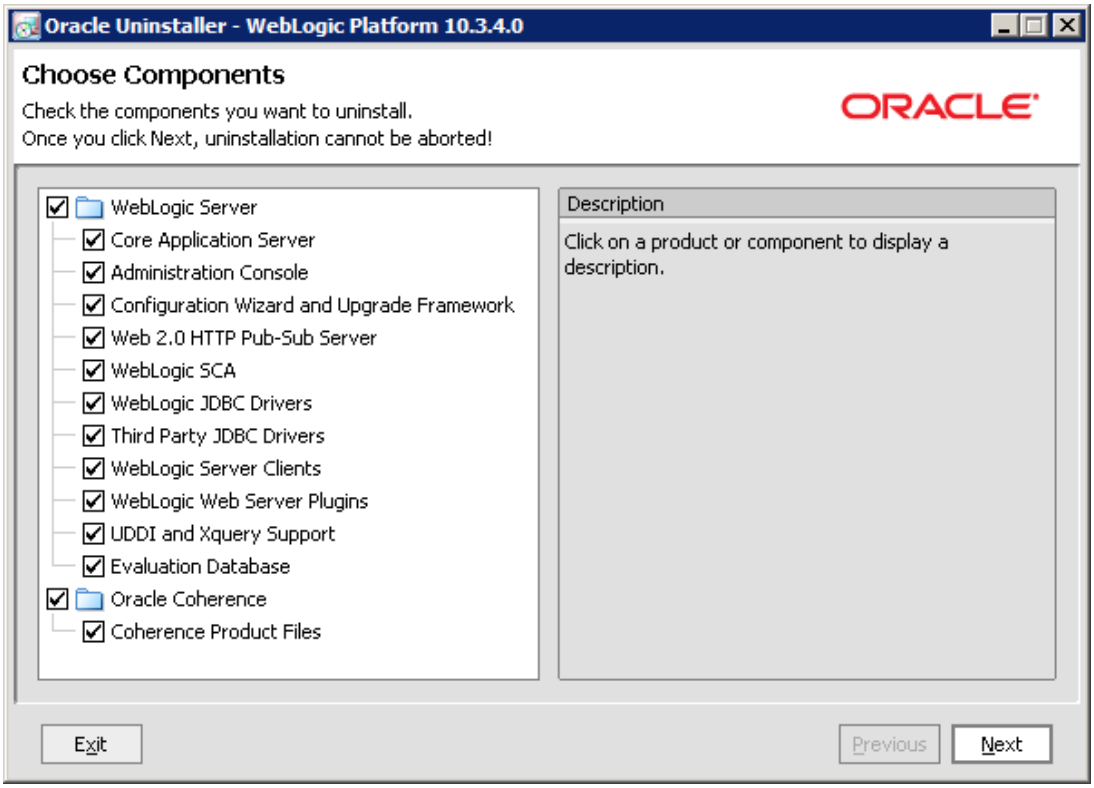
1. Select Start, Programs, Oracle WebLogic, Uninstall Oracle WebLogic.

   The welcome window includes the informational text: "Click the Next button if you want to proceed with the uninstallation. If not, quit the uninstaller immediately by clicking the Exit button."

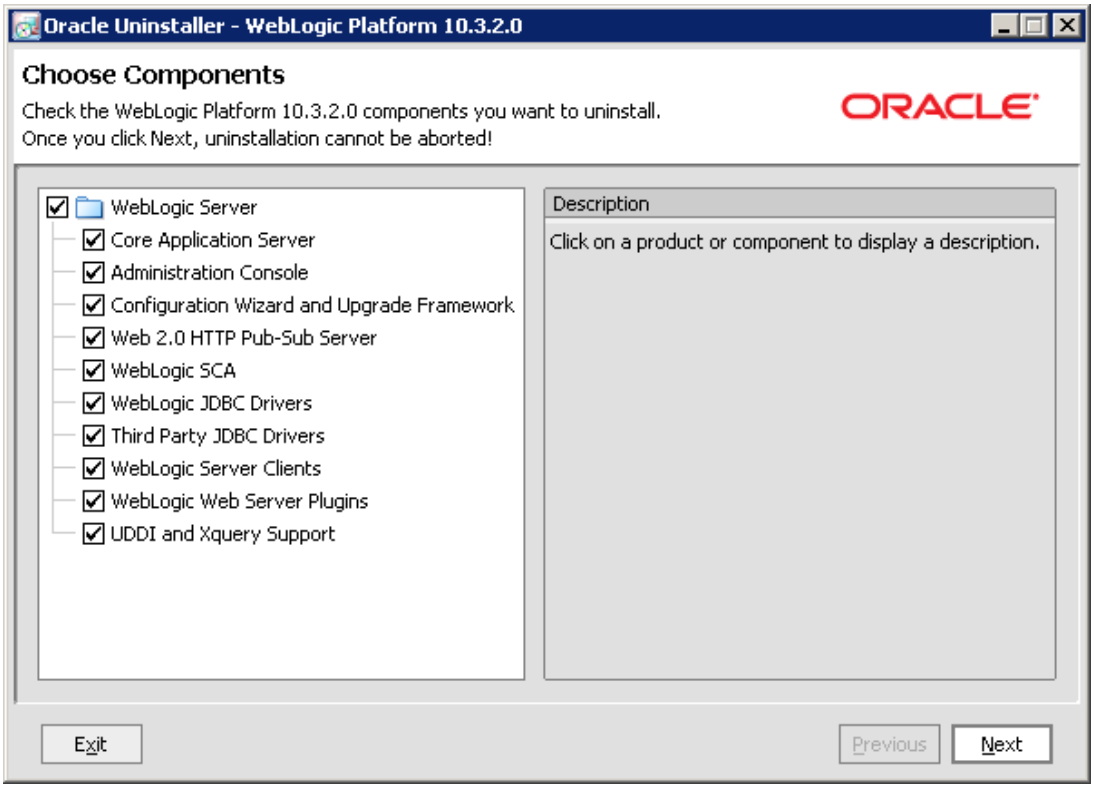


Oracle WebLogic Uninstaller: Welcome window

2. Select the components that you want to uninstall (by default all components are selected) and click Next.



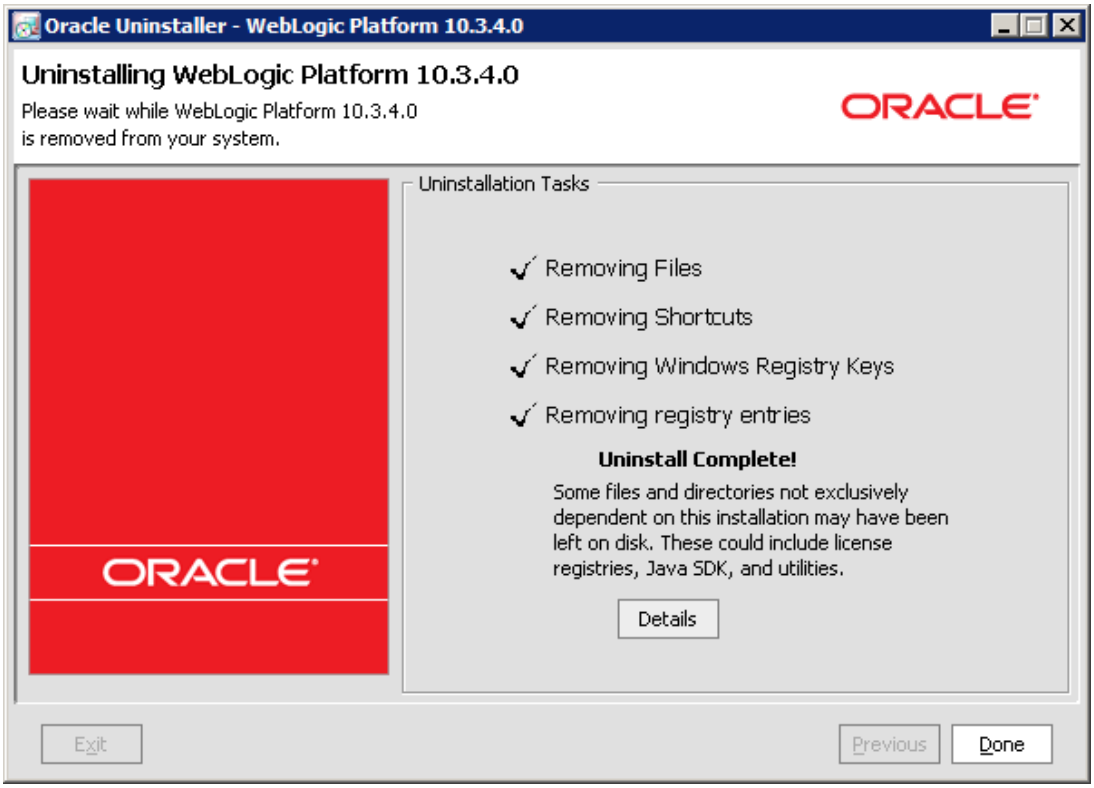
Oracle WebLogic Uninstaller: Choose Components window



Oracle WebLogic Uninstaller: Choose Components window

A progress indicator tracks the components being removed.

3. After all the components are uninstalled, click Done.



Oracle WebLogic Uninstaller: Uninstall Complete window

4. Remove the *WLS_HOME* directory after the uninstallation.

Task 2-1-8: Removing the Oracle WebLogic Installation in Console Mode

To remove the Oracle WebLogic installation on UNIX or Linux in console mode:

1. Change directory to *WLS_HOME*/weblogic_10.3/uninstall.
2. Run the following command to launch the uninstaller:

```
uninstall.sh
```

Note. To run the uninstaller on Microsoft Windows in console mode, use the command `uninstall.cmd`.

3. Type Next at the Welcome prompt:

```
<----------Oracle Uninstaller - WebLogic Platform 10.3.4.0---------->
Welcome:

Welcome to the WebLogic Platform 10.3.4.0 uninstaller. If
 you wish to proceed with the uninstallation type Next,
 otherwise, please type Exit to cancel.

Enter [Exit][Next]> Next
```

4. Type Next to accept a full uninstallation.

The screen lists all of the products and components that will be removed. The following example shows the product list for Linux:

```
<----------Oracle Uninstaller - WebLogic Platform 10.3.4.0---------->
Choose Products and Components to uninstall:
---------------------------------------------
Check the WebLogic Platform components you want to uninstall.

WebLogic Platform 10.3.4.0
|_____WebLogic Server [1] x
|__________Core Application Server [1.1] x
|__________Administration Console [1.2] x
|__________Configuration Wizard and Upgrade Framework [1.3] x
|__________Web 2.0 HTTP Pub-Sub Server [1.4] x
|__________WebLogic SCA [1.5] x
|__________WebLogic JDBC Drivers [1.6] x
|__________Third Party JDBC Drivers [1.7] x
|__________WebLogic Server Clients [1.8] x
|__________WebLogic Web Server Plugins [1.9] x
|__________UDDI and Xquery Support [1.10] x

|_____Oracle Coherence [2] x
|__________Coherence Product Files [2.1] x

Enter number exactly as it appears in brackets to toggle selection OR [Exit]>⇒
 Next
```

5. An indicator shows the progress of the uninstallation process, followed by a completion message.

```
<----------Oracle Uninstaller - WebLogic Platform 10.3.4.0---------->
Uninstallation Complete
Uninstallation of selected components has completed successfully.

Press [Enter] to continue
```

6. Manually remove *WLS_HOME* to complete the uninstallation.

Task 2-2: Installing IBM WebSphere Application Server

This section discusses:

- Understanding IBM WebSphere Installation
- Prerequisites
- Obtaining IBM WebSphere Installation Files
- Installing IBM WebSphere 7.0.0.15 ND
- Installing IBM HTTP Server 7.0.0.15 on HP-UX Itanium and Oracle Solaris
- Installing IBM HTTP Server 7.0.0.15 on AIX, Linux, and Microsoft Windows

- Installing IBM WebSphere Plug-ins 7.0.0.15

Understanding IBM WebSphere Installation

Oracle supports 64-bit IBM® WebSphere® Application Server Network Deployment 7.0.0.15 (referred to as IBM WebSphere ND in this documentation) for PeopleSoft PeopleTools 8.52. The IBM WebSphere ND requires Java Runtime Environment (JRE) 1.6 SR6.

IBM WebSphere Application Server supports IBM HTTP server (IHS) as a HTTP Reverse Proxy servers. IBM WebSphere Application Server alone cannot act as a proxy server for PeopleSoft PeopleTools REN Server. You must also install PeopleSoft Pure Internet Architecture, as well as installing the IBM HTTP server. Consult My Oracle Support for information on the versions of IHS certified for use with PeopleSoft PeopleTools.

This section includes guidelines for installing IBM WebSphere ND, the Web server plug-ins for IBM WebSphere Application Server, and IHS. For detailed installation instructions, see the IBM documentation.

See Also

Enterprise PeopleTools 8.52 Hardware and Software Requirements

My Oracle Support, Certifications

"Clustering and High Availability for Enterprise Tools 8.5x," My Oracle Support, (search for the article name and select the release)

IBM WebSphere Application Server Information Center, http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/com.ibm.websphere.nd.doc/info/welcome_nd.html

Prerequisites

IBM WebSphere ND is certified for PeopleSoft PeopleTools 8.52 on the following operating systems:

- AIX
- HP-UX
- Linux
- Microsoft Windows
- Solaris

The full lists of prerequisites for IBM WebSphere Application Server Network Deployment 7.0.0.15 are available on the IBM website:

See http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27012369

In addition, review the following prerequisites before beginning your installation:

- Both IBM WebSphere ND and PeopleSoft Pure Internet Application (PIA) need to be installed and deployed using the same user id. This restriction has been put forth in order to avoid any security and manage profile creation issues.

  IBM WebSphere ND can be installed either with root (Admin on Microsoft Windows) or non-root user ids. However, a non-root user is not capable of setting up Secure Socket Layer (SSL) on IBM WebSphere ND. A root user id is required to configure SSL on IBM WebSphere ND even though the install is done using non-root user id. It is important to remember that root user id is required only for configuration of SSL. For more information on the limitations of non-root user id, see the following information.

See http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/topic/com.ibm.websphere.installation.nd.doc/info/ae/ae/cins_nonroot.html

- On Microsoft Windows 2008 R2 operating systems, if you are not using the built-in administrator account to run the commands, you will need stronger user account privileges to carry out the installation of IBM WebSphere and its components.

  To set the appropriate privileges, right-click the installer and select Run as administrator. Do the same thing for the installation of IBM WebSphere, IBM HTTP Server, IBM Web server Plug-ins, and the update installers.
- On UNIX platforms, the /var file system is used to store all the security logging information for the system; therefore it is critical that you maintain free space in /var for these operations.
- When you carry out the GUI mode installation on UNIX, executing the installation wizard launches a GUI window. You must run this command from an X-Windows client window (for example, Reflection-X).
- PeopleSoft PeopleTools 8.52 supports the IBM HTTP Server (IHS) 7.0.0.15 that is bundled with the IBM WebSphere 7.0.0.15 installation. Use of an external remote proxy server (RPS) is optional.

  The bundled versions of IHS are 64-bit for Solaris and HP-UX Itanium operating systems. For other operating systems, the bundled versions of IHS are 32-bit. For more information, see the IBM web site.

  See "Fast facts: Should you install a 32-bit or 64-bit fix pack on IBM HTTP Server V7.0?" IBM support web site, http://www-01.ibm.com/support/docview.wss?rs=177&context=SSEQTJ&q1=IHS+v7+64-bit&uid=swg21397054&loc=en_US&cs=utf-8&lang=en

  See "Details concerning whether IBM HTTP Server V7.0 is 32-bit or 64-bit, and whether it should be updated with a 32-bit or 64-bit fix pack" IBM support web site, http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg21396916

Task 2-2-1: Obtaining IBM WebSphere Installation Files

For PeopleSoft PeopleTools 8.52, the installation files for IBM WebSphere are not bundled with PeopleSoft PeopleTools on Oracle E-Delivery. To download the necessary files for the IBM WebSphere installation, contact IBM. The installation of IBM WebSphere 7.0.0.15 requires the download of the following components:

- WebSphere Application Server Network deployment v7 64-bit
- IBM HTTPServer V7.0 64-bit
- Plug-ins V7.0 64-bit
- UpdateInstaller V7.0.0.15 32-bit
- UpdateInstaller V7.0.0.15 64-bit
- Fix Packs 7.0.0.15 for WebSphere, IHS, Plugins, and SDK

The distribution is provided as operating-system-specific zip files. The base binaries of IBM WebSphere 7.0, IHS 7.0 and Plug-in 7.0 have to be downloaded by providing an IBM partner ID and password. The fix packs and the Update Installer download do not require the partner ID and can be downloaded directly from the public IBM site.

Download and extract the appropriate zip files for your operating system, listed in the following tables.

AIX

File or Folder Name	Description
C1G2QML.tar.gz	IBM WebSphere Application Server Network Deployment V7 for AIX on Power PC 64–bit
C1G2RML.tar.gz	Supplements, such as Application Client, IBM HTTP Server, Web Server Plug-ins and Update Installer
UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-AixPPC64.zip	Binaries for installation and uninstallation of 64-bit UpdateInstaller 7.0.0.15
32-bit_UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-AixPPC32.zip	Binaries for installation and uninstallation of 32-bit UpdateInstaller 7.0.0.15
FixPacks7.0.0.15: • 7.0.0-WS-IHS-AixPPC64-FP0000015.pak • 7.0.0-WS-PLG-AixPPC64-FP0000015.pak • 7.0.0-WS-WAS-AixPPC64-FP0000015.pak • 7.0.0-WS-WASSDK-AixPPC32-FP0000015.pak • 7.0.0-WS-WASSDK-AixPPC64-FP0000015.pak	Fix Packs required for upgrading IBM WebSphere ND, IHS and Plug-in to 7.0.0.15

HP-UX Itanium

File or Folder Name	Description
C1G2WML.tar.gz	IBM WebSphere Application Server Network Deployment V7 for HP-UX on Integrity 64–bit
C1G2XML.tar.gz	Supplements, such as Application Client, IBM HTTP Server, Web Server Plug-ins and Update Installer
UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-HpuxIA64.zip	Binaries for installation and uninstallation of UpdateInstaller 7.0.0.15
FixPacks7.0.0.15: • 7.0.0-WS-IHS-HpuxIA64-FP0000015.pak • 7.0.0-WS-PLG-HpuxIA64-FP0000015.pak • 7.0.0-WS-WAS-HpuxIA64-FP0000015.pak • 7.0.0-WS-WASSDK-HpuxIA64-FP0000015.pak	Fix Packs required for upgrading IBM WebSphere ND, IHS and Plug-in to 7.0.0.15

Linux

File or Folder Name	Description
C1G35ML.tar.gz	IBM WebSphere Application Server Network Deployment V7 for Linux on x86–64 bit
C1G36ML.tar.gz	Supplements, such as Application Client, IBM HTTP Server, Web Server Plug-ins and Update Installer
UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-LinuxAMD64.zip	Binaries for installation and uninstallation of 64-bit UpdateInstaller 7.0.0.15

File or Folder Name	Description
32-bit_UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-LinuxIA32.zip	Binaries for installation and uninstallation of 32-bit UpdateInstaller 7.0.0.15
FixPacks7.0.0.15: • 7.0.0-WS-IHS-LinuxX64-FP0000015.pak • 7.0.0-WS-PLG-LinuxX64-FP0000015.pak • 7.0.0-WS-WAS-LinuxX64-FP0000015.pak • 7.0.0-WS-WASSDK-LinuxX32-FP0000015.pak • 7.0.0-WS-WASSDK-LinuxX64-FP0000015.pak	Fix Packs required for upgrading IBM WebSphere ND, IHS and Plug-in to 7.0.0.15

Microsoft Windows

File or Folder Name	Description
C1G2JML.zip	IBM WebSphere Application Server Network Deployment V7 for Windows x86-64 bit
C1G2KML.zip	Supplements, such as Application Client, IBM HTTP Server, Web Server Plug-ins and Update Installer
UpdateInstaller-7.0.0.15\7.0.0.15-WS-UPDI-WinAMD64.zip	Binaries for installation and uninstallation of UpdateInstaller 7.0.0.15
32-bit_UpdateInstaller-7.0.0.15\7.0.0.15-WS-UPDI-WinIA32.zip	Binaries for installation and uninstallation of 32-bit UpdateInstaller 7.0.0.15
FixPacks7.0.0.15: • 7.0.0-WS-IHS-WinX64-FP0000015.pak • 7.0.0-WS-PLG-WinX64-FP0000015.pak • 7.0.0-WS-WASSDK-WinX32-FP0000015.pak • 7.0.0-WS-WASSDK-WinX64-FP0000015.pak • 7.0.0-WS-WAS-WinX64-FP0000015.pak	Fix Packs required for upgrading IBM WebSphere ND, IHS and Plug-in to 7.0.0.15

Oracle Solaris on SPARC

File or Folder Name	Description
C1G3HML.tar.gz	IBM WebSphere Application Server Network Deployment V7 for Solaris Sparc PC 64–bit
C1G3IML.tar.gz	Supplements, such as Application Client, IBM HTTP Server, Web Server Plug-ins and Update Installer

File or Folder Name	Description
UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-SolarisSparc64.zip	Binaries for installation and uninstallation of UpdateInstaller 7.0.0.15
FixPacks7.0.0.15: • 7.0.0-WS-IHS-SolarisSparc64-FP0000015.pak • 7.0.0-WS-PLG-SolarisSparc64-FP0000015.pak • 7.0.0-WS-WASSDK-SolarisSparc64-FP0000015.pak • 7.0.0-WS-WAS-SolarisSparc64-FP0000015.pak	Fix Packs required for upgrading IBM WebSphere ND, IHS and Plug-in to 7.0.0.15

Oracle Solaris on x86_64

File or Folder Name	Description
C1G3KML.tar.gz	IBM WebSphere Application Server Network Deployment V7 for Solaris
C1G3LML.tar.gz	Supplements, such as Application Client, IBM HTTP Server, Web Server Plug-ins and Update Installer
UpdateInstaller-7.0.0.15/7.0.0.15-WS-UPDI-SolarisX64.zip	Binaries for installation and uninstallation of UpdateInstaller 7.0.0.15
FixPacks7.0.0.15: • 7.0.0-WS-IHS-SolarisX64-FP0000015.pak • 7.0.0-WS-PLG-SolarisX64-FP0000015.pak • 7.0.0-WS-WASSDK-SolarisX64-FP0000015.pak • 7.0.0-WS-WAS-SolarisX64-FP0000015.pak	Fix Packs required for upgrading IBM WebSphere ND, IHS and Plug-in to 7.0.0.15

Note. See the Prerequisites section for information on 32-bit and 64-bit IHS.

Task 2-2-2: Installing IBM WebSphere 7.0.0.15 ND

For detailed information on installing IBM WebSphere 7.0.0.15 ND, see the documentation on the IBM web site. See the previous section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system. The installation of IBM WebSphere Application Server Network includes the following steps:

1. Install IBM WebSphere 7.0 64-bit.
2. Install the Update Installer 7.0.0.15
3. Upgrade IBM WebSphere 7.0 to IBM WebSphere 7.0.0.15 selecting the appropriate fix packs.

See Also

"Readme for IBM Websphere Application Server V7.0.0.15, Steps for Installing Fix Pack 15 (7.0.0.15)" IBM Support website, http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27020681#steps

Task 2-2-3: Installing IBM HTTP Server 7.0.0.15 on HP-UX Itanium and Oracle Solaris

For detailed information on installing IHS 7.0.0.15, see the documentation on the IBM web site. See the previous section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system. The installation of IHS 7.0.0.15 includes the following steps:

1. Install IHS 7.0 64-bit.
2. Install the Update Installer 7.0.0.15 64-bit.
3. Upgrade IHS 7.0 to IHS 7.0.0.15 selecting the appropriate fix packs.

Task 2-2-4: Installing IBM HTTP Server 7.0.0.15 on AIX, Linux, and Microsoft Windows

For detailed information on installing IBM HTTP Server 7.0.0.15, see the documentation on the IBM web site. See the previous section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system. To install IHS 7.0.0.15 on AIX, Linux, and Microsoft Windows operating systems, you must use the 32-bit update installer as well as the 64-bit update installer. The installation includes the following steps:

1. Install IHS 7.0 64-bit
2. Install the Update Installer 7.0.0.15 64-bit
3. Upgrade IHS 7.0 to IHS 7.0.0.15 using the 64-bit Update Installer by selecting the appropriate fix packs.
4. Install the Update Installer 7.0.0.15 32-bit.
5. Upgrade the SDK to 7.0.0.15 using the 32-bit Update Installer by selecting the appropriate fix packs.

Task 2-2-5: Installing IBM WebSphere Plug-ins 7.0.0.15

For detailed information on installing the Web server plug-ins for IBM WebSphere Application Servers, see the documentation on the IBM web site. See the earlier section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system. The installation of the Web server Plug-ins for IBM WebSphere Application Servers includes the following steps:

1. Install IBM Plug-ins 7.0 64-bit
2. Install the Update Installer 7.0.0.15
3. Upgrade IBM Plug-ins 7.0 to IBM Plug-ins 7.0.0.15 selecting the appropriate fix packs.

CHAPTER 3

Installing Additional Components

This chapter discusses:

- Reviewing Additional Components
- Installing Oracle Tuxedo

Reviewing Additional Components

Depending upon your PeopleSoft installation environment, you may need to install and configure software components that are not included with the PeopleSoft PeopleTools installation files, or which you acquire from vendors other than Oracle. Some of the components that are discussed in this installation guide include:

- Oracle Tuxedo

  The installation of Oracle Tuxedo is required for a basic PeopleSoft PeopleTools installation, and is covered in this chapter.

- COBOL

  COBOL is not needed for PeopleSoft PeopleTools or for PeopleSoft Applications that contain no COBOL programs. Check My Oracle Support for details about whether your application requires COBOL.

  See “PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the Micro Focus COBOL Compiler,” My Oracle Support (search for article title).

  See “PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the IBM COBOL Compiler,” My Oracle Support (search for article title).

  The installation and configuration of Micro Focus and IBM COBOL compilers are covered in a later chapter.

  See "Installing and Configuring COBOL"

- SAP Crystal Reports and BusinessObjects Enterprise

  The installation of SAP Crystal Reports or BusinessObjects Enterprise XI 3.1 is optional for PeopleSoft PeopleTools 8.52.

  See "Installing and Configuring Software for Crystal Reports."

- Oracle Secure Enterprise Search

  Oracle Secure Enterprise Search (SES) is the search engine for the PeopleSoft Search Framework. The integration of Oracle SES with PeopleSoft PeopleTools is covered in a later chapter.

  See "Configuring Integration Between PeopleSoft PeopleTools and Oracle SES."

Task 3-1: Installing Oracle Tuxedo

This section discusses:

- Understanding Oracle Tuxedo
- Prerequisites
- Obtaining the Oracle Tuxedo Installation Files from Oracle E-Delivery
- Obtaining the Oracle Tuxedo Patches from My Oracle Support
- Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional)
- Designating the Application Server Administrator on Microsoft Windows
- Installing Oracle Tuxedo on Microsoft Windows
- Installing the Oracle Tuxedo Patch on Microsoft Windows
- Uninstalling Oracle Tuxedo 10gR3_VS2008 and Patch on Microsoft Windows
- Checking the Windows Service Account
- Restricting Domain Process Privileges
- Setting Up the Windows Services for Oracle Tuxedo
- Verifying the Server Installation on Microsoft Windows
- Removing Existing Oracle Tuxedo Installations from UNIX (Optional)
- Completing the Preinstallation Checklist on UNIX
- Designating the Oracle Tuxedo Owner on UNIX
- Installing Oracle Tuxedo on UNIX
- Installing the Oracle Tuxedo Patch on UNIX
- Uninstalling Oracle Tuxedo 10gR3 and Patch on UNIX
- Verifying the Server Installation on UNIX
- Ensuring that Oracle Tuxedo Coexists with Earlier Versions

Understanding Oracle Tuxedo

The PeopleSoft application server uses the Oracle® Fusion Middleware product, Oracle Tuxedo, to perform transaction management, messaging, and administration. This task guides you through the installation of Oracle Tuxedo on your server. It is essential that you install Oracle Tuxedo version 10gR3, which is available on Oracle E-Delivery. You need to install Oracle Tuxedo before you go any further in setting up your application server and your PeopleSoft Pure Internet Architecture. After you perform the installation described here, you will configure the application server environment to incorporate Oracle Tuxedo with the PeopleSoft components.

Note. Oracle supports Oracle Tuxedo 10gR3 for Linux or UNIX, and Oracle Tuxedo 10gR3_VS2008 for Microsoft Windows, with PeopleSoft PeopleTools 8.52. If you have a previous version of Oracle Tuxedo installed, you need to install the new version of Oracle Tuxedo, and re-create your application server domains. (You must create your domains using PSADMIN; you cannot migrate existing domains.) You can also use PSADMIN's domain import utility.

For the sake of brevity, this documentation sometimes uses “Oracle Tuxedo 10gR3” to refer to both Oracle Tuxedo 10gR3 for Linux or UNIX, and Oracle Tuxedo 10gR3_VS2008 for Microsoft Windows, unless specifically mentioned.

The minimum patch level certified for running Oracle Tuxedo 10gR3 with PeopleSoft PeopleTools 8.52 is RP043. These installation instructions include the installation of the base Oracle Tuxedo 10gR3, followed by the patch installation.

You can install Oracle Tuxedo once for each release on a machine, regardless of the number of PeopleSoft applications or databases the server supports. For example, if you are a PeopleSoft 9.1 customer and have Oracle Tuxedo 6.5 installed, you may install Oracle Tuxedo 6.5 and Oracle Tuxedo 10gR3 on the same machine in separate directories. For example:

On Windows, you may install into C:\oracle\tuxedo10gR3_VS2008 and C:\tux65.

On UNIX, you may install into /home/oracle/tuxedo10gR3 and /prod/tuxedo/6.5.

If more than one PeopleSoft application uses the same Oracle Tuxedo version (that is, the same patch level), then it is recommended that you have a single installation of Oracle Tuxedo to serve all the supported PeopleSoft applications. A single Oracle Tuxedo installation simplifies future maintenance (such as applying patches). However, if you choose to have more than one Oracle Tuxedo installation (this scenario is possible only on UNIX systems, as Oracle Tuxedo does not allow multiple installations of the same version of Oracle Tuxedo on Microsoft Windows), you must install and maintain the same Oracle Tuxedo version more than once in different directories.

See Also

PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook

PeopleTools 8.52: System and Server Administration PeopleBook.

Operating System, RDBMS, and Additional Component Patches Required for Installation PeopleTools, My Oracle Support (search for article name and select the release)

"Clustering and High Availability for Enterprise Tools 8.5x," My Oracle Support (search for title)

Prerequisites

Before you begin to install Oracle Tuxedo, make sure that you have the following resources in place:

- TCP/IP connectivity (required for PeopleSoft PeopleTools 8.50 or higher) between the client machine and the application server
- Approximately 235 MB of free disk space on the application server
- For UNIX, you must have root access.

Task 3-1-1: Obtaining the Oracle Tuxedo Installation Files from Oracle E-Delivery

You can obtain the files needed to install Oracle Tuxedo 10gR3 or 10gR3_VS2008 from the Oracle E-Delivery site. At this point you should have already downloaded the necessary files. This section includes additional information on finding and using the files for Oracle Tuxedo if necessary.

Note. Only the Oracle Tuxedo installation files provided as part of the PeopleTools 8.52 media pack on Oracle E-Delivery are certified for use with PeopleSoft PeopleTools 8.52.

See http://edelivery.oracle.com.

See "Preparing for Installation," Using Oracle E-Delivery to Obtain Installation Files.

1. After logging in to Oracle E-Delivery, on the Media Search Pack page, select *PeopleSoft Enterprise* from the Select a Product Pack drop-down list.

   Select the operating system you are running on from the Platform drop-down list, and click Go.
2. Select the radio button for the PeopleSoft Enterprise - PeopleTools 8.52 Media Pack for your platform, and click Continue.
3. Select Oracle Tuxedo 10gR3 or 10gR3_VS2008 for your operating system, and click Download.

   Save the zip file to a temporary directory on your local system, referred to in this documentation as *TUX_INSTALL*.
4. After you download the installation files from Oracle E-Delivery, if it is necessary, transfer the files to a UNIX computer using FTP. Unzip the file and change the permissions of the unzipped file to make it an executable, for example using the chmod +x command.
5. Extract the files into *TUX_INSTALL*.

   The Oracle Tuxedo installation files are platform-specific. The following table lists the installation files for the PeopleSoft-supported platforms:

Supported Platform	Oracle Tuxedo Installer Name
IBM AIX	tuxedo10gR3_64_aix_53_ppc.bin
HP-UX Itanium	tuxedo10gR3_64_hpux_1123_ia.bin
Linux	tuxedo10gR3_64_Linux_01_x86.bin
Microsoft Windows	tuxedo10gR3_32_win_2k8_x86_VS2008.exe
Oracle Solaris on SPARC	tuxedo10gR3_64_sol_9_sp.bin
Oracle Solaris on x86–64	tuxedo10gR3_64_sol_10_x86.bin

Task 3-1-2: Obtaining the Oracle Tuxedo Patches from My Oracle Support

You can download the latest patch for Oracle Tuxedo 10gR3_VS2008 for Microsoft Windows or Oracle Tuxedo 10gR3 for Linux or UNIX from My Oracle Support. The patch level certified at the general availability date for PeopleSoft PeopleTools 8.52 is RP043. Patches released for Oracle Tuxedo 10gR3 and 10gR3_VS2008 after RP043 will also be supported.

Note. To obtain older Oracle Tuxedo patches, raise a service request through My Oracle Support.

To obtain the latest Oracle Tuxedo patch:

1. Sign in to My Oracle Support with your account name and password:

   https://support.oracle.com

2. Select the Patches & Updates tab.
3. Under Patch Search, select Product or Family (Advanced Search).
4. Select *Oracle Tuxedo* from the product drop-down list.
5. Select *Oracle Tuxedo 10.3.0.0* from the release drop-down list.
6. Select your platform.

   Note. For detailed supported platform information, see the certifications area on My Oracle Support.

   Note. If you are running on a Microsoft Window operating system, you should select 32-bit Microsoft Windows. You need 32-bit Oracle Tuxedo to run with PeopleSoft PeopleTools 8.52 on 64-bit Microsoft Windows operating systems.

   The supported platforms are:

   - AIX
   - HP-UX Itanium
   - Linux
   - Microsoft Windows
   - Oracle Solaris on SPARC
   - Oracle Solaris on x86-64

7. Click Search.

   Download the necessary files from the list of results. For installation on Microsoft Windows operating systems, make sure your rolling patch (RP) description has “VS2008” or “Visual Studio 2008” in the description.

   Note. To begin a new search, select Edit Search in the top right of the results page.

8. Download the patch file for your operating system platform to a convenient directory, referred to here as *TUX_INSTALL*.

Task 3-1-3: Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional)

You may already have prior versions of Oracle Tuxedo installed on your system from an earlier version of PeopleSoft PeopleTools. If you are completely upgrading to PeopleSoft PeopleTools 8.52 from an earlier version of PeopleSoft PeopleTools, then, you may uninstall the existing version and patches.

Note. It is not mandatory to uninstall the existing version of PeopleSoft PeopleTools, as Oracle Tuxedo 10gR3_VS2008 can coexist with prior versions on the same machine.

If you wish to use two versions of PeopleSoft PeopleTools that depend on different versions of Oracle Tuxedo, you should read the section "Ensuring that Oracle Tuxedo Coexists with Earlier Versions" before continuing.

You may have to uninstall Oracle Tuxedo for these reasons:

- You are having problems starting Oracle Tuxedo and decide to reinstall.
- You no longer need Oracle Tuxedo on a machine.

To uninstall Oracle Tuxedo from Microsoft Windows:

1. Using PSADMIN, shut down any application server, Process Scheduler, and Search server domains that may be running on the machine.
2. Stop the processes for the Tuxedo Monitor and the Tuxedo Administrative Web Server (wlisten and tuxwsvr), if applicable.
   a. Right-click on the task bar and select Task Manager.
   b. Highlight wlisten, and click the End Task button.
   c. Highlight tuxwsvr and click the End Task button.
   d. Exit Task Manager.
3. Stop and set the TListen *VERSION* service to manual, if applicable.

   Replace *VERSION* with the current version number. For example, this would be TListen 8.1 or TListen 9.1.
   a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
   b. Select TListen *VERSION*and click the Stop button.
   c. Choose the Startup Type and set to Manual.
4. Stop and set the ORACLE ProcMGR *VERSION* (or BEA ProcMGR *VERSION* for earlier releases) service to manual.
   a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
   b. Select ORACLE ProcMGR *VERSION* and click the Stop button.
   c. Choose the Startup Type and set to Manual.
5. Reboot your machine.
6. Uninstall Oracle Tuxedo in one of the following ways:
   - Using the Oracle Tuxedo *VERSION* installation CD provided by Oracle for PeopleSoft installations, open a Command Window, navigate to the root of the CD, and enter `pstuxinstall rmall`. This will remove Oracle Tuxedo *VERSION* plus any delivered Oracle Tuxedo patches from your system.
   - Using the Add/Remove Programs dialog, in sequence remove: Oracle Tuxedo*VERSION* RP and then Oracle Tuxedo *VERSION*.
7. Go to the Control Panel, double-click on the System icon, and then perform the following:
   a. Make sure *TUXDIR*\bin is deleted from PATH.

      TUXDIR refers to the Oracle Tuxedo installation directory.

b. Delete the environment variable TUXDIR.

c. Make sure you click on Apply and OK to save your changes.

8. Using Explorer, delete the Tuxedo home directory, such as C:\bea\tuxedo8.1.

   If you are unable to delete any files, reboot your machine and retry.

The instructions for installing and removing the Oracle Tuxedo 10gR3_VS2008 patch are given later in this section.

See Uninstalling Oracle Tuxedo 10gR3_VS2008 and Patch on Microsoft Windows.

Task 3-1-4: Designating the Application Server Administrator on Microsoft Windows

First you need to designate an existing user—or create a new user such as TUXADM or some other account—to be the Application Server Administrator. The Application Server Administrator, not the Windows Administrator, will install Oracle Tuxedo.

The designated user must be a local Microsoft Windows administrator and must have full system privileges. The PeopleSoft PeopleTools 8.52 program for the Oracle Tuxedo installation creates a new service for Microsoft Windows—called ORACLE ProcMGR V10gR3 with VS2008—for which you need administrator privileges. This service was developed to port Oracle Tuxedo from UNIX to Microsoft Windows. Administrator rights are required since system registry settings are updated. Once this new service is created, you must reboot to start it.

When you configure your application server domain in a read-only *PS_HOME* environment, the user ID designated to be the Application Server Administrator must have read-only access to *PS_HOME*, read and write access to *PS_CFG_HOME,* and read-only access to the Oracle Tuxedo installation directory, *TUXDIR,* (for example, C:\oracle\tuxedo10gR3_VS2008). Otherwise, in a scenario where *<PS_CFG_HOME>* = *<PS_HOME>*, the Application Server Administrator must have read and write access to *PS_HOME* and read-only access to *TUXDIR*.

See "Configuring the Application Server on Windows."

See "Preparing for Installation," Defining Server Domain Configurations.

To designate the Application Server Administrator:

1. To add the user, add the user ID by choosing Start, Settings, Control Panel, Administrative Tools, Computer Management, Local Users and Groups.

   Keep in mind that you can also use an existing account if you don't care to create a new one. You can set this to the system account or an account that is a domain administrator (if there is a need to access files on the domain).

2. Expand Local Users and Groups.
3. If the user ID does not yet exist, highlight the Users folder, and select Action, New User.
4. On the New User dialog box, specify the information for the new account.

   Make sure to deselect the User must change password at next logon check box.

5. Expand the Groups folder.
6. Right-click the Administrators group, and select All Tasks, Add to Group, Add.
7. Click Locations to select the local machine or the network domain in which you created the new user.
8. Enter the new user name you created in the object names box.

9. Click OK, and click Apply and OK again to accept the changes.

Task 3-1-5: Installing Oracle Tuxedo on Microsoft Windows

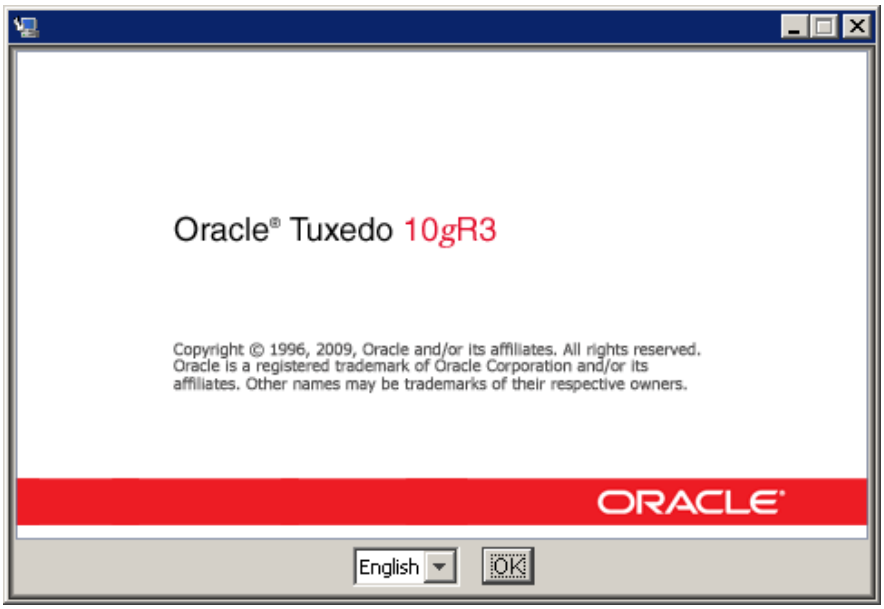
The following procedure assumes that you saved the installation files from Oracle E-Delivery in the directory *TUX_INSTALL*. Installation in GUI mode is normally used for Microsoft Windows operating systems, so this procedure uses the installer for Microsoft Windows, tuxedo10gR3_32_win_2k8_x86_VS2008.exe.

Note. Oracle Tuxedo 10gR3_VS2008 can coexist on a machine with other versions of Oracle Tuxedo.

To install Oracle Tuxedo on Microsoft Windows:

1. Double-click *TUX_INSTALL*\tuxedo10gR3_32_win_2k8_x86_VS2008.exe to begin the installation process.

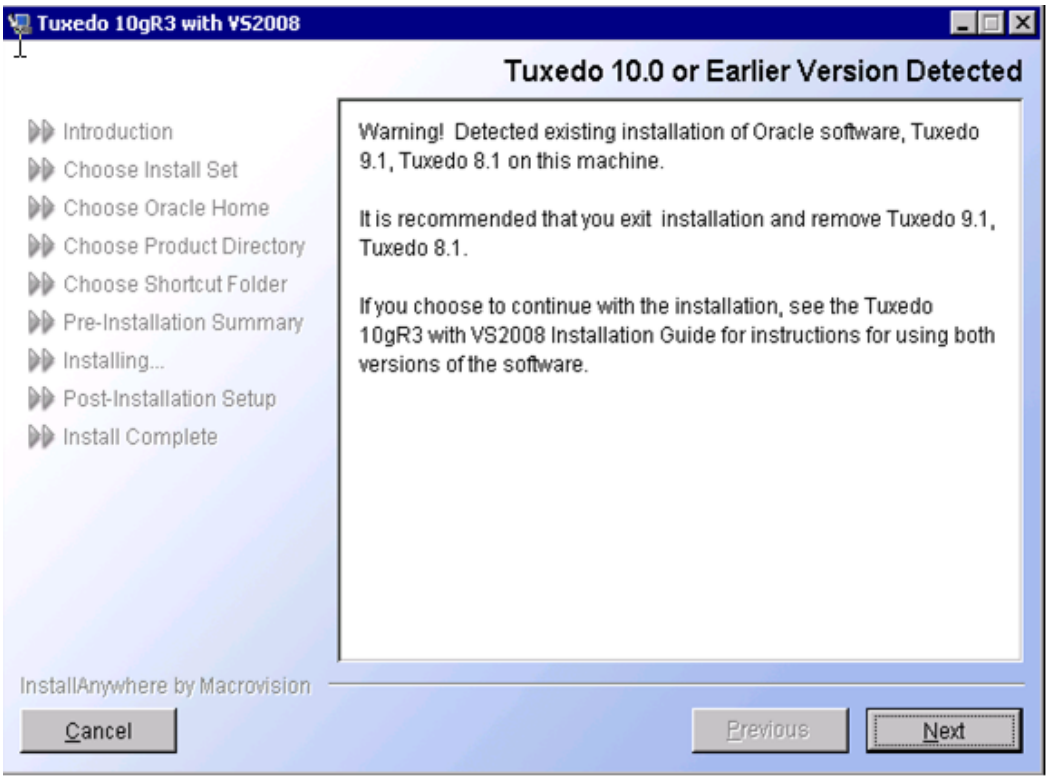
   Click OK on the initial window.



Oracle Tuxedo 10gR3 initial installation window

2. If you have other versions of Oracle Tuxedo on your system, you may get a warning that earlier versions were detected, and recommending that you exit and remove the earlier versions.

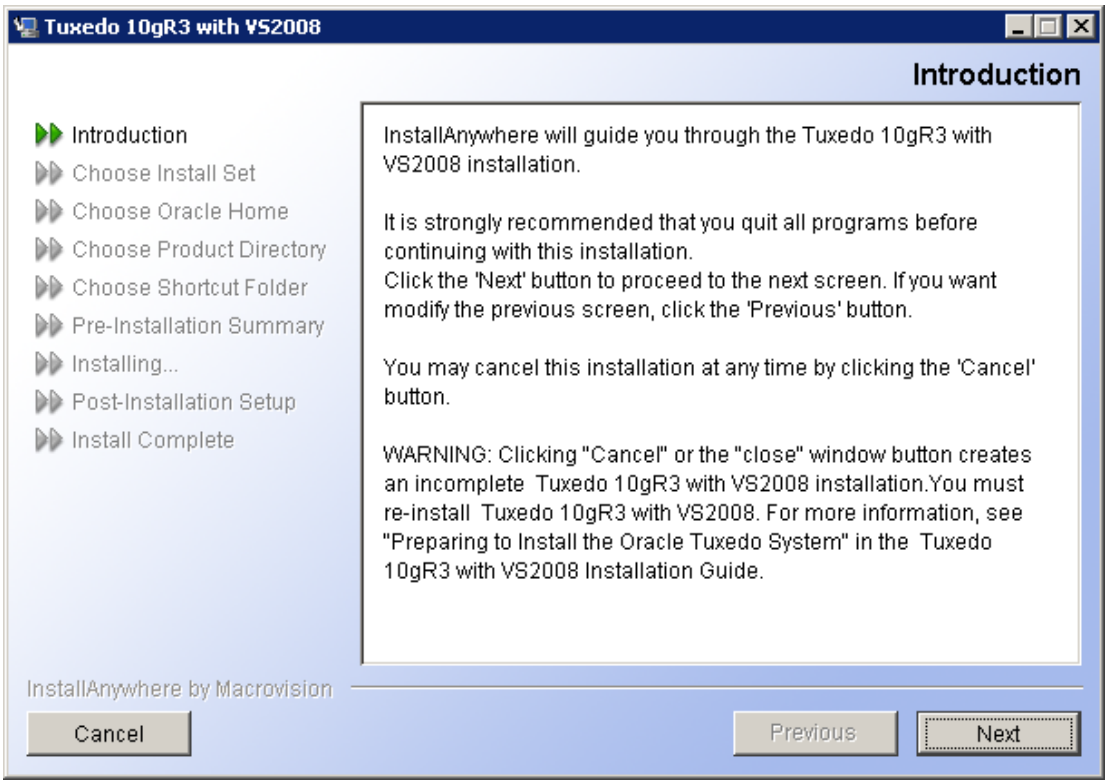
   The message directs you to the Tuxedo 10gR3 with VS2008 Installation Guide for instructions for using more than one version of the software, as shown in this example:



Tuxedo 10.0 or Earlier Version Detected window

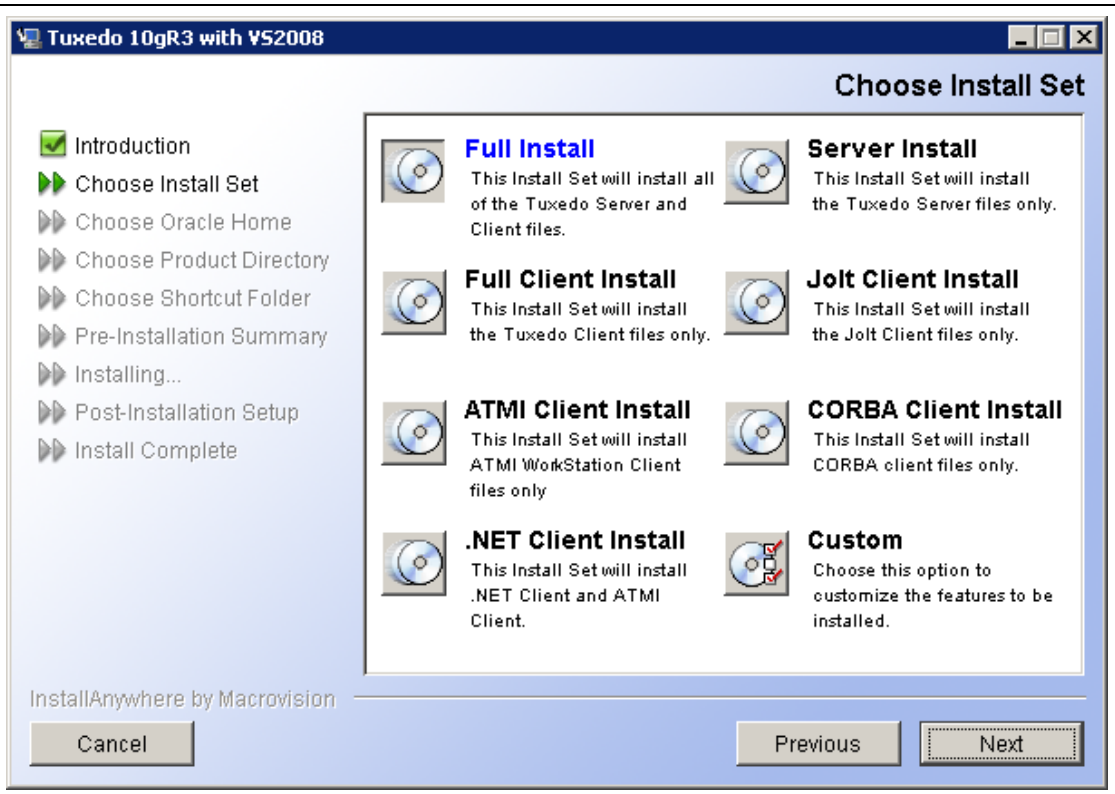
3. Click Next.

   The Introduction window shown in this example includes the following text: “You may cancel this installation at any time by clicking the ’Cancel’ button. WARNING: Clicking “Cancel” or the “close” window button creates an incomplete Tuxedo 10gR3 with VS2008 installation. You must re-install Tuxedo 10gR3 with VS2008. For more information, see “Preparing to Install the Oracle Tuxedo System” in the Tuxedo 10gR3 with VS2008 Installation Guide.”



Oracle Tuxedo installation introduction window

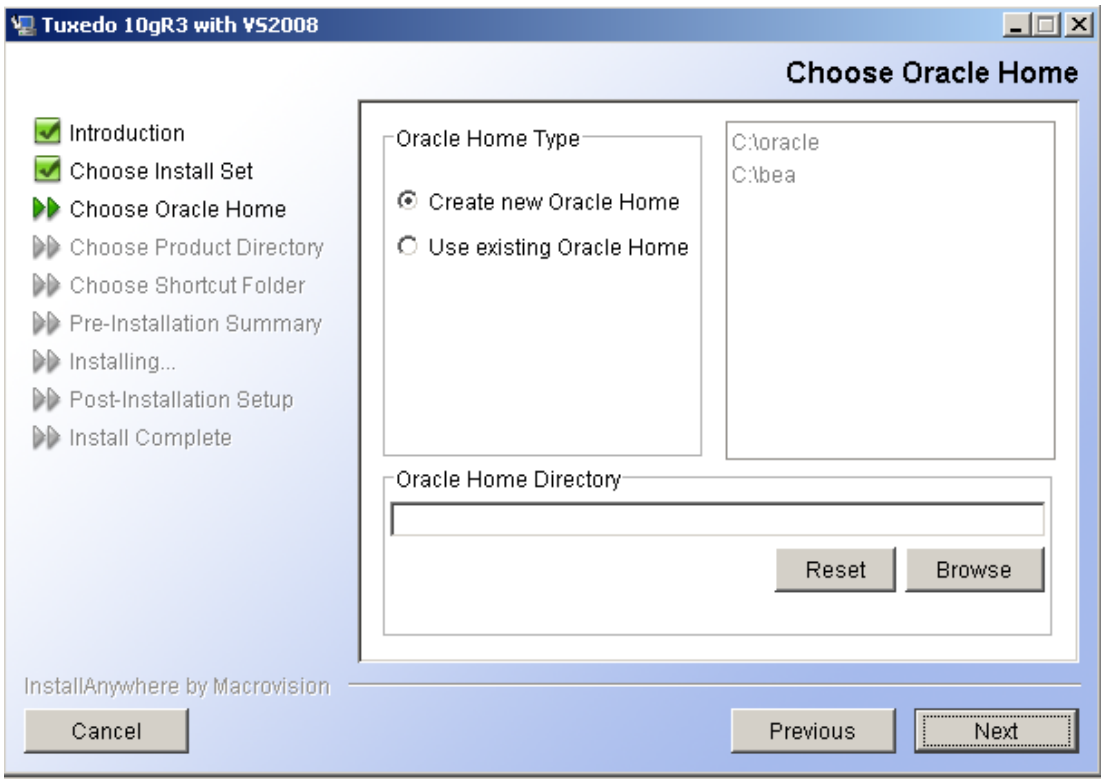
4. Accept the default installation set option, Full Install, and click Next.



Oracle Tuxedo Choose Install Set window

5. Specify an Oracle home directory, referred to here as *ORACLE_HOME*.

Note. In previous Oracle Tuxedo and PeopleSoft PeopleTools releases, the installation directory was referred to as *BEA_HOME*, and the default was C:\bea. You may see installation directories from previous releases displayed here, and if so, you can select one.

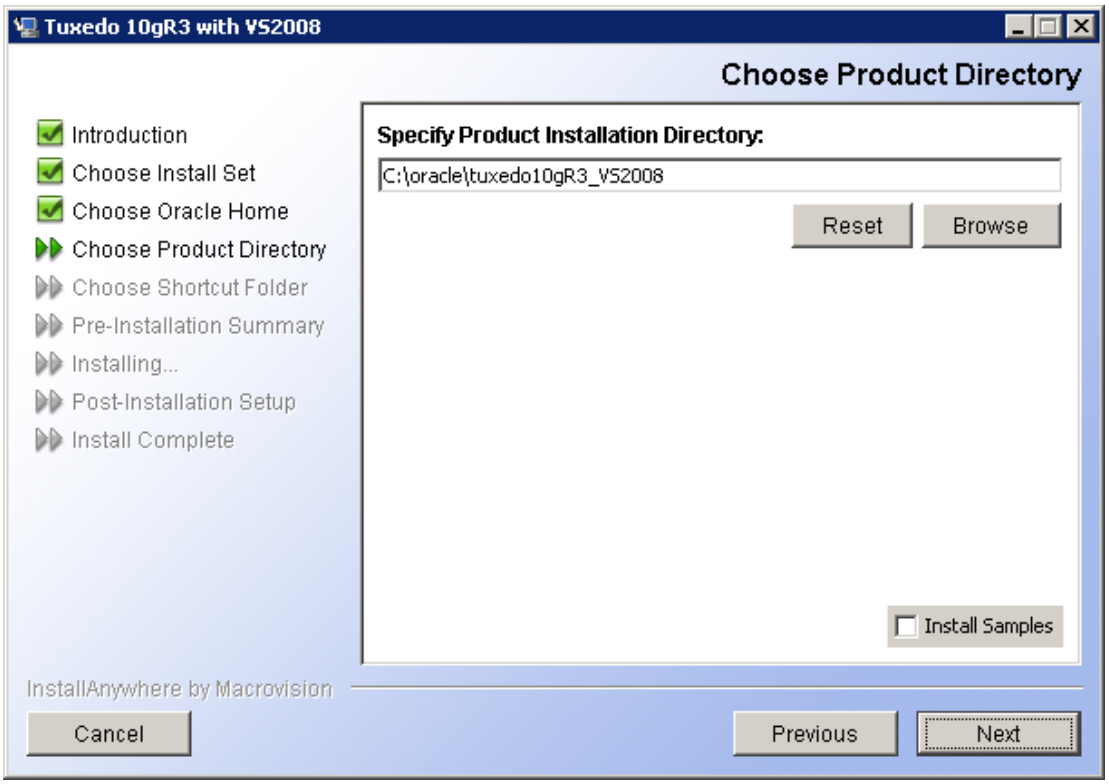


Oracle Tuxedo Choose Oracle Home window

- If you want to use an existing *ORACLE_HOME,* select Use existing Oracle Home and choose one of the listed directories.
- If you want to create a new *ORACLE_HOME,* select Create new Oracle Home, and enter a name in the Oracle Home Directory box.

6. Specify the Oracle Tuxedo installation directory, referred to here as *TUXDIR*.

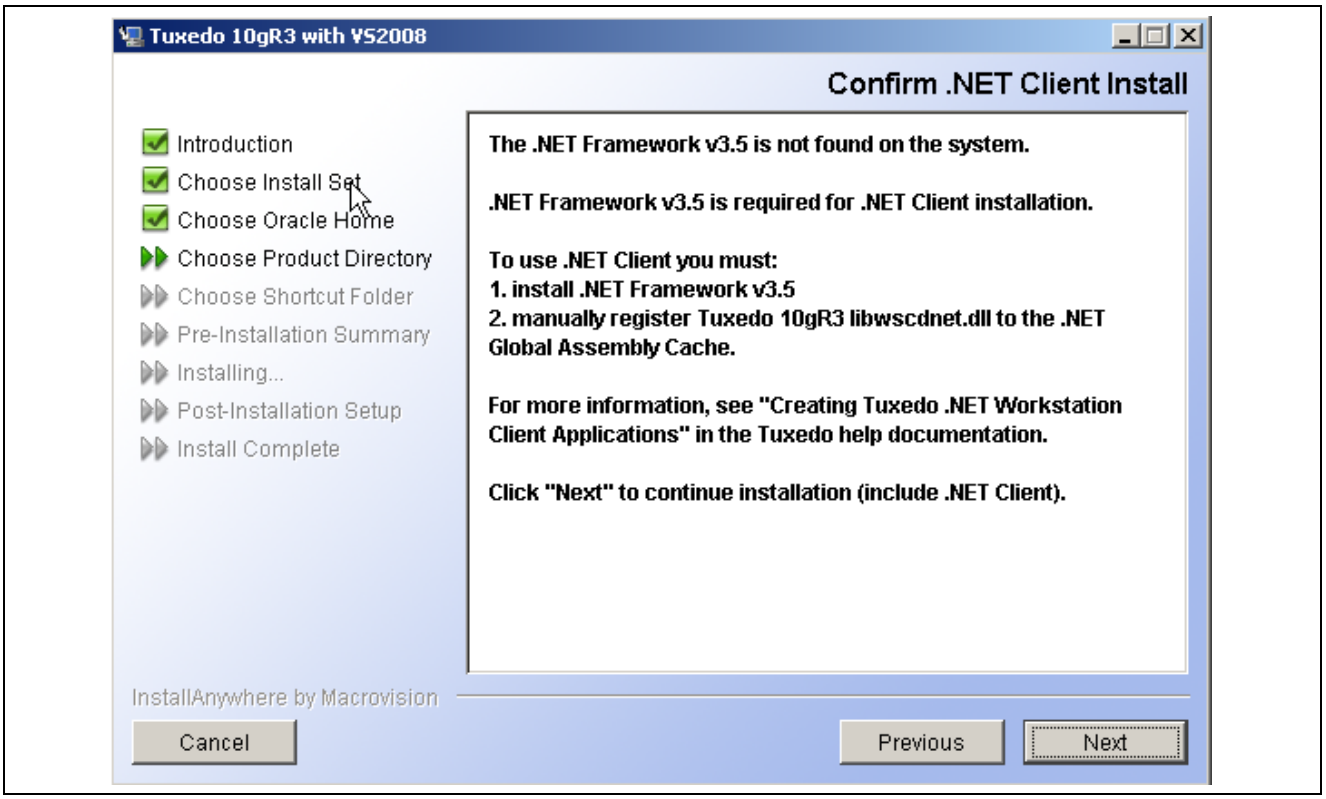
   The default is *ORACLE_HOME*\tuxedo10gR3_VS2008. Accept the default or specify a new location. In this example the installation directory is C:\oracle\tuxedo10gR3_VS2008.



Oracle Tuxedo Choose Product Directory window

7. If you see the following window, click Next to continue.

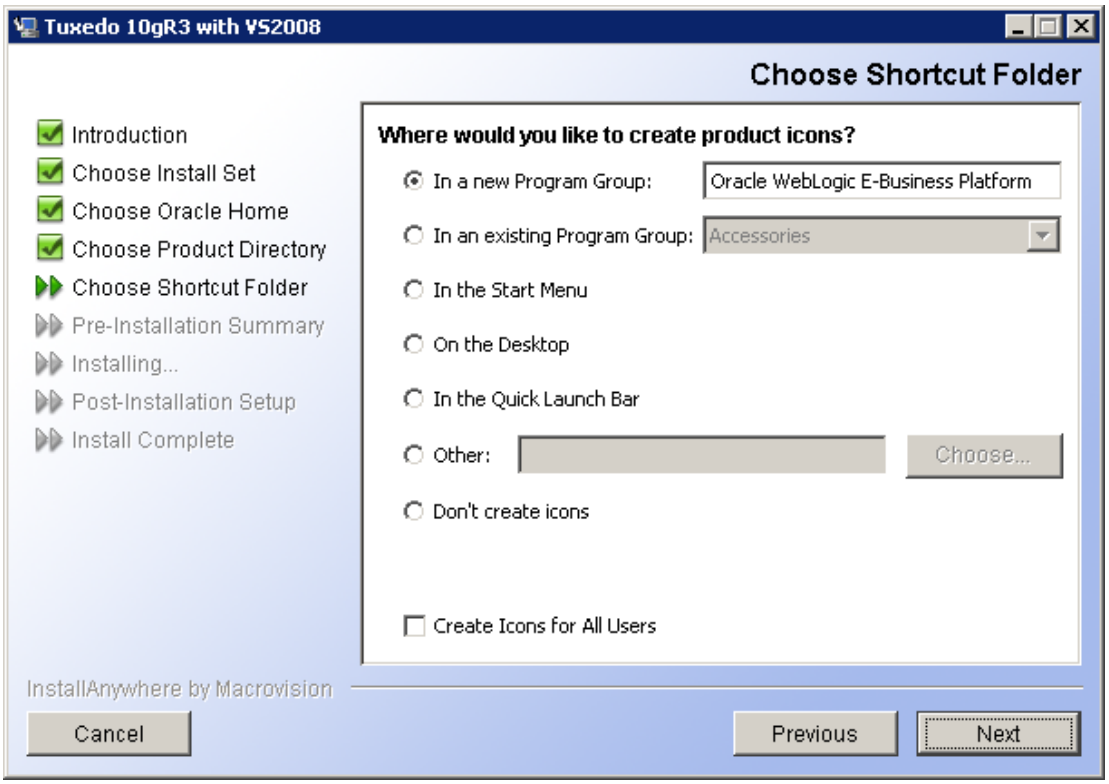
   The window appears for some .NET installations. It displays a message warning that .NET Framework is not found on the system, and referring to the Tuxedo help documentation for further information.



Oracle Tuxedo Confirm .NET Client Install window

8. Specify the location for the shortcut folder.

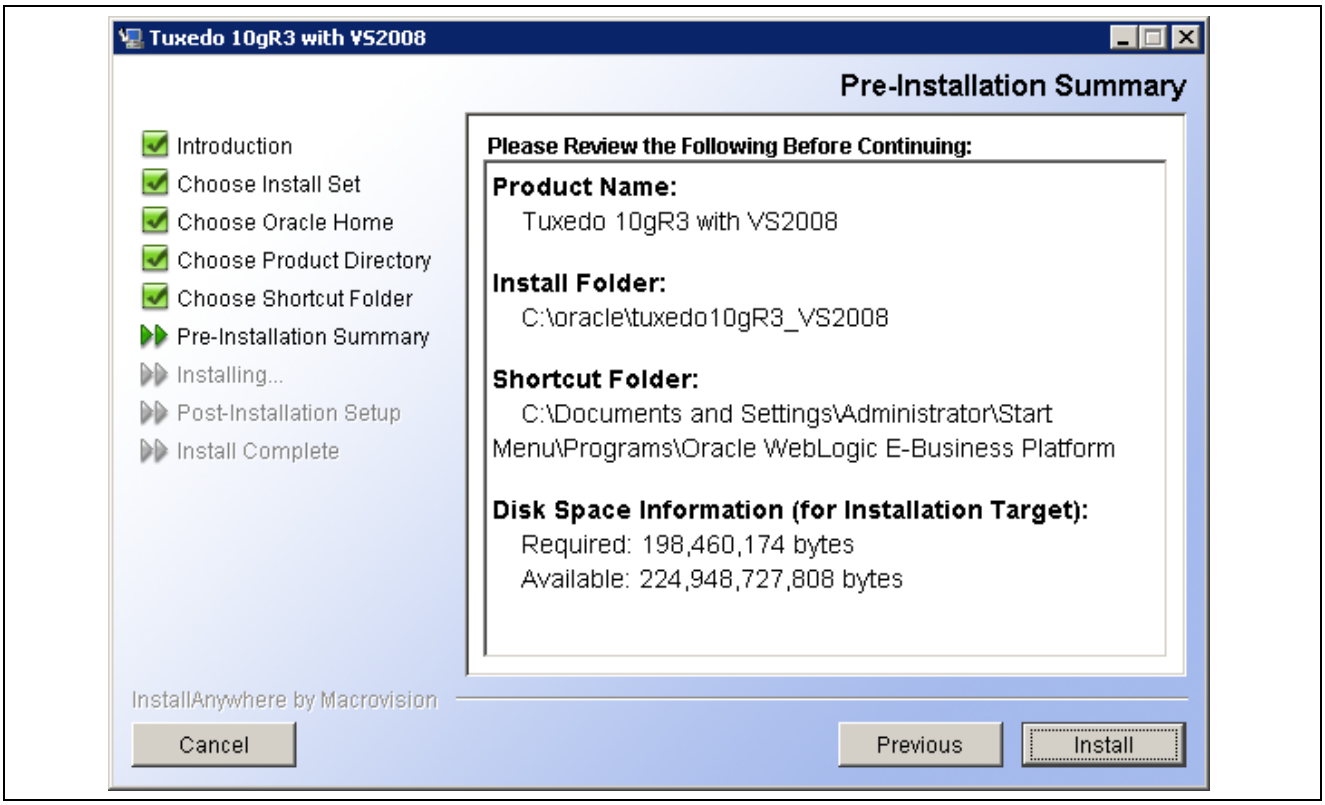
   The following example accepts the default, to create product icons in a new program group named Oracle WebLogic E-Business Platform:



Oracle Tuxedo Choose Shortcut Folder window

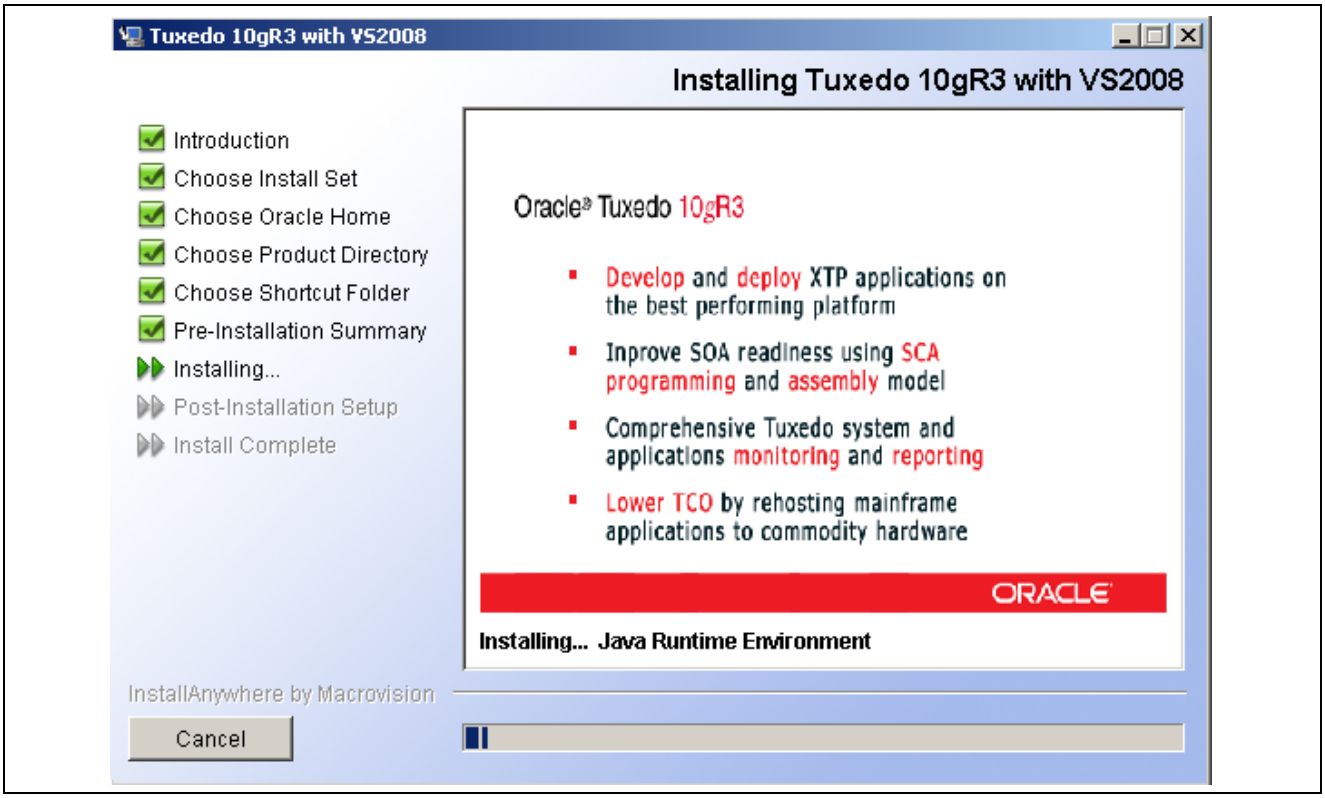
9. Review the summary information, and click Install to continue.

   The summary information includes the product name, install folder, shortcut folder, and disk space information. If you want to change any of your choices, click Previous.



Oracle Tuxedo Pre-Installation Summary window

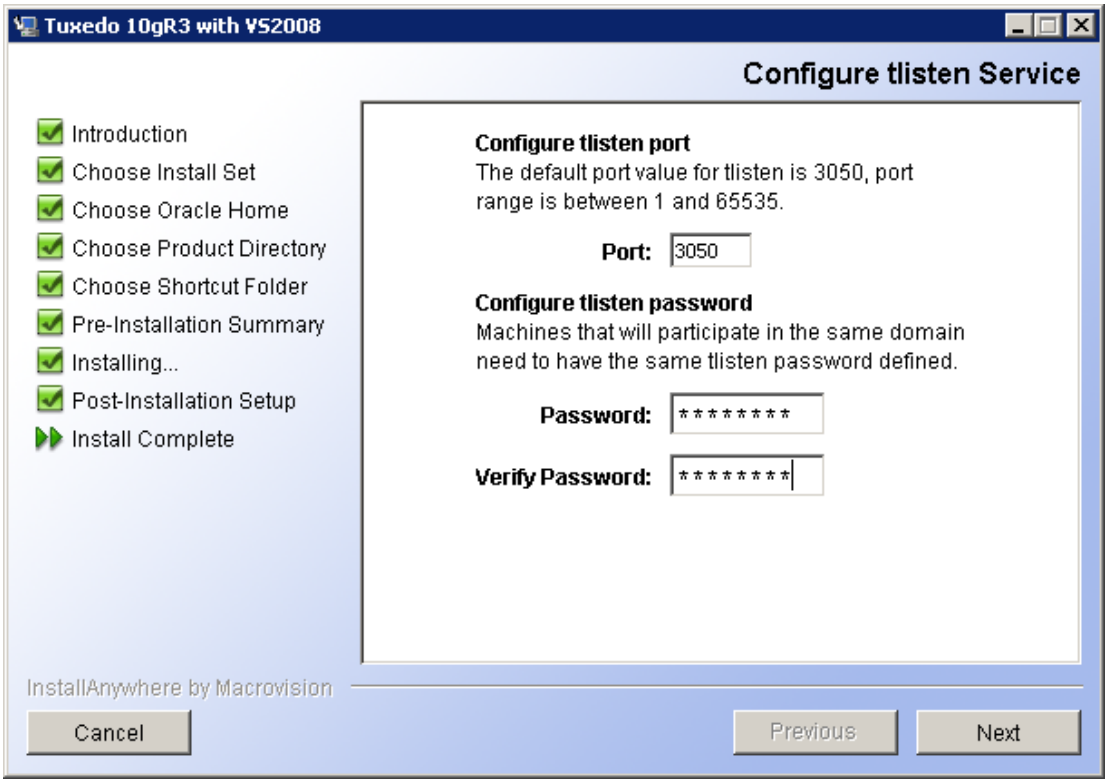
A progress indicator appears during the installation.



Oracle Tuxedo Progress indicator

10. Specify the tlisten port and tlisten password, using the following descriptions.

    Click Next to continue after specifying these values.



Oracle Tuxedo Configure tlisten Service window

- *Configure tlisten port*

  The Tlisten service is not used by PeopleSoft application servers so you can accept the default unless you intend to use the Tuxedo Web Monitor. Unless you use the Tuxedo Web Monitor, you should disable the TListen service following the installation.

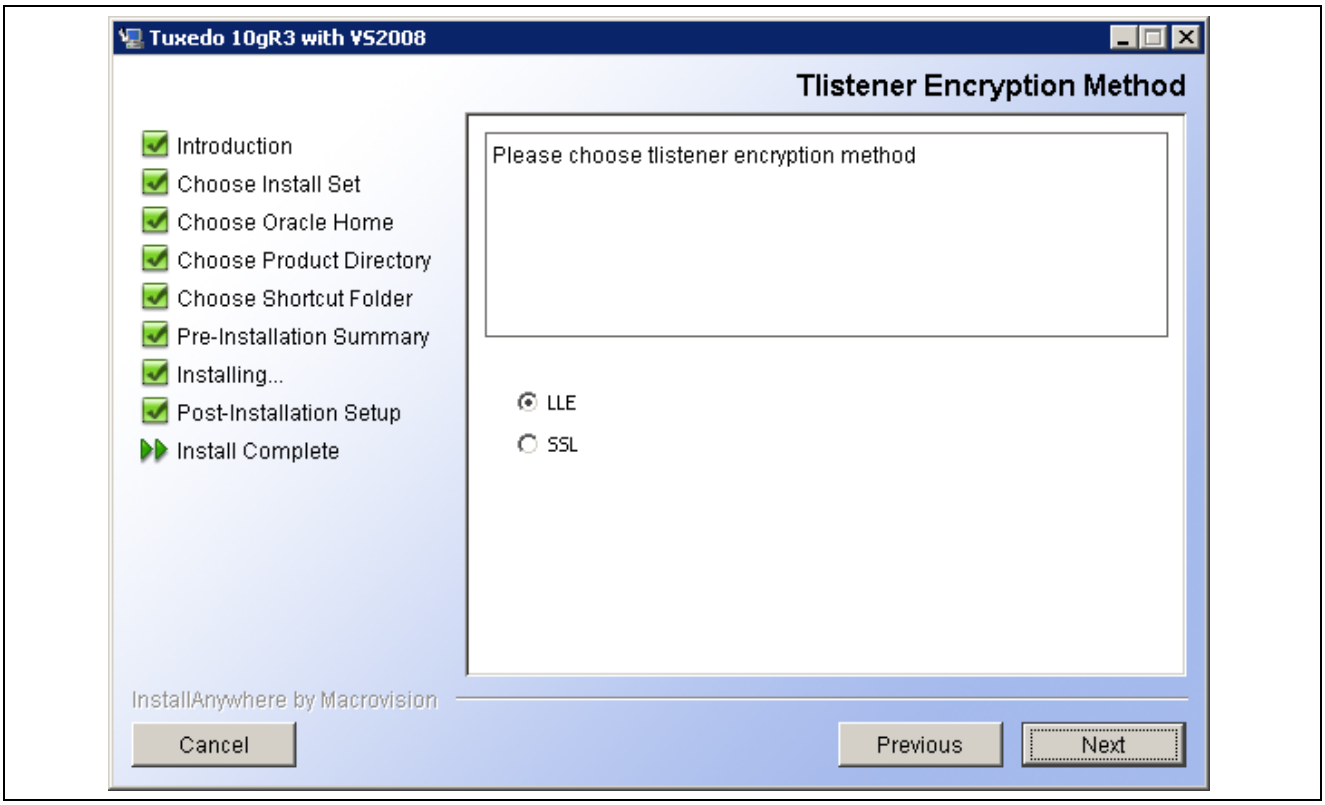
  If you intend to maintain multiple versions of Oracle Tuxedo on the same physical machine, it is wise to choose a port other than the default 3050 because the default port may clash with an existing TListen entry for an earlier version of Oracle Tuxedo.

  See Ensuring that Oracle Tuxedo Coexists with Earlier Versions.

- *Configure tlisten password*

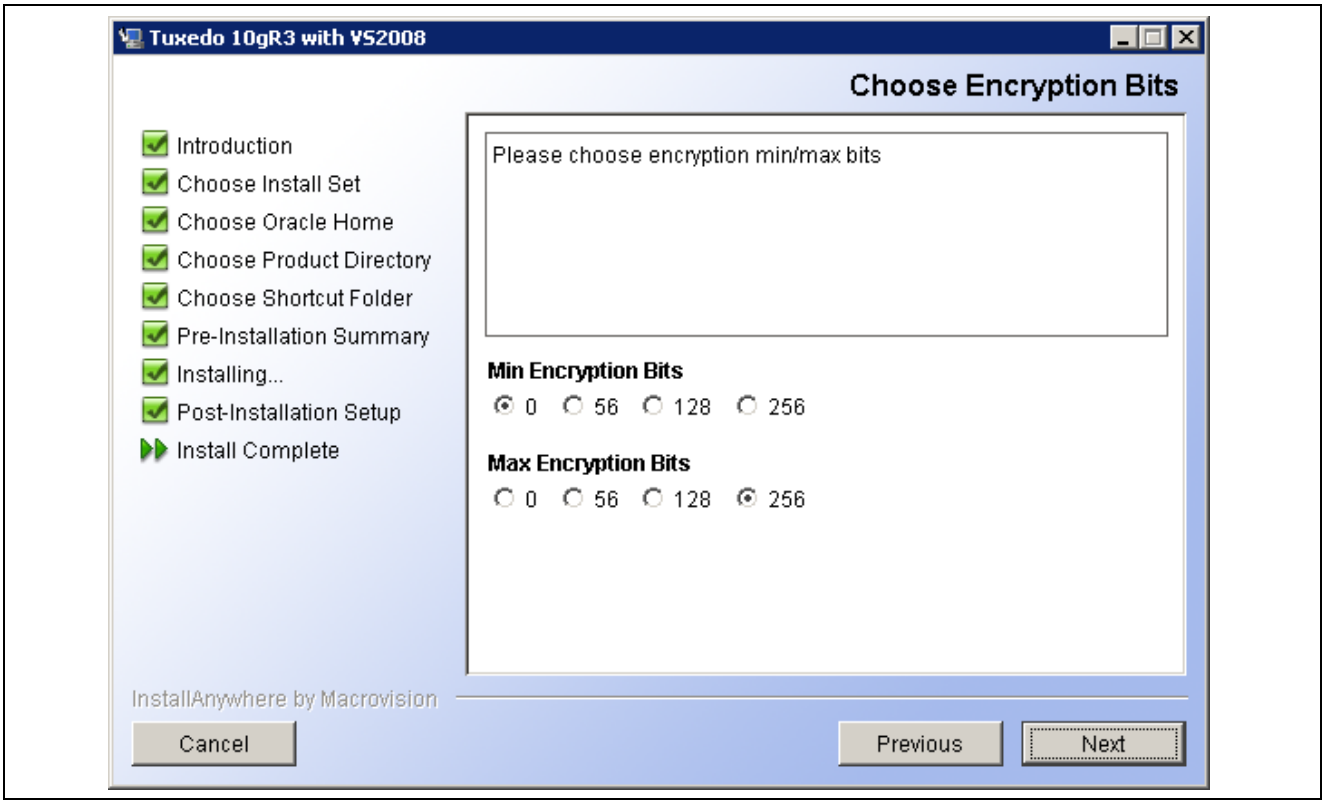
  Enter the tlisten passwords.

11. Select the option LLE for the encryption method and click Next.



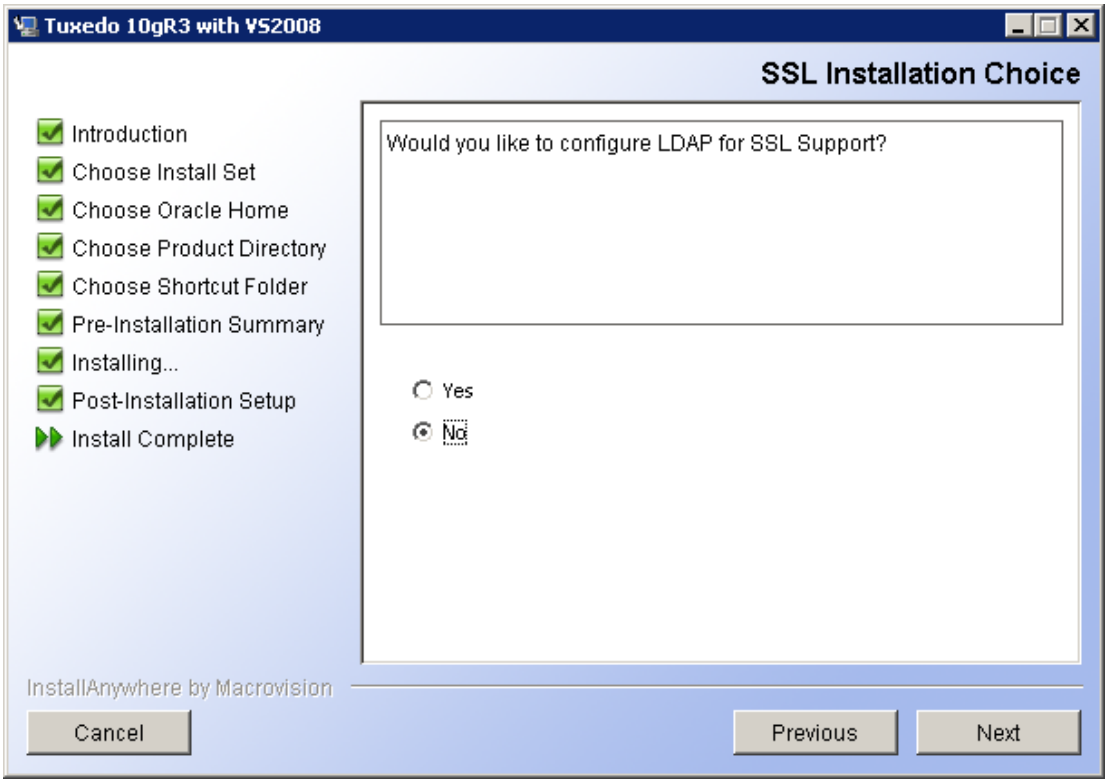
Oracle Tuxedo Tlistener Encryption Method window

12. Choose Min Encryption Bits as *0* and Max Encryption Bits as *256.* Click Next to continue.



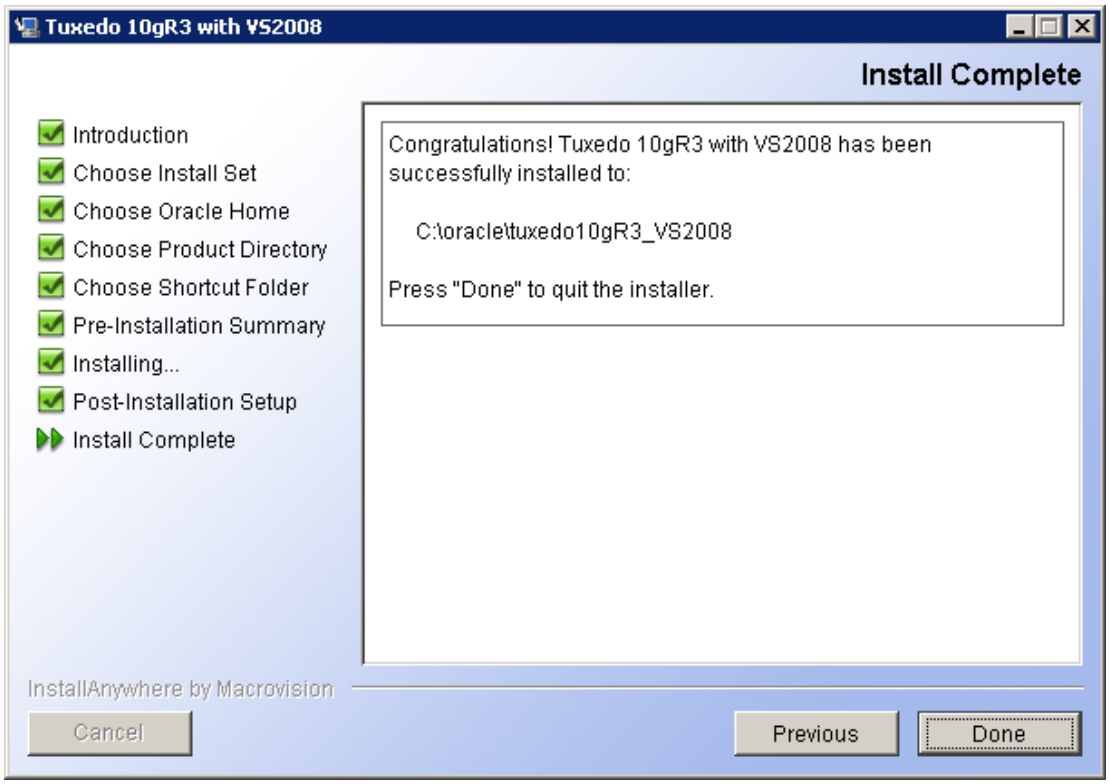
Oracle Tuxedo Choose Encryption Bits window

13. Select No for the option “Would you like to configure LDAP for SSL support?”



Oracle Tuxedo SSL Installation Choice

14. Click Done to complete the installation.



Oracle Tuxedo Install Complete window

Task 3-1-6: Installing the Oracle Tuxedo Patch on Microsoft Windows

These instructions assume that you have installed the base Oracle Tuxedo 10gR3_VS2008, and have downloaded the platform-specific version of the rolling patch.

To install the patch:

1. Stop all the PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo 10gR3_VS2008 installation.
2. Select Start, Programs, Administrative Tools, Service.
3. Select each of the following services, right-click and select Stop:
   - ORACLE ProcMGR V10gR3 with VS2008
   - TListen 10gR3 with VS2008 (Port: 3050)

   Note. The port number is variable.

4. Uninstall any existing patches.

   To check for installed patches, review the file patchlev in the Oracle Tuxedo installation directory, *TUXDIR*\udataobj. The last line of the patchlev file indicates the rolling patch (RP) level that is installed. For example:

```
031. BUG9656822 TUX10.3: CAN'T INSTALL PATCHES ON WINDOWS 2003 X86-64 VS2005
```

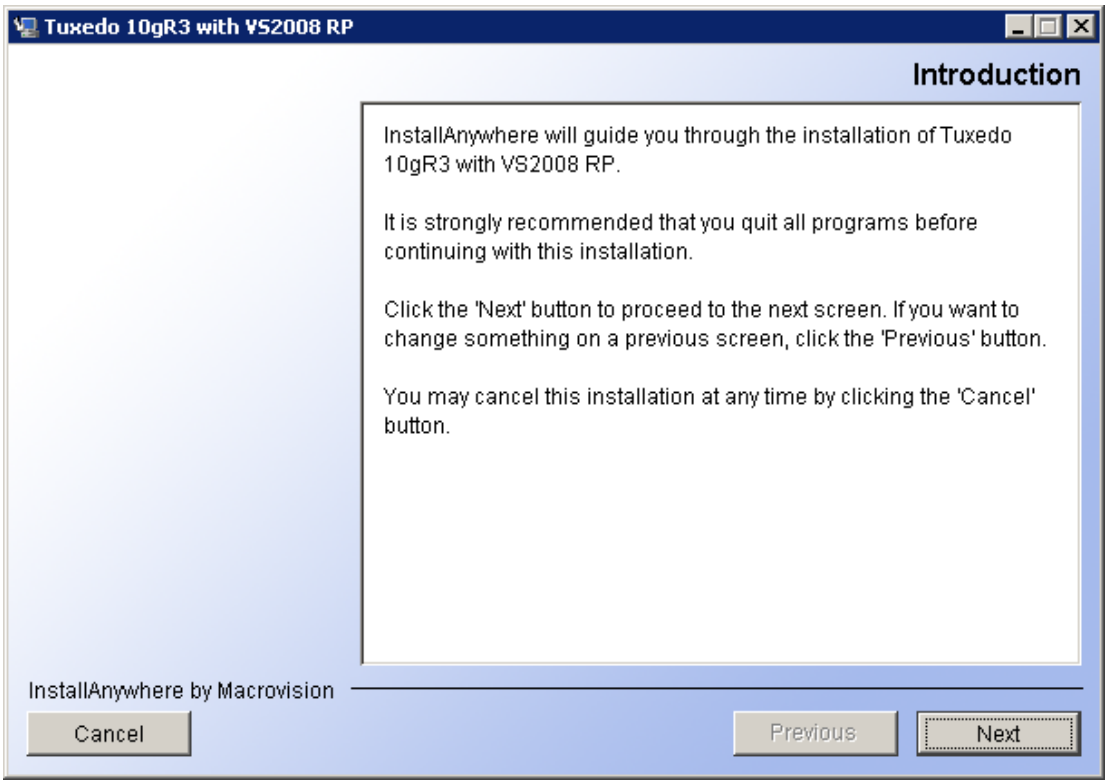

The number “031” indicates that rolling patch 31 has been installed. If there is an existing patch, remove it before installing the new rolling patch.

5. Go to the directory where you downloaded the patch file, *TUX_INSTALL*, and unzip the file.

   This creates a directory RP<*Version Number*> with the installation files. For example, for patch RP043, upon unzipping the file you see a directory named RP043.

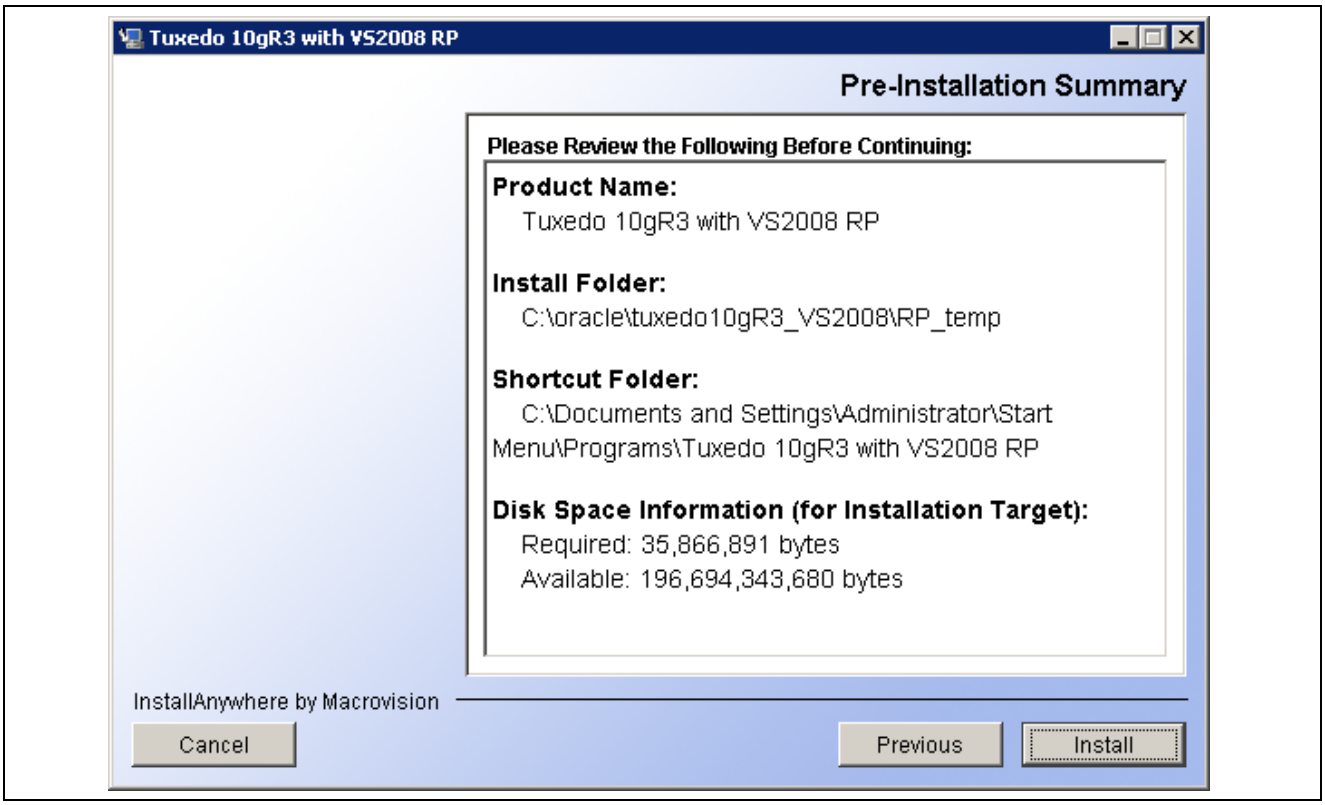
6. Go to *TUX_INSTALL*\RP<*Version Number*>, and double click RP<*Version Number*>.exe (for example, RP043).

7. Click Next on the Introduction window to proceed.



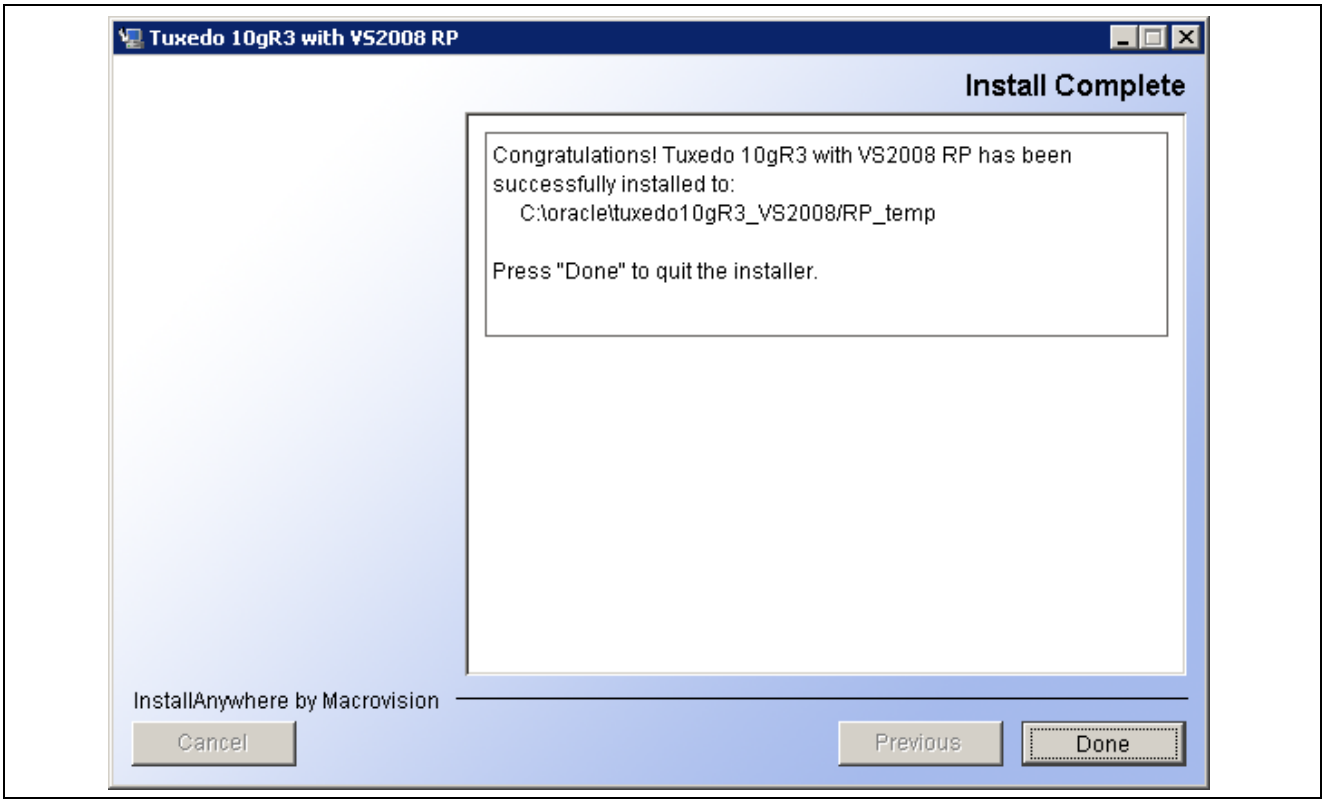
Tuxedo 10gR3 with VS2008 RP Introduction window

8. Review the pre-installation summary, which includes the product name, install folder, shortcut folder, and disk space information, and then click Next.



Tuxedo 10gR3 with VS2008 RP Pre-Installation Summary window

9. Click Done when the installation is complete.



Tuxedo 10gR3 with VS2008 RP Install Complete window

10. Verify the installation.

    See Verifying the Server Installation on Microsoft Windows.

Task 3-1-7: Uninstalling Oracle Tuxedo 10gR3_VS2008 and Patch on Microsoft Windows

Remove any Oracle Tuxedo patches followed by the base Oracle Tuxedo 10gR3_VS2008.

To remove the Oracle Tuxedo RP<*Version Number*> patch on Microsoft Windows:

1. Using PSADMIN, shut down any application server, Process Scheduler, and Search server domains that may be running on the machine.
2. Go to the RP_uninstaller folder under the Oracle Tuxedo installation directory:

   ```
   cd TUXDIR\RP_installer
   ```

3. Double-click Tux10gR3RP_uninstallMain.exe.
4. Click Uninstall, and click Done when the process is complete.

You can confirm that the uninstallation process is complete by checking the directory *TUXDIR*/udataobj. If the patch was successfully removed, the patchlev file will be absent.

To uninstall the base Oracle Tuxedo 10gR3_VS2008:

1. Go to *TUXDIR*\uninstaller.
2. Double-click Uninstall Tuxedo 10gR3 with VS2008.exe.
3. Click Uninstall, and click Done when the process is complete.

Note. You may need to delete the *TUXDIR* directory manually after this uninstallation process is complete.

Task 3-1-8: Checking the Windows Service Account

Use the information in this section to ensure that the Windows services are properly configured. Oracle recommends installing the application server binaries locally on your C drive, for best performance. The procedure to set up the ORACLE ProcMGR V10gR3 with VS2008 service in the next section includes options for the account type. Use the following guidelines to choose between the Local System account option and the This Account option. (For the option This Account, you must specify a user ID and password.)

- If you plan to install the PeopleSoft application server binaries (as in, psappsrv.exe and so on) on a remote file server, you must select the This Account radio button.
- If the PeopleSoft application server binaries are *local*, that is, they exist on your local hard drive, you can use either the Local System account or This Account radio button.
- If you intend to use this Windows service to start Process Scheduler, you must *always* select the This Account radio button. Enter the name of your Domain/Windows user name—not the machine name—and your password.

  Note. When using Oracle Tuxedo with Process Scheduler, you must use the Windows user name that starts the Process Scheduler server agent. This is necessary because the installation of the PeopleSoft ODBC driver sets up the registry settings to be accessible only by this user name. If you do not use the correct Windows user name, processes that require the ODBC registry information (such as Crystal Reports) will fail.

- If you are running on Windows and are configuring a search index that resides on a mapped network drive, you must ensure that the User ID of the ORACLE ProcMGR V10gR3 with VS2008 service has access to network drives accessed by the search engine. The search engine stores the search indexes at *PS_HOME*/data/search. However, this path can be changed in the application or the Process Scheduler's configuration. If this path is changed in these configurations and it points to a network drive, you must ensure that the user ID that starts the ORACLE ProcMGR V10gR3 with VS2008 service has access to these network drives. The application server and the process scheduler are started by the ORACLE ProcMGR V10gR3 with VS2008 service and therefore inherit the same permissions as the ORACLE ProcMGR V10gR3 with VS2008 service.

Task 3-1-9: Restricting Domain Process Privileges

This section discusses:

- Understanding Domain Process Privileges
- Setting TM_CPAU Environment Variable

Understanding Domain Process Privileges

For PeopleSoft systems, the Oracle ProcMGR service (tuxipc.exe) is responsible for starting Oracle Tuxedo domain processes on Microsoft Windows. By default, domain processes run as the same user ID that the service is running as. In a default installation, the service is configured to log on to Microsoft Windows as the Local System user. Microsoft does not support assigning network privileges to the Local System user for security reasons, but the Local System user otherwise has full administrative access to the local system.

In this configuration, PeopleSoft PeopleTools domain processes also run as the Local System user, which presents several potential issues, including:

- PeopleSoft PeopleTools domain processes are unable to access network resources.
- PeopleSoft PeopleTools domain processes run with more privileges than are necessary. A compromised PeopleSoft PeopleTools process will have full access to the local system and could potentially be used to gain unauthorized access to the local system.
- All PeopleSoft PeopleTools domain processes on the system run as the same user ID.

These problems are not present on UNIX systems where domain processes are always started as the user that runs tmadmin (by way of PSADMIN for PeopleSoft installations) to boot the domain. UNIX systems therefore support multiple domains, each running under different user IDs, with only the desired local privileges, and with no undesirable restrictions to network resources.

For Microsoft Windows platforms, you can use the Oracle Tuxedo TM_CPAU environment variable to achieve behavior similar to UNIX systems. If TM_CPAU is set to *YES* before tuxipc is started, tuxipc creates an Oracle Tuxedo process that belongs to the user who initiated tmboot. If the Oracle ProcMGR service (tuxipc.exe) is started with the TM_CPAU=YES environment variable set, then domain processes will run as the user ID used to run tmadmin (PSADMIN) to boot the domain.

Using the TM_CPAU environment variable enables a variety of configuration options, including:

- The Oracle ProcMGR service can be run as the Local System user, but domain processes can be run using a minimally privileged user. This reduces the chance of a compromised PeopleSoft PeopleTools process being used to gain unauthorized access to the system. Note that the option “Allow services to interact with Desktop” should *not* be selected.
- The Oracle ProcMGR service can be configured to log on to Microsoft Windows using a minimally privileged user ID and PeopleSoft PeopleTools processes can run as a user with more privileges than the Oracle Tuxedo user ID. For example, the Oracle Tuxedo user ID could have read-only access to

PS_CFG_HOME, but the PeopleSoft PeopleTools user could have read-write access. The Oracle Tuxedo user ID does not actually require read access to *PS_HOME*. When CreateProcessAsUser runs, access to the executable to start is evaluated using the user ID that the process will run as.

- A single Microsoft Windows system can be used to host multiple PeopleSoft PeopleTools installations that are each administered by a different user. A non-administrative user ID used to boot one domain will have no privileges to processes started with a different user ID.
- Domain processes can be identified and managed in Windows Task Manager by a non-administrative user.

See "File Formats, Data Descriptions, MIBs, and System Processes Reference," Oracle Tuxedo Reference Topics, http://download.oracle.com/docs/cd/E15261_01/tuxedo/docs11gr1/rf5/rf5.html

Setting TM_CPAU Environment Variable

To set the TM_CPAU environment variable:

Note. This is a recommended step. Perform this step only if Local System account is used in the task Setting Up the Windows Services for Oracle Tuxedo.

---

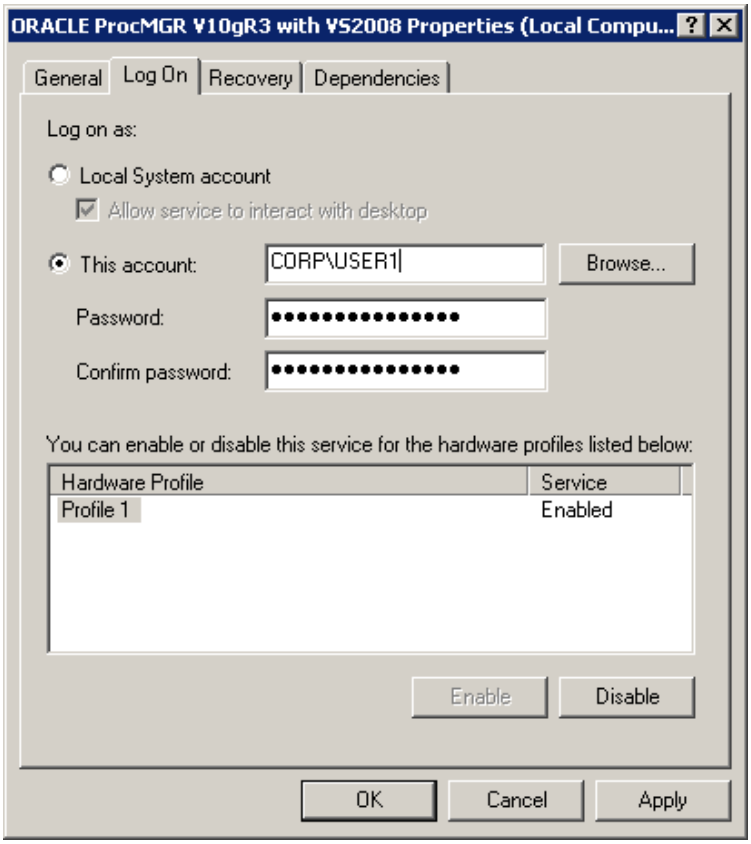
1. Right-click the My Computer icon and select Properties from the menu.
2. Select the Advanced tab.
3. Click Environment Variables.
4. In the System variables area, click New to add a new environment variable.
5. Enter TM_CPAU as the variable name, YES as the value, and click OK three times to close the dialog box.
6. Restart your machine.

Task 3-1-10: Setting Up the Windows Services for Oracle Tuxedo

To set up the Windows services for Oracle Tuxedo:

1. Log on again as the Application Server Administrator, TUXADM, or a designated user ID.
2. Open the Control Panel and double-click Administrative Tools.
3. Select Computer Management and expand Services and Applications.
4. Select Services and locate the service labeled *ORACLE ProcMGR V10gR3 with VS2008.*

   Double-click ORACLE ProcMGR V10gR3 with VS2008 to open the properties dialog box.
5. On the General tab, if the Stop button is enabled, click on it to stop the current ORACLE ProcMGR V10gR3 with VS2008 process.
6. Select Log On.



Oracle ProcMGR V10gR3 with VS2008 Properties Dialog Box: Log on Tab

---

Note. The option used—Local System account or This account—must be consistent with your ODBC catalog definition, due to registry operations. For example, if you use the Local System Account option, you must also catalog your ODBC data source using System DSN.

---

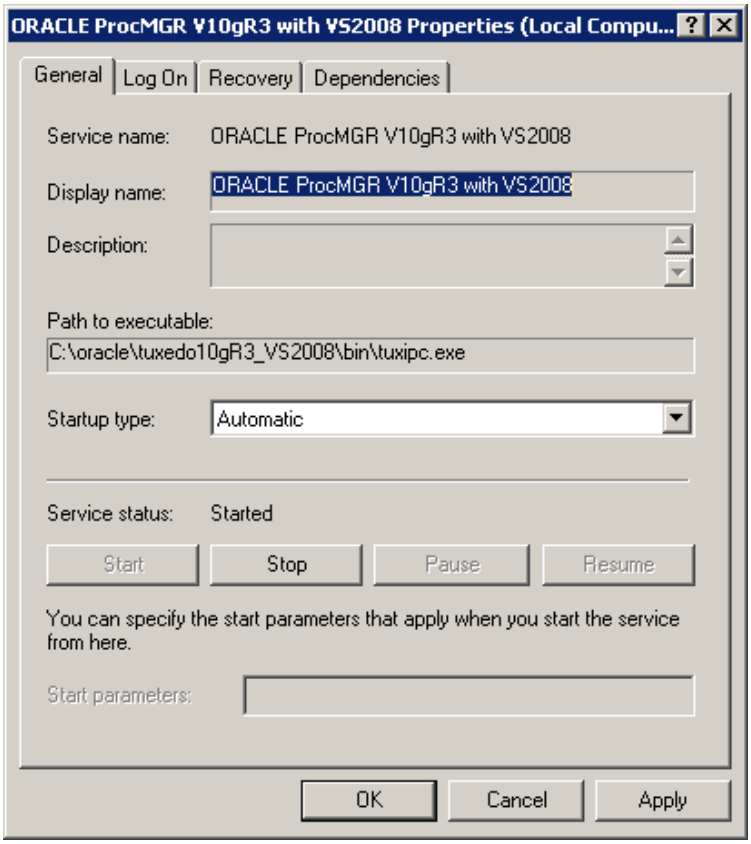
7. Choose either Local System account or This account.

   If you select This account, be sure to specify a user with the appropriate permissions, and then enter and confirm the password.

   See Checking the Windows Service Account.

8. Select General.

   Make sure that Startup Type is set to *Automatic*.



Oracle ProcMGR V10gR3 with VS2008 Properties Dialog Box: General Tab

9. Select Start.

   A message in the Services dialog box will indicate the Started status. Close the dialog box to return to the Control Panel.

10. As mentioned, unless you intend to use the Tuxedo Web Monitor, you should disable the TListen 10gR3 VS2008 (Port: *PORT*) service, where *PORT* is the port number you entered during the installation. The default is 3050.

Task 3-1-11: Verifying the Server Installation on Microsoft Windows

At this point, you should verify that the server installation was successful.

Verify your installation by opening the file *TUXDIR*\udataobj\patchlev in a text editor and checking the last line. For example, the following line indicates that rolling patch RP043 was installed:

```
043. BUG9656822 TUX10.3: CAN'T INSTALL PATCHES ON WINDOWS 2003 X86-64 VS2006
```

If you cannot find a patchlev file in the *TUXDIR*\udataobj directory, it means that only the base is installed; there is no rolling patch installed.

If you do not see the desired output, review your steps and reinstall Oracle Tuxedo 10gR3_VS2008.

Task 3-1-12: Removing Existing Oracle Tuxedo Installations from UNIX (Optional)

You may have older versions of Oracle Tuxedo installed on your system from an earlier version of PeopleSoft PeopleTools. If you are completely upgrading to PeopleSoft PeopleTools 8.52 from an earlier version of PeopleSoft PeopleTools and you do not require the older Oracle Tuxedo anymore, then, you may uninstall it.

Note. It is not mandatory to uninstall older Oracle Tuxedo versions from the machine where you are installing Oracle Tuxedo 10gR3, as older Oracle Tuxedo versions and Oracle Tuxedo 10gR3 can exist on the same machine.

You may have to remove your Oracle Tuxedo installation on UNIX for the following reasons:

- You are having problems starting Oracle Tuxedo and decide to reinstall.
- You no longer need Oracle Tuxedo on a machine.

To remove Oracle Tuxedo from UNIX:

1. Using PSADMIN, shut down any application server, Process Scheduler, and Search server domains that may be running on the machine.
2. Use the UNIX `rm` command to directly remove the Oracle Tuxedo installation.

   Be sure to remove the directory containing Oracle Tuxedo, referred to here as *TUXDIR*.
3. Remove the TUXDIR environment variable and any entries containing your platform-specific LIBRARY PATH and PATH environment variables.

The instructions for installing and removing the patch are given later in this section.

See Uninstalling Oracle Tuxedo 10gR3 and Patch on UNIX.

Task 3-1-13: Completing the Preinstallation Checklist on UNIX

We recommend that you complete the following preinstallation checklist before you begin the Oracle Tuxedo installation. The checklist includes various parameters with descriptions and example values. Specify your values in the Real Value column. Completing this information first should save you time during your installation.

Item	Description	Example Value	Real Value
ORACLE_HOME	The high level directory where you converge the installation for all Oracle products.	[/oracle]	<enter value>
TUXDIR	The directory where Oracle Tuxedo system software will be installed.	[/oracle/tuxedo10gR3]	<enter value>
Username	The UNIX user name of the Application Server Administrator (Oracle Tuxedo owner).	[tuxedo]	<enter value>
Groupname	Specify the UNIX group name of the Oracle Tuxedo owner.	[tuxedo]	<enter value>

Note. You can select any user name and group name you want; however, you might want to use the “tuxedo” convention for simplicity.

Task 3-1-14: Designating the Oracle Tuxedo Owner on UNIX

A new or existing user must be designated as the Oracle Tuxedo owner.

To designate the Oracle Tuxedo owner:

1. Log in as root.
2. Create the UNIX group and the user name of the individual who will be the owner of Oracle Tuxedo.

   Using the values from the preinstallation checklist, create the group and specify the group name. Then create the user who will be the Oracle Tuxedo owner, specifying the user name, group name, and home directory, denoted by TUXDIR from the checklist.

   Note. Depending on your operating system, the utility you use to create the user and group is different. For example, HP-UX uses the "sam" utility, AIX uses the "smit" utility, and so on. For the exact utility, refer to your operating system documentation.

Task 3-1-15: Installing Oracle Tuxedo on UNIX

The following procedure assumes that you saved the installation files from Oracle E-Delivery in the directory *TUX_INSTALL*. This procedure uses installation on Linux as an example.

To install Oracle Tuxedo on UNIX or Linux:

1. Make the installer an executable with the following command

   ```
   chmod +x tuxedo10gR3_64_Linux_01_x86.bin
   ```

2. Start the installation in console mode with the following command:

   ```
   ./tuxedo10gR3_64_Linux_01_x86.bin -i console
   ```

3. Select English as the installation language:

   ```
   Choose Locale...
   -----------------------
     ->1- English

   CHOOSE LOCALE BY NUMBER: 1
   ```

4. Press ENTER after reading the introduction.
5. Select Full Install as the installation set:

   ```
   Choose Install Set
   ------------------

   Please choose the Install Set to be installed by this installer.

     ->1- Full Install
       2- Server Install
       3- Full Client Install
   ```



```
    4- Jolt Client Install
    5- ATMI Client Install
    6- CORBA Client Install

    7- Customize...

ENTER THE NUMBER FOR THE INSTALL SET, OR PRESS <ENTER> TO ACCEPT THE DEFAULT: 1
```

6. Enter a full path for the top-level installation directory.

   The following example creates a new *ORACLE_HOME* directory. If you want to use an existing directory, enter *2* and select one of the existing directories.

   Note. In previous Oracle Tuxedo and PeopleSoft PeopleTools releases, the installation directory was referred to as *BEA_HOME*. You may see installation directories from previous releases displayed at this prompt, and if so, you can select one.

```
Choose Oracle Home
------------------

  ->1- Create new Oracle Home
    2- Use existing Oracle Home

Enter a number: 1
Specify a new Oracle Home directory: /home/user/Oracle
```

7. Enter *2* to accept the default product directory, which is *ORACLE_HOME*/tuxedo10gR3, or enter *1* to specify another location. This directory is referred to as *TUXDIR*.

```
Choose Product Directory
------------------------

  ->1- Modify Current Selection (/home/user/Oracle/tuxedo10gR3)
    2- Use Current Selection (/home/user/Oracle/tuxedo10gR3)

Enter a number: 2
```

8. Enter *Y* to continue:

```
Install Samples (Y/N): Y
```

9. Review the installation summary and press ENTER to continue.

```
Pre-Installation Summary
------------------------

Please Review the Following Before Continuing:

Product Name:
    Tuxedo 10gR3

Install Folder:
    /home/user/Oracle/tuxedo10gR3
```



```
Link Folder:
    /home/user

Disk Space Information (for Installation Target):
    Required:  195,549,595 bytes
    Available: 13,555,073,024 bytes

PRESS <ENTER> TO CONTINUE:
```

10. Press ENTER to begin the installation.

```
Ready To Install
----------------

InstallAnywhere is now ready to install Tuxedo 10gR3 onto your system at the⇒
 following location:

 /home/user/Oracle/tuxedo10gR3

PRESS <ENTER> TO INSTALL:
```

11. Enter and confirm a password for tlisten.

```
Configure tlisten Service
-------------------------

Password:
Verify Password:
Password accepted! Press "Enter" to continue.
```

12. Select *2* for No when asked whether to install SSL support.

```
SSL Installation Choice
----------------

Would you like to install SSL Support?

  ->1- Yes
    2- No

ENTER THE NUMBER FOR YOUR CHOICE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT:
2
```

13. Press ENTER to exit the installer.

```
Installation Complete
---------------------

Congratulations. Tuxedo 10gR3 has been successfully installed to:

 /home/user/Oracle/tuxedo10gR3
```



```
PRESS <ENTER> TO EXIT THE INSTALLER
```

Task 3-1-16: Installing the Oracle Tuxedo Patch on UNIX

These instructions assume that you have installed the base Oracle Tuxedo 10gR3, and have downloaded and extracted the platform-specific version of the rolling patch.

To install the patch:

1. Stop all the PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo 10gR3 installation.
2. Uninstall any existing patches.

   To check for installed patches, review the file patchlev in the Oracle Tuxedo installation directory, *TUXDIR*/udataobj. The last line of the patchlev file indicates the rolling patch (RP) level that is installed. For example:

   ```
   031. BUG9656822 TUX10.3: CAN'T INSTALL PATCHES ON WINDOWS 2003 X86-64 VS2005
   ```

   The number "031" indicates that rolling patch 31 has been installed. If there is an existing patch, remove it before installing the new rolling patch.
3. Set the TUXDIR environment variable to indicate the absolute path to the directory where you installed the base Oracle Tuxedo 10gR3, *TUX_HOME*:

   ```
   export TUXDIR=TUX_HOME
   ```
4. Source tux.env to set the environment variables:

   ```
   . $TUXDIR/tux.env
   ```
5. Go to the directory where you downloaded the patch file, *TUX_INSTALL*, and unzip the file.

   This creates a directory RP<*Version Number*> with a TAR file containing the installation executable. (For example for patch RP043, the directory would be named RP043.)
6. Change directory to *TUX_INSTALL*/RP<*Version Number*>, uncompress, and extract the TAR file

   Note. Use the appropriate commands to uncompress and untar the file on your UNIX operating system.

   For example:

   ```
   cd RP043
   tar -zxf RP043.tar.Z
   ```
7. Run the following command to begin the installation:

   ```
   ./install
   ```
8. Enter the Oracle Tuxedo owner:

   See Completing the Preinstallation Checklist on UNIX.

   ```
   Installing server and client files...
   Enter owner for patch files:
   ```
9. Enter the Oracle Tuxedo group name:

   ```
   Enter group for patch files:
   ```

10. When the installation is complete, you see the following message:

    ```
    The patch installation finished successfully.
    ```

11. Verify your installation.

    See Verifying the Installation on UNIX.

Task 3-1-17: Uninstalling Oracle Tuxedo 10gR3 and Patch on UNIX

Remove any Oracle Tuxedo 10gR3 patches first, followed by the base installation.

This section uses the uninstaller provided with the Oracle Tuxedo patch. You must use the uninstaller that is the same version of the patch as is currently installed. The uninstaller is provided with the zip file that you downloaded from Oracle E-Delivery.

This section assumes that you downloaded and extracted the files, and set the environment variables as described in the previous section.

To uninstall the patch from Oracle Tuxedo 10gR3:

1. Set the environment variable TUXDIR to indicate the absolute path to the directory where the patch is installed.
2. Using PSADMIN, shut down any application server, Process Scheduler, and Search server domains that may be running on the machine.
3. Go to the directory where you downloaded, unzipped, and extracted the TAR file:

   ```
   cd TUX_INSTALL/RP<Version Number>
   ```

4. Enter the following command:

   ```
   ./uninstall
   The uninstallation finished successfully.
   ```

You can confirm that the uninstallation process is complete by checking the directory *TUXDIR*/udataobj. If the patch was successfully removed, the patchlev file will be absent.

To uninstall Oracle Tuxedo 10gR3:

1. Go to *TUXDIR*/uninstaller.
2. Enter the following command:

   ```
   ./Uninstall_Tuxedo_10gR3
   ```

3. Follow the instructions on the uninstaller.

Note. You may need to delete the *TUXDIR* directory manually after this uninstallation process is complete.

Task 3-1-18: Verifying the Server Installation on UNIX

At this point, you should verify that the server installation was successful.

Verify your installation by opening the file *TUXDIR*/udataobj/patchlev in a text editor and checking the last line. For example, the following line indicates that RP043 was installed:


```
043. BUG9656822 TUX10.3: CAN'T INSTALL PATCHES ON WINDOWS 2003 X86-64 VS2005
```

If you cannot find a patchlev file in the *TUXDIR*/udataobj directory, it indicates that only the base is installed, and there is no rolling patch installed.

If you do not see the desired output, review your steps and reinstall Oracle Tuxedo 10gR3.

Task 3-1-19: Ensuring that Oracle Tuxedo Coexists with Earlier Versions

This section discusses:

- Understanding the Use of Multiple Oracle Tuxedo Versions
- Checking Your Environment Variables
- Changing the TListen Port

Understanding the Use of Multiple Oracle Tuxedo Versions

PeopleSoft PeopleTools 8.49 uses Oracle Tuxedo 9.1; releases 8.44 to 8.48 use Oracle Tuxedo 8.1. Earlier versions of PeopleSoft PeopleTools rely on earlier versions of Oracle Tuxedo—for example, PeopleSoft PeopleTools 8.41 uses Oracle Tuxedo 6.5. If you are installing only PeopleSoft PeopleTools 8.52, you can safely skip this section. If you need to run application servers on PeopleSoft PeopleTools 8.52 and earlier PeopleSoft PeopleTools versions on the same machine, read this section to learn about coexistence issues. Although Oracle Tuxedo 10gR3 coexists with earlier Oracle Tuxedo versions on the same machine, you may need to take a number of manual steps to ensure that these products share the same environment gracefully.

Checking Your Environment Variables

Installing Oracle Tuxedo changes your *TUXDIR* and *PATH* environment variables. Although you do not need to change these environment variables to successfully run PeopleSoft PeopleTools 8.52 with Oracle Tuxedo 10gR3, earlier versions of PeopleSoft PeopleTools rely on these environment variables being set.

To change your environment variables:

1. Set your *TUXDIR* environment variable to reflect the installation directory of your earlier Oracle Tuxedo release.

   For example, Oracle Tuxedo 8.1 may be installed to C:\tux8.1. This means that TUXDIR=C:\tux8.1 is the correct setting. Oracle Tuxedo 6.5 may be installed to C:\tux65. This means that TUXDIR=C:\tux65 is the correct setting.

2. Your *PATH* environment variable must contain *TUXDIR*\bin for the earlier Oracle Tuxedo version before any entries for Oracle Tuxedo 10gR3 *TUXDIR*\bin.

   For example the setting PATH=C:\winnt;C:\oracle\tuxedo10gR3_VS2008\bin;C:\tux65\bin will cause your pre-8.51 domains to no longer work. You would need to change this to PATH=C:\winnt;C:\tux65\bin;C:\oracle\tuxedo10gR3_VS2008\bin to work with pre-PeopleSoft PeopleTools 8.44 domains.

   Note. PeopleSoft PeopleTools 8.44 and later do not use environment variables to discover the installation location of Oracle Tuxedo 8.1 and later. The PSADMIN tool retrieves these values from the Microsoft Windows registry.

   ---

3. Your library path on UNIX (the environment variable LD_LIBRARY_PATH, LIBPATH, or SHLIB_PATH; whichever is appropriate for your platform) must contain *TUXDIR*/lib for the earlier Oracle Tuxedo version before any entries for Oracle Tuxedo 10gR3.

For example the setting LD_LIBRARY_PATH=/lib:/usr/lib:/home/user/Oracle/tuxedo10gR3/lib:/prod /tuxedo/6.5/lib, will cause your pre-8.50 domains to no longer work. You would need to change this to LD_LIBRARY_PATH=/lib:/usr/lib:/prod/tuxedo/6.5/lib:/home/user/Oracle/tuxedo10gR3/lib for your pre-8.50 domains to work.

Changing the TListen Port

Installing Oracle Tuxedo 10gR3 and earlier creates a new service known as TListen. In most cases, you can disable this service as it is not required to run PeopleSoft PeopleTools application server domains. However, if you intend to use the Tuxedo Web Monitor you may wish to ensure that there is no port clash with earlier versions. This port is determined at installation and should be changed to a port other than the default 3050 if you intend on using the TListen service for Oracle Tuxedo 10gR3 and earlier Oracle Tuxedo versions concurrently.

CHAPTER 4

Using the PeopleSoft Installer

This chapter discusses:

- Understanding the PeopleSoft Installer
- Prerequisites
- Obtaining the PeopleSoft Installation Files from Oracle E-Delivery
- Running the PeopleSoft Installer
- Verifying Necessary Files for Installation on Windows
- Installing the Verity Integration Kit
- Installing PeopleSoft Application Software
- Installing the Multilanguage Files
- Installing the PeopleSoft Client Files
- Binding Windows “SQR for PeopleSoft” DB2 Connect Packages
- Mapping a Drive on the Install Workstation

Understanding the PeopleSoft Installer

This section discusses:

- Defining the PeopleSoft Installer
- Defining Supported Server Combinations
- Obtaining License Codes

Defining the PeopleSoft Installer

The PeopleSoft Installer is a Java-based tool that delivers software to your servers and to the PeopleSoft Client. You can install the whole range of PeopleSoft servers and client with the PeopleSoft installer. You can install the server and client software separately or together.

Note. You must install the necessary web server products and any additional component software as described in the previous chapters before you run the PeopleSoft Installer.

The PeopleSoft Installer enables you to transfer files needed for various PeopleSoft servers—including application servers, batch servers, web servers, and database servers, and for the PeopleSoft Client.

You run the PeopleSoft installer to install the necessary products on the target machines. Which files are installed depends on the operating system on the target machine, the database platform, and the selected server option. The PeopleSoft Installer installs files directly to Microsoft Windows, UNIX, and Linux machines. PeopleSoft PeopleTools and PeopleSoft Applications use the same PeopleSoft installation template. This chapter discusses the installation of PeopleSoft PeopleTools, followed by the installation of PeopleSoft application software and the application-specific Multilanguage files.

All licensed components of the PeopleSoft Architecture must be installed on each server. If you are not able to download and extract the PeopleSoft installation files directly on a UNIX machine, for example, you can download to the Windows file server and then FTP the files to your UNIX system

You can install multiple logical servers to the same machine. For example, you can have the application server and the batch server on the same machine. But, if you want to install different servers to different machines, you have to run the PeopleSoft Installer once for each server.

Before beginning the installation, be sure to review the information about the various PeopleSoft servers and clients in the chapter “Preparing for Installation.”

See Also

"Preparing for Installation," Planning Your Initial Configuration

Defining Supported Server Combinations

The following table lists the supported operating systems for the various PeopleSoft servers for your database platform. For more detailed information, consult the PeopleSoft product certifications area of My Oracle Support.

Supported operating systems for database servers	Supported operating systems for application servers and batch servers	Supported operating systems for file servers	Supported operating systems for web servers
IBM z/OS on System z	• IBM AIX on POWER Systems (64-bit) • IBM: Linux on System z (batch server only; no application server) • IBM z/OS on System z (batch server only; no application server) • Linux x86-64 • Microsoft Windows x64 (64–bit) • Oracle Solaris on SPARC (64–bit) • Oracle Solaris x86_64	Microsoft Windows x64 (64-bit)	• IBM AIX on POWER Systems (64-bit) • HP-UX Itanium (64-bit) • Linux x86-64 • Microsoft Windows x64 (64-bit) • Oracle Solaris on SPARC (64-bit) • Oracle Solaris x86_64

See Also

PeopleTools 8.52 Hardware and Software Requirements.

My Oracle Support, Certifications

Obtaining License Codes

Refer to the following URL for license codes for Oracle's PeopleSoft line of products: http://licensecodes.oracle.com/ent_keys_by_prod.html.

See Also

My Oracle Support, (search for Licensing Notes for the current release)

"Setting Up the PeopleSoft Pure Internet Architecture (in GUI or Console Mode)," Completing Post-Installation Steps

Prerequisites

Verify that you fulfill the following requirements before beginning the installation:

- The PeopleSoft Installer requires Java Virtual Machine (JVM), which is bundled for all OS platforms. The PeopleSoft Installer searches for the JVMs in the directories in which users would typically install JVM. If the search fails, the bundled JVM will be used. For the PeopleSoft Installer to run successfully, you must have JRE/JDK version 1.6.0 or higher. See My Oracle Support for information on the correct JRE version for your system.

  See My Oracle Support, Certifications.

- Before running the PeopleSoft installer, you must verify that you have the correct patches for your JVM level.

  Check My Oracle Support and your vendor for required patches.

  See "Operating System, RDBMS, & Additional Component Patches Required for Installation PeopleTools," My Oracle Support, (search for the article title).

- Make sure you have at least 4.5 GB of free space to perform your installation.

  See Running the PeopleSoft Installer.

- The installation process also requires at least 2.0 GB of free temporary disk space, which is needed only for the duration of the process. The process uses the directory defined by the TEMP environment variable on your installation computer or the directory specified by the -tempdir option when using setup.sh to install.

  Oracle strongly recommends that you use the -tempdir option to install, using the following guidelines:

  - Do not use /tmp as the temporary directory.
  - Do not specify /tmp as the explicit temporary directory for the -tempdir option.
  - Do not specify a directory that is on a shared drive.
  - Do not specify a directory that is inside the location where PeopleSoft PeopleTools is being installed; for example, *PS_HOME*/temp.

- The user who installs PeopleSoft PeopleTools must be root or the owner of *PS_HOME*.

  PS_HOME is used throughout this installation guide to refer to the high-level directory where your PeopleSoft PeopleTools and application software are installed. The documentation may also use the notation $PS_HOME or %PS_HOME% to refer to the PS_HOME environment variable in a code sample.

- You must have admin privileges to install the PeopleSoft web server.

- You can install the PeopleSoft web server to *PS_HOME*, or to another directory outside *PS_HOME*. This documentation refers to the directory where you install the PeopleSoft web server as *PIA_HOME*.

  See "Preparing for Installation," Defining Installation Locations.
- If your installation requires any PeopleSoft PeopleTools patches, you can apply the code (that is, the contents of the zip file you downloaded from My Oracle Support) after running the PeopleSoft Installer. Do not apply the database instructions at this time; the database objects will be applied later during the install. Be sure to read and follow the instructions provided with the PeopleSoft PeopleTools patches.

See Also

PeopleTools 8.52 Hardware and Software Requirements, Additional Requirements, Describing JRE Requirements

My Oracle Support, Certifications

Task 4-1: Obtaining the PeopleSoft Installation Files from Oracle E-Delivery

You obtain the PeopleSoft PeopleTools, PeopleSoft application, and multi-language software by downloading them as zip files from Oracle E-Delivery. At this point you should have already downloaded the necessary files. However, if you have not yet downloaded the files, this section includes information on finding and using the installation files.

See "Preparing for Installation," Using Oracle E-Delivery to Obtain Installation Files.

To obtain the installation files for PeopleSoft PeopleTools from Oracle E-Delivery:

1. After logging in to Oracle E-Delivery, on the Media Search Pack page, select *PeopleSoft Enterprise* from the Select a Product Pack drop-down list on the Media Pack Search page.

   Select the operating system you are running on from the Platform drop-down list, and click Go.

   Note that you must unzip the media pack zip files on the platform for which they are intended. For example, if you download the file for the Oracle Solaris platform, you must unzip the file on an Oracle Solaris operating system. If you unzip the file on a Microsoft Windows machine into a staging directory, and then move the directory to an Oracle Solaris machine, the staging area files may be corrupted.

   For installations on DB2 z/OS, download the Microsoft Windows version of the zip file. When you install, select the option DB2 UDB for OS/390 as the database platform, and then use the PeopleSoft Server Transfer to copy the files from the Microsoft Windows machine to your DB2 z/OS machine.

   See "Setting Up the Batch Environment on z/OS," Using PeopleSoft Server Transfer.
2. Select the radio button for PeopleSoft Enterprise - PeopleTools 8.52 Media Pack, and click Continue.
3. Download the 3 zip files for the PeopleSoft PeopleTools 8.52 installation, and the following:
   - For the PeopleSoft application and multi-language installations, download the appropriate zip files.
   - For a separate installation of the PeopleSoft Client, download the PeopleSoft PeopleTools 8.52 Client Only zip file.
   - For Verity, download PeopleSoft PeopleTools 8.52 Verity.

4. For the PeopleSoft PeopleTools installation, when you unzip the files, extract them into a temporary directory, referred to here as *PS_INSTALL*. The extracted files are loaded into directories Disk1, Disk2, Disk3, and so on.

   For the PeopleSoft application, multi-language files, Verity, and PeopleSoft PeopleTools Client Only installation file, extract the zip files into a convenient local directory, referred to as *PS_INSTALL*.

For UNIX only:

After you download the installation files from Oracle E-Delivery, if it is necessary to transfer the files to a UNIX computer using FTP, you must change the permissions to make them executable, for example using the `chmod +x` command. Change the mode to executable for the following files:

- *PS_INSTALL*\Disk1\setup.sh
- Files in *PS_INSTALL*\Disk1\InstData:
  - setup.aix
  - setup.hp-ia64
  - setup.linux
  - setup.solaris
  - setup.solaris-x86_64
  - setup.zlinux

See Also

"Setting Up the PeopleSoft Pure Internet Architecture," Completing Post-Installation Steps

Application-specific installation instructions, My Oracle Support (search for the PeopleSoft application)

Obtaining License Codes

Task 4-2: Running the PeopleSoft Installer

This section discusses:

- Understanding the PeopleSoft Installer
- Starting the PeopleSoft Installer
- Installing PeopleSoft PeopleTools in GUI Mode
- Installing PeopleSoft PeopleTools in Console Mode

Understanding the PeopleSoft Installer

The PeopleSoft Installer guides you through the process of installing files to your various servers. You must run the PeopleSoft Installer on each machine that you use for one or more PeopleSoft server. The specific options that you see during the installation procedure depend upon the operating system platform, database platform and so on.

Use the PeopleSoft Installer for:

- PeopleSoft PeopleTools

- PeopleSoft Applications
- Multilanguage files
- PeopleSoft Client files

The files will be installed into a high-level PeopleSoft directory. This directory, which is referred to in this documentation as *PS_HOME*, is the location for PeopleSoft PeopleTools, PeopleSoft application, and multilanguage files. It is a good idea to use a directory name that indicates the application you are installing and the version number, such as HRMS910 for the 9.1 version of Human Resources Management System.

You can run the installer in GUI mode, on Microsoft Windows operating systems, or in console (text) mode, on UNIX or Linux.

Note. The machine that you use to perform your PeopleSoft PeopleTools installation must be running in *256-color mode* or higher when running the PeopleSoft PeopleTools, PeopleSoft Application, Multilanguage, or PeopleSoft Pure Internet Architecture installation, and database configuration in Microsoft Windows. This is not necessary for UNIX or console mode.

The PeopleSoft Installer asks whether you want to install supporting features such as Unicode support or Environment Management Hub. Before you run the PeopleSoft Installer, you may want to consult supporting documentation to help you in choosing these options.

See Also

PeopleTools 8.52: Global Technology PeopleBook

PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook

PeopleTools 8.52: System and Server Administration PeopleBook

PeopleTools 8.52 Hardware and Software Requirements, "Server Requirements"

Task 4-2-1: Starting the PeopleSoft Installer

After you download and extract the PeopleSoft PeopleTools installation files you can find the installer in *PS_INSTALL*/disk1.

To start the PeopleSoft Installer on Microsoft Windows, type:

```
PS_INSTALL\disk1\setup.bat [additional flags]
```

To start the PeopleSoft Installer on a supported UNIX or Linux operating system, type:

```
PS_INSTALL/disk1/setup.sh [additional flags]
```

Use setup.sh to start the PeopleSoft Installer on the following platforms:

- AIX
- HP-UX
- Linux
- Solaris
- zLinux

To run the PeopleSoft Installer on DB2 for z/OS, use `PS_INSTALL\disk1\setup.bat` to install on Microsoft Windows, and then use Server Transfer. This is the procedure that was used in PeopleSoft PeopleTools 8.1x releases.

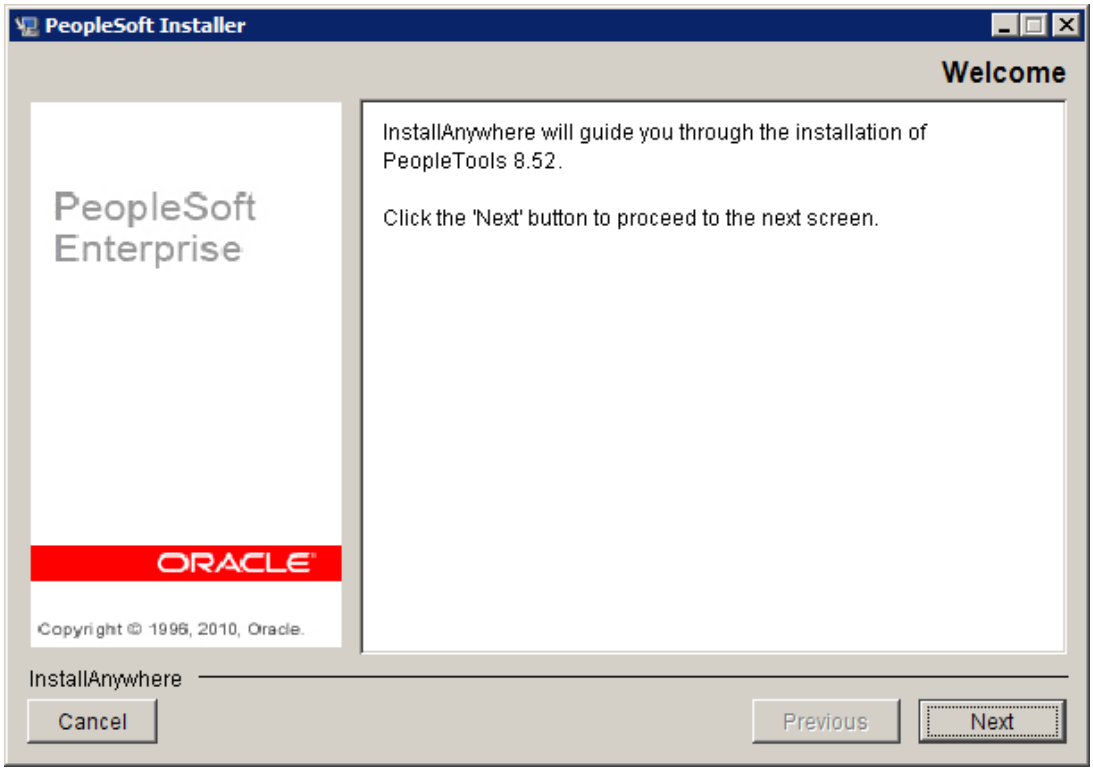
This table lists the options that you can use with setup.sh, their allowed values, and descriptions:

Command Line Option	Allowed Values	Description
-debug	NA	Use this flag to enable debugging mode.
-DDEBUG=true	NA	Use this variable for debugging.
-javahome	Path to Java home directory. For example: `setup.sh -javahome /prod/jre`	Use this flag to specify where you installed the Java home directory, if your installation is different than the vendor-defined JRE Search Path.
-tempdir	Path to temporary directory	Use this flag to specify the temporary directory to extract temporary files. This is recommended if you have less than 2 GB of space in your temporary directory. See the Prerequisites section for information on specifying the temporary directory.

Task 4-2-2: Installing PeopleSoft PeopleTools in GUI Mode

To install PeopleSoft PeopleTools with the PeopleSoft Installer in GUI mode:

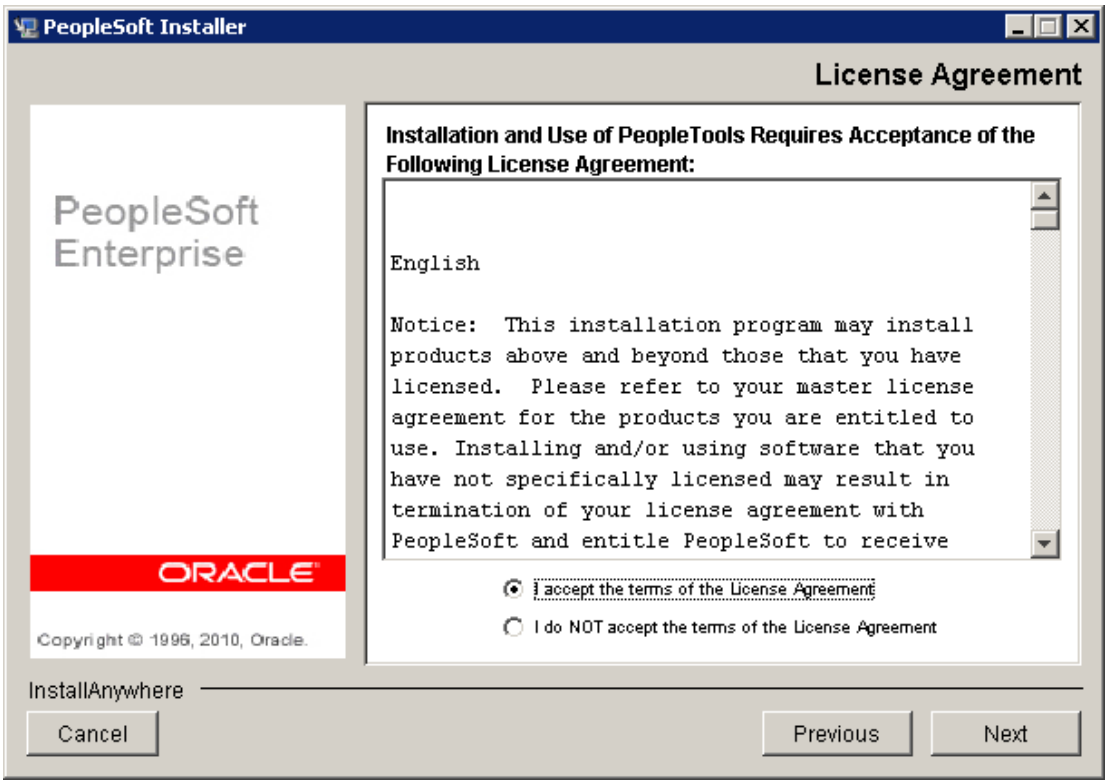
1. Launch the installer. Click Next when you see the Welcome screen for PeopleTools 8.52.



PeopleSoft Installer Welcome window

2. Click the radio button to accept the license agreement and click Next.

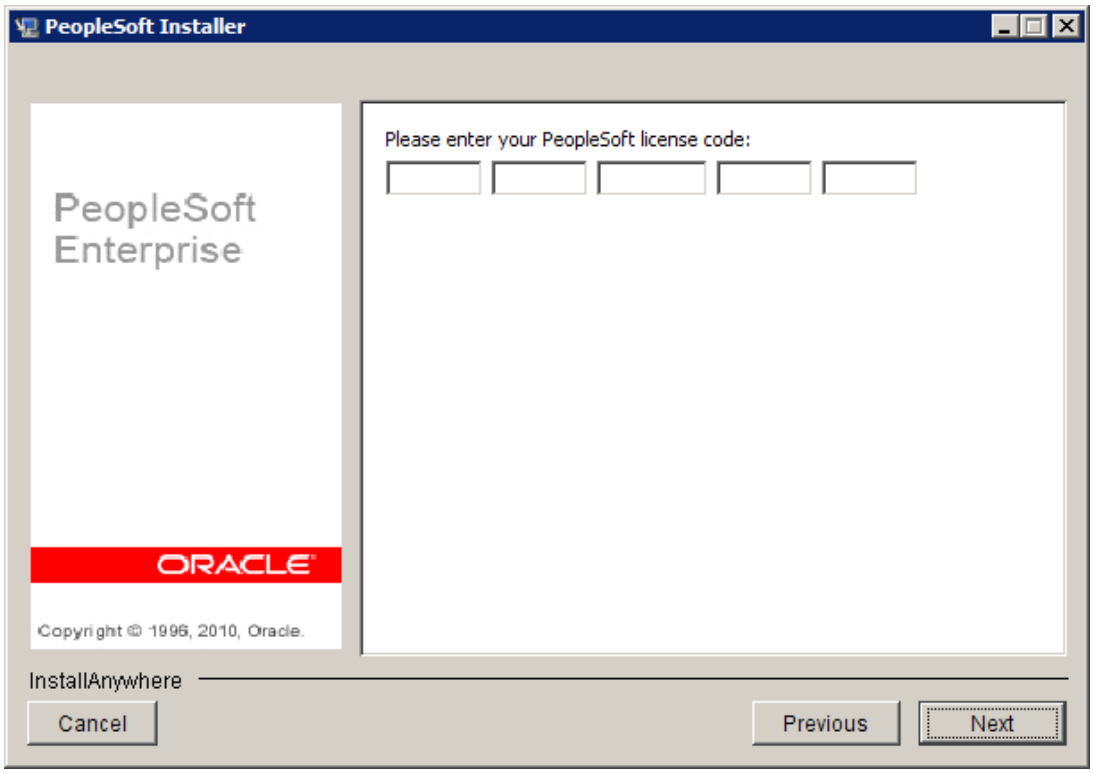
   The License Agreement window includes the terms in several languages.



PeopleSoft Installer License Agreement window

3. Enter your license code and click Next.

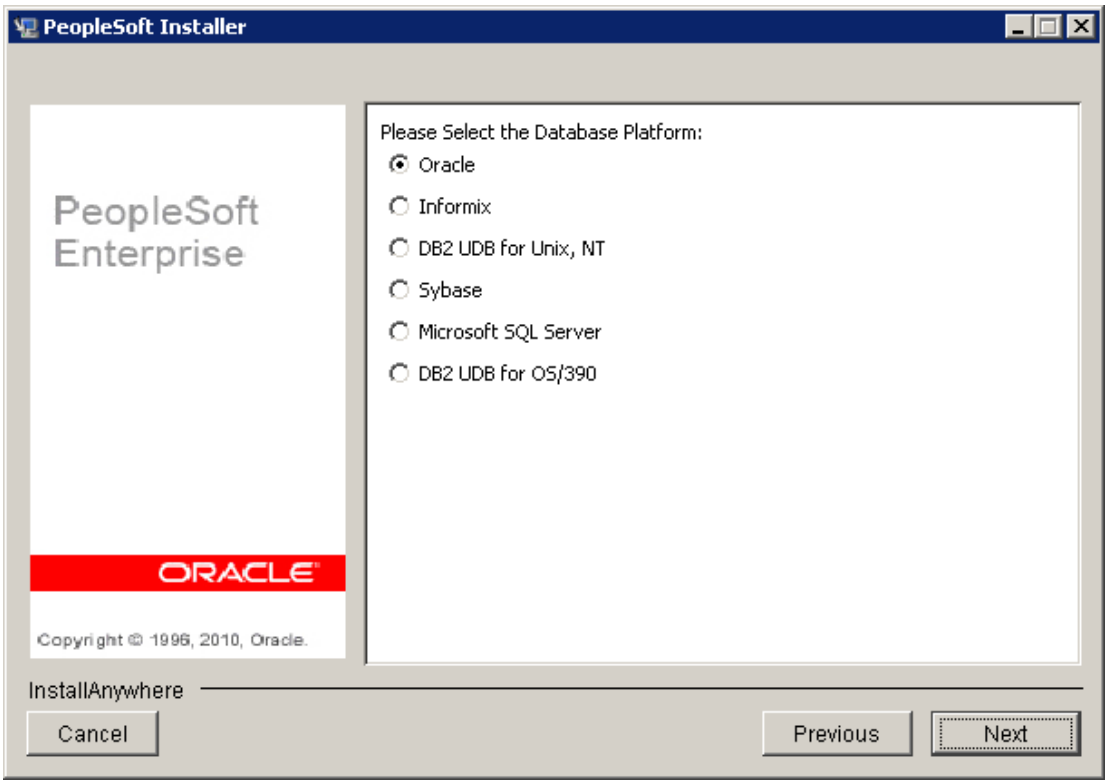
   See Understanding the PeopleSoft Installer, Obtaining License Codes.



PeopleSoft Installer License code entry window

4. Select the database platform you are installing on and click next.

   In the following example, an Oracle database platform is selected. The other options are Informix, DB2 UDB for Unix, NT (DB2/LUW), Sybase, Microsoft SQL Server, and DB2 UDB for OS/390 (DB2 z/OS).



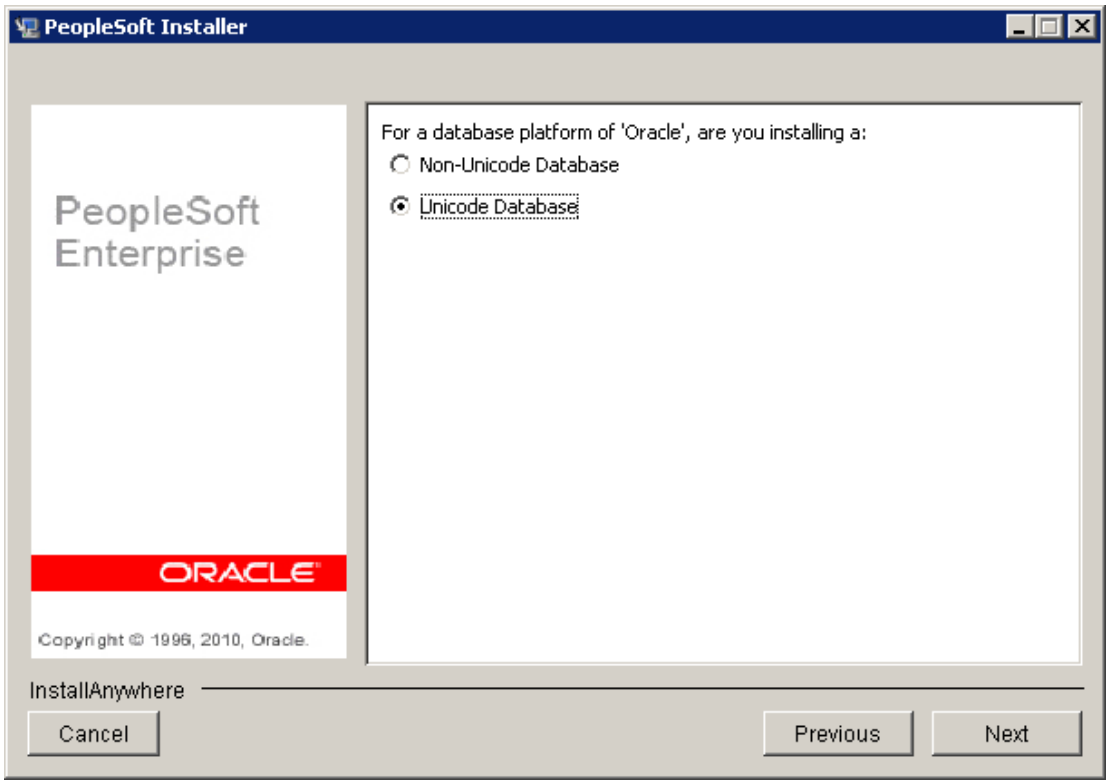
Selecting an Oracle database platform for the PeopleSoft PeopleTools installation

5. Choose a Unicode or non-Unicode database and click Next.

Note. Unicode databases are beneficial if you intend to deploy your applications globally and would otherwise have to implement multiple databases to handle different languages. However, Unicode databases require much more disk space than non-Unicode databases.

See *PeopleTools 8.52: Global Technology PeopleBook*.

This example shows the Unicode Database option selected.

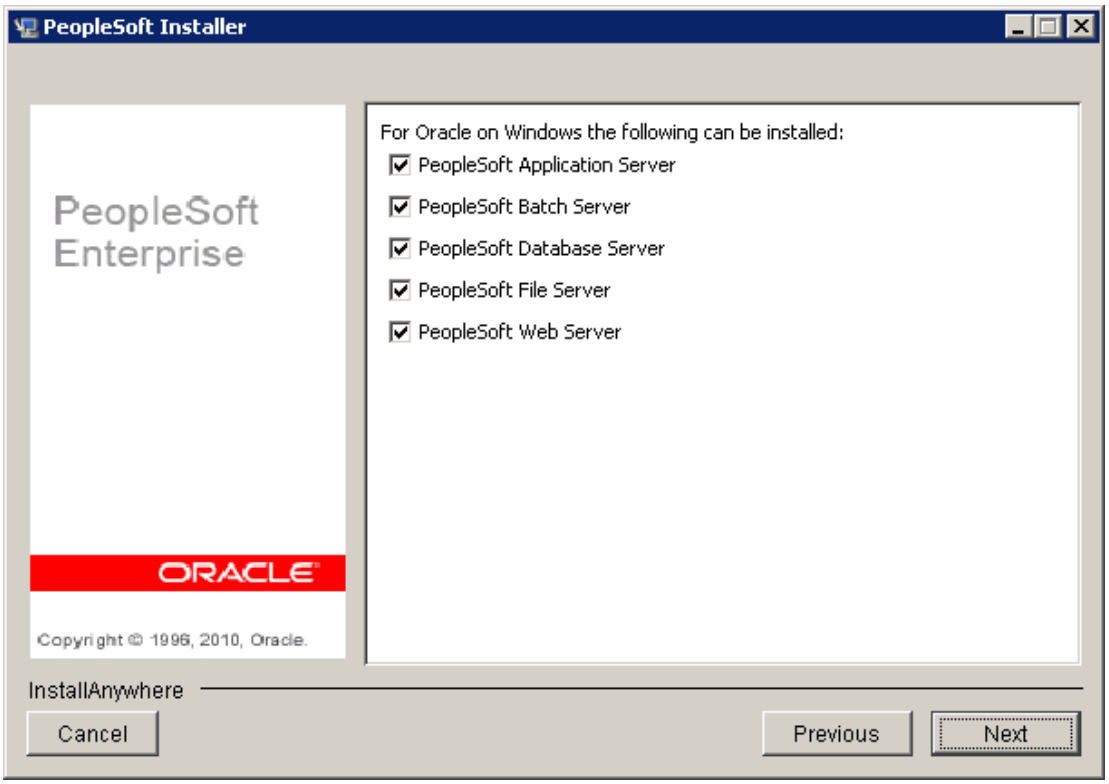


Selecting Unicode Database for the PeopleSoft PeopleTools installation

6. Select the servers you want to install and click *Next*.

Warning! If you are installing for DB2 for z/OS, you need to select *all* PeopleSoft Servers. This will ensure that all of the files needed by Server Transfer are installed to the PeopleSoft file server.

In this example the PeopleSoft Application Server, PeopleSoft Batch Server, PeopleSoft Database Server, PeopleSoft File Server, and PeopleSoft Web Server are selected.



Selecting servers for the PeopleSoft PeopleTools installation

Use the following information to help you make your selection:

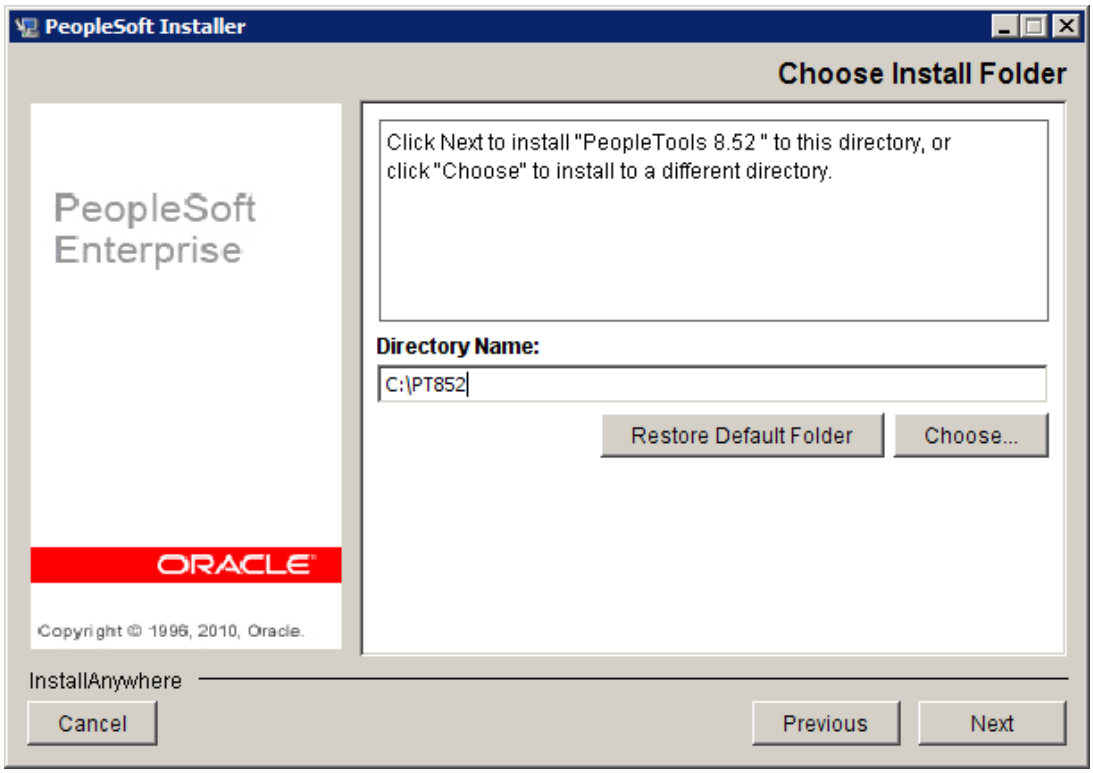
- You can install multiple servers at the same time, but they will all be installed on the same machine. If you want to install servers on separate machines, you need to run the PeopleSoft Installer on each server machine.
- If you do not have admin privileges, you will not be able to install PeopleSoft web server. You will have to either acquire admin privileges or deselect the Web Server option to continue.

7. Specify the directory where you want to install PeopleSoft PeopleTools, referred to in this documentation as *PS_HOME*, in the Directory Name field, and click *Next*.

   In this example, *PS_HOME* is C:\PT852.

Note. Substitute your network drive and the directory name of your choice for the default selection. The installation directory name cannot contain a space. Note that directory names containing periods or non-US-ASCII characters may not work with some additional component software.

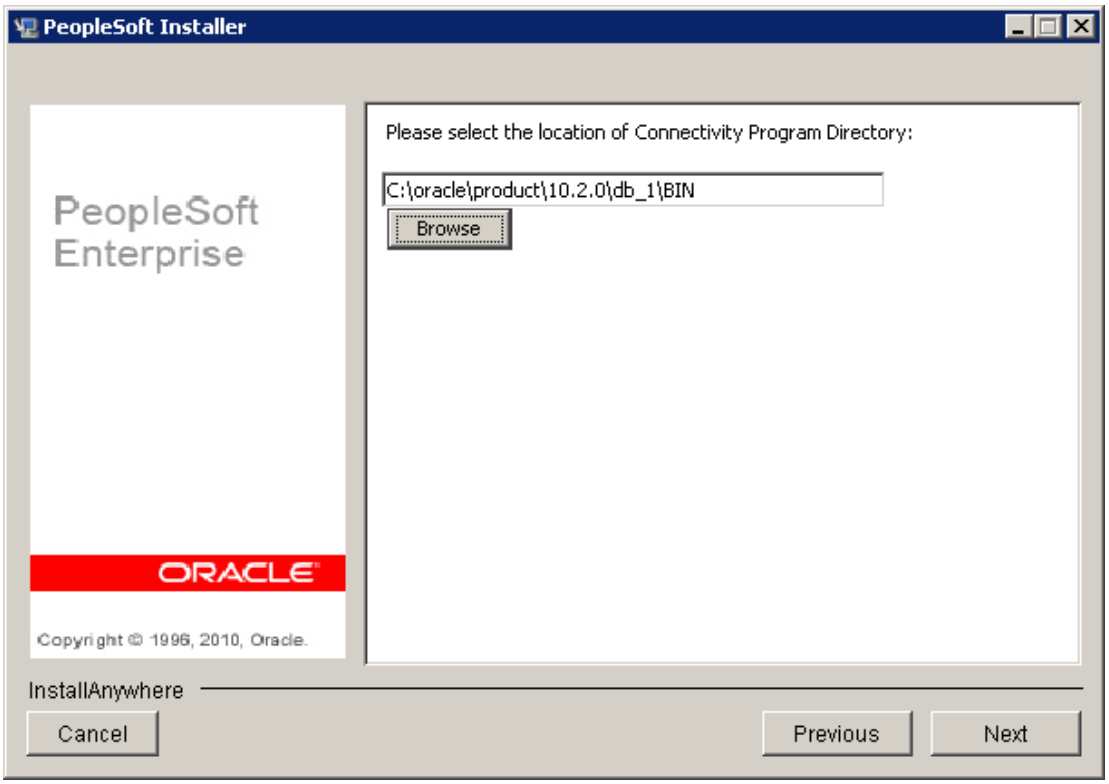
Note. If you are installing on UNIX, do not use symbolic links. Use the actual directory.



PeopleSoft Installer Choose Install Folder window

8. Specify the location of your Connectivity Program Directory and click *Next*.

   This example shows the directory for an Oracle database platform:

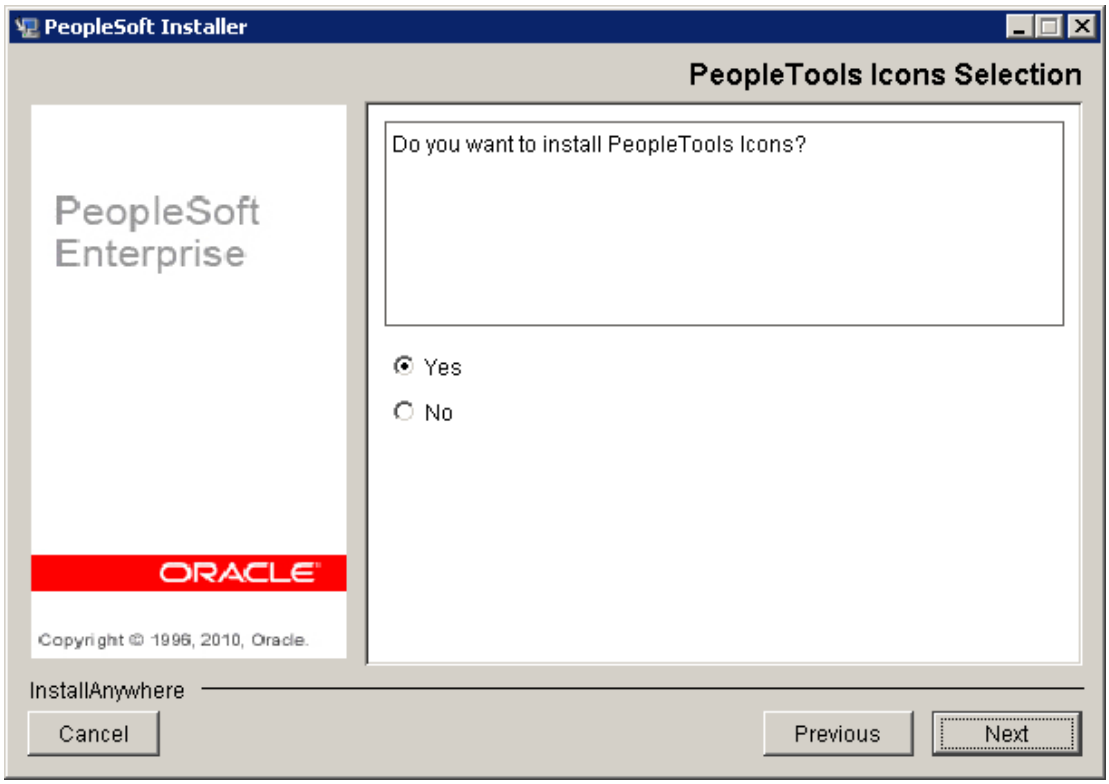


Specifying the Connectivity Program Directory for the PeopleSoft PeopleTools installation

The default location for the connectivity software for DB2 for z/OS (as set by the vendor) is: C:\sqllib\bin.

If the database connectivity software was installed to a different directory, enter that path instead.

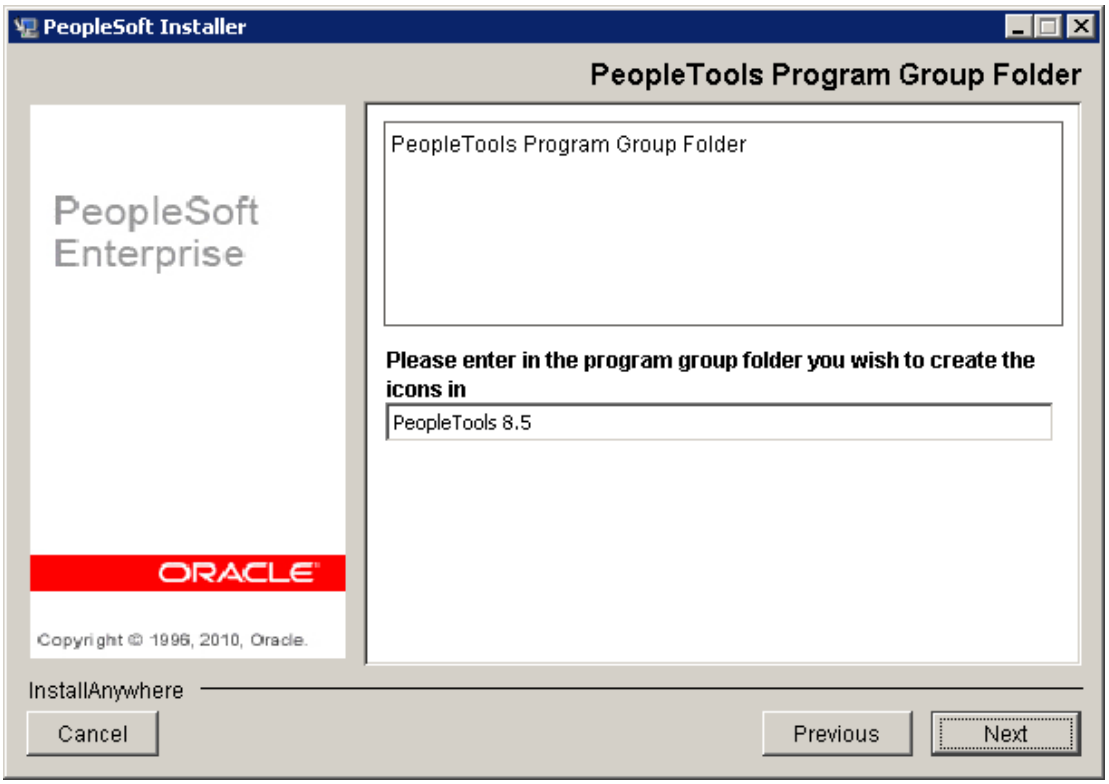
9. Depending on the PeopleSoft servers you selected, choose whether to install the PeopleSoft PeopleTools icons and click Next.



PeopleSoft PeopleTools Installer Icons Selection window

10. If you elected to install PeopleSoft PeopleTools icons, choose a valid group folder in which to create them and click Next.

    This example shows the default group folder, PeopleTools 8.5.

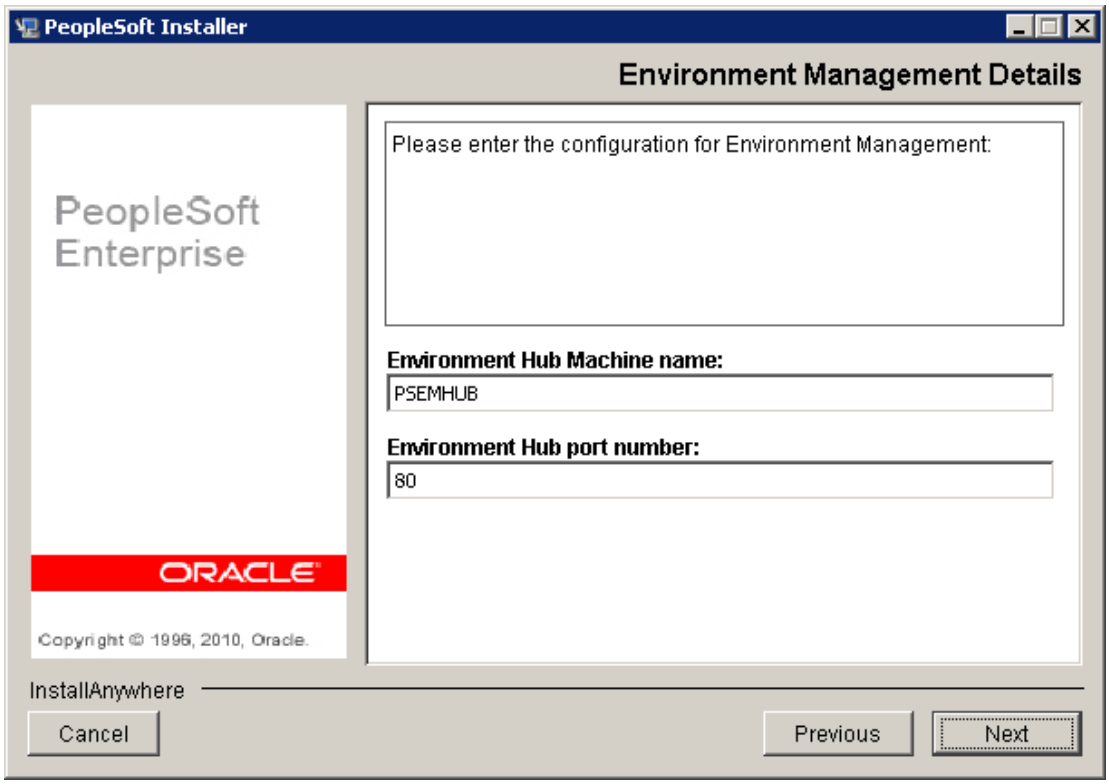


PeopleSoft PeopleTools Program Group Folder window

11. Enter the configuration information for Environment Management.

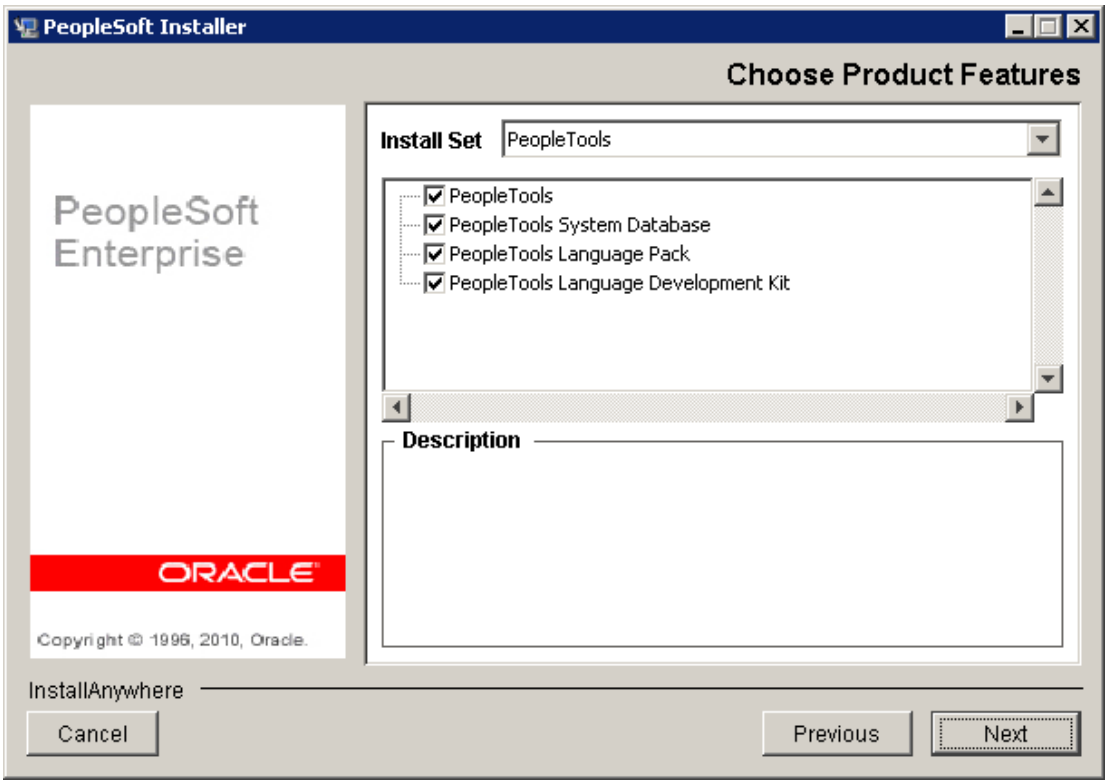
    Select the machine name of the web server running the Environment Manager Hub. (This will very likely be the machine on which you run the PeopleSoft Pure Internet Architecture). Select the hub port number (the default is 80, as shown in the example). This needs to match the PeopleSoft Pure Internet Architecture port. If you change the port number for the PeopleSoft Pure Internet Architecture configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

    See *PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook,* "Configuring and Running Environment Management Components."



PeopleSoft PeopleTools Installer Environment Management Details window

12. The next screen lists the PeopleSoft PeopleTools components (features). Accept the defaults for the PeopleSoft PeopleTools features and click Next.



PeopleSoft PeopleTools Installer Choose Product Features window

- Select *PeopleTools* to install PeopleSoft PeopleTools and the PeopleSoft Pure Internet Architecture. This component contains the core PeopleTools files and is required for the proper operation of the PeopleSoft system and the PeopleSoft Pure Internet Architecture.
- Select *PeopleTools System Database* to allow your developers to create custom PeopleSoft PeopleTools applications outside of the delivered PeopleSoft Application.
- The *PeopleTools Language Pack* and *PeopleTools Language Development Kit* contain the translated PeopleSoft PeopleTools DLLs and the resource files and headers needed to build them.

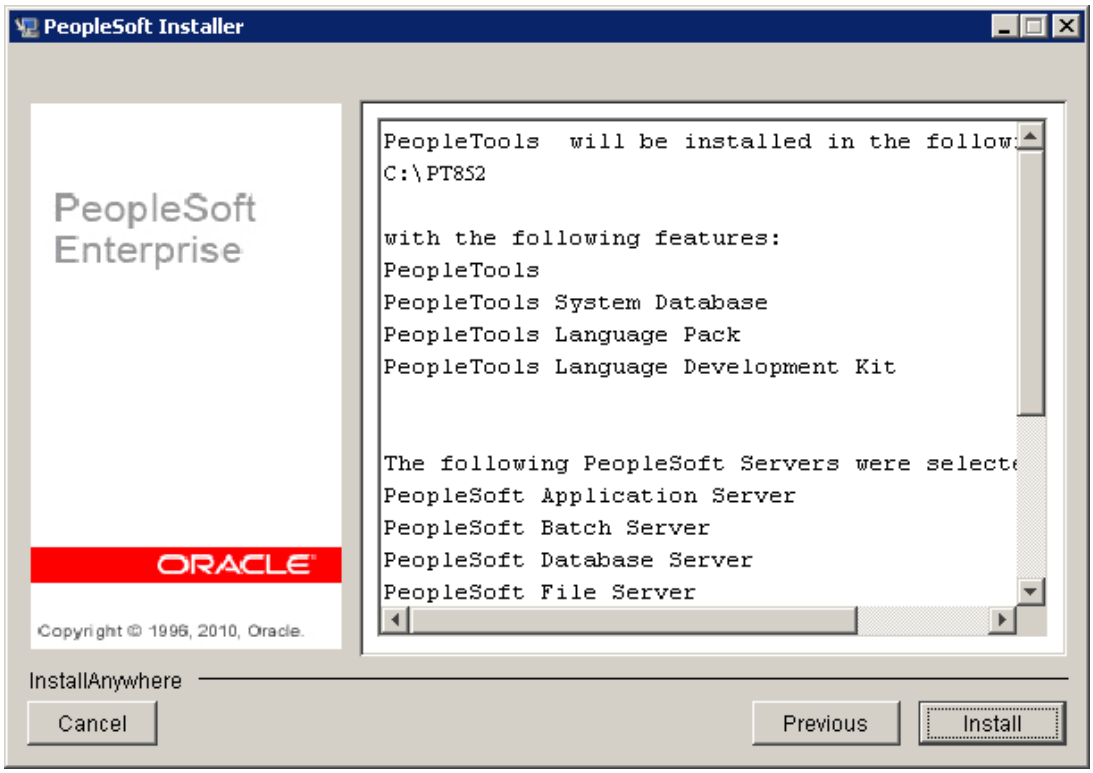
Note. These options are available only for installations on Windows.

Select *PeopleTools Language Pack* if you plan on running the Windows components of the installation in languages other than English. This component contains the compiled PeopleSoft translations for the Windows client. If you are not using multiple languages throughout your implementation, you do not need this component.

Select *PeopleTools Language Development Kit* if you plan on modifying or creating your own new translations for the PeopleSoft PeopleTools Windows client components. It contains the source and header files required to modify and compile new versions of these translations. Again, you do not need this component if you are not using multiple languages.

13. You will see an installation confirmation window. If the information is correct, choose Next. If you need to modify any of the information, choose the Back button and make your changes.

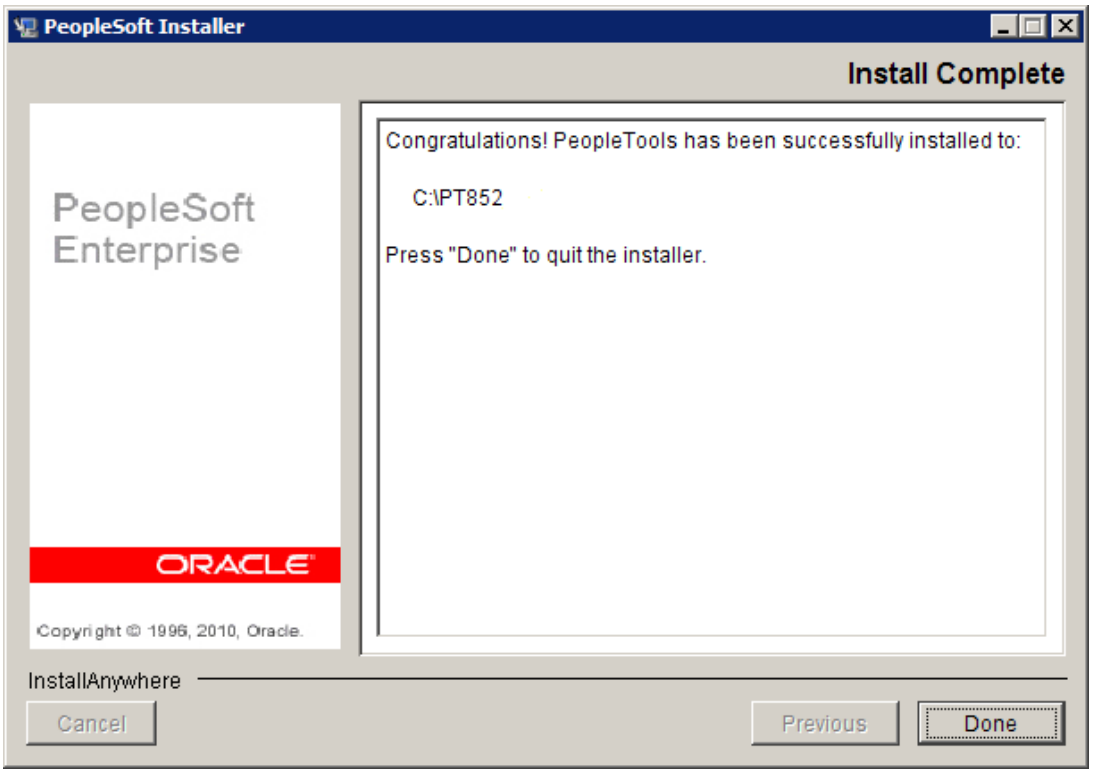
    The summary information includes the installation directory, the features, and the PeopleSoft servers:



PeopleSoft Installer Summary information window

14. After the files have been installed, click *Finish* to complete the setup.

    The window displays the installation directory.



PeopleSoft Installer Install Complete window

Task 4-2-3: Installing PeopleSoft PeopleTools in Console Mode

To install PeopleSoft PeopleTools with the PeopleSoft Installer in console mode:

Note. The console mode installation is typically used on UNIX and Linux platforms.

1. Launch the PeopleSoft Installer in console mode. For example:

   ```
   PS_INSTALL/disk1/setup.sh -tempdir /tmp
   ```

   See Starting the PeopleSoft Installer.
2. At the Welcome prompt, press ENTER to continue.
3. *Windows only:* Accept the license agreement by selecting 1. Select 0 when you are finished.
4. Enter your license code, and press ENTER to continue.

   See Understanding the PeopleSoft Installer, Obtaining License Codes.
5. Select the PeopleSoft servers you want to install.

   By default, all of the servers supported for your database platform are selected.

   Note. If you are installing on UNIX, do not use Symbolic Links. Use the actual directory.

Note. DB2 z/OS customers need to select *all* servers when running the installer on Windows. This is because there are additional steps using Server Transfer to upload the files. Also, to install a Unicode database, DB2 z/OS customers must select the Unicode Database option.

After your selection, press ENTER; you will be prompted for the destination (for example, *PS_HOME*). Specify the directory and press ENTER to continue.

Note. In console mode, the browse option for specifying a different install directory is unavailable.

6. If you specify Proxy User Name, a prompt appears asking for a Proxy Password.
7. Enter NONE if you do not want to receive security updates through your My Oracle Support account.

```
If you want to remain uninformed of critical security issues in your⇒
 configuration, enter NONE
Proxy specification (DEFAULT: NONE)
```

8. Enter the configuration for Environment Management. Select the machine name and port number.

   Select the machine name of the web server running the Environment Manager Hub. (This will very likely be the machine on which you run the PeopleSoft Pure Internet Architecture). Select the hub port number (the default is 80). This needs to match the PeopleSoft Pure Internet Architecture port. If you change the port number for the PeopleSoft Pure Internet Architecture configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

   See *PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook,* "Configuring and Running Environment Management Components."
9. *Windows only:* Specify the database connectivity directory.

   The default location for the connectivity software for DB2 for z/OS (as set by the vendor) is: C:\sqllib\bin.

   If the database connectivity software was installed to a different directory, enter that path instead.
10. *Windows only:* Indicate whether you want icons to be created.
11. Choose the features that you wish to install:

```
To select/deselect a feature or to view its children, type its number

         -> 1-  PeopleTools
            2-  PeopleTools System Database
```

12. At this point, you can toggle the install status of each product. Press 0 and then ENTER to continue and the PeopleSoft Installer will give you a summary of your selection. This summary will depend on your earlier selections.

```
PeopleTools 8.52 will be installed in the following location:
/home/PT851/ptest
with the following features:
PeopleTools
PeopleTools System Database

The following PeopleSoft Servers were selected by you:
PeopleSoft Application Server
PeopleSoft Batch Server
```



```
PeopleSoft Database Server
PeopleSoft File Server
PeopleSoft Web Server

Database Type:
<Database Name>

Environment Hub Configuration:
Hub machine name: PSEMHUB
Hub port number: 80

Press 1 for Next, 2 for Previous, 3 to Cancel, or 5 to Redisplay [1]
```

13. Press ENTER to start the installation.
14. The PeopleSoft Installer will create a text-based progress bar to indicate the progress of the install.
15. Press ENTER to exit.

Note. For UNIX platforms, if you chose PeopleSoft servers that require a JRE, you see the "Unpacking JRE" message after the progress bar.

16. If you are installing on AIX, go to the *PS_HOME*/jre directory and ensure that the directory has executable permissions. If not, set the permission using a command such as chmod +x.

Task 4-3: Verifying Necessary Files for Installation on Windows

PeopleSoft PeopleTools 8.50 and higher releases are developed using Microsoft Visual C++ 2005. Microsoft, as part of VC++ 2005, changed the way applications use and ship the required C Run Time (CRT) files (these files are installed as shared assemblies). PeopleSoft PeopleTools 8.50 and higher programs require these files to be present or the programs will not run.

During your PeopleSoft PeopleTools installation, the install programs will automatically update the Microsoft Windows machine performing the installation.

The required CRT files are installed by all of the PeopleSoft installers, including:

- PeopleSoft PeopleTools
- PeopleSoft Client
- Database
- PeopleSoft Pure Internet Architecture
- Change Assistant
- Change Impact Analyzer
- Webapp Deploy

In some cases it may be necessary for you to carry out a separate installation of the CRT files. For example:

- If the update does not take place during the installation program run, you may not be able to launch PeopleSoft PeopleTools client or server executables on that machine and may receive error messages.
- If you are accessing PeopleSoft PeopleTools executables from a machine on which the PeopleSoft installer did not run, the executables may not work and you may receive error messages.

If you encounter these errors, you can update the Microsoft Windows machine's CRT files by running psvccrt_retail.msi manually.

1. Go to *PS_HOME*\setup\psvccrt.
2. Run psvccrt_retail.msi.

   The installation is completed automatically.

Task 4-4: Installing the Verity Integration Kit

This section discusses:

- Understanding the Verity Installation
- Installing the Verity Integration Kit in GUI Mode
- Installing the Verity Integration Kit in Console Mode

Understanding the Verity Installation

PeopleSoft PeopleTools uses Verity software to carry out searches. You must install the Verity for PeopleSoft Enterprise Integration kit for PeopleSoft PeopleTools 8.50 and higher. Install Verity after you install PeopleSoft PeopleTools, and before you create the database. Install Verity on the machines on which you set up the application server, batch server, and the web server.

The installation files for Verity are part of the PeopleSoft PeopleTools installation files that you downloaded from Oracle E-Delivery. This section assumes that you have already downloaded and extracted the files into a directory referred to as *PS_INSTALL*.

See Also

Obtaining the PeopleSoft Installation Files from Oracle E-Delivery

PeopleTools 8.52: System and Server Administration PeopleBook, "Configuring Search and Building Search Indexes"

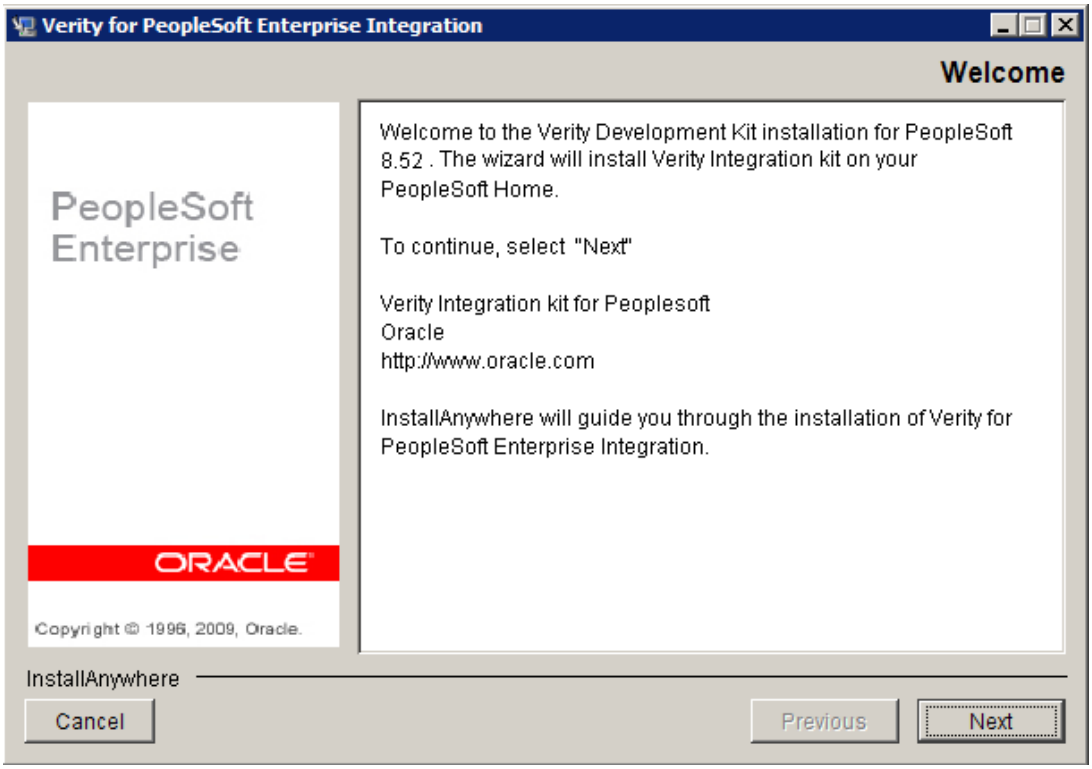
Task 4-4-1: Installing the Verity Integration Kit in GUI Mode

GUI mode is typically used for installation on Microsoft Windows.

To install the Verity Integration Kit in GUI mode:

1. Go to *PS_INSTALL*\Verity\Disk1.
2. Double-click setup.bat.

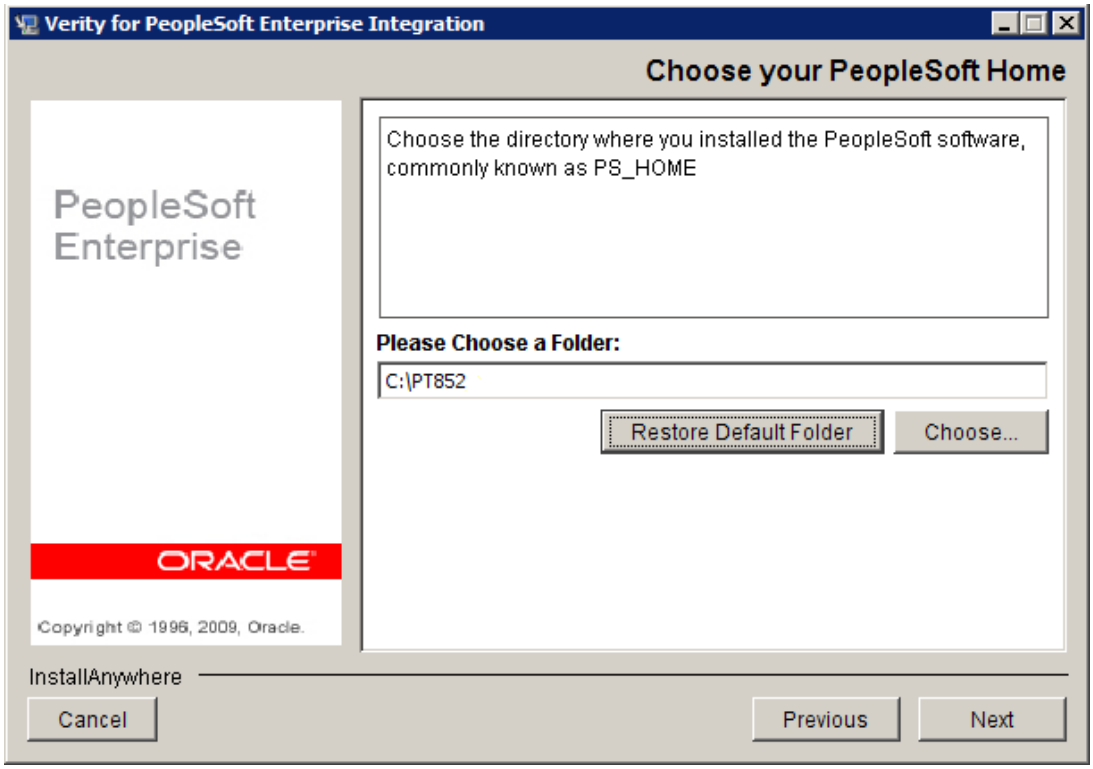
   The Welcome window appears. Click Next.



Verity for PeopleSoft Enterprise Integration Welcome window

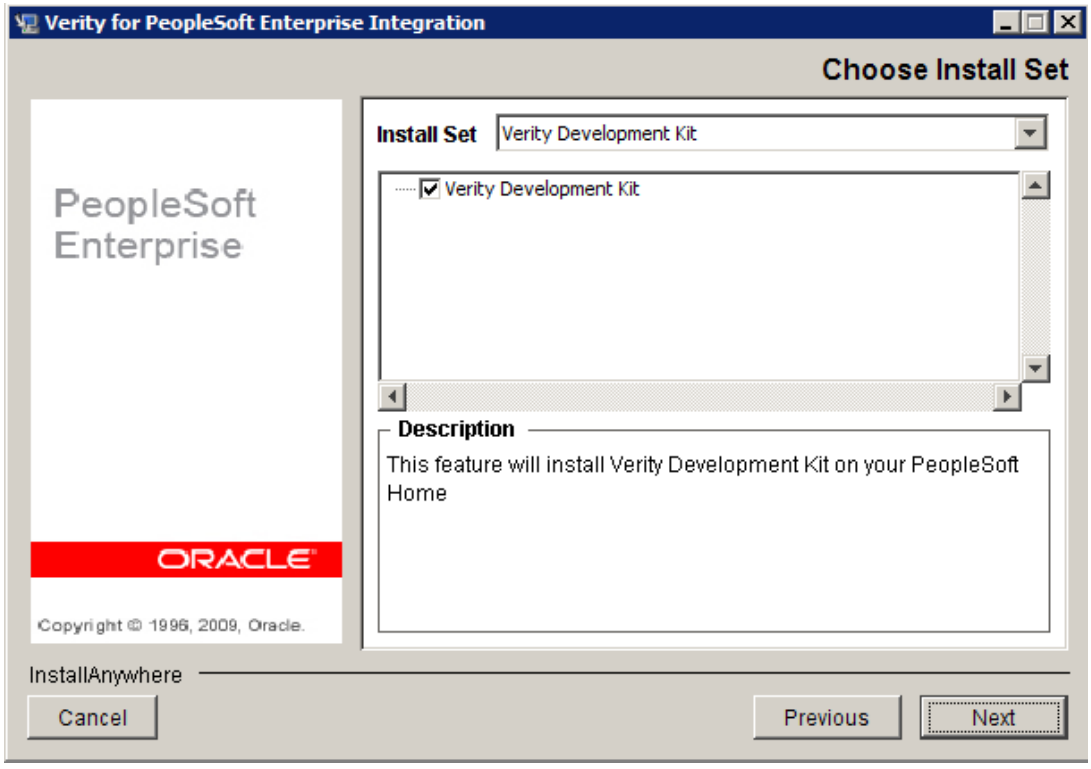
3. Specify the directory where you installed PeopleSoft PeopleTools, referred to as *PS_HOME*, and then click Next.

   In the following example, *PS_HOME* is C:\PT852.



Verity for PeopleSoft Enterprise Integration Choose your PeopleSoft Home window

4. Accept the default option to install the Verity Development Kit, and click Next.



Verity for PeopleSoft Enterprise Integration Choose Install Set window

5. Review the pre-installation summary and click Install.

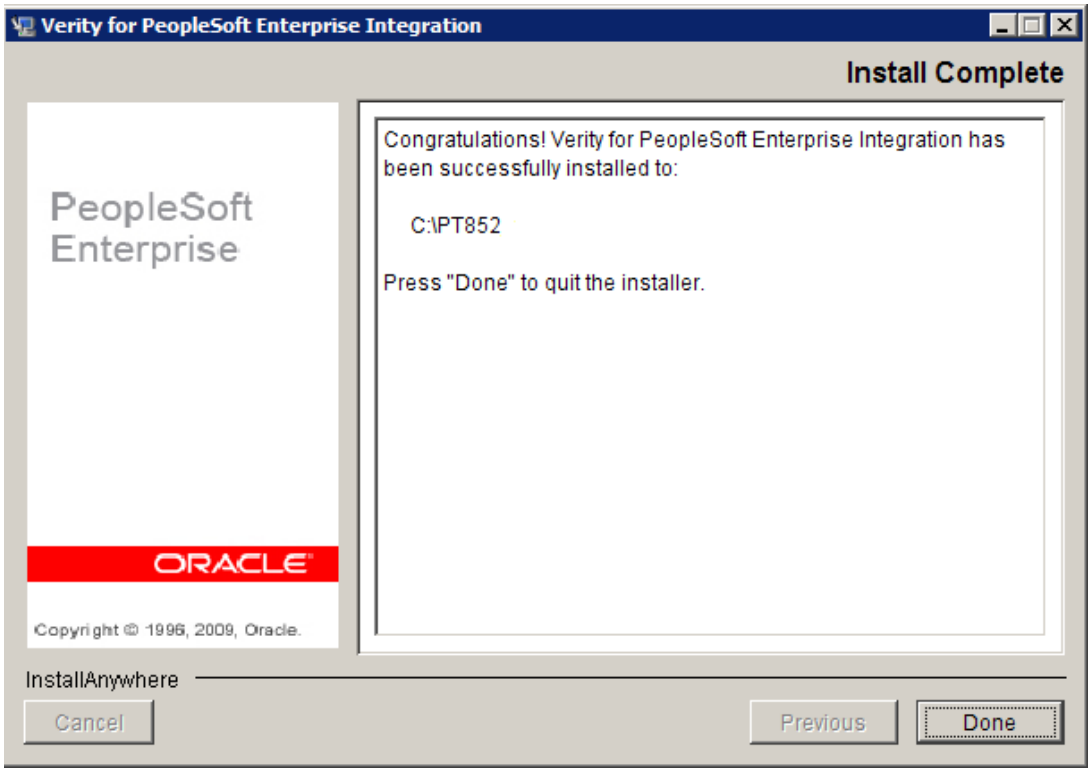
   If you want to change any options, click Previous to return to an earlier window. The summary includes the product name, installation location, and product features.

   The installation requires a few minutes.

Verity for PeopleSoft Enterprise Integration Pre-Installation Summary window

6. Click Done to exit the installer.

   The window displays a message indicating that the installation is complete, and including the installation location.



Verity for PeopleSoft Enterprise Integration Install Complete window

Task 4-4-2: Installing the Verity Integration Kit in Console Mode

Console mode is typically used for installation on UNIX and Linux.

To install the Verity Integration Kit in console mode:

1. Go to *PS_HOME* and source psconfig.sh:

   ```
   ../psconfig.sh
   ```

2. Go to *PS_INSTALL*/Verity/Disk1.
3. Run setup.sh with the tempdir option:

   ```
   ./setup.sh -tempdir temporary_directory
   ```

4. Press ENTER after reading the welcome statement:

   ```
   Preparing to install...
   Extracting the installation resources from the installer archive...
   Configuring the installer for this system's environment...
   Launching installer...
   Preparing CONSOLE Mode Installation...
   ===============================================================================
   Verity for PeopleSoft Enterprise Integration(created with InstallAnywhere by⇒
    Macrovision)
   -------------------------------------------------------------------------------
   ===============================================================================
   Welcome
   ```



```
-------
Welcome to the Verity Development Kit installation for PeopleSoft 8.52.
The wizard will install Verity Integration kit on your Peoplesoft Home.
Respond to each prompt to proceed to the next step in the installation.
Oracle (http://www.oracle.com)
PRESS <ENTER> TO CONTINUE:
==========================================================================
```

5. Specify the full path to the directory where you installed PeopleSoft PeopleTools, referred to as *PS_HOME*:

```
Select your PeopleSoft Home
Enter an absolute path, or press <ENTER> to accept the default (DEFAULT:
   /home/user1/PT8.52):
Press 1 for Next, 2 for Previous, 3 to Cancel or 5 to Redisplay [1] :
```

6. Enter *0* (zero) to install the Verity Development Kit, and *1* for Next:

```
Select the verity features for PeopleTools 8.52 you would like to
install:
  ->1- Verity Development Kit
To select an item enter its number, or 0 when you are finished [0] :
Press 1 for Next, 2 for Previous, 3 to Cancel or 5 to Redisplay [1] :
```

7. Review the installation summary.

   Enter *2* if you want to go back to a previous prompt to make changes:

```
PeopleTools Verity Installer 8.52 will be installed in the following
location:
/home/user1/PT8.52 with the following features:
Verity
Press 1 for Next, 2 for Previous, 3 to Cancel or 5 to Redisplay [1] :
```

8. Press ENTER to exit the installer:

```
Installation Complete
---------------------
Congratulations. Verity for PeopleSoft Enterprise Integration has been
successfully installed to:
   /home/user1/PT8.52
PRESS <ENTER> TO EXIT THE INSTALLER:
```

Task 4-5: Installing PeopleSoft Application Software

After installing PeopleSoft PeopleTools, install the PeopleSoft Application to the same *PS_HOME* directory. The installation windows may look slightly different depending upon which application you install.

To install the PeopleSoft application, launch the PeopleSoft Installer from *PS_HOME*/disk1 and follow the procedure in Running the PeopleSoft Installer.

Use the following guidelines when installing:

- If supported by the PeopleSoft Application that you are installing, you can install the PeopleSoft Application software to a *PS_APP_HOME* location that is not the same as the *PS_HOME* location where you installed PeopleSoft PeopleTools. Be sure to review the installation guide for your PeopleSoft Application to determine whether this functionality is supported.
- If you are installing more than one application, it is a good idea to create an application-specific *PS_HOME* or *PS_APP_HOME* and carry out an installation of PeopleSoft PeopleTools for each application. This helps you to maintain your applications more efficiently, since you can easily match each application version to the correct version of PeopleSoft PeopleTools.
- To properly install a Demo database, you must select both the System Database and the Demo Database when asked to choose product features during the installation of your PeopleSoft applications. The chapter on creating a database discusses the installation of the application database component to the database server.

See Also

"Setting Up the PeopleSoft Pure Internet Architecture," Completing Post-Installation Steps

Task 4-6: Installing the Multilanguage Files

If you have licensed and selected to install languages other than English, you need to load the application-specific PeopleSoft Multilanguage files. Each PeopleSoft application installation has a corresponding Multilanguage installation that contains all the non-English translations. This procedure assumes that you unzipped the PeopleSoft application installation files from Oracle E-Delivery into a directory referred to as *PS_INSTALL*.

Load the Multilanguage files after you install PeopleSoft PeopleTools and the PeopleSoft application software. Install the Multilanguage files to the same *PS_HOME* as you used for PeopleSoft PeopleTools and the PeopleSoft Application.

Warning! The release numbers for the application media pack and the Multilanguage media pack must be in sync. For example, if you are installing HRMS 9.1, you can only use the Multilanguage HRMS 9.1 ML; you cannot use HRMS 8.8 SP1.

To install the Multilanguage files, launch the PeopleSoft Installer from *PS_INSTALL*/disk1 and follow the procedure in Running the PeopleSoft Installer.

Task 4-7: Installing the PeopleSoft Client Files

To install the files needed for the PeopleSoft Client, launch the PeopleSoft Installer from *PS_INSTALL*\Client\disk1 and follow the procedure in Running the PeopleSoft Installer.

Task 4-8: Binding Windows “SQR for PeopleSoft” DB2 Connect Packages

This task applies to Microsoft Windows file or report servers.

To bind Windows "SQR for PeopleSoft" DB2 Connect packages:

1. Using an ID with mainframe logon and BINDADD privileges, log on to DB2 Connect Command Line Processor:

   ```
   db2 => CONNECT TO <database name> USER <mainframe User Id>
   ```

   Note. Enter your current password for "mainframe User Id": <mainframe User Id password>.

   Database Connection Information:

   Database server = DB2 OS/390 8.1.5

   SQL authorization ID = <mainframe User Id>

   Local database alias = <database name>

2. The Windows SQR bind executable is located in the File or Report Server directory (for example, *PS_HOME*\bin\sqr\db2\BINW\dbcalls.bnd).

   For an EBCDIC installation, issue the following bind command:

   ```
   db2 => bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd blocking all grant public⇒
    sqlerror continue
   ```

   For a Unicode installation, issue the following command to bind the Windows SQR executable with encoding Unicode:

   ```
   db2 ->  bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd encoding unicode blocking⇒
    all grant public sqlerror continue
   ```

   Collection id (COLLID) of SQR will be added to SYSPACKAGE catalog table and package execute authority to PUBLIC in SYSPACKAUTH catalog table.

   Note. This bind needs to be executed for each new version of SQR for PeopleSoft on every DB2 subsystem or database.

Task 4-9: Mapping a Drive on the Install Workstation

If you need to install to the file server or PeopleSoft Client from a networked install workstation, map a drive letter to the top-level PeopleSoft directory (*PS_HOME*) from the install workstation. The *PS_HOME* directory must be shared, and you must have write permission from the install workstation to the file server or PeopleSoft Client.

From the install workstation, create a logical drive that points to the *PS_HOME* directory.

On a Windows network, use Windows Explorer to map to the drive on the file server or PeopleSoft Client to which you are installing; or use the NET USE command, for example:


```
NET USE N: \\SERVER1\PS_HOME
```

On a Novell network, use the MAP command:

```
MAP ROOT N:=SERVER1/SYS:PS_HOME
```

In this example, *SERVER1* is the name of the file server or PeopleSoft Client.

See Also

"Setting Up the Install Workstation"

CHAPTER 5

Setting Up the Install Workstation

This chapter discusses:

- Understanding the Install Workstation
- Prerequisites
- Starting Configuration Manager
- Setting Startup Options
- Editing the Default Profile
- Running Client Setup
- Installing PeopleSoft ODBC Driver and Configuring the Crystal 2008 .NET Runtime

Understanding the Install Workstation

This chapter describes how to set up a PeopleSoft Windows-based client for connecting to the database server in two-tier mode, specifically for the purpose of performing install-related tasks from the workstation. You must configure at least one two-tier Windows-based client for running the Server Transfer, Data Mover and SQR processes required for setting up the batch server and for creating the PeopleSoft database. For some installations you may wish to set up multiple install workstations, so that you can perform asynchronous tasks at the same time; for example, you could create and populate multiple databases simultaneously. You can quickly configure multiple workstations by exporting a configuration file from one workstation and importing it to another workstation.

See Also

PeopleTools 8.52: System and Server Administration PeopleBook

Prerequisites

The following tasks are prerequisites for setting up the install workstation:

- The workstation must have database connectivity software installed.
- You must have planned your database creation strategy. You should know the precise names of the databases that you intend to create.
- Make sure that you have created your connect strategy. You must use a Connect ID. You should know both the Connect ID and Connect password.

For information on PeopleSoft password, consult PeopleBooks.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Setting Application Server Domain Parameters."

- The workstation must have a logical drive mapped to *PS_HOME* on the file server (or, if the file server and install workstation are one and the same, *PS_HOME* can be installed on a local drive).
- The person performing the installation must have read access to the *PS_HOME* directory.

If this is the same workstation on which the PeopleSoft PeopleTools installation was performed, it should have a PeopleTools 8.5 installation program group, which was created when you loaded the PeopleTools software. This isn't a requirement, but it does make it more convenient to run the PeopleTools install applications.

See Also

"Preparing for Installation"

"Using the PeopleSoft Installer"

Task 5-1: Starting Configuration Manager

Configuration Manager is a utility for configuring workstations being used as the PeopleTools Development Environment. These are its principal functions:

- Sets up and make changes to PeopleSoft configuration settings.
- Creates a program group containing Windows shortcuts to PeopleSoft applications.
- Installs local DLLs.

The first time you run Configuration Manager on the client, it will populate certain fields with default values specified in a configuration file stored on the file server, specifically: *PS_HOME*\setup\pstools.cfg. This configuration file was set up when you ran the installation. Once you set up and run Configuration Manager, it will populate fields using values that are stored in the Windows system registry.

To start Configuration Manager, do one of the following:

- Select *Start, Programs, PeopleTools 8.52 , Configuration Manager*. (This program group will be available if you installed PeopleSoft PeopleTools on this workstation.)
- If the *PeopleTools 8.52* program group was not installed on this workstation, run pscfg.exe directly from the *PS_HOME*\bin\client\winx86 directory on the file server.

Task 5-2: Setting Startup Options

The Startup tab of Configuration Manager sets the default options for the PeopleSoft sign-on screen that is used for connecting to a PeopleSoft database. It also contains a setting that specifies the local directory for storing cached PeopleSoft data.

To set Startup options:

1. Make sure you are viewing the Configuration Manager Startup tab (this tab is what you see if you started Configuration Manager as described in the previous task).

   Set the following options:

   - *Database type* — Verify the type of RDBMS. This should already be set to DB2 UDB for OS/390.
   - *Application Server Name* — This option appears if you select a database type of Application Server. It is where you enter your application server name if you are setting up a three-tier connection.
   - *Database name* — The name of the default database to connect to. Enter the name of one of the databases that you intend to create.
   - *User ID* — The name of the default user that will appear in the sign-on screen. This can be any valid user name, although for installation setup it normally matches the name of one of the built-in PeopleSoft users (typically PS or VP1) that will be installed in the database.

     If you have decided to modify the PeopleSoft database directly and use a user ID other than a user ID delivered by PeopleSoft, type your user ID into this field.
   - *Connect ID and Connect Password* — Type your connect ID and password into these fields. Connect ID is required for this PeopleSoft release. The connect ID and password must match the z/OS ID that you set up in the chapter “Preparing for Installation.”
2. If you are using SAP Crystal Reports, select the Crystal/Bus. Interlink/JDeveloper tab and set the following options:

   - *Crystal EXEs Path* — Set this to the location of your SAP Crystal Reports executables.
   - *Default Crystal Reports* — Set this to the path on the file server where the Crystal reports reside. Note that the specified path should not contain reports run in production. This option is used when running from PSQuery to Crystal.
   - *Use trace during execution* — This option is used when running SAP Crystal Reports from Process Scheduler on the client.
   - *Business Interlink Directory* — You can leave this option blank. If you do so, the system uses its default directory *PS_HOME*\bin\<client>|<server>\winx86\interfacedrivers.
   - *JDeveloper Home Directory* — See the Integration Broker PeopleBook for information on specifying the JDeveloper directory for use with the Oracle XSL Mapper.

     See *PeopleTools 8.52: Integration Broker PeopleBook,* "Applying Filtering, Transformation and Translation."

     Note. You can leave the options here blank. If you do so, a message appears indicating that the option is not set, but you can ignore this message and continue.

See Also

"Preparing for Installation," Using Connect ID

Task 5-3: Editing the Default Profile

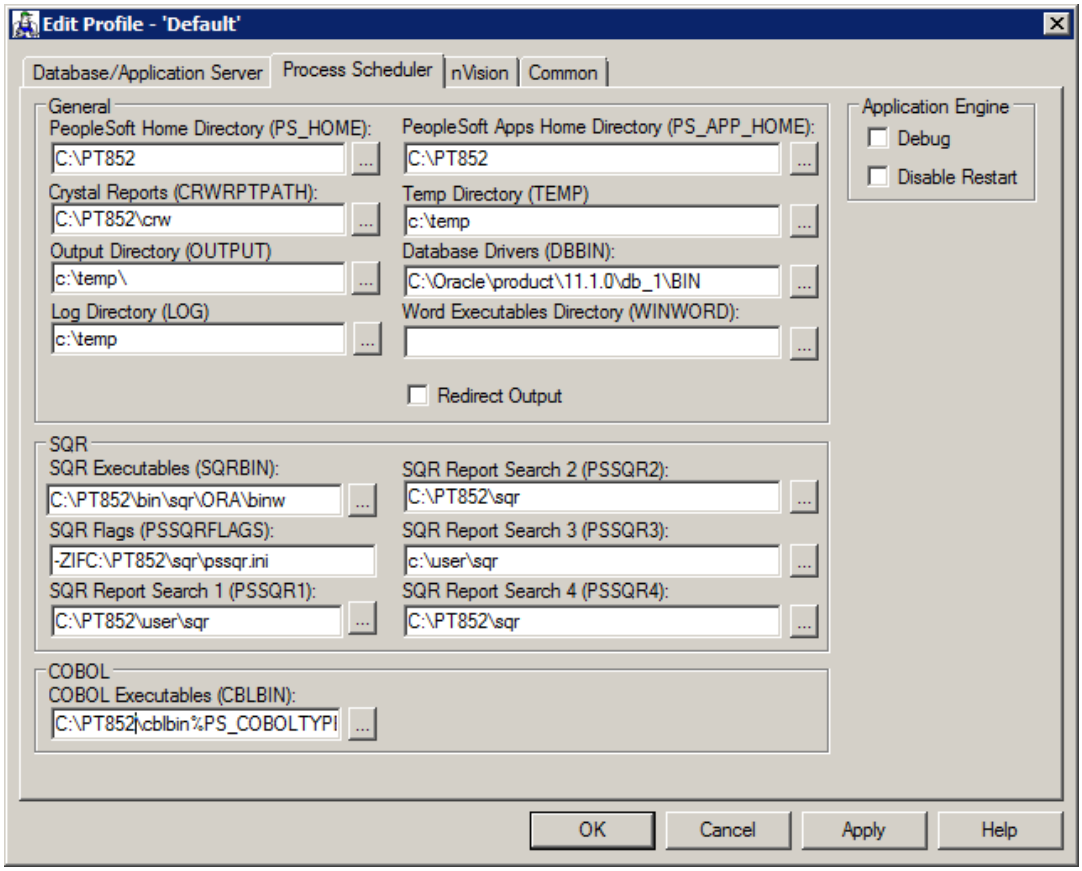
Begin by editing the default profile for the workstation. Among other things, this will verify that the paths to *PS_HOME* and its subdirectories are correctly set, which is required for subsequent tasks.

To edit the default profile:

1. Select the Profile tab in Configuration Manager.

   Only one profile, the Default Profile, has been defined.
2. Select Edit to display the Edit Profile dialog box, and then select the Process Scheduler tab.
3. In the Process Scheduler tab, shown in this example, verify the following options:

   These should have been set correctly by the PeopleSoft installation program.

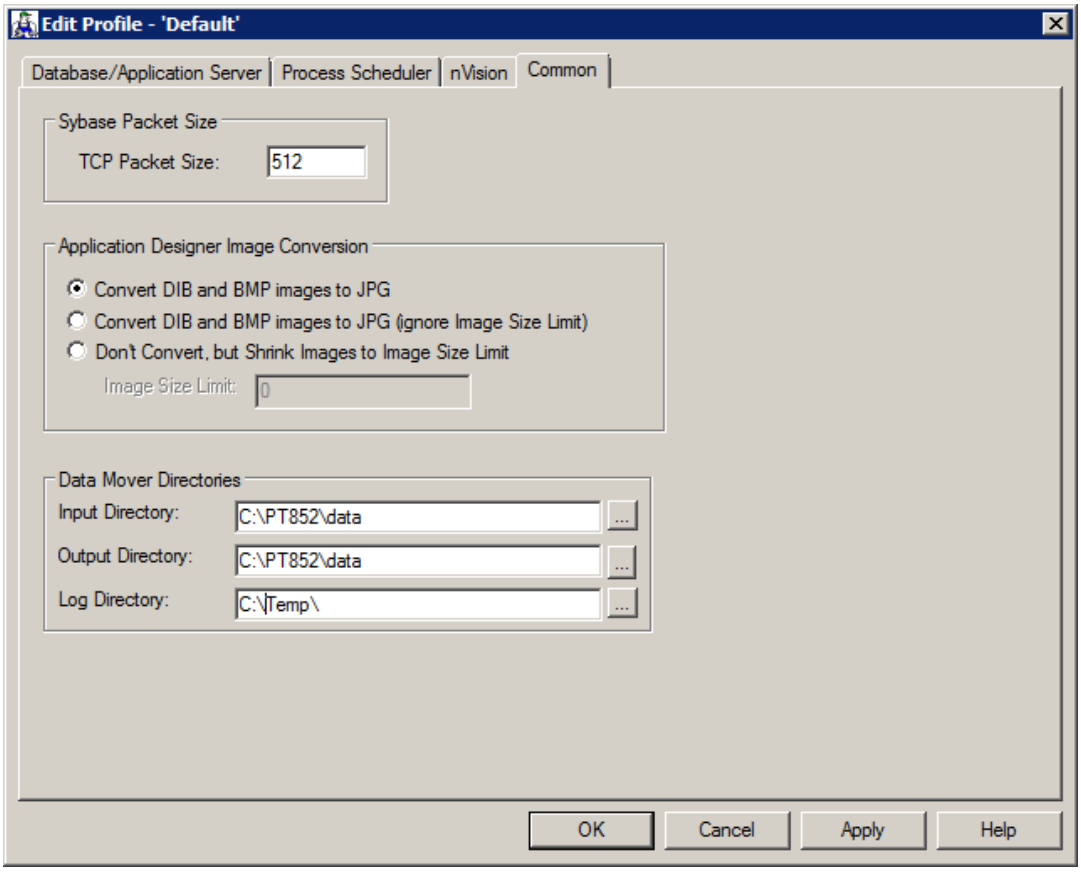


Edit Profile dialog box: Process Scheduler tab

- Verify that the PeopleSoft Home Directory (PS_HOME) field is set to the path to *PS_HOME* on the file server.
- Verify that the PeopleSoft Apps Home Directory (PS_APP_HOME) field is set to the path to *PS_APP_HOME* on the file server.

  The default value is the same as *PS_HOME*.
- Set the Database Drivers (DBBIN) field to the location of the database connectivity files on the workstation; such as c:\sqllib\bin.
- Set the SQR Executables (SQRBIN) field to the file server directory where SQR for Windows was installed when you ran the PeopleSoft Installer.
- Set the SQR Flags (PSSQRFLAGS) field to *-ZIF<PS_HOME>\sqr\pssqr.ini*.
- Set the SQR Report Search 1 (PSSQR1) field to *PS_HOME\sqr*. The remaining SQR Report Search fields can be left blank, because no additional SQR report directories have been created yet.

4. Select the Common tab of the Edit Profile dialog box, shown in this example:



Edit Profile dialog box: Common tab

The following fields on the Common tab are used to set Data Mover default input, output, and log directories.

- Verify that the Input Directory and Output Directory fields are set to *PS_HOME\data*. This directory will store the Data Mover scripts required to populate the PeopleSoft database.
- Set the Log Directory to a local workstation directory to store the Data Mover log files. The default is C:\TEMP.

5. Select OK to close the Edit Profile dialog box.

See Also

PeopleTools 8.52: System and Server Administration PeopleBook, "Using PeopleSoft Configuration Manager"

Task 5-4: Running Client Setup

The Client Setup tab does the following:

- Installs a PeopleSoft program group on the workstation.
- Installs system DLLs on the workstation.

These Client Setup functions are performed when you click OK or Apply from Configuration Manager only if the Install Workstation option on the Client Setup tab is selected.

Note. Any files installed by Client Setup on the workstation from the file server use the paths specified in the default profile.

To run Client Setup:

1. Select the Client Setup tab in Configuration Manager.
2. In the Group Title text box enter the name of the program group for the icons you want on the client workstation. (A program group name cannot contain any of the following characters: \ / : * ? " < > |)

   You can call the program group anything you want, but this documentation uses the default name, *PeopleTools 8.52*.
3. If you do not have a PeopleTools 8.52 program group set up on the workstation, be sure to check the following two options for installing shortcuts to applications essential for installation:

   Note. When you run Client Setup, it will uninstall any existing shortcuts in the PeopleTools 8.52 program group, and install shortcuts for the applications you have selected. If you subsequently want to install or uninstall shortcuts, you can always re-run Client Setup.

   - *Data Mover*
   - *Configuration Manager*
4. Select the option Install Workstation.

   This check box determines whether Client Setup runs when you click Apply or OK in Configuration Manager. If this option is not selected, Client Setup will create or update settings in the registry, but it won't set up the PeopleTools 8.52 program group or install local DLLs.
5. Click OK to run Client Setup and close Configuration Manager.

Task 5-5: Installing PeopleSoft ODBC Driver and Configuring the Crystal 2008 .NET Runtime

This section applies to those installations which use SAP Crystal Reports. Running psodbccrinst.exe installs the PeopleSoft ODBC driver and configures the Crystal Runtime for use within the PeopleSoft environment. This is required in order to successfully design and run Crystal Reports from the SAP Crystal Reports 2008 application. This would also be required for any other client activities requiring access to the PeopleSoft OpenQuery API.

If you use SAP Crystal Reports for your installation, you must run psodbccrinst.exe directly from the *PS_HOME*\bin\client\winx86 directory on the file server. The user who runs this installation must have administrative privileges.

The installation performs the following tasks:

- Installs PeopleSoft ODBC driver
- Creates PeopleSoft PeopleTools ODBC Data Source Name
- Integrates the Crystal 2008 .NET Runtime with the PeopleSoft environment.

Note. The psodbccrinst.exe install script generates a log file named psodbccrinst.log under the user's TEMP directory. If the user environment variable TEMP is undefined, the log file is written under c:\temp directory by default.

The psodbccrinst.exe install script detects whether or not the Crystal Runtime is installed prior to configuration, and exits with an error if it is not found.

See Also

PeopleTools 8.52: PeopleSoft Query PeopleBook

PeopleTools 8.52: Crystal Reports for PeopleSoft PeopleBook

"Installing and Configuring Software for Crystal Reports"

CHAPTER 6

Setting Up the Batch Environment on z/OS

This chapter discusses:

- Understanding COBOL
- Setting Up Your Batch Environment
- Completing the Preinstallation Worksheet
- Allocating z/OS Partitioned Datasets
- Using PeopleSoft Server Transfer
- Setting up the USS Environment Variables and Granting Access to USS Files
- Installing SQR for z/OS
- Binding the SQR DB2 Plan
- Assembling PeopleTools Programs
- Compiling and Link-Editing DB2 COBOL
- Compiling and Link-Editing COBOL

Understanding COBOL

This chapter describes how to compile and link PeopleSoft ASSEMBLER and COBOL batch programs, if necessary. Note that COBOL is no longer needed for PeopleTools because the Process Scheduler is written in C++. In addition, COBOL is not required for applications that contain no COBOL programs.

Note. We require that you maintain a "central repository" of your COBOL source code on the file server. The multiplatform installer will place all the needed COBOL source code on your Windows and UNIX servers during the initial install. However, if you download any COBOL patches or make any customizations, you should apply them to your file server. From there you can transfer the updated COBOL source code out to any relevant application or batch servers. This approach will help you keep your COBOL source code in sync, even if it resides on multiple machines. For Windows, COBOL stored SQL statements are only installed on the file server as well.

See Also

PeopleTools 8.52 Hardware and Software Requirements

PeopleTools 8.52: Global Technology PeopleBook

My Oracle Support, Certifications

Setting Up Your Batch Environment

This chapter describes how to set up your batch environment on a z/OS database server. This process involves compiling and linking PeopleSoft COBOL batch programs that you will use for such PeopleSoft products as PeopleSoft Human Capital Management's Payroll or PeopleSoft Financial Management's General Ledger. The PeopleSoft Server Transfer program creates a script that your FTP program will use to transfer files from the file server to the database or batch server. It also creates scripts to configure the batch environment.

Note. Remember, COBOL is not required for applications that contain no COBOL programs.

The batch environment components reside in two locations: the z/OS server and UNIX System Services. COBOL, SQR and other installation-related components reside on the z/OS server; Process Scheduler and Application Engine components reside in UNIX System Services.

The Server Transfer process must be executed using an ID that has the authority to access both the z/OS Server and UNIX System Services (USS). PDS and PDSE members will be created on the z/OS server, and directories and files will be created in UNIX System Services. UNIX System Services security requires that any IDs or USER values deployed in subsequent batch processes must belong to the same GROUP as the User ID that initially created the libraries and files on USS. During batch execution, both permanent and temporary files are written to UNIX Systems Services, and the ID creating these files must have the proper authority to create directories and files. Oracle recommends that this be administered at the UNIX security GROUP level.

After you compile your COBOL components in the following steps you will only need to re-compile COBOL in the following situations:

- Any COBOL programs change
- The supported COBOL compiler changes
- You change the version of your RDBMS
- You change your version of your operating system
- You apply a patch or a fix

See Also

PeopleTools 8.52 Hardware and Software Requirements

My Oracle Support, Patches & Updates

Task 6-1: Completing the Preinstallation Worksheet

Use the preinstallation worksheet below to record site-specific information to expedite editing and transferring COBOL and SQR files to z/OS. Try to complete it before going on to the next step. Typically, z/OS and DB2 systems administrators should be able to supply the required information.

Parameter values will be blank the first time you run the PeopleSoft Server Transfer program. You must specify your own site-specific values. The sample values, where provided, are only suggestions. In subsequent executions of the Server Transfer program, the program will use the values stored in %TEMP%\PSXFR.CFG, built during the initial run. Note that %TEMP% is a system or environment variable.

Transfer Parameters	Site-Specific Value	Sample Value
1. z/OS Dataset High Level Qualifier The high-level qualifier used for PeopleSoft COBOL and SQR datasets. Suggested Default: HLQ.ppvvv where ppvvv is the PeopleSoft product and release (such as HR840).	<enter value>	PS.HR840
2. PeopleSoft File Server High Level Directory Set to *PS_HOME*, the directory to which you installed the PeopleSoft software, such as N:\HR840.	<enter value>	N:\HR840
3. Target Directory for Generated Files The workstation directory that will contain a variety of files generated when you run the PeopleSoft Server Transfer program, including file transfers, COBOL compile JCL, and translated SQRs (for example [and] translated to \). Suggested Default: *PS_HOME* \STAGE	<enter value>	N:\HR840\STAGE
4. File Transfer Method Indicates which file transfer protocol will be used. Suggested Default: Microsoft FTP	<enter value>	Microsoft File Transfer Protocol (FTP)
5. Database Server Host/Node Name FTP Only: Symbolic IP Name For z/OS System Suggested Default: IP Name of Server If you do not use FTP, specify any alphanumeric character in this field.	<enter value>	Server IP name
6. Database Server Login ID FTP Only: z/OS user ID used to connect to z/OS server and create files and directories on USS. *Note*: This ID MUST be in the same UNIX GROUP as any IDs under which subsequent batch processing will be executed. Suggested Default: LOGONID If you do not use FTP, specify any alphanumeric character in this field.	<enter value>	USER1

Transfer Parameters	Site-Specific Value	Sample Value
7. Job Card Line 1 This is the first line of a job card that will be inserted into JCL files by the PeopleSoft Server Transfer program. Enter // in first two positions followed by job card information such as job name, keyword JOB, account information, and so on. If the job card extends to two lines, end the first line with a comma and complete Job Card Line 2. *Note*: Any USER= parm coded MUST be in the same UNIX GROUP as the Database Server Logon ID noted in Parameter 6 above.	<enter value>	//PSHR840 JOB (PSOFT),'J',CLASS= A,MSGCLASS=A
8. Job Card Line 2 This is the second line of a job card that will be inserted into JCL files by the PeopleSoft Server Transfer program. Enter // in first two positions followed by at least one space before continuing to add job card information. Suggested Default: //*	<enter value>	//REGION=OM,MSGLEVEL= (1,1),USER= BATCHID1,PASSWORD=BPSWD1
9. Job Card Line 3 This is the third line of a job card that will be inserted into JCL files by the PeopleSoft Server Transfer program. Enter // in first two positions followed by at least one space before continuing to add job card information. Suggested Default: //*	<enter value>	// NOTIFY=&SYSUID
10. OS390z/OS/DB2 Operator ID This parameter is for PeopleSoft internal use. Let it default to OPRID.	<enter value>	OPRID
11. OS390z/OS/DB2 Table Owner ID This is the PeopleSoft table owner ID—the high-level qualifier for DB2 tables. (also known as "CREATOR" in the IBM SYS Catalog tables). If you are using secondary authorization, this will be your secondary authorization ID, otherwise it will be your primary authorization ID. Suggested Default: PSOWNER	<enter value>	PS001

Transfer Parameters	Site-Specific Value	Sample Value
12. DB2 Subsystem Name This is the DB2 Subsystem used for the PeopleSoft application you are currently installing (DMO or SYS). Suggested Default: DDDD	<enter value>	DSNT
13. DB2 System Dataset Containing DSN Member This is the DB2 system dataset that contains member DSN. Suggested Default: SYS1.DB2.DDDD.DSNLOAD	<enter value>	DSN810.SDSNLOAD
14. DB2 System Dataset Containing DSN3@ATH Member This is the DB2 system dataset that contains member DSN3@ATH. DSN3@ATH is a sample authorization exit. By implementing the sample authorization exits you can provide group names as secondary authorization IDs. Suggested Default: SYS1.DB2.DDDD.EXIT	<enter value>	DSN810.SDSNEXIT
15. DB2 System Dataset Containing DSNTEP2 Member This is the DB2 runtime system dataset containing member DSNTEP2. Suggested Default: SYS1.DB2.DDDD.RUNLIB.LOAD	<enter value>	DSN810.RUNLIB.LOAD
16. PeopleSoft Database Name Suggested Default: DB	<enter value>	PSHR840
17. Plan Name for PTPSQLRT via TSO Attach Facility This is DB2 Plan used by PTPSQLRT (the COBOL/DB2 API used by COBOL batch and process scheduler jobs). Suggested Default: PTPSQLRT	<enter value>	PTPSQLRT
18. Plan Name for PTPSQLRT via Call Attach facility (for USS) Suggested Default: PTPSQLRA	<enter value>	PTPSQLRA

Transfer Parameters	Site-Specific Value	Sample Value
19. Language Environment runtime library (that is, CEE.SCEERUN) We recommend that you ensure the LE runtime libraries are present on the system: xxx.SCEERUN xxx.SCEERUN2 Suggested Default: *CEE.SCEERUN*	<enter value>	Check with System Administrator for installation LE library name. For example: SYS1.CEE.SCEERUN
20. Language Environment linkedit library (that is, CEE.SCEELKED) Note that in SQR in 8.44 uses PM Binder CEE.SCEEBIND Suggested Default: *CEE.SCEELKED*	<enter value>	CEE.SCEELKED
21. COBOL System Dataset Name Containing IGY Members* This is the COBOL load library containing modules used by COBOL compiler. Its members include IGYCASM1, IGYCINIT, and so on. Suggested Defaults: IGY.V4R1M0.SIGYCOMP or IGY.V4R1M0.SIGYCOMP for ANSI Database (EBCDIC) IGY.V4R1M0.SIGYCOMP for Unicode Database	<enter value>	Check with the System Administrator for the installation of IBM Enterprise COBOL V4R1. For example: IGY.V4R1M0.SIGYCOMP
22. System Storage Name for Temporary Datasets This is the storage device name used for temporary datasets—used in sorting, passing temporary datasets, and so forth—that are deleted after the job completes. Suggested Default: SYSTEMP	<enter value>	SYSTEMP
23. System Storage Name for Permanent Datasets This is the storage device name used for permanent datasets used in dataset allocation, such as those used to store COBOL and SQR files. Suggested Default: SYSPERM	<enter value>	SYSPERM
24. Assembler System Dataset Containing STIMER	<enter value>	SYS1.MACLIB
25. Assembler Program Name	<enter value>	ASMA90

Transfer Parameters	Site-Specific Value	Sample Value
26. SQR High Level Qualifier This is the high-level qualifier used for SQR datasets. Suggested Default: PS.HR840.SQR	<enter value>	PS.HR840.SQR
27. SQR Program Name Found in SQR Load Library This is the name of the SQR program contained in the SQR Load Library. Suggested Default: SQR	<enter value>	SQR
28. SQR Plan Name This is the DB2 Plan name assigned for SQR. Suggested Default: DBCALLS	<enter value>	SQR840
29. Target Server Hardware Platform	<enter value>	UNIX System Services (OS390z/OS)
30. PeopleSoft Unix System Services Home Directory Suggested Default: /u/data001 /dbname	<enter value>	/u/data001/PSHR800
31. Library for DB2 CLI Load Module (that is, DSNAOCLI)	<enter value>	DSN810.SDSNLOAD
32. Plan Name for CLI Packages (that is, DSNACLI) Suggested Default: DSNACLI	<enter value>	DSNACLI
33. Attachment Type for ODBC to Connect to DB2 Suggested Default: RRSAF	<enter value>	RRSAF (Resource Recovery Services Attachment Facility)
34. HFS path to top level of JDK product This will provide the value for the JDK_HOME environment variable in the psconfig.sh file. Suggested Default: /usr/lpp/java/J1.6	<enter value>	/usr/lpp/java/J1.6

Task 6-2: Allocating z/OS Partitioned Datasets

Allocate a z/OS partitioned dataset as HLQ.PS*vvv*.CNTL, where HLQ is any high-level dataset qualifier, PS is a constant, and *vvv* is the current release of your PeopleSoft software (such as 840).

File attributes are: FB, LRECL=80,BLKSIZE=6160, Dir Blks 5, SPACE (Primary 15 Tracks, Secondary 5 Tracks). This dataset will be used to transfer allocation JCL.

To complete allocating the datasets:

1. Transfer *PS_HOME*\SRC\CBL\MVS\PSLIBCBL.JCL to HLQ.PSvvv.CNTL(PSLIBCBL).
2. Transfer *PS_HOME*\SRC\CBL\MVS\PSLIBSQR.JCL to HLQ.PSvvv.CNTL(PSLIBSQR).
3. Log on to z/OS and edit PSLIBCBL and PSLIBSQR to reflect the appropriate values for your site as follows:
   a. Add a job card.
   b. Change all occurrences of *$PSHLQ$* to the z/OS Dataset High Level Qualifier determined in the preinstallation worksheet.
   c. Change all occurrences of *$SYSPERM$* to the System Storage Name for Permanent Datasets value determined in the preinstallation worksheet.
   d. Change all occurrences of *$SQRHLQ$* to the z/OS Dataset High Level Qualifier determined in the preinstallation worksheet.

      See Completing the Preinstallation Worksheet.
4. Submit (PSLIBCBL) and (PSLIBSQR) to allocate files.

Task 6-3: Using PeopleSoft Server Transfer

This section discusses:

- Understanding PeopleSoft Server Transfer
- Running the PeopleSoft Server Transfer Program
- Transferring Files to Host Manually
- Mapping PeopleSoft Installation Directories to z/OS

Understanding PeopleSoft Server Transfer

The PeopleSoft Server Transfer program simplifies editing and transferring COBOL and SQR files to z/OS. Pre-compile, Compile, Linkedit, binds, and Process Scheduler-initiated COBOL and SQR jobs are ready to submit following the file transfer, assuming the worksheet values you enter are correct.

Note. Remember, before you can run the Server Transfer program to set up a batch server on z/OS, you need to have run the PeopleSoft Installer, as described in the chapter "Using the PeopleSoft Installer." Run it on a Microsoft Windows machine, making sure to select *all* of the PeopleSoft servers. This Microsoft Windows machine will then function as your file server, from which you can run Server Transfer.

The PeopleSoft Server Transfer program performs the following functions:

- Generates a file containing transfer commands to transfer files to z/OS and UNIX System Services (USS). This file is named PSFTXFR.TXT for transferring files to z/OS using FTP.
- Generates COBOL compile JCL—program preparation JCL.
- Edits various JCL and PRC files to site-specific standards using values from the transfer parameters specified in the PeopleSoft Server Transfer program.
- Translates [and] characters to a \ (backslash) to correct an ASCII-to-EBCDIC translation problem that occurs during the transfer of SQR files.

Later in this chapter you will learn how workstation file directories relate to z/OS partitioned datasets.

See Mapping PeopleSoft Installation Directories to z/OS.

Before running the PeopleSoft Server Transfer program, ensure that a DOS environment variable (%TMP%) is set to a “temporary” directory to which you have write access. PeopleSoft recommends using C:\temp.

The transfer program writes the following two files to the %TMP% directory:

- PSXFR.LOG—a log file that summarizes the program’s execution.
- PSXFR.CFG—a configuration file that stores the parameters you selected.

Note. The PeopleSoft Server Transfer program writes the above files to the %TMP% directory, or to the %TEMP% directory if the %TMP% environment variable is undefined.

See "Using the PeopleSoft Installer."

Note. In PeopleTools 8.4 and above, the Server Transfer program is used only to transfer files to your batch server. On UNIX or Windows, to install files to your application server, file server, web server, and so on, you should use the PeopleSoft Installer.

Task 6-3-1: Running the PeopleSoft Server Transfer Program

To run the PeopleSoft Server Transfer program:

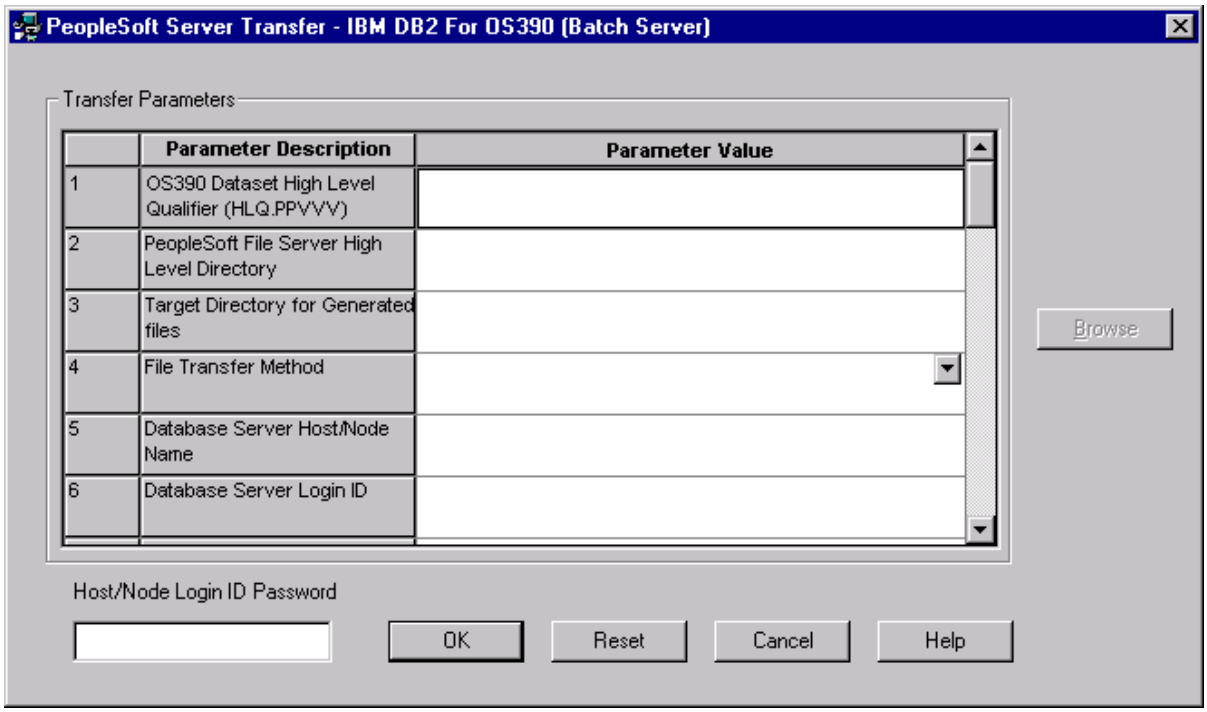
1. Start PeopleSoft Server Transfer.

   Enter the following path into the Run dialog box:

   ```
   PS_HOME\BIN\CLIENT\WINX86\pstrans.exe
   ```

   Alternatively, select the Server Transfer shortcut, if you elected to create a Program Group during the PeopleSoft PeopleTools installation.

   The PeopleSoft Server Transfer screen appears, as shown in this example, which contains all of the parameters whose values you should have determined while filling out the preinstallation worksheet.



Entering transfer parameters in the PeopleSoft Server Transfer dialog box

2. Enter the appropriate value for each parameter.

   Using the preinstallation worksheet you completed earlier, enter the parameters values describing how you want to install the PeopleSoft batch environment on your database server. Some of the parameter values may already exist either as default values or as values from a previous execution of the Server Transfer program. To select an individual row, just click it. To enter or change a particular parameter value, either select from predefined values in a drop-down list or enter the values manually if there is no drop-down list.

   Note. You must specify a value for each edit field. If you are not sure what value to use, type in the default suggested by Oracle for PeopleSoft software (see the preinstallation worksheet for a list of defaults) and edit the parameter value following the file transfer on z/OS.

   For parameters that require a directory path, you may enter it directly. If you don't know the exact location, click Browse to select the directory from the Select Directory dialog box. The Browse button is available when you click in a field that requires a directory path.

3. Enter the appropriate value for Host/Node Login ID Password. This value should be the password for the Host/Node Name specified as parameter number 5 in the Server Transfer panel.

   This password is mandatory regardless of your database platform or site specifications. Microsoft's FTP software requires a password.

4. Once you enter all the correct parameter values for your site, click OK. (If instead you want to clear all of your entries and start over, press Reset. To close this instance of the PeopleSoft Server Transfer, press Cancel.)

   The PeopleSoft Server Transfer prepares the files for transfer, which can take from a few seconds to a few minutes, depending on the number of files and the type of processing required.

   The PeopleSoft Server Transfer program will generate a number of files that will be located in the *Target Directory for Generated Files* that you specified previously.

5. In the PeopleSoft Server Transfer Output window, if you want to verify that the Transfer program created all the proper files, click the Display Log button.

   The Display Log button calls the PSXFR.LOG in your %TMP% directory (or %TEMP% directory if %TMP% is undefined) and displays it in Microsoft Notepad. PSXFR.LOG provides summary information about the transfer program's execution that can be helpful for identifying potential errors and inconsistencies. It contains the following sections:

   - *SELECTED PARAMETERS:* Shows the parameters you selected from the PeopleSoft Server Transfer main window.
   - *SUMMARY OF SELECTED FILES:* Shows which files—and how many of them—will be transferred. It also shows which directory they were copied from and their new location.
   - *FILE TRANSFER NOTES:* Shows important details regarding your transfer process, such as the command line option and where log files are located.

   Note. Only click Close if you want to dismiss the PeopleSoft Server Transfer Output window and transfer the files manually from the command line.

6. Click the Transfer Now button to begin the transfer process. This button will launch the file transfer method that you selected on the server transfer main screen.

   Note. The Transfer Now button assumes that the destination partitioned datasets exist. See "Allocating z/OS Partitioned Datasets."

7. When the transfer has completed, the FTPOUT.LOG will display in Notepad. You should review this file for any errors that may have occurred during the transfer. The file is located in the Target Directory for Generated Files that you specified previously.
8. Close Notepad and press the CLOSE button on the PeopleSoft Server Transfer Output Panel.

   Note. If your transfer is unsuccessful or you would rather transfer the files manually, read the following section.

The following table summarizes the files generated during the use of the PeopleSoft Server Transfer utility, in the order in which they are generated, along with their locations and a description.

File Name	Location	Contents
PSXFR.CFG	%TMP%	Configuration file generated by the PeopleSoft Server Transfer Utility. It contains the parameters entered in a somewhat cryptic format
PSXFR.LOG	%TMP%	Summary file generated by the PeopleSoft Server Transfer Utility. It contains a summary of the parameters entered, the files that will be transferred, and instructions on how to manually transfer the files, if you choose to do so later.

File Name	Location	Contents
PSFTXFR.TXT	The Target Directory for Generated Files that you specified previously.	A Microsoft FTP command file that contains the FTP statements to be executed to transfer the files. This file is only generated if you selected the Microsoft FTP file transfer protocol option.
FTPEXEC.BAT	The Target Directory for Generated Files that you specified previously.	The .bat file that calls either the Microsoft FTP command file, from which the FTP process is initiated. The PeopleSoft Server Transfer Utility will initiate this batch file if you select the Transfer Now option.
FTPOUT.LOG	The Target Directory for Generated Files that you specified previously.	This is the FTP log file generated by the FTP utility that details the transfer results for each file processed.

Task 6-3-2: Transferring Files to Host Manually

From DOS, or a DOS shell in Windows, transfer application files to z/OS using the transfer/send file generated by the PeopleSoft Server Transfer program. For the Microsoft FTP file transfer protocol, the file containing transfer commands is in *PS_HOME*\STAGE and is called PSFTXFR.TXT.

You can initiate either Server Transfer by executing the FTPEXEC.BAT file in *PS_HOME*\STAGE. Allow at least 45 minutes to complete the file transfer. If the transfer fails:

- Make sure the z/OS datasets to which the files are transferred have been allocated.
- Check whether a z/OS dataset is underallocated or allocated on a volume with insufficient space.
- Verify that the Database Server Login Id specified in Parameter 6 has write access to z/OS and UNIX System Services.

Task 6-3-3: Mapping PeopleSoft Installation Directories to z/OS

The following table shows the mapping between workstation files and the suggested z/OS target datasets. The root directory is assumed to be PPVVV, which denotes the high-level PeopleSoft directory, such as \HR840.

Subdirectory	Subdirectory	FILES	z/OS DATASET	DESCRIPTION
CBL	BASE	??P*.CBL	HLQ.PSVVV.SRCLIB	COBOL programs
		??C*.CBL	HLQ.PSVVV.COPYLIB	COBOL copy members
CBL	MVS	??P*.CBL	HLQ.PSVVV.SRCLIB	z/OS specific programs
		??C*.CBL	HLQ.PSVVV.COPYLIB	z/OS/COBOL copy members
		*.ASM	HLQ.PSVVV.SRCLIB	Assembler programs
		*.JCL	HLQ.PSVVV.JCLLIB	Compile, bind, Process Scheduler jobs
		*.PRC	HLQ.PSVVV.PROCLIB	Procs for compile, bind, assemble
		*.JCT	/u/datax/psvvv/appserv/prcs /shelljcl	JCL Shells for COBOL and SQR Processes
SQR	none	*.SQR	HLQ.PSVVV.SQRSRC	Application SQRs
		*.SQC	HLQ.PSVVV.SQRINC	Application SQR include members
SQR	none	SQRPARMS.PAR	HLQ.PSVVV.PARMLIB	SQR parameter file
		SQRSAMP.JCL	HLQ.PSVVV.JCLLIB	Sample SQR JCL
		SQRPROC.PRC	HLQ.PSVVV.PROCLIB	SQR cataloged procedures
SCRIPTS	none	??DDL.SQL	HLQ.PSVVV.DDLLIB	DDL script files used to build PeopleSoft database in the chapter Creating a Database
		??DDLU.SQL		Script files for Unicode databases
APPSERV	PRCS	*.IN	/u/datax/psvv/appserv	PSADMIN program utility files
SERVER	PS390 2 6	*.*	/u/datax/psvv/bin	Process Scheduler executables for USS

Note. The \CBL\MVS directory contains files specifically for the DB2 for z/OS platform. Certain files will appear in both the \CBL\BASE and \CBL\MVS directories. The *.CBL files in the \CBL\BASE directory will be transferred first, followed by the *.CBL files in the \CBL\MVS directory. As a result, the z/OS-specific files will overwrite the generic files. In other words, the order in which files are FTPed to the server does matter. The PeopleSoft Server Transfer program FTPs the files to the server in the correct order.

Task 6-4: Setting up the USS Environment Variables and Granting Access to USS Files

Before installing SQR for z/OS, you need to set up USS environment variables by executing the psconfig.sh shell script, and grant access to specific libraries in UNIX System Services by executing the psmv.sh shell script.

To execute the psconfig.sh and psmv.sh shell scripts:

1. Locate the files psconfig.sh and psmv.sh in USS Home directory /u/datax/ppvvv.

   This is the same directory specified in the preinstallation worksheet, parameter 30. Make this directory your current working directory.

2. Grant execute authority to the file by entering the following at the prompt:

   ```
   chmod 755 psmv.sh
   ```

3. Execute the scripts by entering `psconfig.sh` and `psmv.sh` at the prompt.

Task 6-5: Installing SQR for z/OS

To install SQR in the designated partitioned dataset, you need to run the INSTALLSQR.SH shell script. The shell script performs the following tasks:

- Copies all SQR installation binary files from the HFS directory *PS_HOME*/bin/sqr into the designated SQR sequential data sets.
- Submits HLQ.PPVVV.JCLLIB (RECVSQR.JCL) that will use IBM's RECV utility to migrate all the binaries from the sequential data set to the designated SQR partitioned datataset.

To execute the installsqr.sh shell script:

1. Change directory to the USS Home directory /u/datax/ppvvv. This is the same directory specified in the preinstallation worksheet (item 30).
2. Enter installsqr.sh at the prompt.

   When the shell script submits the JCL to unpack all the SQR binaries from the installation sequential data set, review the status of the JCL from TSO to verify that all steps using the RECV utility have successfully completed with return code of 0.

Task 6-6: Binding the SQR DB2 Plan

Once SQR is installed, you have to run the DSN subcommand BIND to build an application plan for SQR. All DB2 programs require an application plan to allocate resources and to support SQL requests made during execution. The keywords and parameters you should use when exercising the DSN BIND commands follow. Refer to the IBM DB2 Command and Utility Reference Manual for further information on BIND.

To create the DB2 Plan for SQR, submit the following JCL job:

```
HLQ.PSVVV.JCLLIB(PSBNDSQR)
```

Note. To execute an XPLINK program, the SCEERUN2 as well as the SCEERUN data set must be in the z/OS program search order (see the {_PLIB_PREFIX} environment variable). The following data sets are also used: The data sets {_PLIB_PREFIX}.SCEERUN and {_PLIB_PREFIX}.SCEERUN2 contains the runtime library programs. These data sets are listed here for information only, to assist in identifying the correct data sets to be added to the z/OS program search order. The default value is "CEE".

Task 6-7: Assembling PeopleTools Programs

You need to assemble the PeopleSoft programs PTPSQLTM. PTPSQLTM, called by PTPSQLRT, collects time interval data to produce the statistics report.

In z/OS, submit the following job:

```
HLQ..PPVVV.JCLLIB (PSASM)
```

On job output, the expected return code is 0 or 4.

Note. In the catalogued procedure PSASM, the ASM step EXEC statement contains the assembler program specified during the PeopleSoft Server Transfer program. $ASMLIB$ is replaced by the “Assembler Program Name” transfer parameter. The expected assembler program name is ASMA90. However, IEV90 may also be used, but the SYSLIN DD statement in the ASM step must be commented first to be assembled successfully.

Task 6-8: Compiling and Link-Editing DB2 COBOL

Precompile, compile, and link-edit PTPSQLRT (PeopleSoft’s COBOL/DB2 API) as follows:

- Submit HLQ.PPVVV.JCLLIB(PSCOB*). Acceptable return codes are 0 and 4 for pre-compiles and compiles, and 0 for the link-edit step.
- PSCOBDA: for DB2 precompile, compile and linkedit of program PTPSQLRT for Native CAF for USS.
- PSCOBDE: for DB2 precompile, compile and linkedit of program PTPSQLRT for TSO CAF.
- PSCOBNET: for compile and linkedit COBOL program PTPNETRT for Native CAF for USS.

Common compile errors include:

- Users inadvertently introducing tab characters into source code while viewing it using workstation editors before file transfer. Check to see if you have X’05’ (or other odd hex values) in the z/OS source.
- Failure to transfer all the BASE and z/OS copy members from the file server, or perhaps overwriting the z/OS versions with the BASE versions. Check PSFTXFR.TXT to see the order in which the files were transferred.

- Failure in LINKEDIT of PSCOBNET with error message “Attempt to get file status for an HFS file failed...” usually results when the User ID under which the PSCOBNET job is running does not have read access to the necessary USS file.

Note. Oracle delivers procedure library members PSCOBD, PSCOBDA, and PSCOBDE, which set the DB2 precompiler options DATE(ISO) and TIME(ISO). Do not change these settings, because PeopleSoft applications rely on the ISO format for date and time processing.

Task 6-9: Compiling and Link-Editing COBOL

Submit HLQ.PPVVV.JCLLIB(PSCOB*) to compile COBOL programs.

Note. Previous versions of PSCOB had to be manually divided into multiple jobs if they contained more than 125 COBOL programs to compile. This step is now done by the Server Transfer process, which will create the PSCOB* members.

Next, serialize compile jobs to avoid problems associated with concurrent PDS updating, and submit the PSCOB job(s). Acceptable return codes are 0 or 4 for pre-compiles and compiles, and 0 for the link-edit step.

Common compile errors include:

- Users inadvertently introducing tab characters to source code while viewing them using workstation editors before file transfer. Check to see if you have X’05’ (or other odd hex values) in the z/OS source.
- Failure to transfer all the BASE and z/OS copy members from the file server, or perhaps overlaying the z/OS versions with the BASE versions. Check PSFTXFR.TXT to see the order in which the files were transferred.

CHAPTER 7

Creating a Database

This chapter discusses:

- Understanding Database Creation
- Planning Your Installation
- Transferring DDL Scripts to z/OS
- Creating PS.PSDBOWNER Table
- Granting Privileges on PS.PSDBOWNER
- Granting Privileges to Owner ID
- Creating DB2 Databases, Storage Groups, and Tablespaces
- Creating Tables
- Configuring the DB2 Connect Gateway
- Creating Data Mover Import Scripts
- Running Data Mover Import Scripts
- Creating Indexes
- Updating Database to Latest PeopleTools Release
- Running the DB2 RUNSTATS Utility
- Creating PeopleSoft Views
- Building Temporary Tables
- Creating PeopleSoft Triggers
- Running Additional Data Mover Scripts
- Installing a Multilingual PeopleTools System Database
- Running SQR Reports
- Updating PeopleSoft System Tables
- Binding DB2 Plans
- Running VERSION Application Engine Program
- Changing the Base Language
- Checking the Database
- Running Alter Audit
- Disabling %UpdateStats

Understanding Database Creation

This section describes the tasks required to create a PeopleSoft product database. During a standard PeopleSoft installation you will execute these tasks to create two distinct types of databases.

- *System:* The System (SYS) database has no company specific data, and can be used to load your data and begin development of your production database.
- *Demo:* The Demo (DMO) database contains data for a sample company, and can be used immediately for demonstration, for testing, and as a development reference.

The requirements for these databases vary, so not all of this section's tasks apply to each database. The instructions will note any distinctions between creating a Demo and a System database.

Remember, you need to have the PeopleTools Development Environment set up to create your database.

Important! Do not forget that application-specific installation steps are provided in a separate document specific to the application. For instance, if you are performing PeopleSoft CRM installation, you need both this PeopleSoft PeopleTools installation guide and any additional instructions provided by CRM. Search in My Oracle Support for the installation documentation specific to your application.

Planning Your Installation

This section discusses:

- Using %UpdateStats
- Using Temporary Tables

Note. Two features that impact how you install your PeopleSoft database are the %UpdateStats MetaSQL function, and the Application Designer Object Type of “Temporary Table.”

Using %UpdateStats

%UpdateStats is an optional feature that lets you invoke the DB2 Utility RUNSTATS from within an Application Engine or COBOL process. Consider the following if you plan to use %UpdateStats:

- You can initiate RUNSTATS dynamically via the IBM stored procedure DSNUTILS. Before you can use %UpdateStats, the stored procedure DSNUTILS must be configured in the DB2 subsystem in which you run the PeopleSoft applications. If %UpdateStats is enabled but DSNUTILS is not in place, a processing error will result. Please refer to your IBM Systems documentation for instructions on enabling and configuring the DSNUTILS stored procedure.
- Using %UpdateStats with COBOL requires modifications to some delivered PeopleSoft code. These modifications are described in the Data Management PeopleBook.

  See *PeopleTools 8.52: Data Management PeopleBook.*
- %UpdateStats can be enabled or disabled based on the DBFLAGS Process Scheduler configuration parameter. Disabling %UpdateStats will cause the functionality to be bypassed, without causing any processing errors. Note that the default setting for DBFLAGS for UNIX and Windows Process Schedulers is ON (DBFLAGS=0). The default setting for USS is DBFLAGS=0 (Enable Second DB Connection).

- The %UpdateStats MetaSql targets a table, whereas the DB2 z/OS RUNSTATS utility processes at the tablespace level. This can present a performance issue with the default PeopleSoft database installation strategy, which combines multiple tables into a single tablespace. To alleviate this issue and assist you in installing your database to optimally utilize the %UpdateStats feature, consider using the PeopleSoft Tablespace DDL Automation Tool (PSTAAT). PSTAAT can be used to better optimize the mapping of tables among tablespaces and databases.

  See Appendix: "Using The PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

The scripts that are required for PeopleSoft products are listed in the section "Transferring DDL Scripts to z/OS".

Using Temporary Tables

Temporary tables are an object type defined in Application Designer to support Application Engine concurrent processing. For PeopleSoft installations, we refer to these objects as temporary tables, but to the DB2 z/OS database they will be defined as "permanent" SQL tables. Each temporary table defines a base table from which additional instances or copies of the base table are scripted and physically created on your DB2 z/OS PeopleSoft database. Only the definition of the base table is stored in Application Designer. The actual number of instances is governed by a global value for Online concurrent processes, and a value defined either at a Global level (for EPM) or at the Application Engine Process Level for batch processes.

See *PeopleTools 8.52: PeopleSoft Application Engine PeopleBook.*

In an attempt to limit the number of potentially unused objects created on your database, we have reduced the number of temporary table instances to a minimum setting. Depending on the actual products you are installing, your processing characteristics and workloads, you may need to modify the number of temporary table instances to improve performance. This will become evident if you have a number of processes queuing to use a limited number of temporary table instances. The actual scripting and creation of the temporary tables are performed as a separate step in the installation process, so you may intervene during this process to increase the number of temporary table instances if you feel you have substantial batch processing workloads and/or a large volume of online transaction processing. Temporary tables can be regenerated at any time in the life of your database, so you don't need to determine the exact number of instances that will be right for your environment at installation time.

When the number of instances of the temporary tables within the PeopleSoft application is changed, all temporary tables should be regenerated. The same values in the PeopleTools tables that are used to determine how many temporary tables instances should be created, are also used to determine how many should be available to an Application Engine process. The expectation is that the number of instances defined within the PeopleTools tables actually exists on the database. A later task in this chapter describes how to create the temporary tables.

Lastly, since each instance of a base temporary table is not defined within the PeopleTools tables, database and tablespace information is not stored for these instances. When the DDL is generated to create the base temporary table and its instances, each instance is put in the same database and tablespace as the base temporary table. To avoid concurrency issues and obtain optimal performance, each temporary table instance should also be assigned to its own unique tablespace, particularly when the temporary table is also the object of the %UpdateStats functionality, described earlier. Use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to put the base temporary table and each of its instances in separate tablespaces. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

Task 7-1: Transferring DDL Scripts to z/OS

If you have set up your batch environment on the z/OS mainframe following the instructions in the chapter "Setting Up the Batch Environment on z/OS," these files have already been transferred and you can skip this step.

All DDL script files to create the DB2 objects for the PeopleSoft database reside in the *PS_HOME*\SCRIPTS directory of your file server (where *PS_HOME* is the root directory where PeopleSoft software has been installed in your file server). This task requires that you manually transfer these files to z/OS. Each of these files must be customized with site-specific values and standards before you submit them either through SPUFI or DSNTEP2.

To transfer DDL scripts:

1. Allocate a partitioned dataset named HLQ.PSvvv.DDLLIB on z/OS, where HLQ is any high-level dataset qualifier, PS is a constant, and vvv is the current release of your PeopleSoft software (such as 800).

   File attributes are: FB, LRECL=80, Dir Blks 10, SPACE (Primary 800 Tracks, Secondary 300 Tracks). For example, DCB=(RECFM=FB,LRECL=80,BLKSIZE=6160) SPACE=(TRK,(800,300,10)).

2. Transfer the following files from the *PS_HOME*\SCRIPTS directory, as a member of the HLQ.PSvvv.DDLLIB PDS library using Microsoft File Transfer Protocol (FTP).

   This table lists and gives a brief description for each script, and defines the naming convention.

Files in the SCRIPTS subdirectory	Description
*XX*DDL.SQL†	This script contains all the DDL statements to create database, storage groups, and table spaces
*XX*DDLU.SQL†	This script contains all the DDL statements to create database, storage groups, and table spaces for an UNICODE database.
PSDDL.SQL	This script contains the DDL statements to create the PS.PSDBOWNER table.
TBDDL.SQL	This script contains all the CREATE TABLE statements for the product line.
TBDDLU.SQL	This script contains all the CREATE TABLE statements for the product line for a UNICODE database.
IXDDL.SQL	This script contains all the CREATE INDEX statements for the product line.

† Substitute these product line values for XX:

- Use *CR* for PeopleSoft Customer Relationship Management.
- Use *LM* for PeopleSoft Enterprise Learning Management.
- Use *PF* for PeopleSoft Enterprise Performance Management.
- Use *EP* for PeopleSoft Financials/Supply Chain Management.
- Use *EA* for PeopleSoft Financials/Supply Chain Management Argentina.
- Use *EB* for PeopleSoft Financials/Supply Chain Management Brazil.
- Use *HC* for PeopleSoft Human Capital Management.

- Use *PA* for PeopleSoft Portal Solutions.

Task 7-2: Creating PS.PSDBOWNER Table

You can skip this step if a PS.PSDBOWNER table already exists in the same DB2 subsystem as your new database. This would be the case if you already have an existing PeopleSoft database in the target DB2 subsystem. You will have one PS.PSDBOWNER table per subsystem.

Edit and execute HLQ.PSvvv.DDLLIB(PSDDL) using SPUFI or DSNTEP2. The PS.PSDBOWNER must exist in each DB2 subsystem where PeopleSoft databases will be installed and it is the only table that Oracle provides for PeopleSoft software where an OWNERID cannot be customized. PeopleSoft PeopleTools applications select from this table to obtain the Owner ID and Database Name information during the PeopleSoft Sign-on process.

Note. For UNICODE databases, it is not necessary to use the CCSID=UNICODE option of the Create Database statement when creating the PSOWNRDB (this contains the PS.PSDBOWNER table). IBM supports the use of Unicode, EBCDIC, and ASCII tables in the same subsystem, and the ability to join data using any of these encoding schemes in DB2 for z/OS V8.1 New Function Mode. DB2 for z/OS v8.1 NFM is required for a Unicode installation.

Task 7-3: Granting Privileges on PS.PSDBOWNER

Grant the ALL authority to the table owner ID used for the PeopleSoft database:

```
GRANT ALL ON TABLE PS.PSDBOWNER TO <Owner_ID> WITH GRANT OPTION;
```

Task 7-4: Granting Privileges to Owner ID

Before creating your DB2 databases, make sure the owner ID has authorization to use the following DB2 resources:

Grant use of bufferpool to the Owner ID:

```
GRANT USE OF BUFFERPOOL BP1 TO <Owner_ID>;
GRANT USE OF BUFFERPOOL BP2 TO <Owner_ID>;
GRANT USE OF BUFFERPOOL BP3 TO <Owner_ID>;
GRANT USE OF BUFFERPOOL BP32K TO <Owner_ID>;
```

Task 7-5: Creating DB2 Databases, Storage Groups, and Tablespaces

This section discusses:

- Understanding DB2 Databases, Storage Groups, and Tablespaces

- Customizing the Database Name
- Working with Tablespaces

Understanding DB2 Databases, Storage Groups, and Tablespaces

Oracle delivers a generic script to create the DB2 for z/OS storage groups, database shells and tablespaces. Unless you are installing the System (SYS) or Demo (DMO) database using the generic defaults in the script, you need to edit various parameters to comply with the standard at the customer site. These parameters include:

- Storage group names and volumes (if you have already created stogroups, you may comment out the statements in the script to create them)
- Database names
- Tablespace names
- Bufferpool names
- Owner_ID

Note. There is a SET CURRENT SQLID = ’OWNER#ID’ statement in the script. It is recommended that the Current SQLID be set to the ID that will be used to "own" all the database tables (even though no tables are being created in this step). This will either be the Secondary Authorization ID, if using Secondary Authorization ID processing, or the Primary Authorization ID, if not. (In the scripts to create the tables found in the next step, this value is referred to as OBJ#OWNER). The "CREATOR" field in the SYSIBM.SYSTABLESPACE catalog table will be the same value as the "CREATOR" field in the SYSIBM.SYSTABLES catalog table. Having these two fields being the same value will facilitate running the optional SQR SETDBNAM and creating the temporary tables, mentioned later in the chapter.

The following instructions detail where to make these edits as necessary.

Using SPUFI, DSNTEP2, or an equivalent product, create your DB2 objects (that is, databases, storage groups, and tablespaces) using the HLQ.PSvvv.DDLLIB(*XX*DDL/*XX*DDLU) file.

Use the XXDDL version is used for the non-Unicode installation, and the XXDDLU version for Unicode installation.

The following table shows a few examples of the product identifiers in HLQ.PS*vvv*.DDLLIB(*XX*DDL /*XX*DDLU):

Product	Identifier
Human Capital Management	HC
Financials/Supply Chain Management	EP
Enterprise Performance Management	PF
Customer Relationship Management	CR

Task 7-5-1: Customizing the Database Name

This section discusses:

- Understanding Database Name Customization
- Editing the xxDDL Script

Understanding Database Name Customization

You can customize the database name found in the CREATE DATABASE statements to your organization standards. However, make note of the database names you change because you will have to make corresponding changes to the DDL scripts for creating the tables.

Note. Because of the large number of objects delivered in the database, and to facilitate performance, multiple physical databases are deployed to contain the single, logical PeopleSoft database. The objects in the physical databases are unified into one logical database by sharing the same Owner ID (the CREATOR field in SYSIBM.SYSTABLES). For consistency, and to facilitate editing, the physical database names all share a common root value of seven characters. A unique eighth character is appended to the root name, resulting in a distinct database name. As an example, the Human Capital Management product is delivered with a "root" value of PSHRDMO for the database name. The actual physical database names include PSHRDMO, PSHRDMOB, PSHRDMOH, PSHRDMOP, PSHRDMOT, PSHRDMO1 and PSHRDMO2. The PeopleSoft applications contain a substantial number of DB2 objects, and we do not recommend putting all these objects into a single database. Doing so will require an inordinately large EDM pool size, and will produce undesirable results in your DB2 system. Note also that the PTPRC tablespace is assigned to its own database PSxxDMOT. This tablespace contains all the tables used by Process Scheduler. Combining these tables in one of the other databases could potentially cause the lockout of other processes, such as DB2 utilities running concurrently with Process Scheduler. Finally, note that several tablespaces specify LOCKSIZE ROW. If any tables we deliver within these tablespaces are moved, they should only be moved to a tablespace that was defined with row level locking.

Note. Use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to customize the physical database names that constitute your logical PeopleSoft database. See the appendix “Using the PeopleSoft Tablespace DDL Automation Assistance Tool” for more details.

Editing the xxDDL Script

To edit the xxDDL script, edit the CREATE STOGROUP statements to site-specific values. Storage group name defaults are PSSGTSxx and PSSGIXxx for tablespaces and index spaces, respectively, but you can change them to comply with your organization’s standards. You may also comment out the CREATE STOGROUP statements if you have already established Stogroups on your DB2 subsystem, but you will still need to edit the CREATE TABLESPACE statements with your site-specific Stogroup value.

We highly recommend that you use standard PeopleSoft tablespace names when installing the demonstration database to simplify the installation process.

The script contains the GRANT DBADM commands for each DB2 database you plan to create for your PeopleSoft database. This is the easiest way to grant the required privileges to the owner ID. This enables the owner ID to perform other tasks, such as starting and stopping the PeopleSoft database, and running DB2 utilities such as RUNSTATS.

Note. References to *owner ID* in this document, and in the accompanying scripts, refer to the DB2 Secondary Authorization ID if using Secondary Authorization ID processing, or to the DB2 Primary Authorization ID, if not.

The options are to grant DBADM to the Owner ID or to issue individual grants for the following:

- Grant bind capability to the Owner ID:

  ```
  GRANT BINDADD TO <Owner_ID>;
  ```

- Grant create tablespace capabilities to the Owner ID:


```
GRANT CREATETS ON DATABASE <database_name> TO <Owner_ID>;
```

- Grant create table capability to the Owner ID:

```
GRANT CREATETAB ON DATABASE <database_name> TO <Owner_ID>;
```

Note. You may use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to customize tablespace DDL. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

Task 7-5-2: Working with Tablespaces

This section discusses:

- Using Tablespaces
- Following the Standard Tablespace Name Formats
- Naming Tablespace Defaults
- Parsing Tablespaces

Using Tablespaces

For tablespaces in your PeopleSoft installation, Oracle provides a strategy for Demo and System databases aimed at identifying high growth and frequently updated tables. This limits the number of tables the DBA must monitor and analyze, and simplifies capacity planning and database tuning activities. In addition, with PeopleSoft Release 8 and higher, a new type of table was introduced referred to as a temporary table. A temporary table is permanently created in the database, but its usage, by Application Engine programs, is temporary. The tables are delivered empty, but because of the potential for a volatile increase and decrease in the number of rows populating the table during the execution of a process, the temporary tables are also segregated into their own tablespaces, buffer pool, and databases. This segregation seeks to facilitate administration of these tables and tablespaces separate from the tablespaces in which the core application tables reside.

For customers that elect to use the %UpdateStats functionality, use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to place each table that is the target of the %UpdateStats function in its own tablespace. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

Note. For multilingual installs, the PTTBL, PTTLRG and PSIMAGE tablespaces may need to be increased in size.

Following the Standard Tablespace Name Formats

The standard tablespace names that Oracle delivers categorize tables as follows:

- High growth and frequently updated tables for Applications are grouped together into tablespaces named XXLARGE, where XX is a PeopleSoft application identifier. Similarly, the PeopleTools tables identified as large tables or frequently updated tables are grouped in the PTTLRG tablespace. Depending on customer-specific requirements and environment, it may be advisable to move those tables containing the largest amount of data from this shared tablespace into their own segmented or partitioned tablespaces. This should be done for performance and concurrency reasons.
- Tables with static or relatively minimal growth are grouped into tablespaces named XXAPP, where XX is a PeopleSoft application identifier. These tablespaces are defined with a moderate free space specification.

- Tables that are classified by record type as Temporary tables are grouped into tablespaces named XXWORK, where XX is a PeopleSoft application identifier.
- Tables, which have rows exceeding 4K in length, are placed in the PSIMAGE tablespace, which is created using a 32K buffer pool.
- Tables that benefit from row level locking exist in the following tablespaces:
  - PTPRC — Tables used by the Process Scheduler
  - PTPRJWK — Tools Project Work Table
  - PTAUDIT — Table used by PeopleTools Audit functionality
  - PTAMSG — Tables used by Application Messaging
  - PTLOCK — PSLOCK and PSVERSION tables are stored in this tablespace. These tables consist of multiple rows and are used for concurrency and version control respectively.
  - PTRPTS — Tables used by Report Repository processes
  - PSIMGR — Tables that benefit from row level locking that also require use of a 32K bufferpool.
- Other tablespaces exist to group tables in PeopleTools by functionality (that is, PTTREE for tree tables, and PTAPPE for Application Engine tables).

Simple or partitioned tablespaces (one table per tablespace) are not supported for the initial installation, but may be implemented for demonstration and production databases using the PeopleTools Application Designer.

Naming Tablespace Defaults

The following tables lists and describes common tablespaces:

Tablespaces	Comments
PTAPP, PTTBL	Contain moderate sized PeopleTools tables with little expected growth.
PTTLRG	Contains larger PeopleTools tables that have the potential to grow large.
PTAUDIT	Contains table PSAUDIT used by PeopleTools audit functionality. Row level locking is specified for this tablespace.
PSIMAGE	Contains all PeopleSoft tables requiring 32K bufferpool size.
PSIMGR	Contains tables requiring a 32K bufferpool size that also benefit from row level locking. Row level locking is specified for this tablespace.
PTAMSG	Tables used by Application Messaging. Row level locking is used for this tablespace.
PTAPPE	Tables used for Application Engine. Please note that other AE tables exist in PSIMAGE because they require 32KB bufferpool.
PTLOCK	Contains PSLOCK and PSVERSION. Row level locking is used for this tablesapce.
PTTREE	Contains tables specific to PeopleTools trees.
PTPRC	All tables used by ProcessScheduler. Row level locking used for this tablespace.

Tablespaces	Comments
PTPRJWK	Contains table PSPROJECTWRK. Row level locking is used for this tablespace.
PTRPTS	Contains tables associated with Report Repository functionality. Row level locking is used for this tablespace.
XXWORK	Contain PeopleTools and application “temporary”2. tables.
XXLRG	Application tablespaces containing tables identified as high growth and high update, where the xx corresponds to the two-character application identifier (FS, PC, AF, and so on).
XXAPP	Application tablespaces identified as static or with the potential for relatively minimal growth, where the xx corresponds to the two-character application identifier (FS, PC, AF, and so on).
XXIMAGE	Contain Application tables requiring 32K buffer pool size.

Parsing Tablespaces

In this multiple database strategy, the tablespaces are distributed to different databases based on the key application group within the product line. This parsing strategy serves as a good starting point to build a PeopleSoft database in your development environment. We recommend that you install the Demonstration database with the delivered strategy to expedite the database creation. You may consider tailoring the delivered DDL script files to implement your own strategy to build your System PeopleSoft database.

Below are some guidelines that were used in determining a parsing strategy:

- PeopleTools tablespaces are created in a "root" database, with one exception ("root" being the seven-character database name without addition of the eighth character).
- Tablespace PTPRC (also a PeopleTools tablespace) is placed in its own database, with an added eighth character of T, to avoid contention between Process Scheduler and any other processes that may be running.

Refer to the summary found in the specific XXDDL.SQL script, for the exact database or tablespace parsing strategy for the Product Line.

Note. You can further improve performance by remapping tables to additional tablespaces, and tablespaces to additional databases with the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT). Consult the appendix “Using the PeopleSoft Tablespace DDL Automation Assistance Tool” to help you plan a strategy for implementing production PeopleSoft databases.

See *PeopleTools 8.52: Data Management PeopleBook.*

Task 7-6: Creating Tables

The CREATE TABLE statements to build the tables for the application group are in Partitioned Data Set HLQ.PS*vvv*.DDLLIB. To create the tables, use TBDDL for non-Unicode databases, and TBDDLU for Unicode databases. If any changes were made to the name of the databases or tablespaces in the HLQ.PS*vvv*.DDLLIB(*XX*DDL) or HLQ.PSvvv.DDLLIB script, you must make the same parameter changes to the file you will use to create the tables. The key values you need to modify are:

- *Owner#ID* — This value equates to the "CREATOR" field in the SYSIBM.SYSTABLES catalog table and is offered to facilitate Seondary Authorization ID processing.
- *OBJ#OWNER* — This value should equate to the CREATOR field in the SYSIBM.SYSTABLES catalog table.
- *Database names*
- *Tablespace names* — Only if you changed the default names specified in the HLQ.PS*vvv*.DDLLIB(*XX*DDL)

After reviewing all your changes, submit this file, preferably through DSNTEP2, since this task will take between one and two hours.

Note. You may use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to optimize the default installation DDL scripts (xxDDL, TBDDL) for a production environment. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

Warning! By default DSNTEP2 allows 10 errors, failing on the 11th error. Allowing 10 errors before the script stops could leave your database in an inconsistent state. It is important that your script stop at the first error so you can assess the problem, fix it and resubmit the job. You may want to change the default for DSNTEP2 to fail on the first error or use SPUFI to submit the TBDDL.

Task 7-7: Configuring the DB2 Connect Gateway

Because subsequent installation tasks require connectivity to the remote database, you now need to configure the DB2 Connect Gateway, cataloging an alias for the PeopleSoft database. You also need to perform any additional tasks required for connectivity that you didn't already complete during preparation. For instructions on performing these tasks, see the appendix "Installing and Configuring DB2 Connect." For details on DB2 Connect configuration, refer to your IBM DB2 Connect documentation.

Task 7-8: Creating Data Mover Import Scripts

This section discusses:

- Understanding Data Mover Import Scripts
- Working with Multilingual Databases
- Running Database Setup to Create Data Mover Import Scripts

Understanding Data Mover Import Scripts

The Data Mover Import scripts are used to populate the PeopleSoft database with data. You use the Database Setup feature of the PeopleSoft Data Mover program to create the Data Mover Import scripts.

You need to perform this procedure for each type of database that you create (System and Demo databases). Also, if your database supports Unicode, you need to have decided whether to use a Unicode or ANSI database.

See *PeopleTools 8.52: Global Technology PeopleBook.*

Task 7-8-1: Working with Multilingual Databases

All PeopleSoft releases are shipped with English as the database's base language. Therefore when selecting components for the Data Mover Import script, you must select the English components in addition to any other languages you have licensed. After the installation is complete, you can change the database's base language to the language that you plan to use most frequently.

Note. If you are creating a database and want to load Oracle-provided translations for non-English languages, you must load English (ENG) in addition to the foreign language components.

Note. If you haven't already done so, refer to Chapter 1 before determining whether to install multiple languages and whether to change your base language. See "Preparing for Installation," Planning Multilingual Strategy.

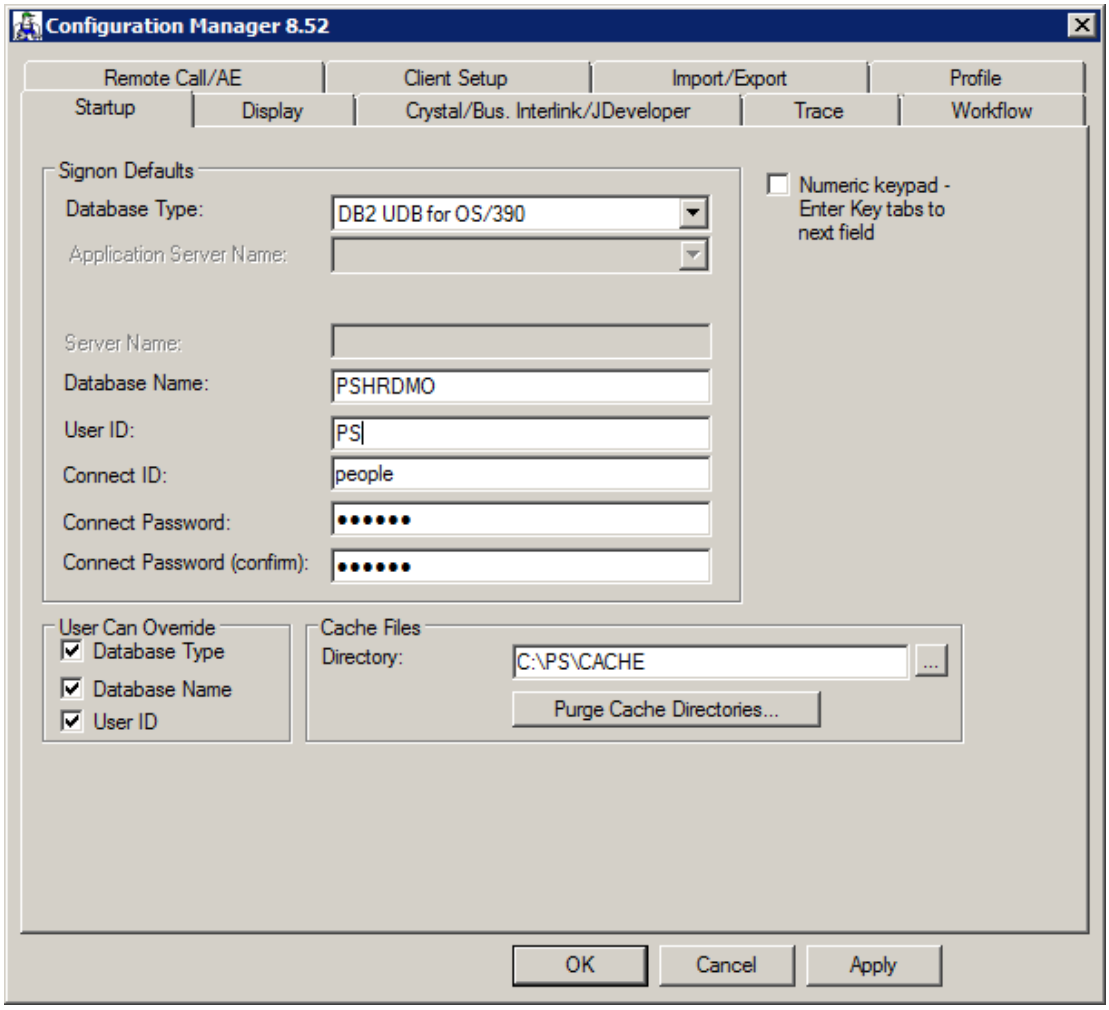
Task 7-8-2: Running Database Setup to Create Data Mover Import Scripts

The following procedure describes how to use the Database Setup feature to generate Data Mover import scripts.

To create Data Mover import scripts:

1. In Configuration Manager, verify in the Signon Defaults on the Startup page that the Database Type of DB2 UDB for OS/390 is selected. If not, you will be prompted for the application server name, instead of the required database name.

   This example shows the Startup tab of Configuration Manager with *DB2 UDB for OS/390* selected as the Database Type.



Startup tab on the Configuration Manager dialog box

2. If the *PS_APP_HOME* location is not the same as *PS_HOME*, make sure it is set in Configuration Manager, as follows:

   a. In Configuration Manager, select Profile.

   b. Highlight the Default Profile and select Edit.

   c. On the Edit Profile dialog box, select the Process Scheduler tab.

   d. Verify that the *PS_APP_HOME* value is correct.

   See "Setting Up the Install Workstation, Editing the Default Profile."

3. Log onto the database shell in *Bootstrap* mode with Data Mover.

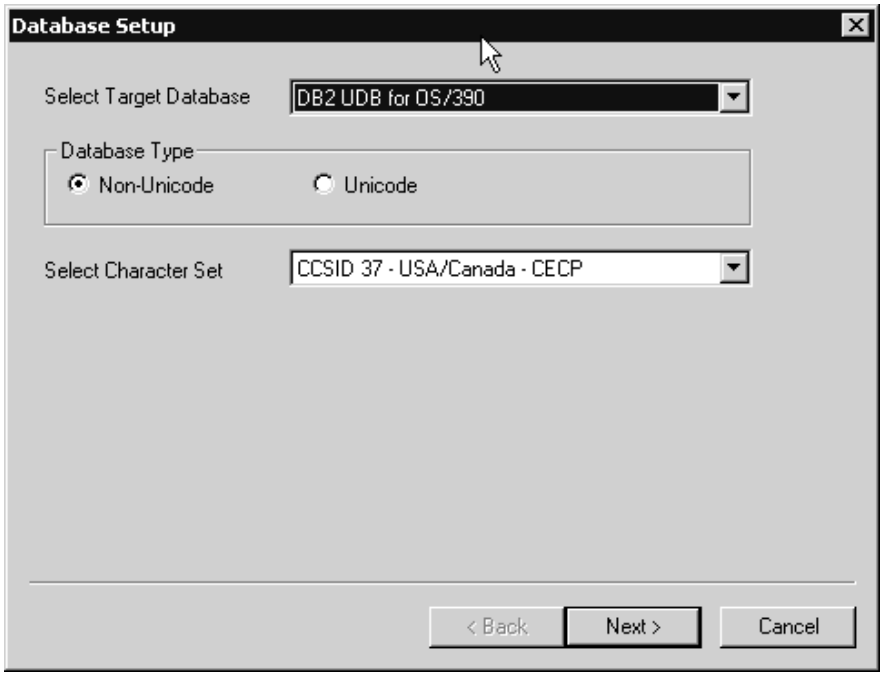
   Bootstrap mode means starting Data Mover with the database Access ID and password, rather than with a PeopleSoft user ID. When you start Data Mover in bootstrap mode, the word “BootStrap” appears in the Data Mover status bar. (The opposite of Bootstrap mode is User mode. When in User mode, no actual mode displays on the status bar.)

   Note. You must limit Access ID and the Access password to eight characters or less.

4. Select Start, Programs, PeopleTools 8.5, Data Mover (or go to *PS_HOME*\bin\client\winx86 and run psdmt.exe). The PeopleSoft Logon window appears.
5. Log on using the Access ID and password you defined in your mainframe security software application; this will start Data Mover in bootstrap mode.

   See "Preparing for Installation," Planning Database Creation.
6. Choose File, Database Setup.

   The Database Setup dialog appears, as shown in this example:



Database Setup dialog box

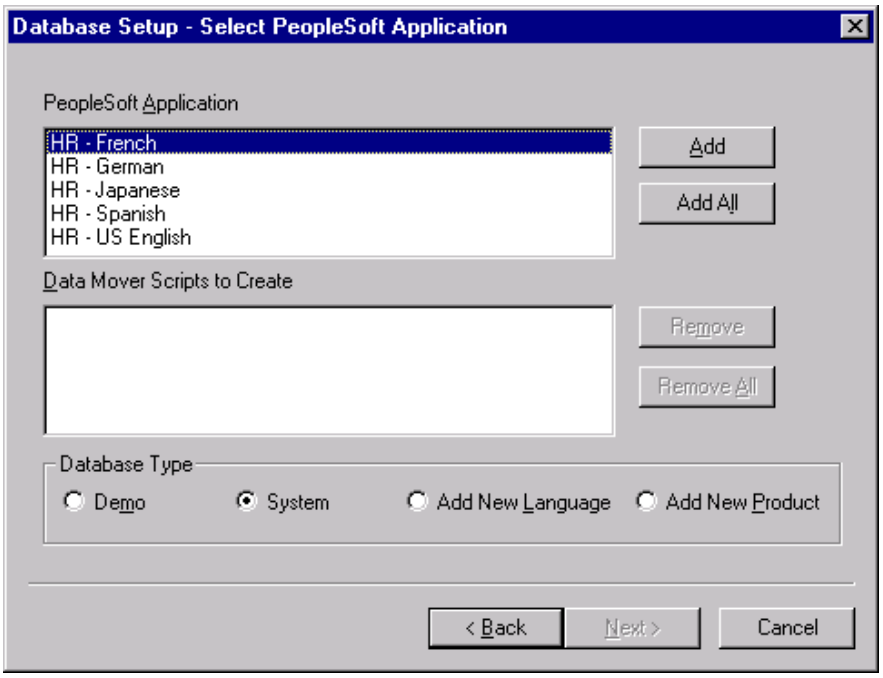
7. If necessary, change your Character Set, and click *Next*.

   In the example in the preceding step the character set shown is CCSID 37 - USA/Canada - CECP

   Note. DB Setup does not actually modify the encoding scheme of your database. That is accomplished during creation. DB Setup only creates customized scripts based on your selections.

8. Select the Demo or System radio button, depending on which type of PeopleSoft database you are installing.

   This example shows the Database Setup - Select PeopleSoft Application dialog box with System selected as the Database Type.

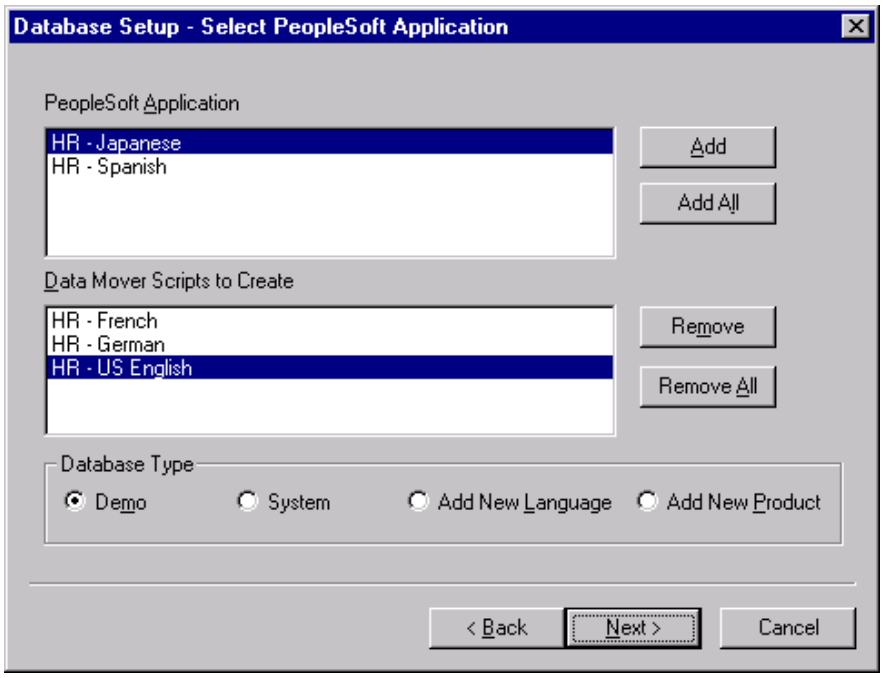


Choosing the PeopleSoft Database type in the Database Setup dialog box

9. Select the Product(s) for which you want to create a Data Mover script from the PeopleSoft Application list box. Move the item(s) you have selected into the Data Mover Scripts to Create list box by clicking on the Add or Add All button.

   If you installed the Multilanguage CD, each application will be listed several times, once for each language. See the chapter on preparing for installation for a list of the Oracle-provided languages and abbreviations. If you are installing languages other than English, make sure to select the appropriate language data files for each application you select in English. This will load the translated database objects.

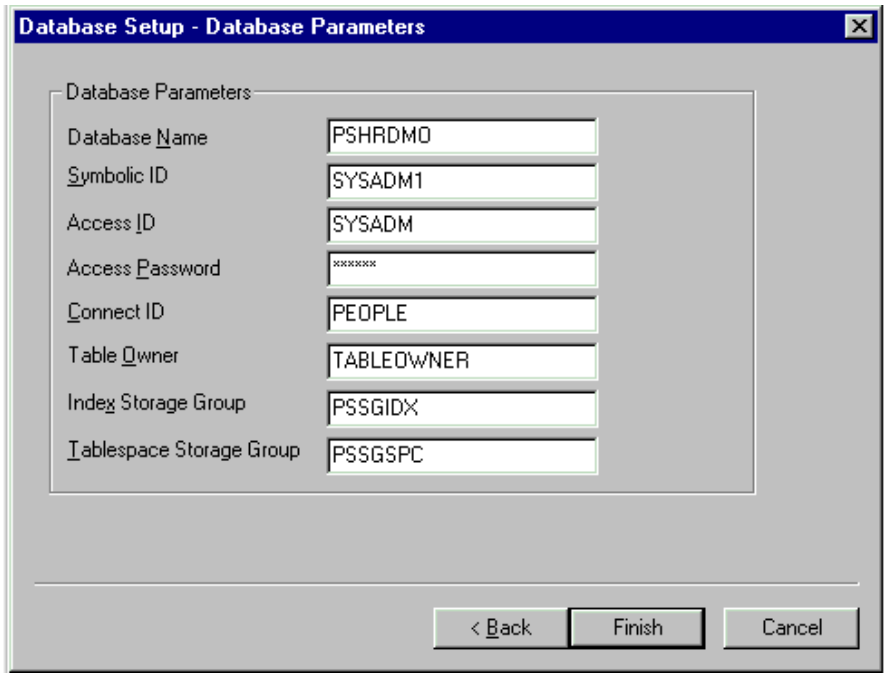
   See "Preparing for Installation," Planning Multilingual Strategy.



Choosing applications in the Database Setup dialog box

If you are installing an application in any language other than English, you must also select the English component of the application. For example, if you select PeopleSoft HR - French, you must also select PeopleSoft HR - US English. This ensures that you install the necessary base-language components. The example above shows HR - French, HR - German, and HR - US English in the Data Mover Scripts to Create box.

10. Once you have selected the languages for the Data Mover scripts to create, select Next. The Database Parameters dialog box appears.



Choosing the database parameters in the Database Setup dialog box

The various parameters are discussed below:

- *Database Name* — the logical DB2 database name determined in the chapter Preparing for Installation in the task "Planning Database Creation."

  The database name must also be defined as an alias in DB2 Connect to establish a successful connection to your PeopleSoft database, as described in the appendix "Installing and Configuring DB2 Connect."

- *Symbolic ID* — the key to retrieve ACCESSID and ACCESSPSWD from PSACCESSPRFL. For initial installation set it equal to the Database Name. The Symbolic ID cannot be longer than eight characters.
- *Access ID* — the PeopleSoft Access ID defined in the chapter Preparing for Installation under "Planning Database Creation." This is also the User ID value with which you should be currently logged on to Data Mover. This value is case sensitive.
- *Access Password* — the PeoleSoft Access Password defined in the chapter Preparing for Installation under "Planning Database Creation." This is also the User password value with which you should be currently logged on to Data Mover.
- *Connect ID* — for DB2 for z/OS, this is the Connect ID that can be used for the initial connection to DB2 for z/OS. This ID is used for connecting to the database.

  Note. The Connect ID must be defined as a valid logon ID in the database security management software. The Connect ID only needs to be granted SELECT access on PS.PSDBOWNER, PSACCESSPRFL, PSOPERDEFN, and PSSTATUS. This ID should be granted no other database authorities.

- *Table Owner* — the name of the table owner ID determined in the chapter Preparing for Installation under "Planning Database Creation." (This value will populate the CREATOR field in the system catalog table SYSIBM.SYSTABLES.) It is this value that identifies all the tables as belonging to the logical PeopleSoft database.
- *Index Storage Group* — the storage group where the index spaces will be created. Later you have to edit the delivered script IXDDL.SQL with this value.
- *Tablespace Storage Group* — the storage group for tablespaces. This value must be the same as that used in the XXDDL.SQL/XXDDLU.SQL script described earlier when the Tablespaces were created.

11. Provide the parameter values, and click Finish.

    A script <dbname>dbo.dms is created in the *PS_HOME*\scripts directory, and the script is displayed in the Data Mover input window. The log files will be written to the location you have specified for the Data Mover Log Directory in the Configuration Manager profile.

    Note. If you selected a Database Type of *System* in the Database Setup dialog (above), you must use the Data Mover DBSPACE command to properly override the default database names in the generated Data Mover script (script <dbname>dbo.dms). The appendix "Extracting DDL for PTSYS Database" discusses a sample script that you can use to customize the database names for your location. Refer to this appendix for information on creating a PTSYS database.

See Also

PeopleTools 8.52: Data Management PeopleBook

"Extracting DDL for PTSYS Database"

Task 7-9: Running Data Mover Import Scripts

This section discusses:

- Understanding Data Mover Import Scripts
- Populating Tables in the PeopleSoft Database
- Validating Files
- Troubleshooting
- Improving Performance
- Improving Execution

Understanding Data Mover Import Scripts

Now you will run the Data Mover scripts (DMS) that you created in the preceding task to import the data for your PeopleSoft database. The Data Mover script creates either a system (SYS) or a demo (DMO) database.

When you initially logged onto Data Mover to create the DMS scripts, you logged in using bootstrap mode. *Bootstrap mode* means starting Data Mover with the database Access ID and password, rather than with a PeopleSoft user ID. You need to use bootstrap mode to run the Data Mover import script, because there are not yet any PeopleSoft security tables in the database.

Note. You should already be signed on in Bootstrap mode from having completed the previous task.

Verify that the same Connect ID was used in the Database Setup, and Configuration Manager panel. If you accepted all defaults, the Connect ID/Password is: people/peop1e (password has the number 1 instead of the letter "l").

See *PeopleTools 8.52: Data Management PeopleBook.*

Warning! The Data Mover utility uses the INSERT SQL command to populate all the tables in PeopleSoft database. Notify your systems programmer and operations staff that this activity will generate more DB2 z/OS logging activity than usual.

Task 7-9-1: Populating Tables in the PeopleSoft Database

To populate tables in the PeopleSoft database:

1. The DMS import script for your application will contain hard-coded file names for log files and data files.

   Modify the DMS script if you have moved any files from the delivered directories or want to write log files to another location than that specified in the script.

2. If you have logged out of Data Mover after creating the DMS script, log back on again in *Bootstrap* mode; otherwise skip the next instruction.

3. Choose File, Open to open the DMS script you created earlier.

   Browse the directory where the script was created: *PS_HOME*\SCRIPTS. Open the DMS script with the name <*dbname*>DBO.dms, where <dbname> is the name of the database you provided when creating the script.

4. One of the statements in the script grants select authority on PS.PSDBOWNER to the Connect ID.


```
GRANT SELECT ON PS.PSDBOWNER TO <Connect Id>;
```

5. If you have not granted the Access ID (the ID that you used to log on to Data Mover to execute the script) a level of authority that would permit it to execute this statement, the Data Mover script will fail and stop at the statement.

   You can exercise three options to prevent this failure:

   - Grant SELECT access on PS.PSDBOWNER to PUBLIC, and remove this GRANT statement from the script.
   - Remove this GRANT statement from the script and perform it later with an ID that is authorized to issue grants on PS.PSDBOWNER.
   - Grant authority to the Access ID to grant access on PS.PSDBOWNER to other user IDs.
6. Select File, Run to execute the script.

When you run the script, Data Mover typically does the following:

- IMPORT *

  Create all the PeopleTools and application tables with their indexes.
- ENCRYPT_PASSWORD *

  Encrypt security information for the database.

Task 7-9-2: Validating Files

Each script will produce .LOG files. The log files are located in the directory you specified in the Data Mover Script.

This is the same directory you specified for the Data Mover Log Directory in the Configuration Manager profile, unless you edited this location in the DMS script.

Task 7-9-3: Troubleshooting

If your script has stopped midway (this can happen for a number of reasons) you need to edit the script and start again.

To edit and restart the DMS script:

1. Determine the record that was being imported (that is, which IMPORT command was running) when the script stopped. (See the note below for additional information on determining where the script stopped.)

   Note. When building a DMO database or a multilingual database, adding the SET START statement can be tricky because the Data Mover script used to load the database will include more than one IMPORT statement. The key is to view the LOG files and determine which IMPORT section of the script Data Mover failed on. If the failure occurred during the first IMPORT, add the SET START statement before the first IMPORT *; statement (no problem with this one). If the failure occurred during a subsequent IMPORT, comment out all preceding IMPORT *; statements and add the SET START statement before the IMPORT*; statement of the section in which the failure occurred. This is very important. If you see any 'unique index constraint' error messages in the 'Create Indexes' step (found later in the chapter), your IMPORT script failed during a subsequent IMPORT but the SET START statement was added to the first IMPORT. In this situation, you can run the Data Mover script in its originally generated form, with only one modification. In the first IMPORT section, change the statement IMPORT *; to REPLACE_DATA *;. This will delete all the data in the tables, and re-import it. This process will take some time to run, and you will need to separately create each of the indexes that failed.

2. Add the following line before the offending IMPORT command (the one being executed when the failure occurred):

```
Set start <RECORD NAME>;
```

where <RECORD NAME> is the name of the record that failed. Make sure to review the Data Mover log file to see where the script failed and locate the last record that imported successfully. The 'SET START' will begin the Data Mover import at the <RECORD NAME> specified.

<RECORD NAME> is the PeopleSoft record name as defined in PSRECDEFN, not necessarily the same as the DB2 table name. With the exception of the PeopleSoft PeopleTools tables, most PeopleSoft record names are appended with PS_ to create the DB2 table name.

Note. It is a good idea to change the name of the log file in the script before each attempt at running it. This ensures that you have a separate log file for each attempt, if you run the import more than once.

Example:

If the script stops and the table is partially inserted with a message similar to this one:

```
Importing  PSPNLFIELD
Rows inserted into PSPNLFIELD
```

First delete the rows from the partially inserted table (for example, record) by using the DELETE FROM <table> command, and then restart Data Mover at the record that failed using the SET START command and continue the Data Mover import. With PeopleSoft PeopleTools 8.4x, this can be done in a single pass.

Add the following lines before the offending IMPORT command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;

DELETE FROM <RECORD NAME>;
```

where <RECORD NAME> is the name of the record that failed. Make sure to review the Data Mover log file to see where the script failed and locate the last record that imported successfully. The `SET START` will begin the Data Mover import at the <RECORD NAME> specified. For example:

Before

```
REM - PeopleTools System Database - US English
/
SET LOG ptengs.log;
SET INPUT ptengs.db;

SET NO RECORD;

SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE OFF;
IMPORT *;
```

After

```
REM - PeopleTools System Database - US English
```



```
/
SET LOG ptengs.log;
SET INPUT ptengs.db;

SET NO RECORD;

SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE OFF;
SET START PSPNLFIELD;

DELETE FROM PSPNLFIELD;

IMPORT *;
```

For the DELETE Statement, for records with a recname without a leading PS, add PS_ to the beginning of the recname; otherwise the table will not be found.

Example:

```
PS_<RECNAME>
```

3. Re-start the script (File, Run Script).

Task 7-9-4: Improving Performance

The following tips can help you save time when running the Data Mover scripts:

- Run only a single instance of Data Mover, and do not have any other applications running during the import.
- In the PeopleSoft Configuration Manager, turn off all Trace options. Tracing during a DMS load will add considerable time to the process.

Task 7-9-5: Improving Execution

Data Mover, by default, commits at the end of each table. If you prefer, when running Data Mover, you can include a SET COMMIT command (such as SET COMMIT 5000) to force a commit after the specified number of rows have been inserted into the table. However, if you use this option, and Data Mover ends abnormally again, you must mass delete the rows contained in the current table.

If the script stops and the table is partially inserted with the message below:

```
Importing  PSPNLFIELD
Rows inserted into PSPNLFIELD
5000, 10000, 15000
```

Bypass the record using the SET START AFTER command and complete the import. In a second pass, import the partially inserted table using this command:

```
Replace_data <record_name>;
```


Task 7-10: Creating Indexes

All DDL statements to create the indexes for your application are located in the HLQ.PSvvv.DDLLIB(IXDDL) file. Edit the IXDDL file to make changes to the delivered DDL to customize the OWNER#ID, OBJ#OWNER, DEFINE YES, DEFINE NO, and STOGROUP values to the specific values used at your site:

Note. You may then use the IXDDL script with the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to further optimize index DDL. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

- OWNER#ID: The statement SET CURRENT SQLID may be used, but is not required. All objects in the CREATE INDEX statements are fully qualified.
- OBJ#OWNER: This value should equate to the CREATOR field in the SYSIBM.SYSINDEXES catalog table.
- DEFINE YES or DEFINE NO: The default for the delivered index DDL is DEFINE NO.

  If you do not want to defer creation of the underlying VSAM index datasets until rows are inserted into tables (DEFINE NO), edit the IXDDL file in ISPF as follows:

  ```
  change all 'DEFINE NO' to 'DEFINE YES'
  ```

  or

  ```
  change all 'DEFINE NO' to ' '
  ```

  If you want to permanently change the delivered default for index DDL to *DEFINE YES*, edit the Data Mover script *PS_HOME*/scripts/DDLDB2.DMS by removing `DEFINE NO` from the end of the index model statement. Terminate the statement with a semi-colon and save the script. For example:

  Original:

  ```
  CREATE [UNIQUE] INDEX **OWNER**.[IDXNAME] ON **OWNER2**.[TBNAME] ([IDXCOLLIST])⇒
   USING STOGROUP **STOGROUP** PRIQTY **PRIQTY** SECQTY **SECQTY** [CLUSTER]⇒
   BUFFERPOOL **BUFFERPL** CLOSE NO DEFINE NO;
  ```

  New:

  ```
  CREATE [UNIQUE] INDEX **OWNER**.[IDXNAME] ON **OWNER2**.[TBNAME] ([IDXCOLLIST])⇒
   USING STOGROUP **STOGROUP** PRIQTY **PRIQTY** SECQTY **SECQTY** [CLUSTER]⇒
   BUFFERPOOL **BUFFERPL** CLOSE NO;
  ```

  After you edit the script, you must run the STOREDDL.DMS script to update the index model ddl definition.

  See Updating PeopleTools System Data.

- STOGROUP

Save your changes and submit the DDL statements either through SPUFI or DSNTEP2. It is preferable to submit this in batch mode using DSNTEP2. This task can take several hours to complete, depending on the product line you are installing.

If you decide to submit this through SPUFI, verify that the designated output data set is allocated with sufficient tracks or cylinders to hold the result of processing all the CREATE INDEX statements. You should consider creating a SPUFI output dataset with file attributes: VB,Record Length =4092,Blk size=4096, SPACE (Primary 20 cylinders, Secondary 5 cylinders).

Important! Do not change the name of any index. All indexes in this script are cataloged in the PeopleSoft system tables. If you change an index name, the physical index will not match the index definition stored in PeopleTools. These index discrepancies will be reported as exceptions in the DDDAUDIT report.

Task 7-11: Updating Database to Latest PeopleTools Release

This section discusses:

- Understanding Database Updates
- Cleaning Up Data
- Updating PeopleTools System Tables
- Updating PeopleTools Database Objects
- Updating PeopleTools Multilingual Objects
- Deleting Obsolete PeopleTools Database Objects
- Applying Patched PeopleTools Database Objects
- Altering PeopleTools Tables
- Migrating Records to New Tablespaces
- Updating PeopleTools System Data
- Running PeopleTools Conversions
- Converting Integration Broker
- Running Additional PeopleTools Conversions

Understanding Database Updates

Your PeopleSoft application database may be on a PeopleSoft PeopleTools release prior to the version that you are currently running. For you to be able to sign on to your database after running the Data Mover script to load your database, the PeopleSoft PeopleTools versions for your database and your file server must match. The steps in this task ensure that your PeopleSoft database is in sync with the PeopleSoft PeopleTools version that you are running.

Note. You will use Application Designer for several steps in this portion of the installation. Consult the Application Designer documentation if you have questions.

See *PeopleTools 8.52: PeopleSoft Application Designer Developer's Guide PeopleBook*

Note. If you are installing either a PeopleSoft PeopleTools System Database or a database delivered on PeopleSoft PeopleTools 8.52, and you are applying a required for install PeopleSoft PeopleTools patch, skip the steps in this task. Instead, follow the directions in the patch user doc to apply the database changes, and then continue with the install at the task Running the DB2 RUNSTATS Utility. If you are installing an application SYS or DMO database that is not delivered on PeopleSoft PeopleTools 8.52, please proceed with this task.

This task must be run for any applications where the PeopleSoft PeopleTools version of the database that was shipped is different than the version of PeopleSoft PeopleTools that you are running. To verify the PeopleSoft PeopleTools release for your application database, run this SQL script:

```
select TOOLSREL from PSSTATUS
```

If the PeopleTools version is not 8.52, you must run this task. Otherwise, continue to the task Running the DB2 RUNSTATS Utility.

Task 7-11-1: Cleaning Up Data

If your database is delivered on PeopleSoft PeopleTools 8.48 or higher, do *not* run this step, and instead, proceed to Updating PeopleTools System Tables. If your database is delivered on PeopleSoft PeopleTools 8.47 or earlier, perform this step to clean out obsolete message data.

Warning! Performing this task when updating from PeopleSoft PeopleTools 8.48 or later will wipe out current valid data that is needed for your system to function properly.

Message functionality and structure changed as of PeopleSoft PeopleTools 8.48 and the old data is obsolete. Edit *PS_HOME*\scripts\ptupgibdel.sql to delete data from the tables that only exist in the old PeopleSoft PeopleTools release. Open the script and make the following modifications, and then run the modified script using your SQL query tool:

1. Search for the string "--- End of PT8.<*xx*> ---" where <xx> represents the last two digits of the PeopleSoft PeopleTools release you are upgrading from.
2. Delete the entire portion of the script below this string.
3. Save the script as <*PS_HOME*>\scripts\ptupgibdel8<*xx*>.sql where <xx> represents the last two digits of the PeopleSoft PeopleTools release you are upgrading from, as determined in Step 1.

   Note. Save the script using the naming convention shown above! This will preserve the original script for use in updating other databases at different PeopleSoft PeopleTools releases.

   ---

4. Using a SQL query tool, run the ptupgibdel8<*xx*>.sql script against your PeopleSoft database.

Task 7-11-2: Updating PeopleTools System Tables

Run SQL scripts to update your PeopleSoft PeopleTools system tables to the latest PeopleSoft PeopleTools release (currently 8.52).

Use a query tool, such as SPUFI, DB2 Command Center, to run SQL scripts while in the PeopleSoft database.

1. Run the appropriate SQL scripts for your application version.

   The following scripts are found in the *PS_HOME*\scripts directory.

   Use the scripts in the following table for non-Unicode databases:

Application Database Version	Required Scripts for Non-Unicode Databases
8.40	rel841, rel842, rel843, rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, and rel852
8.41	rel842, rel843, rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, and rel852
8.42	rel843, rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, and rel852
8.43	rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, and rel852
8.44	rel845, rel846, rel847, rel848, rel849, rel850, rel851, and rel852
8.45	rel846, rel847, arel848, rel849, rel850, rel851, and rel852
8.46	rel847, rel848, rel849, rel850, rel851, and rel852
8.47	rel848, rel849, rel850, rel851, and rel852
8.48	rel849, rel850, rel851, and rel852
8.49	rel850, rel851, and rel852
8.50	rel851 and rel852
8.51	rel852
8.52	None

Use the scripts in the following table for Unicode databases:

Application Database Version	Required Scripts for Unicode Databases
8.40	rel841u, rel842u, rel843u, rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.41	rel842u, rel843u, rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.42	rel843u, rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.43	rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.44	rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.45	rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.46	rel847u, rel848u, rel849u, rel850u, rel851u, and rel852u
8.47	rel848u, rel849u, rel850u, rel851u, and rel852u
8.48	rel849u, rel850u, rel851u, and rel852u
8.49	rel850u, rel851u, and rel852u
8.50	rel851u and rel852u

Application Database Version	Required Scripts for Unicode Databases
8.51	rel852u
8.52	None

2. If the application database version you are installing is either 8.42 or 8.43, run the following SQL command:

   ```
   DROP TABLE PS_PSMCFQUEUESLANG
   ```

   Note. PS_PSMCFQUEUESLANG may not exist in some 8.43 application databases. Do *not* drop the table PSMCFQUEUESLANG.

3. If the application database you are installing is 8.45 or lower, run the following SQL command:

   ```
   DROP TABLE PSOPTSTATUS
   ```

4. Edit and run the grant.sql script in the *PS_HOME*\scripts directory. This will grant permissions to the Connect ID.
5. Invoke Data Mover by running *PS_HOME*\bin\client\winx86\psdmt.exe.

   The PeopleSoft Logon window appears.

   Log on using a valid PeopleSoft Operator ID, such as PS for HRMS or VP1 for FDM.
6. If you are applying a required for install PeopleSoft PeopleTools patch, run *PS_HOME*\scripts \PTPATCH.DMS.
7. Run the storeddl.dms Data Mover script in the *PS_HOME*\scripts directory.

   Note. Comment out the other platform-specific scripts according to your platform.

   This will update your platform-specific DDL model statements.

   Log out of Data Mover for the next step.
8. Invoke Data Mover by running *PS_HOME*\bin\client\winx86\psdmt.exe.

   The PeopleSoft Logon window appears.

   Log on using the access ID you specified when you created your Data Mover scripts with the Database Setup program.

   This will start Data Mover in bootstrap mode.
9. Run the msgtlsupg.dms Data Mover script in the *PS_HOME*\scripts directory.

   This will update the PeopleSoft PeopleTools messages in your database.

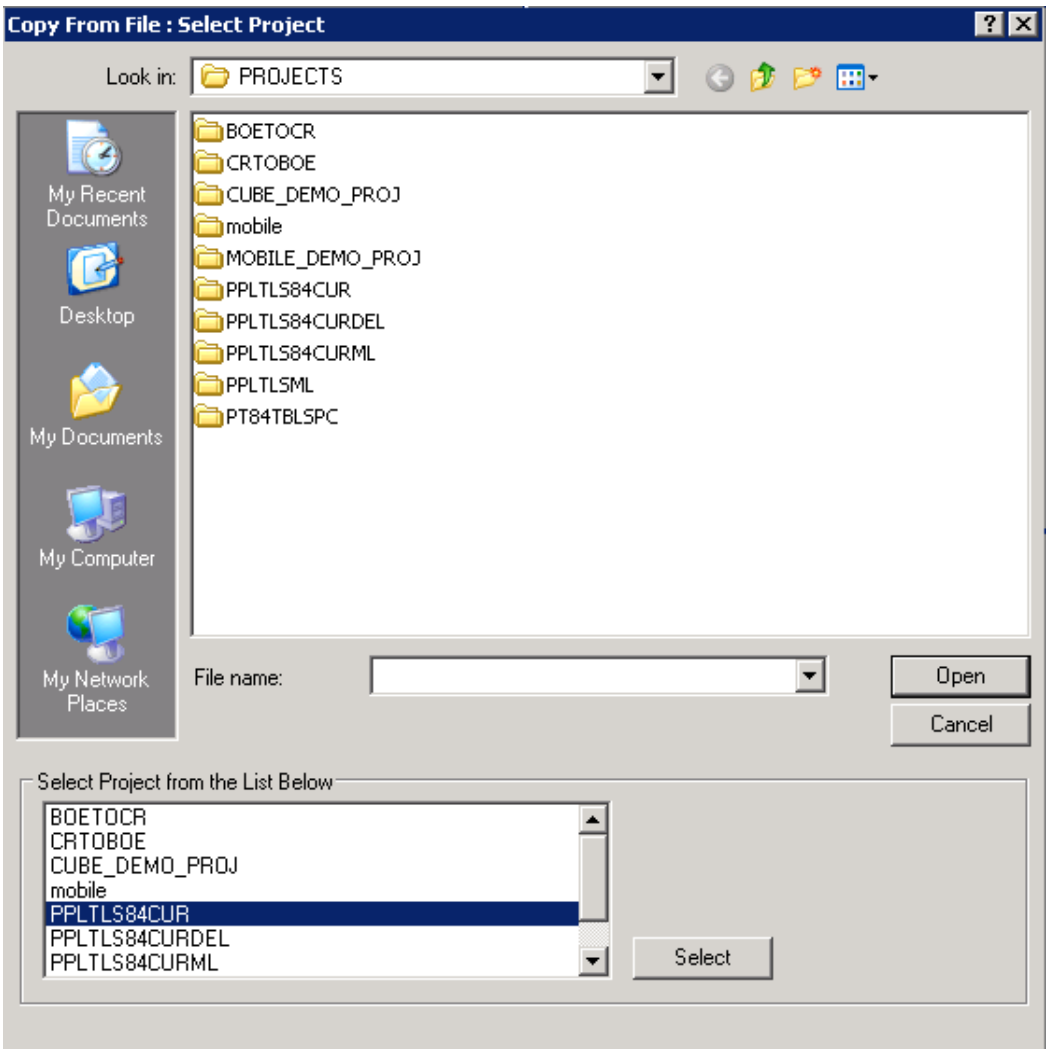
Task 7-11-3: Updating PeopleTools Database Objects

To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft PeopleTools release. Failure to run this step will introduce problems to your environment.

To update PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. Select Tools, Copy Project, From File.
3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PPLTLS84CUR from the list of projects and click the Select button.

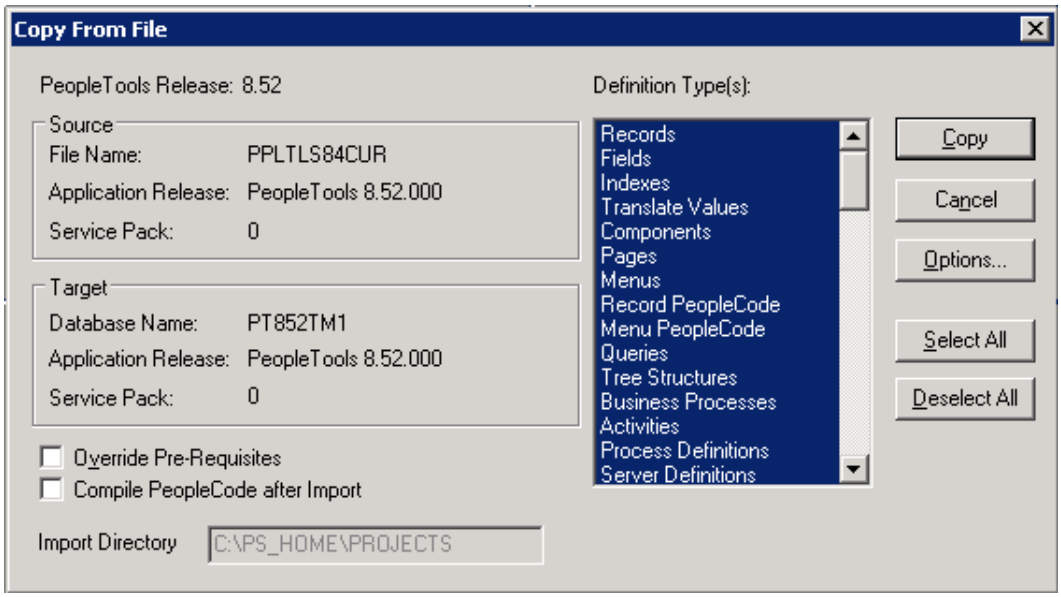
Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.



Selecting Project PPLTLS84CUR in the Copy From File dialog box

4. The Copy From File dialog box appears.

   Select all object types and then click the Copy button. When the progress window disappears, the project has been copied.



The Copy From File dialog box showing that PPLTLS84CUR will be copied

If you see the following types of messages in the output window do not worry; they are acceptable because the field label properties were copied with the object definition:

- Definition Name: OPERPSWD.OPERPSWD not copied, entire definition already copied (62,32).
- Definition Name: OPRID.NEW not copied, entire definition already copied (62,32).

Task 7-11-4: Updating PeopleTools Multilingual Objects

If you are currently updating a PeopleSoft Multilingual Database, you must also apply the project PPLTLS84CURML, which contains the translations of the PeopleSoft PeopleTools Objects.

Note. If you have licensed and installed French into this database, copy the PPLTLSML project instead of the PPLTLS84CURML project for French *only*. Substitute the project name PPLTLSML instead of PPLTLS84CURML in the instructions below. Copy the PPLTLS84CURML project to update any non-French languages that are installed in the database.

To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file.

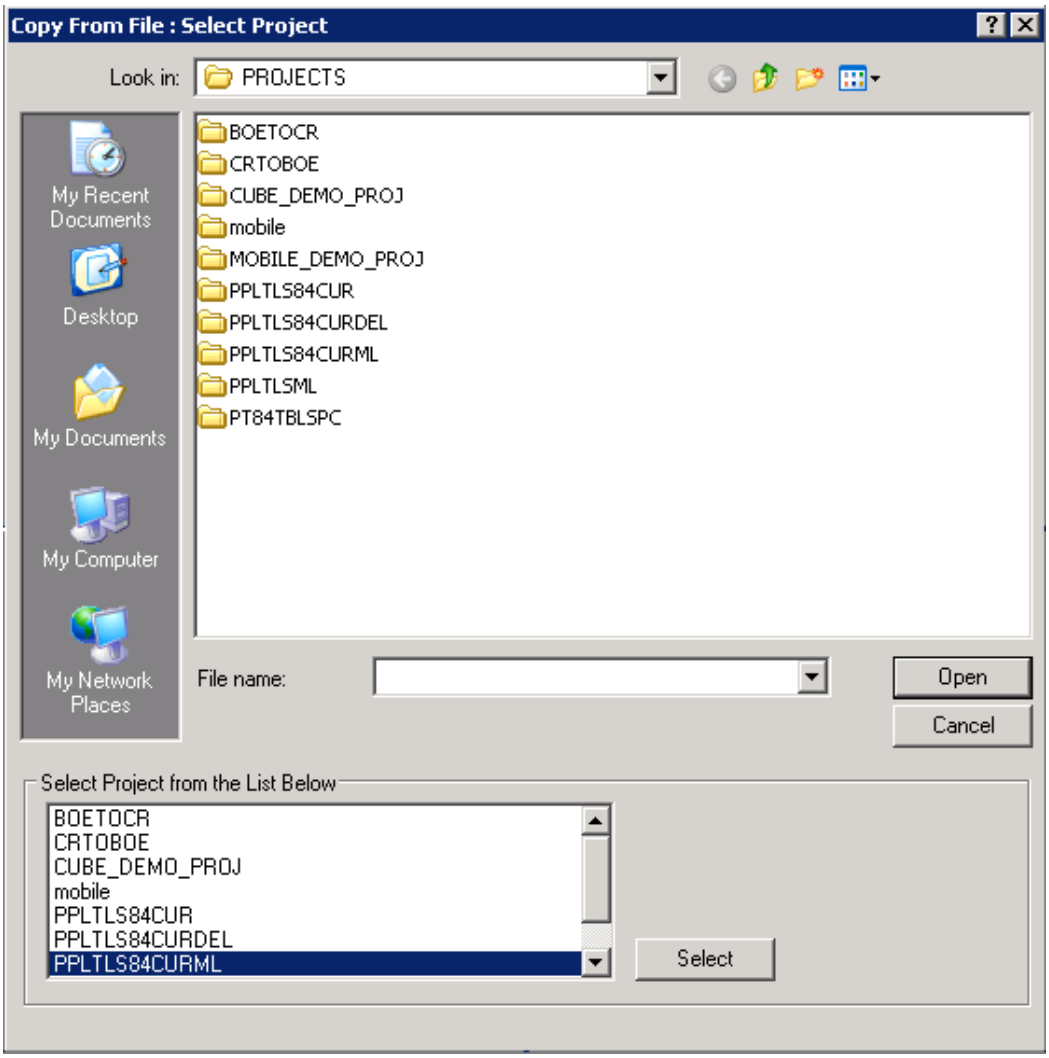
To apply the translation project for PeopleSoft PeopleTools 8.52:

1. Bring up the Configuration Manager and select the Display tab.

   Ensure that the language matches the base language of your database. Always run upgrade copy as a base language user.

2. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
3. Select Tools, Copy Project, From File.
4. In the resulting dialog box, change the import directory to *PS_HOME*\projects.
5. Select PPLTLS84CURML from the list of projects and click the Select button.

Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.



Selecting Project PPLTLS84CURML in the Copy From File dialog box

6. The Upgrade Copy dialog box appears.

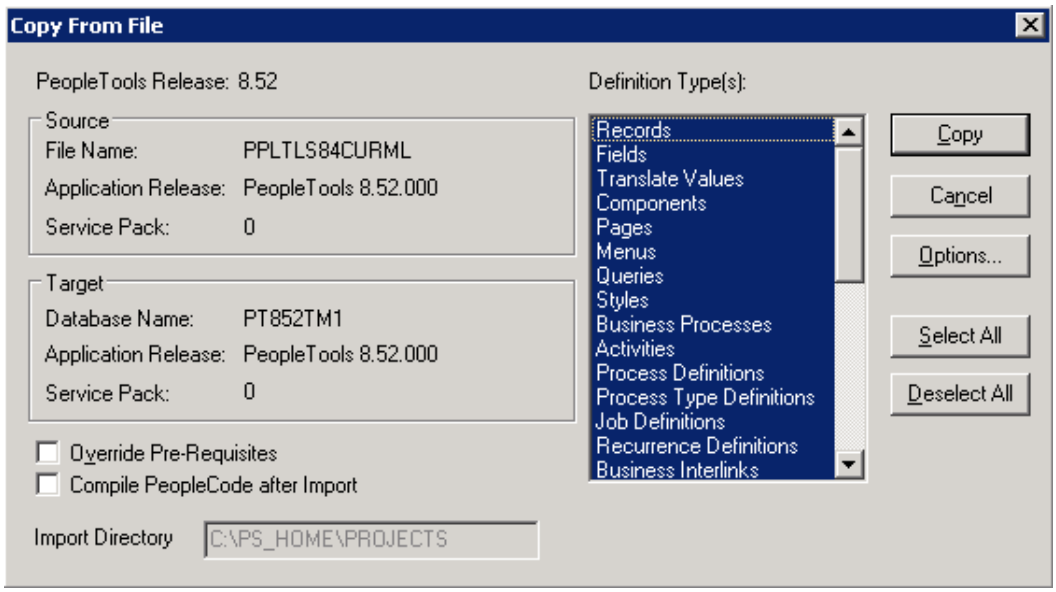
   Make sure that all object types are selected.

7. Click the Options button, select the Copy Options tab, and ensure that only the non-English languages you have installed are selected.

   Please note that English and Common should *not* be selected.

8. Select the languages that you are currently installing from the Copy Options dialog box.

9. Click the Copy button.



The Copy From File dialog box showing that PPLTLS84CURML will be copied

When the progress dialog box disappears, the project has been copied.

Task 7-11-5: Deleting Obsolete PeopleTools Database Objects

This process removes obsolete PeopleSoft PeopleTools objects from your database. To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. You will use the Copy from File functionality to delete the obsolete objects from the database.

The copy process detects whether any deleted fields are in use on other objects, such as records. You may see the following kind of warning during the copy:

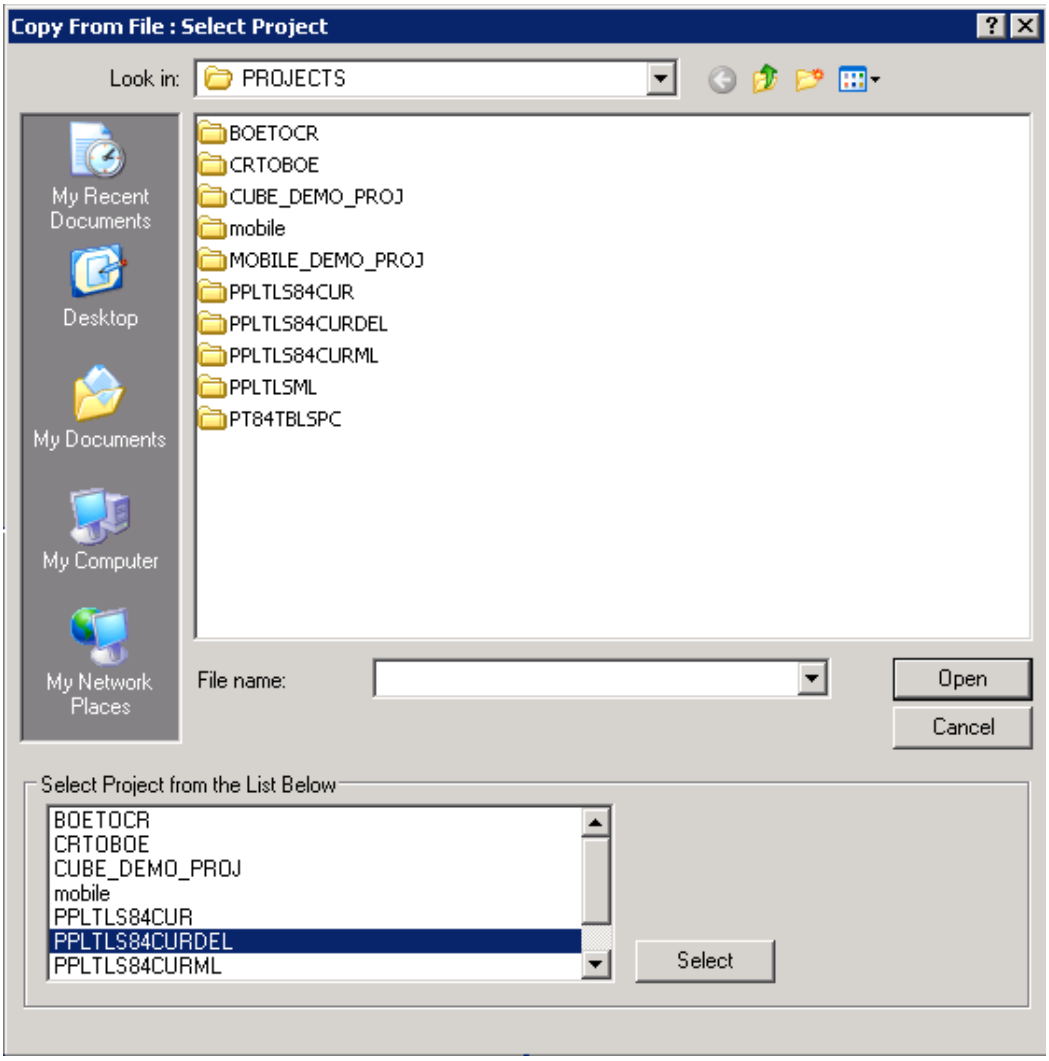
```
Field <FIELDNAME> is in use on at least one record.
```

You must clean up any objects that reference the deleted field(s) after the upgrade. While PeopleTools has deleted the field as part of the new release, you may still have objects that reference this deleted field. After fixing any objects that reference this field, delete the field from your system.

To delete obsolete PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. Select Tools, Copy Project, From File.
3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PPLTLS84CURDEL from the list of projects and click Select.

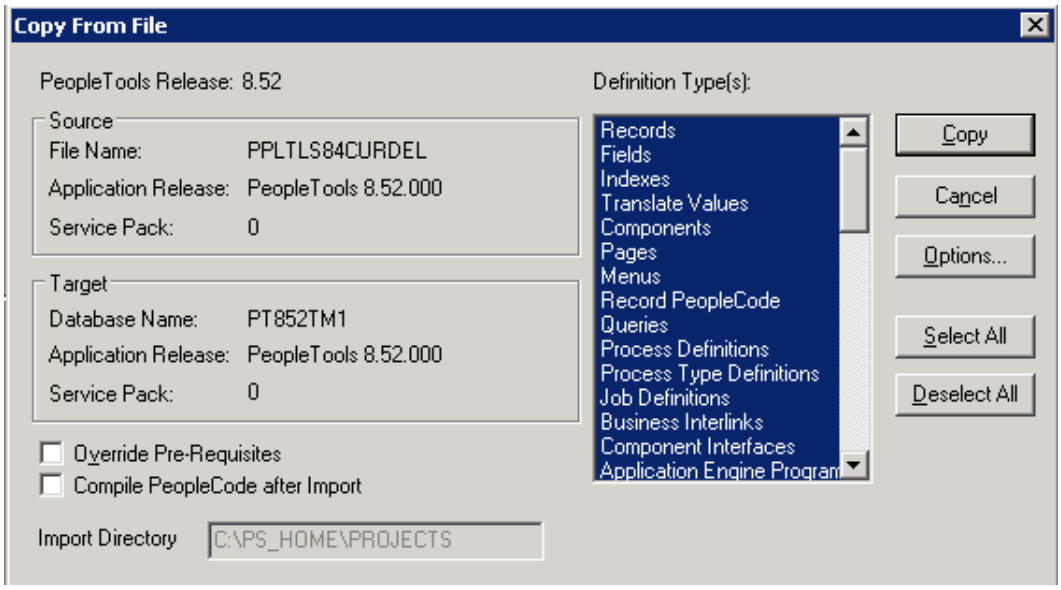
Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.



Selecting Project PPLTLS84CURDEL in the Copy From File dialog box

4. The Copy From File dialog box appears.

   Select all object types and click the Copy button. When the progress dialog box disappears, the project has been copied.



The Copy From File dialog box showing that PPLTLS84CURDEL will be copied

Note. If you have a multilingual database, do not change the languages that are selected by default.

Task 7-11-6: Applying Patched PeopleTools Database Objects

If you are applying a required for install PeopleSoft PeopleTools patch and *if a database project is included as part of the patch*, apply the database project(s) now. Make sure you apply all projects that are appropriate for your environment, including multilingual (ML) projects, if necessary. Make sure to read the patch release notes to find out if database changes are in the patch.

To update patched PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft PeopleTools patch release. Failure to run this step will introduce problems to your environment.

To apply patched PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. Select Tools, Copy Project, From File.
3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select the patch project from the list of projects and click the Select button.
4. Follow the patch instructions to select the correct copy options. Select all object types and then click the Copy button.

   When the progress window disappears, the project has been copied.

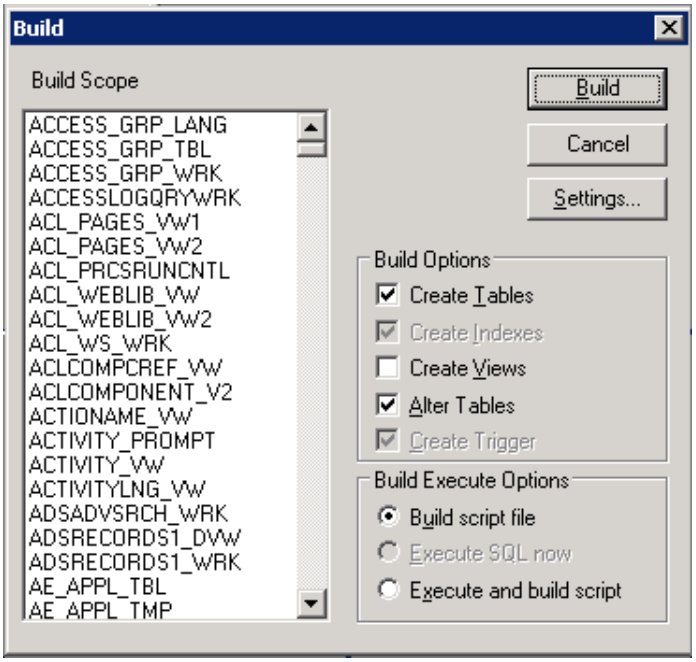
Task 7-11-7: Altering PeopleTools Tables

Use the ALTER AUDIT process in this step to check whether the PeopleSoft PeopleTools tables are synchronized with the underlying SQL data tables in your database. This step uses a delivered project to compare the data structures of your database tables with the PeopleSoft PeopleTools tables to uncover inconsistencies. The ALTER AUDIT process then reports its findings. At this point in the installation, we expect to see differences between the database structure and the PeopleSoft PeopleTools tables. You will generate and run a SQL script to synchronize the PeopleSoft PeopleTools table definitions with the underlying tables in your database.

To alter PeopleSoft PeopleTools tables:

1. Launch Application Designer with a valid PeopleSoft user ID and sign on to the installed database.
2. Select File, Open.
3. Select *Project*, enter *PPLTLS84CUR* in the name dialog box, and click OK.
4. Select Build, Project.

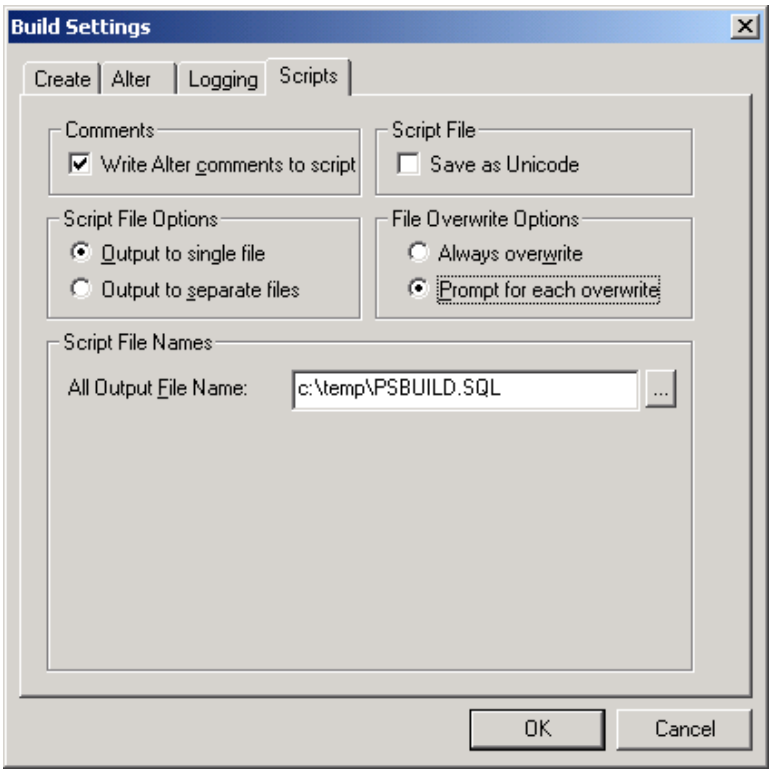
   The Build dialog box appears:



The Build dialog box with selections for altering tables

5. Select Create Tables and Alter Tables in the Build Options region as shown in the example above (Create Indexes and Create Trigger will automatically be selected).
6. Select Build script file in the Build Execute Options region.
7. Click Settings.

   The Build Settings dialog box appears:

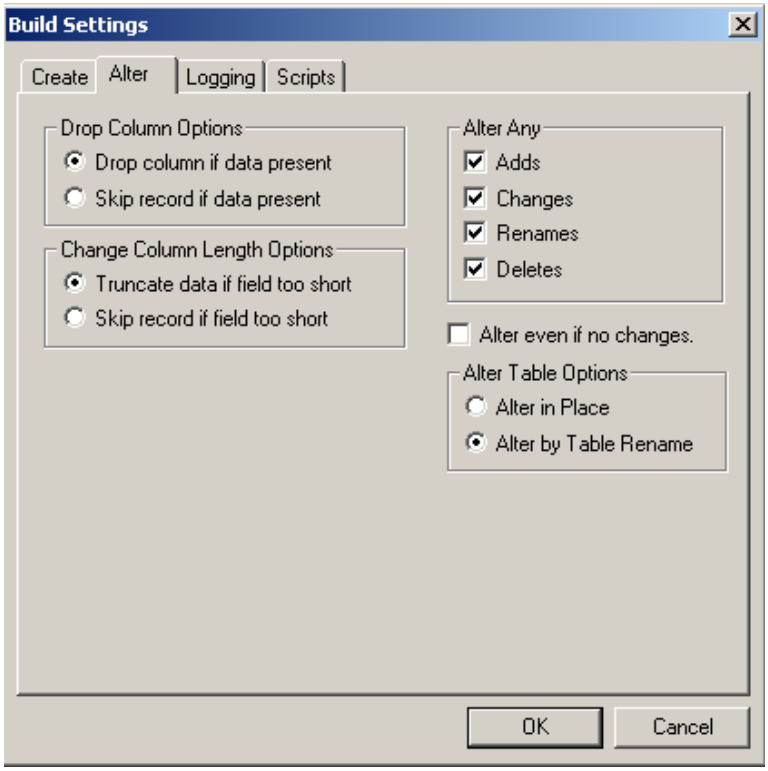


Build Settings dialog box: Scripts tab

8. Select the Scripts tab.
9. Select Write Alter comments to script.
10. Select the Alter tab and ensure that the Adds, Changes, Renames, and Deletes check boxes are selected in the Alter Any region.

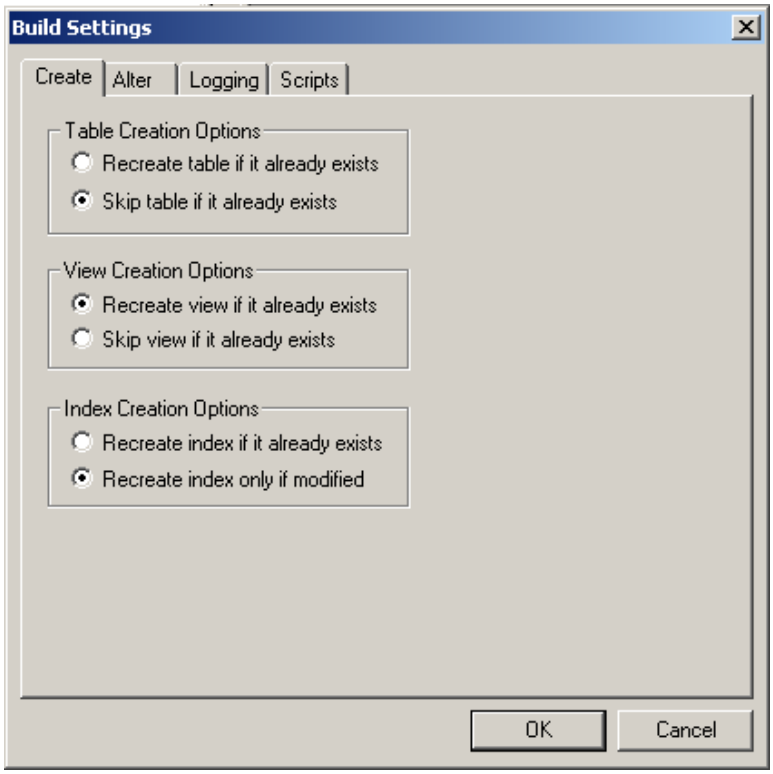
    Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.

    Make sure that the option Alter by Table Rename is selected in the Alter Table Options region.



Build Settings dialog box: Alter tab

11. Select the Create tab and ensure that the Skip table if it already exists, Recreate view if it already exists, and Recreate index only if modified options are selected.



Build Settings dialog box: Create tab

12. Click OK.

    The Build dialog box reappears.
13. Click Build.
14. Click Close when the process is completed.
15. Edit the generated SQL script for the correct database name.
16. Edit the generated SQL script for the correct tablespace names and sizing parameters if you are not using delivered PeopleSoft Tablespace names.
17. Run the generated SQL script in your platform-specific query tool to bring your database structure in sync with the PeopleSoft PeopleTools tables.

Task 7-11-8: Migrating Records to New Tablespaces

This section discusses:

- Copying the Tablespace Record Project
- Running Alter Tools Tables

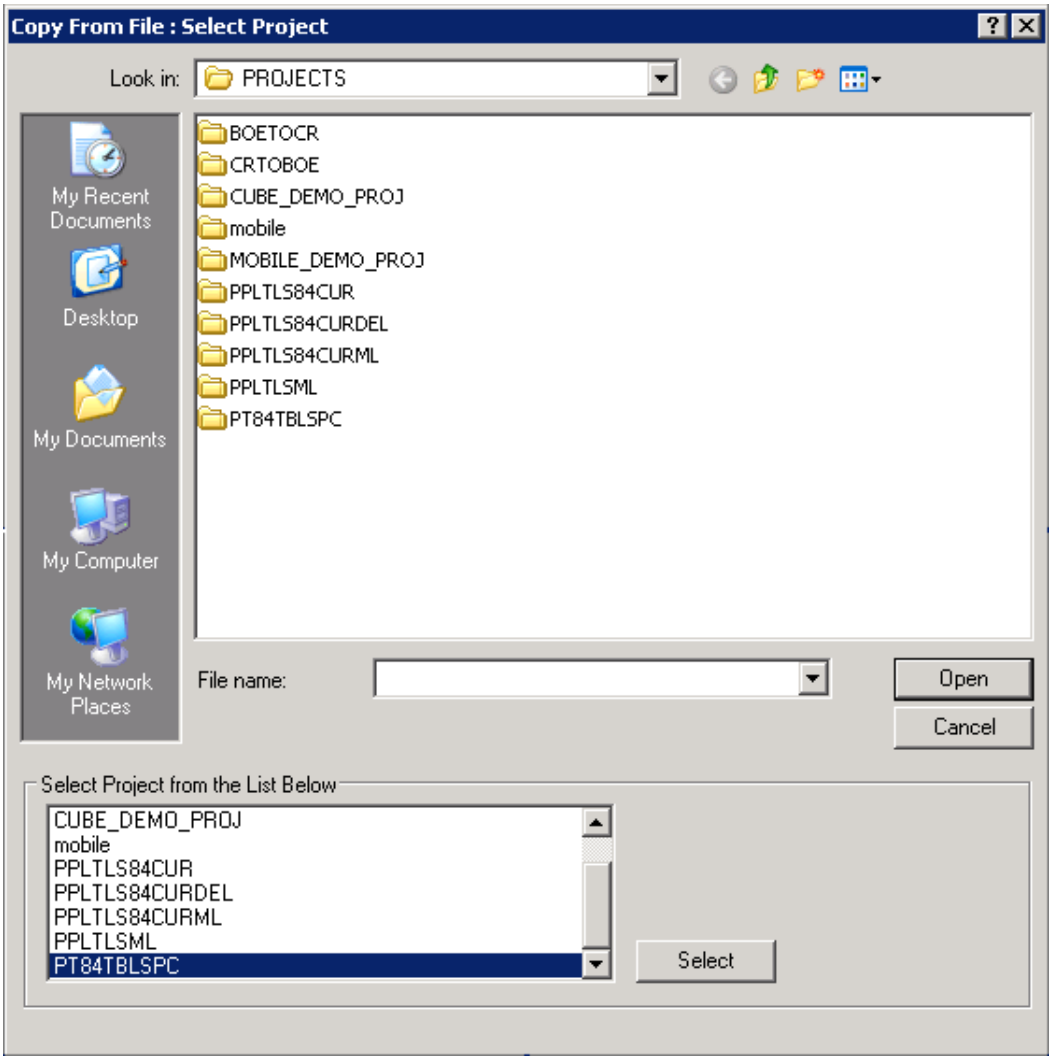
Copying the Tablespace Record Project

Oracle moved some delivered tables to different Tablespaces for PeopleSoft releases 8.44 and above. You must run this step to move the tables.

To copy the Tablespace Record project:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. Select Tools, Copy Project, From File.
3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PT84TBLSPC from the list of projects, and click Select.

Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

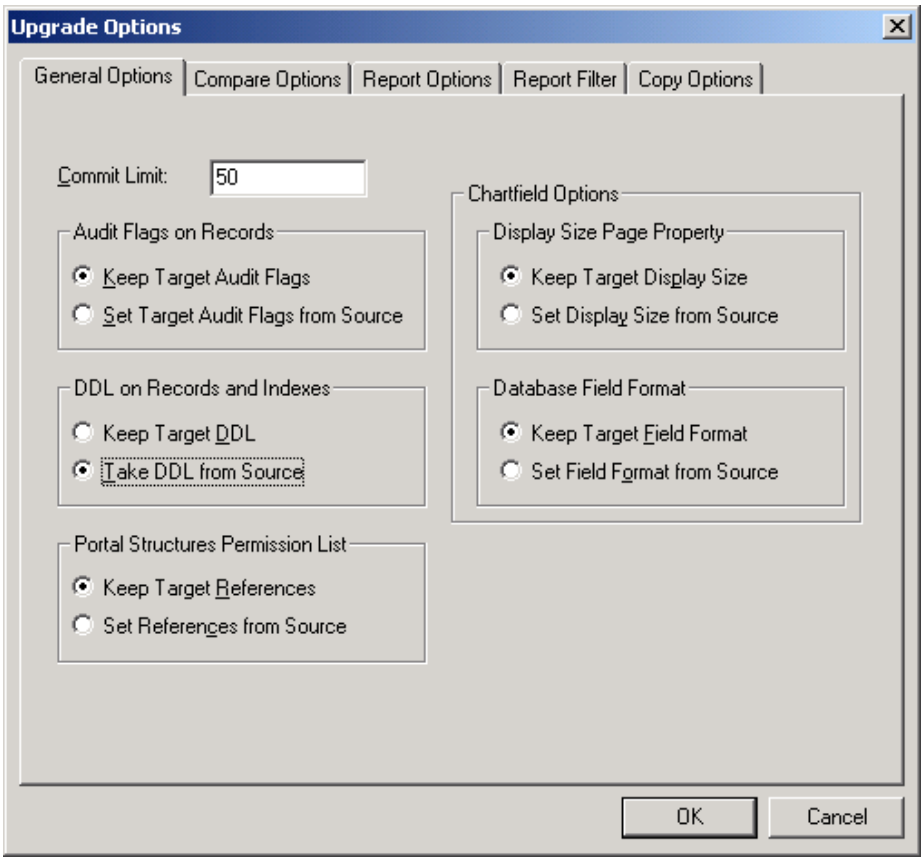


Selecting Project PT84TBLSPC in the Copy From File dialog box

4. The Copy From File dialog box appears.

   Select all object types and click the Options button. Navigate to General Options and make sure that the Take DDL from Source option is selected.

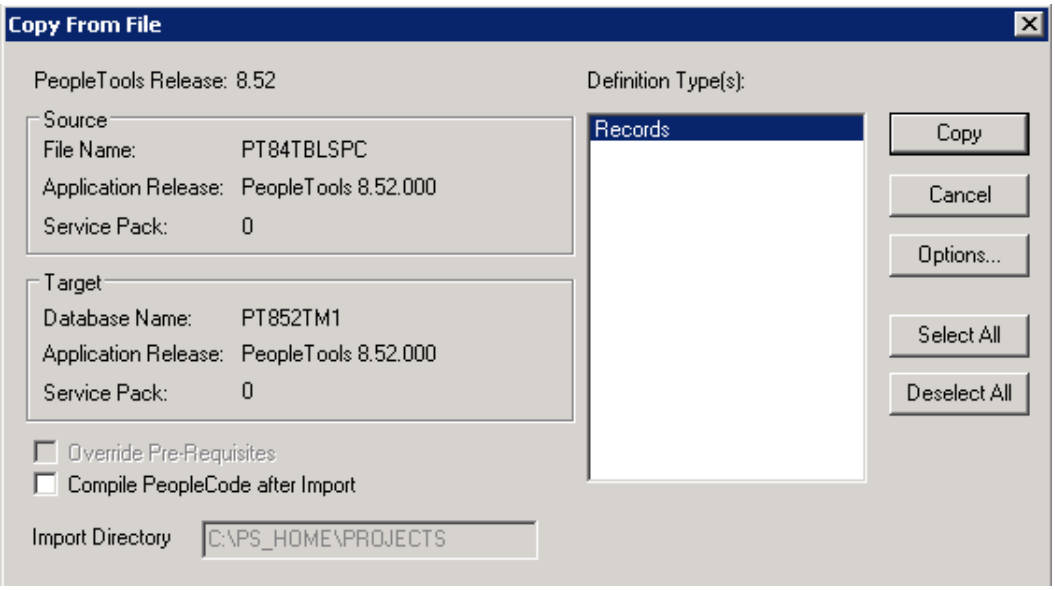
   Click OK.



Upgrade Options dialog box: General Options tab

5. Click the Copy button.

   When the progress dialog box disappears, the project has been copied.



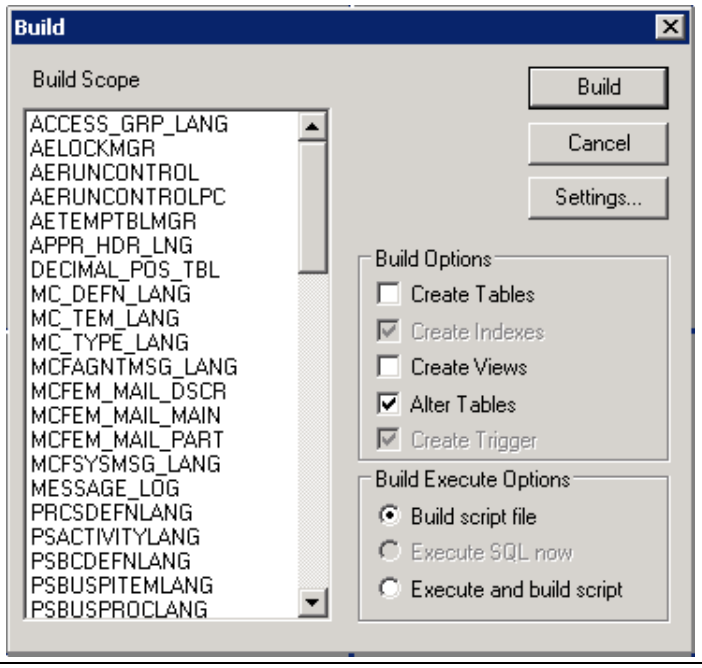
The Copy From File dialog box showing that PT84TBLSPC will be copied

Running Alter Tools Tables

To run Alter Tools tables:

1. Launch PeopleSoft PeopleTools and sign on to Installed database.
2. From the Application Designer, select File, Open.
3. Select Project, enter PT84TBLSPC in the name dialog box, and click OK.
4. Select Build, Project.

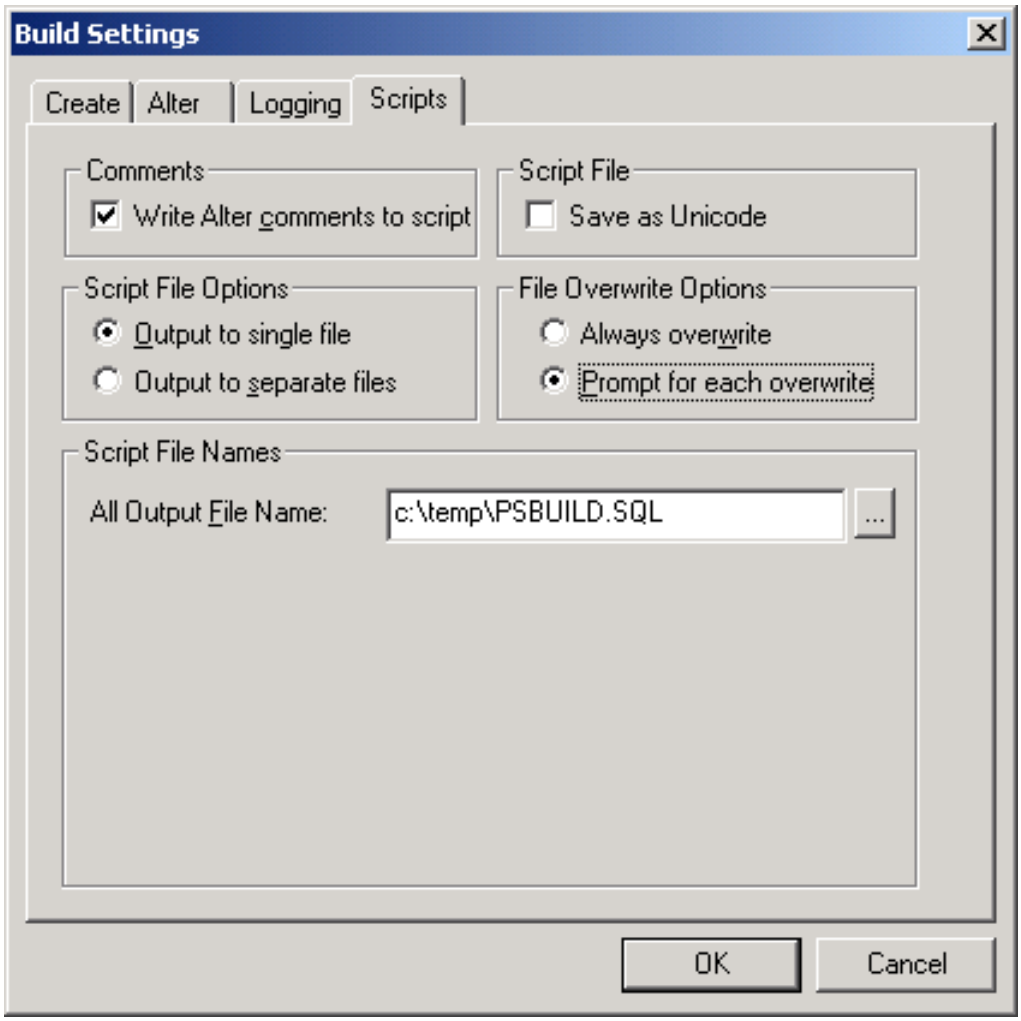
   The Build dialog box appears:



The Build dialog box

5. Select Alter Tables in the Build Options region as shown in the example above (Create Indexes and Create Trigger will automatically be selected).
6. Select Build script file in the Build Execute Options region.
7. Click Settings.

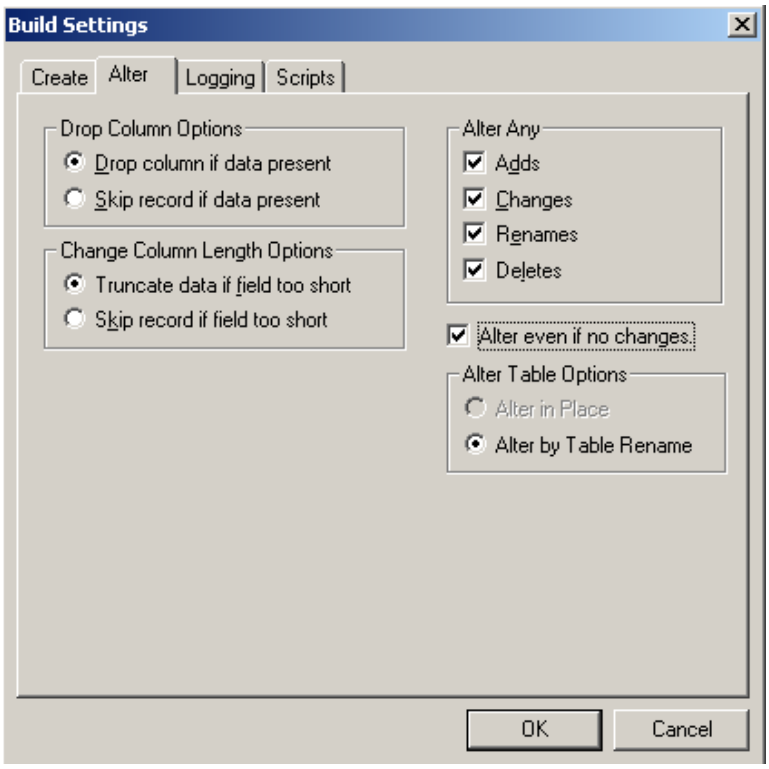
   The Build Settings dialog box appears:



Build Settings dialog box: Scripts tab

8. Select the Scripts tab.
9. Select Write Alter comments to script.
10. Select the Alter tab and ensure that the Adds, Changes, Renames, and Deletes check boxes are selected in the Alter Any region, and that the Alter even if no changes check box has been selected.

    Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.



Build Settings dialog box: Alter tab

11. Click OK.

    The Build dialog box reappears.

12. Click Build.
13. Click Close when the process is completed.
14. Edit the generated SQL script for the correct database name.
15. Edit the generated SQL script for the correct Tablespace names and sizing parameters if you are not using delivered PeopleSoft Tablespace names.
16. Run the generated SQL script in your platform-specific query tool move the tables to the correct Tablespaces.

Task 7-11-9: Updating PeopleTools System Data

Data Mover scripts that update PeopleSoft PeopleTools system data are run to enable new features and load new messages for the PeopleSoft PeopleTools 8.52 release. Several of the scripts that you need to run are dependent upon the version of the application you are running.

See Understanding Database Updates.

To update PeopleSoft PeopleTools system data:

Note. DB2 for z/OS scripts need the “set current sqlid” statement so that the tables are created with the correct owner ID. Open each script listed below, and then uncomment and modify all of the statements specific for DB2 for z/OS to reflect your environment.

---

1. Invoke Data Mover by running *PS_HOME*\bin\client\winx86\psdmt.exe.

The PeopleSoft Logon window appears.

2. Log on using the access ID you specified when you created your Data Mover scripts with the Database Setup program.

   This will start Data Mover in bootstrap mode.

3. Run the appropriate Data Mover scripts for your application database version.

   The application database version refers to the version before you started this step. Be sure to run the scripts in the order listed. The scripts are found in the *PS_HOME*\scripts directory:

Application Database Version	Scripts to Run
8.40	pt841tls, pt842tls, pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.41	pt842tls, pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.42	pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.43	pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.44	pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.45	pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.46	pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.47	pt848tls, pt849tls, pt850tls, pt851tls, and pt852tls
8.48	pt849tls, pt850tls, pt851tls, and pt852tls
8.49	pt850tls, pt851tls, and pt852tls
8.50	pt851tls and pt852tls
8.51	pt852tls
8.52	None

4. Run the pslanguages.dms Data Mover script in the *PS_HOME*\scripts directory.

   This script loads language-specific seed data.

5. Run the tlsupgnoncomp.dms Data Mover script in the *PS_HOME*\scripts directory.

   This will import the updated PeopleSoft PeopleTools Trees, Roles, and Access Groups into your database.

6. If you are a Multilingual customer, from the Data Mover script that was created for your PeopleSoft database installation, find the UPDATE to PSLANGUAGES.

   The statement should look similar to the following, where *xxx* is one of the PeopleSoft three-letter language code identifiers, as described earlier:

```
UPDATE PSLANGUAGES SET INSTALLED=1 WHERE LANGUAGE_CD = 'xxx';
```

   See "Preparing for Installation," Planning Multilingual Strategy.

   Run the SQL command identified above using your SQL tool.

7. Open Data Mover using a valid PeopleSoft Operator ID, such as PS for HRMS or VP1 for FDM.
8. If you are a Multilingual customer and have licensed non-English languages, run the pt852tls*xxx*.dms scripts in the *PS_HOME*\scripts directory.

   This will update the language-specific PeopleSoft PeopleTools system data in your database.

   Note. The portion of the script name *xxx* is equivalent to the language code (that is, FRA, CFR, GER, JPN, and so on) of the non-English languages you have installed. There will be a Data Mover script for each non-English language.

9. Run the msgtleng.dms Data Mover Script in the *PS_HOME*\scripts directory.

   Non-English message data was loaded in the pt852tls*xxx*.dms scripts. This will update the messages in your database.
10. Run the ptstreng.dms Data Mover script in the *PS_HOME*\scripts directory.

    Non-English system data was loaded in the pt852tls*xxx*.dms scripts. This will update the SQR strings in your database.
11. Run the storept.dms Data Mover script in the *PS_HOME*\src\cbl\base directory.

    This will update your PeopleSoft PeopleTools COBOL stored statements.
12. Run the ptdefnsec.dms Data Mover script in the *PS_HOME*\scripts directory.

    This will update the PeopleSoft PeopleTools Definition Security group.
13. Run the createvw.dms Data Mover script in the *PS_HOME*\scripts directory.

    This will recreate all the views in your database.

Task 7-11-10: Running PeopleTools Conversions

This section discusses:

- Understanding Usage of Application Engine Programs
- Converting Portal Objects
- Converting Query Headings
- Converting Setup Manager
- Converting Navigation Collection and Pagelet Wizard Data
- Converting Additional Pagelet Wizard Data
- Populating the Feed Options Table
- Updating Feeds for Active Data Guard
- Populating the Hash Values

Understanding Usage of Application Engine Programs

You run several Application Engine programs in this section. For information on Application Engine, including how to use and restart Application Engine programs, consult the Application Engine documentation.

See *PeopleTools 8.52: PeopleSoft Application Engine PeopleBook,* "Managing Application Engine Programs."

Converting Portal Objects

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.43 or earlier. The Application Engine program UPG844PORTAL splits PSPRSMDEFN.PORTAL_URLTEXT into segments. This is performed for PeopleSoft Components URLs to extract Menu, Component, and Market information. Record, Field, Event, and Function Names are extracted from Iscript URLs. This program must be run by a PeopleSoft user with the Portal Administrator or PeopleSoft Administrator role. The following SQL will identify which users have the PeopleSoft Administrator or Portal Administrator roles:

```
select ROLEUSER, ROLENAME from PSROLEUSER where ROLENAME in ('PeopleSoft⇒
 Administrator','Portal Administrator')
```

Run the UPG844PORTAL Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPG844PORTAL
```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <oprid>, respectively. However, be aware that <pswd> is not the same as the connect password that you entered on the Configuration Manager startup tab. Enter a value for <pswd> that is the password you want to be associated with the <oprid>.

See "Setting Up the Install Workstation."

You may see some of the following errors when running this Application Engine program:

- `Not authorized CRef: <Portal Object Name> (95,5032).`

  This means that you do not have proper privileges to run this conversion. The user ID that you are using to run this conversion needs to have Portal Administrator permissions.

- `Security synchronization failed for Portal Object: <Portal Object Name> (96,61).`

  This is not a fatal error. It may be caused by a content reference that contains invalid URL text and indicates that there was an internal error writing to the security table. The invalid URL text may be pointing to a component or script that does not exist in the database. If you receive this error, search the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database.

- `Cref <Portal Object Name> points to Menu: <Menu Name>, Component <Component Name> which doesn't exist. (96,80).`

  The content reference is pointing to an invalid Menu/Component combination. If you receive this error, search the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*

Converting Query Headings

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.43 or earlier. Crystal Reports when run through Process Scheduler will not handle queries with two or more prompts that have the same heading. These duplicates are also not legal in Query. Any old queries that have this condition need to be altered to work with Crystal. This Application Engine program searches for duplicate prompt headings in the table PSQRYBIND and appends numbers onto the text. For example "Item ID" would become "Item ID 2".

Run the UPGQRYDUPHED Application Engine program on your database. From the DOS command line, the syntax is:


```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGQRYDUPHED
```

Note. If a duplicate heading is found that will exceed the length of the field HEADING, the heading will need to be manually changed. The following error will be written to the log file in these cases :

```
The prompt heading <HEADING> for Query <QUERY> is duplicated.
Please manually correct. (108, 1108)
```

See *PeopleTools 8.52: PeopleSoft Query PeopleBook.*

Converting Setup Manager

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.45 or earlier. The application engine program UPGPTSMDAT upgrades Setup Manager Version 1 (shipped with Fin SCM 8.8, CRM 8.9, and with HCM 8.9) to Setup Manager Version 2 (shipped with PeopleSoft PeopleTools 8.46 and above). The program moves all data from Setup Manager Version 1 tables to Version 2 tables.

The application engine program was designed so that it can be run in any database, and can be rerun in the same database. In either case, it will determine if there is data to convert and run as appropriate. For detailed information, see comments attached to the Steps and Actions in this Application Engine Program within Application Designer. This program must be run by a PeopleSoft user with PeopleSoft Administrator role.

Run the UPGPTSMDAT Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPTSMDAT
```

Converting Navigation Collection and Pagelet Wizard Data

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.45 or earlier. The application engine program UPGPT846PP adds Navigation Collection and Pagelet Wizard data from the Common Components and PeopleSoft Applications Portal storage tables into PeopleSoft PeopleTools tables.

The application engine program performs the following conversions:

1. Moves data from Common Components tables to PeopleSoft PeopleTools tables.
2. Moves data from PeopleSoft Applications Portal tables to PeopleSoft PeopleTools tables.
3. Updates the registry definitions to enable displaying Navigation pages.
4. Adds, updates, and deletes the Navigation Collections folders and content references in the portal registry to the new structures.
5. Converts Pagelet Wizard definitions to the PeopleSoft PeopleTools Pagelet Wizard version.
6. Renames Navigation Collection and Pagelet Wizard portal registry attributes to the PeopleSoft PeopleTools attribute names.

This program must be run by a PeopleSoft user with the Portal Administrator or PeopleSoft Administrator role.

Run the UPGPT846PP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname>  -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPT846PP
```

You may see the following error when running this Application Engine program:


```
You are not authorized for the <objecttype>...
```

This means that you do not have proper privileges to run this conversion. The user ID that you are using to run this conversion needs to have Portal Administrator permissions.

You can ignore any other errors encountered on Oracle-delivered objects at this time. Check the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database. You can safely rerun UPGPT846PP to check for any remaining errors after applying patches.

Converting Additional Pagelet Wizard Data

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.47 or earlier. The application engine program UPGPT848PP adds the following Pagelet Wizard data sources from PeopleSoft Applications Portal to PeopleSoft PeopleTools: IB Connector, Integration Broker, SOAP, and URL. In addition, the application program transforms the WSRP Portlets created in PeopleSoft PeopleTools 8.46 or 8.47 versions of Pagelet Wizard. The process includes the following:

- Move data from PeopleSoft Applications Portal tables to PeopleSoft PeopleTools tables.
- Convert WSRP Portlets created by Pagelet Wizard to the new version.

This program must be run by a PeopleSoft user with the Portal Administrator or PeopleSoft Administrator role.

Run the UPGPT848PP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPT848PP
```

You may see the following error when running this Application Engine program:

```
You are not authorized for the <objecttype>...
```

This means that you do not have proper privileges to run this conversion. The user ID that you are using to run this conversion needs to have Portal Administrator permissions.

You can ignore any other errors encountered on Oracle-delivered objects at this time. Check the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database. You can safely rerun UPGPT848PP to check for any remaining errors after applying patches.

Populating the Feed Options Table

The Application Engine program UPGPT850PTFP populates the feed options table PS_PTFP_OPTIONS if it is empty.

Run the UPGPT850PTFP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPT850PTFP
```

Updating Feeds for Active Data Guard

The Application Engine program UPGPT852PTFP updates Service Operations used by Feeds for Active Data Guard support.

Run the UPGPT852PTFP Application Engine program on your database. From the DOS command line, the syntax is:


```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPT852PTFP
```

Populating the Hash Values

The Application Engine program UPGPTHASH populates the hash columns on PSPCMTEXT and PSSQLHASH if they are empty.

Run the UPGPTHASH Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPTHASH
```

Task 7-11-11: Converting Integration Broker

This section discusses:

- Updating Integration Broker Defaults
- Creating Integration Broker Objects
- Saving Application Messaging Objects
- Exporting Node Transactions
- Deleting Application Messaging Objects
- Deleting Node Transactions

If your database is delivered with PeopleSoft PeopleTools 8.48 or higher, do *not* run this task since the database is already delivered with the new Integration Broker objects as of PeopleSoft PeopleTools 8.48. Instead, proceed to Running Additional PeopleTools Conversions.

Updating Integration Broker Defaults

User-level node security and transactional security have been added as of PeopleSoft PeopleTools 8.48. Service namespace information, a low-level user on the node, and a low-level permission list for service operations, need to be specified. Edit *PS_HOME*\scripts\ptibupgrade.dms and make the necessary modifications as documented in the script. Consult with your Integration Broker specialist for assistance.

Open Data Mover using a valid PeopleSoft Operator ID and run this script.

Creating Integration Broker Objects

The application engine program UPGPT848IBUG converts Application Package metadata into Integration Broker metadata. It also creates the projects PTUPGIBCLONE and PTUPGIBDELETE, and the script ptupg_trx.dms.

Note. Conversion errors in the Application Engine log file will be resolved by applying application-specific Required for Install patches.

Run the UPGPT848IBUG Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPT848IBUG
```


Saving Application Messaging Objects

The PTUPGIBCLONE project was created by the UPGPT848IBUG Application Engine program and contains objects that were successfully converted. Copy this project to a directory of your choice where it will not be overwritten. The objects are copied to file as a precautionary measure since you will delete them from the database in a subsequent step.

To save Application Messaging Objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. From the Application Designer, select File, Open.
3. Select Project, enter *PTUPGIBCLONE* in the name dialog box, and click OK.
4. Select Tools, Copy Project, To File.
5. In the resulting dialog box, change the export directory to one of your choice, and click Copy.

   When the progress dialog box disappears, the project has been copied to the specified location.

Exporting Node Transactions

Open Data Mover using a valid PeopleSoft Operator ID and run the script *PS_HOME*\scripts\ptupg_trx_export.dms to save the old pre-conversion node transaction data.

Deleting Application Messaging Objects

Delete the obsolete pre-conversion object definitions from the database by first copying the PTUPGIBDELETE project to file, and then copying the same project from file. This project was created by the UPGPT848IBUG Application Engine program and contains the same objects as PTUPGIBCLONE.

To delete Application Messaging Objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. From the Application Designer, select File, Open.
3. Select Project, enter *PTUPGIBDELETE* in the name dialog box, and click OK.
4. Select Tools, Copy Project, To File.
5. In the resulting dialog box, change the export directory to the same one you used for PTUPGIBCLONE, and click Copy.

   When the progress dialog box disappears, the project has been copied to the specified location.
6. Select Tools, Copy Project, From File.
7. In the resulting dialog box, change the import directory to the previously specified directory, select PTUPGIBDELETE from the list of projects, and click Select.

   Note. Because the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

   ---

8. Select all object types and click the Copy button.

   When the progress dialog box disappears, the project has been copied. The actions in the project are set to Delete, so this will delete the obsolete pre-conversion object definitions from the database.

Deleting Node Transactions

The script ptupg_trx.dms is generated by the UPGPT848IBUG Application Engine program. This script can be found in the location specified in the OUTPUT variable set in Configuration Manager.

To view the OUTPUT variable:

1. Open Configuration Manager.
2. Select the Profile tab.
3. Click Edit to open the Default profile.
4. Select the Process Scheduler tab.
5. Examine the Output Directory value.

Open Data Mover using a valid PeopleSoft Operator ID and run this script to remove obsolete node transaction data associated with the obsolete objects in the PTUPGIBDELETE project.

Task 7-11-12: Running Additional PeopleTools Conversions

The Application Engine program UPGPTSERVOPR converts WSDL and Schema data.

Run the UPGPTSERVOPR Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <oprid> -CP <pswd> -⇒
R INSTALL -AI UPGPTSERVOPR
```

Task 7-12: Running the DB2 RUNSTATS Utility

Do not run the DB2 RUNSTATS utility against the xxWORK tablespaces. The tables in these tablespaces are designated as temporary tables or tables against which %UpdateStats is being performed. Running RUNSTATS against these tables at this time could prove detrimental to performance.

Note. The PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) isolates temporary tables to individual tablespaces named as follows: TMP00001, TMP00002 and so on. Do not run RUNSTATS against any of the TMP*nnnnn* tablespaces at this time because this could prove detrimental to performance. The TMP*nnnnn* tablespaces should also be excluded from routine RUNSTATS and other database maintenance jobs. See the appendix “Using the PeopleSoft Tablespace DDL Automation Assistance Tool” for more details.

Task 7-13: Creating PeopleSoft Views

This section discusses:

- Understanding PeopleSoft Views
- Creating Views in Data Mover
- Creating Views in Application Designer

Understanding PeopleSoft Views

If you had to carry out the task "Updating Database to Latest PeopleTools Release" you have already created your views, in which case you can skip this task.

When creating the PeopleSoft Views, you can use Data Mover or Application Designer to create the objects directly, or you may use Application Designer to generate a DDL script of SQL statements, which can then be run using another utility such as SPUFI or DSNTEP2 and/or a User ID other than the Access ID.

Task 7-13-1: Creating Views in Data Mover

To create views in Data Mover:

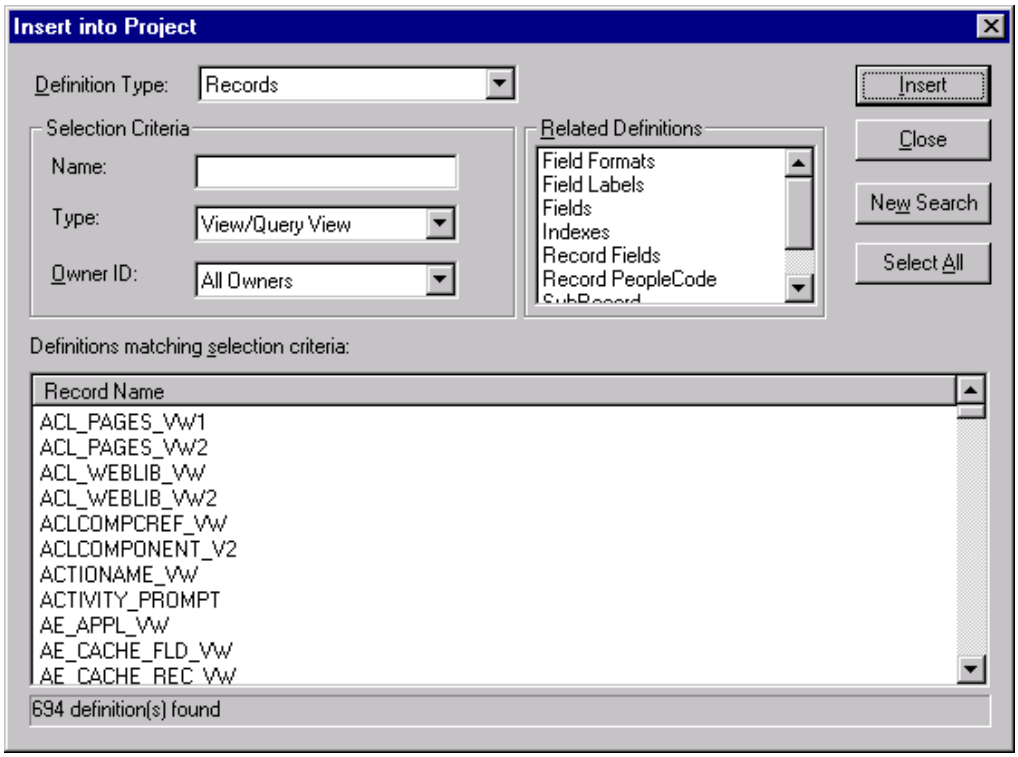
1. Start Data Mover in User mode using a valid PeopleSoft operator ID, for example, PS or VP1.
2. Select File, Open from the Data Mover menu and navigate to *PS_HOME*\scripts.
3. Select the script CREATEVW.dms.
4. Select File, Run to execute the script.
5. Exit Data Mover.

Task 7-13-2: Creating Views in Application Designer

To create views in Application Designer:

1. Start Application Designer (Start, Programs, PeopleTools 8.4, Application Designer).
2. Create a new project. Choose File, New, and then select Project from the New dialog.
3. Insert all PeopleTools view records into the project:
   a. Choose Insert, Definitions into Project. The Insert into Project dialog box appears.
   b. Select a Definition Type of *Records*.
   c. In the Selection Criteria control group, choose a Type of *View/Query View*; and then press ENTER to select the records.

      This example shows the Insert into Project dialog box with a list of results in the Record Name area.



Insert into Project dialog box

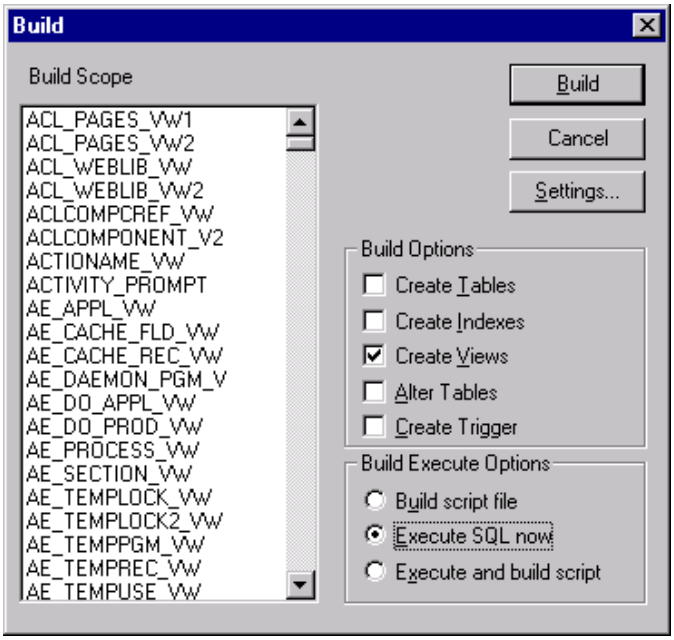
d. Click Select All, and then click Insert to insert the View/Query View records into the project.

e. Click Close to close the Insert into Project dialog box.

4. Build the project.

   a. Choose Build, Project. The Build dialog box appears.

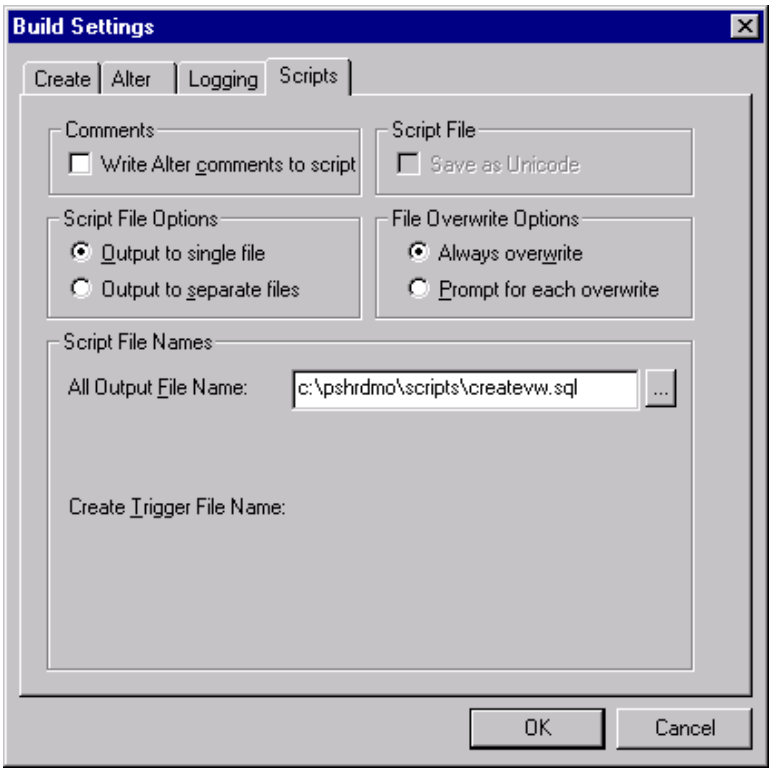
   b. In the Build Options group, select the Create Views check box. In the Build Execute Options group, select the Execute SQL now radio button to create the views directly, or the Build script file radio button to generate a DDL script of CREATE VIEW statements.



Selecting Create Views and Execute SQL now in the Build dialog box

c. If you select Build script file, click Settings, go to the Scripts tab, and enter the output directory and filename where you want the DDL statement script written in the area All Output File Name.

In this example, the directory and filename are c:\pshrdmo\scripts\createvw.sql.



Build Settings dialog box: Scripts tab

d. Click OK to return to the Build dialog box.

e. Click Build to build the views in the project.

Depending on the Build Execute Option you selected, Application Designer will either directly build the views on the database or generate a script file of CREATE VIEW DDL statements. If you have opted to generate the script file, execute the DDL statements either through SPUFI or DSNTEP2. Because of the time it may take the script to complete, we recommend submitting this script in batch mode using DSNTEP2. You may also need to prefix the script with the SQL command `SET CURRENT SQLID = <ownerid>`.

Note. On DB2 z/OS, when a object is dropped, all the dependent objects are automatically dropped. As a result some of the drop view statements could fail—and generate errors—if they were dependent on the view earlier dropped in the script. Please ignore these errors and restart the remaining part of the script.

Task 7-14: Building Temporary Tables

This section discusses:

- Understanding Temporary Tables
- Running SQR SETSPACE.SQR
- Correcting Invalid Database/Tablespace Combinations
- Setting the Number of Temporary Tables
- Using the Volatile Table Attribute
- Building the Temporary Tables and Their Indexes

Understanding Temporary Tables

In this task you use Application Designer to create temporary tables. PeopleSoft software has a temporary table structure where the number of instances for each base temporary table is controlled internally to PeopleSoft PeopleTools. The definition of each base temporary table is stored in the PeopleSoft PeopleTools table PSRECDEFN. The temporary table instances themselves are not defined. The table PSRECTBLSPC contains the database and tablespace values for each record defined in PSRECDEFN. The DDL generated by Application Designer to create the temporary tables uses the database and tablespace information from the base temporary table definition in PSRECTBLSPC. The delivered database and tablespace values are in synch with the xxDDL script that you ran earlier to create the databases and tablespaces. If you changed the database or tablespace name values in this script for tablespaces originally named xxWORK, you need to either update the PSRECTBLSPC table or revise the DDL script to be generated to create the temporary tables.

Oracle recommends that you run SQR SETSPACE.SQR against your database and use the output from the SQR as a guide in making the necessary updates or revisions. How and where to make the adjustments is discussed in the later section "Correcting Invalid Database/Tablespace Combinations."

Note. If you used the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to optimize the installation DDL, run the SETSPACE.SQR to update table PSRECTBLSPC with the database and tablespace values created by PSTAAT.

Task 7-14-1: Running SQR SETSPACE.SQR

In this procedure, you run SQR SETSPACE.SQR to update table PSRECTBLSPC with the database and tablespace values from the DB2 system catalog. Application Designer uses the database and tablespace values stored in PSRECTBLSPC to generate DDL statements to create the tables.

SETSPACE.SQR serves multiple purposes:

- It updates PSRECTBLSPC with the database/tablespace values from the DB2 system catalog table SYSIBM.SYSTABLES for the tables defined in the DB2 System Catalog.
- It reports tables in PSRECTBLSPC that are updated with a new database or tablespace name.
- It reports tables that are defined in PSRECTBLSPC, but not defined in the DB2 system catalogs, and whether the database/tablespace combination defined for the record is valid or invalid (not defined in the DB2 system catalog table SYSIBM.SYSTABLESPACE).
- It synchs up the database/tablespace combinations used in PSRECTBLSPC with the PeopleTools "master" tablespace table PSTBLSPCCAT by inserting the valid combinations in PSTBLSPCCAT if they have not already been defined.
- It reports those database/tablespace values added to the PSTBLSPCCAT table.
- It summarizes and reports database/tablespace combinations defined in PSTBLSPCCAT that are not valid. The reports are a valuable tool in determining how and where to make revisions so the temporary tables are created in the correct location, and without error.

To run SQR SETSPACE.SQR:

Submit the Job PSHLQ.PPvvv.JCLLIB(SETSPACE) to execute the SQR on the mainframe.

The SDSF logs will display the results of running the SQR and information related to the success of executing this SQR.

An output file will be written to PSHLQ.PPvvv.SQRLIST(SETSPACE) detailing the records processed and actions taken.

Note. The SQR can be run multiple times without any negative impact, but the output file will be overwritten with each execution. You may want to rename the member PSHLQ.Ppyyy.SQRLIST(SETSPACE) to another name before each resubmission of the SQR.

Task 7-14-2: Correcting Invalid Database/Tablespace Combinations

Review the output in PSHLQ.PPvvv.SQRLIST(SETSPACE). Note any messages with "Table Undefined — DB/TS Invalid," but most importantly, note any Warning messages in the second Phase of the output report. These warning messages summarize the database/tablespace name combinations defined in PSRECTBLSPC that have not been defined in the DB2 system catalog tables.

There are five options for making the necessary revisions. Of these options, Option 1 is the recommended one. Editing can be done globally, no table data will be impacted as it would in other options, you are guaranteed that the temporary table will be built in the database and tablespace that you intend and you may have already found it necessary to edit the script file of DDL statements to create the Temporary table for other reasons.

- *Option 1*: Proceed through the Installation process and build a script file of the DDL statements to create the temporary tables. After the script has been generated, but before executing it, globally edit the database/tablespace name combinations using the second Phase of the output report as a guide to the "before" values, changing them to your preferred site specific values. (Recommended option)
- *Option 2*: Update the PSRECTBLSPC table directly via the database interface of choice before building the script file of DDL statements to create the temporary tables. Use the second Phase of the output report as a guide. The SQL to correct each invalid database/tablespace combination would be scripted as follows:

```
UPDATE PSRECTBLSPC  SET DBNAME = '<new dbname>',
```



```
                        DDLSPACENAME = '<new tablespacename>'
WHERE DBNAME = '<old dbname>'
AND DDLSPACENAME = '<old tablespacename>'
AND  DBTYPE = (SELECT MAX(A.DBTYPE) FROM PSRECTBLSPC A
               WHERE RECNAME = A.RECNAME
               AND A.DBTYPE IN (' ','1'))
```

- *Option 3*: Run SQR SETDBNAM to update the database value in PSRECTBLSPC with a "best guess" value based on the tablespace value defined in PSRECTBLSPC. The accuracy of this SQR is based on the following caveats:
  - The ID or Current SqlID that was used to create the tablespaces must be the same value as the owner ID of the tables comprising the logical PeopleSoft database. In other words, the CREATOR field value in SYSIBM.SYSTABLESPACE must be the same value as the CREATOR field in SYSIBM.SYSTABLES.
  - The given tablespace name and CREATOR value in SYSIBM.SYSTABLESPACE must represent a unique relationship. For a given CREATOR, if you have defined a given tablespace name in more than one database, the SQR will use the database value associated with the tablespace that contains the fewest number of tables.

    If either of these requirements is not met, either a database value will not be found and PSRECTBLSPC will not be updated, or PSRECTBLSPC could be updated with a database value different from that intended.

    To run the SQR SETDBNAM, follow the same procedure as running SQR SETSPACE, using the JCL Job PSHLQ.PPvvv.JCLLIB(SETDBNAM) instead.
- *Option 4*: Log into the database via Application Designer, and update the record definitions with valid database/tablespace combinations, before building the script of DDL statements to create the temporary tables. Use the first Phase of the output report as a guide. (This could be a tedious and time-consuming process and is not recommended over the previously described options.)
- *Option 5*: Create the database/tablespace combinations in DB2 so they are no longer invalid, before executing the script file of DDL statements to create the Temporary tables. Use the second Phase of the output report as a guide to the databases and tablespaces that need to be created. (This is not recommended simply because it is likely to contradict the naming standards established for your DB2 installation.)

Task 7-14-3: Setting the Number of Temporary Tables

Normally, you will leave the number of temporary tables set to the default defined in the database. You may want to change this setting for optimal performance, depending on various aspects of your implementation, including account transaction volumes, benchmark numbers for the current hardware and database platform, and your service-level requirements.

Oracle delivers a minimum of three temporary table instances in most cases. You cannot adjust the number of temporary tables unless you have installed the PeopleSoft Pure Internet Architecture. (See “Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode” or “Setting Up the PeopleSoft Pure Internet Architecture in Console Mode.”) You may skip this step entirely, and come back to it after PeopleSoft Pure Internet Architecture has been installed and you have a better idea of how many instances of the temporary tables might best fit your processing requirements. Another option is to update the PeopleTools table that controls the number of temporary table instances directly. Using the Database SQL interface of choice, issue the following SQL:

```
UPDATE PSOPTIONS SET TEMPTBLINSTANCES =  <#>, TEMPINSTANCEONLINE = <#> WHERE⇒
 TEMPINSTANCEBATCH = 0
```


The number of instances (#) for either field should not be less than 3 or greater than 9.

For non-EPM applications, it is strongly recommended that the TEMPTBLINSTANCES and TEMPINSTANCEONLINE values be the same. For EPM applications we strongly recommend that you take the delivered defaults.

Note. Again, this step can be performed at installation and/or at any time during the life of your database. The only caveat is that when any of the parameters are changed that would impact the number of temporary table instances, all temporary tables should be regenerated.

Task 7-14-4: Using the Volatile Table Attribute

Beginning with PeopleSoft PeopleTools 8.48 and later, all temporary tables are created using the volatile keyword.

Sample DB2 for z/OS volatile temporary DDL follows:

```
CREATE TABLE Q848902.PS_AEEXT_TAO (PROCESS_INSTANCE DECIMAL(10) NOT
 NULL,
   AE_INT_1 SMALLINT NOT NULL,
   AE_APPLID CHAR(12) NOT NULL,
   AE_SECTION CHAR(8) NOT NULL,
   AE_STEP CHAR(8) NOT NULL) VOLATILE IN Q848902.PTAPPE;
```

The volatile attribute specifies that the DB2 optimizer should favor index access on this table whenever possible for SQL operations regardless of the presence of statistics.

For more details on the volatile table attribute, refer to the DB2 for z/OS SQL Reference and the DB2 for z/OS Administration Guide.

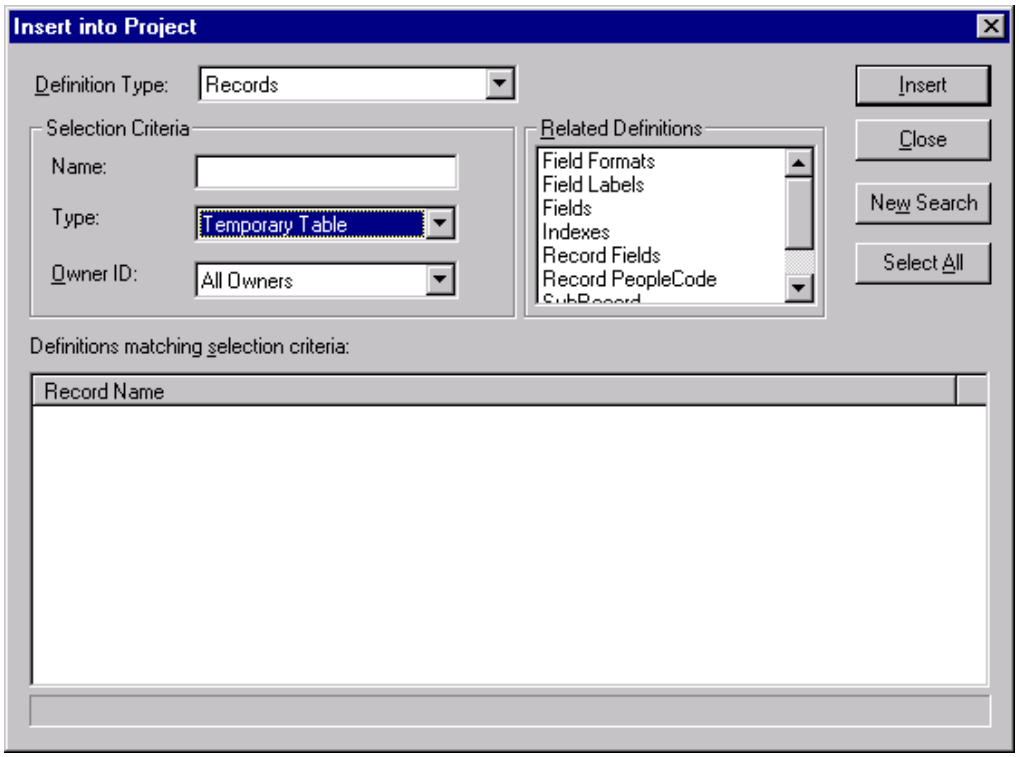
Task 7-14-5: Building the Temporary Tables and Their Indexes

Use the following procedure to build temporary tables in the database.

Note. You may use the temporary table DDL script created at the end of this task as input to the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to isolate each of the temporary tables to its own tablespace.

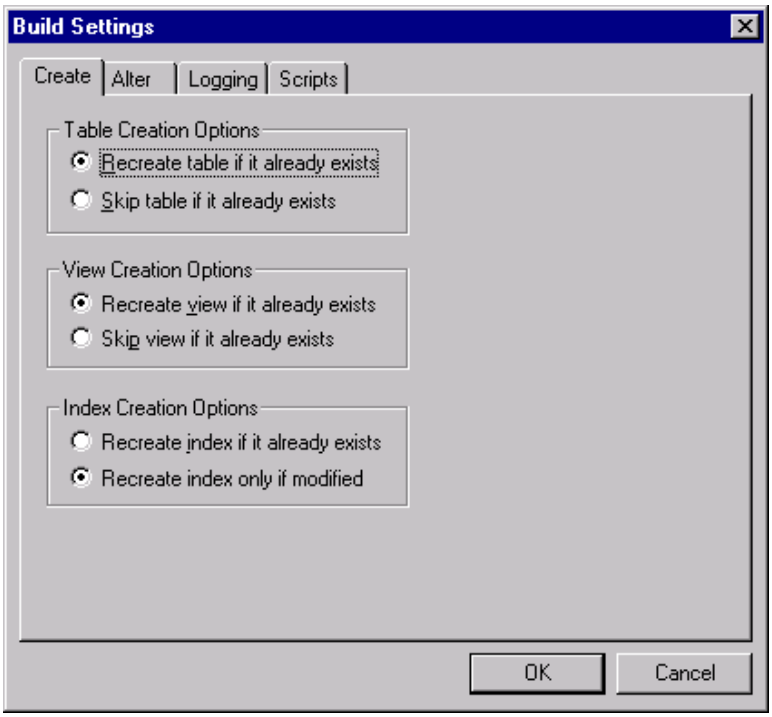
To build temporary tables:

1. Open Application Designer.
2. Choose File, New. In the New dialog, select Project, and then click OK.
3. Choose Insert, Definitions into Project.
4. Set Definition Type to *Records* and Type to *Temporary Table*.



Insert into Project dialog box

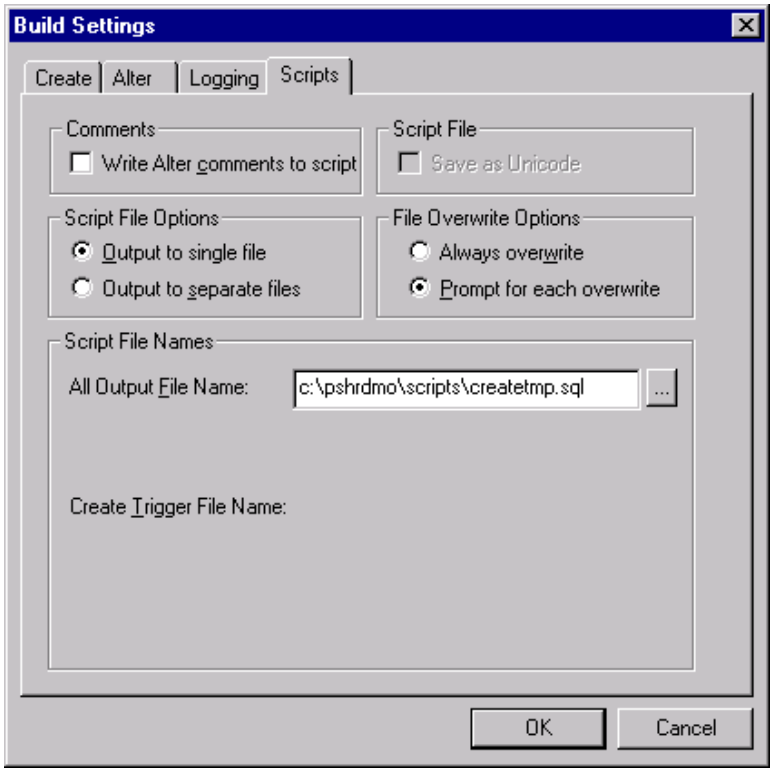
5. Press ENTER, or click Insert and then click the Select All button. This selects all of the PeopleTools Records for temporary tables.
6. Click Insert to insert all of the temporary tables into the new project.
7. Click Close to close the Insert into Project dialog.
8. Before building the project, you should save it. Choose File, Save Project As and enter a project name such as *TEMPTBL*.
9. Choose Build, Project. The Build dialog appears.
10. In the Build Options group, select the Create Tables check box. The Create Index check box should be selected by default.
11. Select Build script file to direct the DDL to a file.
12. Click the Settings button. The Build Settings dialog appears.
13. On the Create tab, select Recreate table if it already exists (if it is not already selected) under Table Creation Options.



Selecting the Recreate table if it already exists in the Build Settings dialog box

14. Select the Scripts tab, and select Output to Single File under Script File Options.
15. Under Script File Names, specify the path and filename for the output file to contain the DDL to create the Temporary tables and their indexes (for example, *PS_HOME*\scripts\TEMPDDL.SQL).

    The path and filename in this example is c:\pshrdmo\scripts\createtmp.sql.



Specifying the path and filename in the All Output File Name section

16. Click OK to accept the build settings.
17. Click Build to build temp tables. You may receive a warning message, which you can disregard because the temp tables do not contain any existing data.
18. After the script generation process has finished, click Close in the Build Progress dialog box to return to Application Designer.
19. Transfer the file of DDL statements just created to the mainframe server PDS HLQ.PSvvv.DDLLIB (*filename*).
20. If you have corrected the invalid database/tablespace combinations following Option 1 described earlier, and not updated the PSRECTBLSPC table with the database and tablespace names used in your installation, you need to edit the file, changing both the database and tablespace names from the values as would be noted in the second Phase of the output report from SQR SETSPACE, to your site-specific values.

    Note. If you intend to use the %UpdateStats functionality, you should use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to isolate each of the temporary tables to its own tablespace to avoid contention in any concurrently running processes. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool."

21. When the file has been edited with the appropriate database and tablespace name values, save your changes and submit the DDL statements either through SPUFI or DSNTEP2. It is preferable to submit this in batch mode using DSNTEP2, because the task could take over an hour to complete.

Task 7-15: Creating PeopleSoft Triggers

This section discusses:

- Understanding PeopleSoft Triggers
- Creating Triggers in Data Mover
- Creating Triggers in Application Designer

Understanding PeopleSoft Triggers

When creating the PeopleSoft Triggers, you can use Data Mover or Application Designer to create the objects directly, or you can use Application Designer to generate a DDL script of SQL statements, which can then be run using another utility such as SPUFI or DSNTEP2, and with a UserID with a greater level of database authority.

Task 7-15-1: Creating Triggers in Data Mover

To create triggers in Data Mover:

1. Start Data Mover in User mode, using a valid PeopleSoft operator ID, for example, PS or VP1.
2. Choose File, Open from the Data Mover menu and navigate to *PS_HOME*\scripts.
3. Select the script CREATETRGR.dms.
4. Choose File, Run to execute the script.
5. Exit Data Mover.

Task 7-15-2: Creating Triggers in Application Designer

To create triggers in Application Designer:

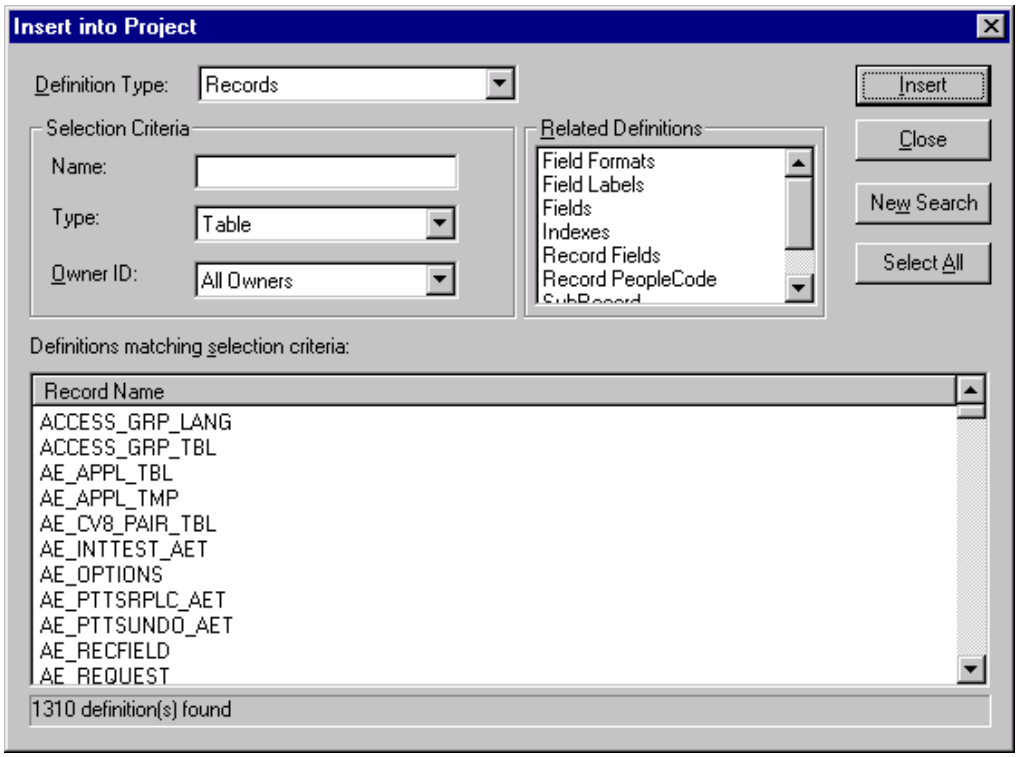
1. Start Application Designer (*Start, Programs, PeopleTools 8.52, Application Designer*).
2. Create a new project. Choose File, New, and then select Project from the New dialog.
3. Insert all PeopleTools Table records into the project.

   To insert the Table records:

   a. Choose Insert, Definitions into Project. The Insert into Project dialog appears.

   b. Select a Definition Type of *Records*.

   c. In the Selection Criteria control group, choose a Type of *Table*; and then press ENTER to select the records.



Insert into Project dialog box

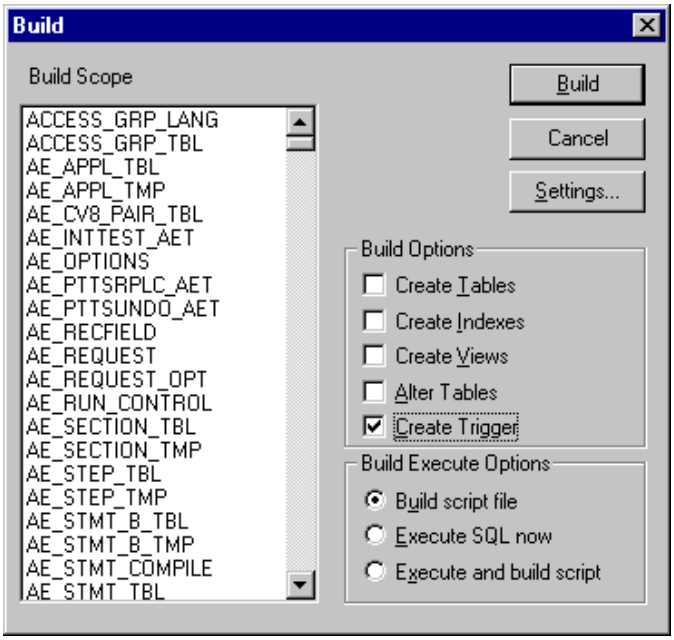
d. Click Select All, and then click Insert to insert the Table records into the project.

e. Click Close to close the Insert into Project dialog.

4. Build the project.

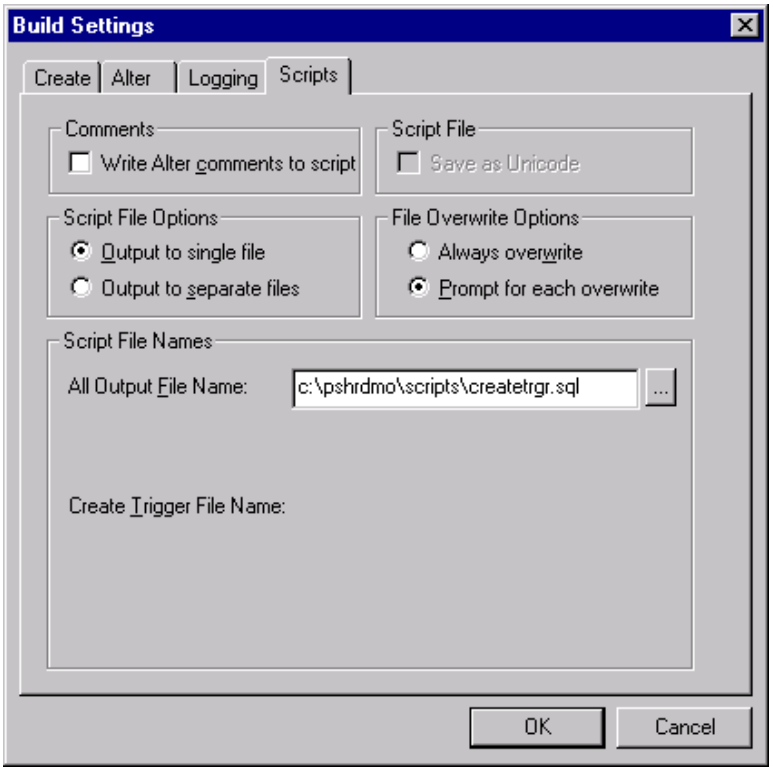
a. Choose Build, Project. The Build dialog displays.

b. In the Build Options group, select the Create Trigger check box. In the Build Execute Options group, select either the Execute SQL now radio button to create the triggers directly, or the Build script file radio button to generate a DDL script of CREATE TRIGGER statements.



Build dialog box

c. If you have selected the Build script file radio button, click the Settings button, go to the Scripts tab, and enter the output directory and filename where you want the DDL statement script written.



Build Settings dialog box

d. Click OK to return to the Build dialog.

5. Click Build to build the triggers associated with the tables in the project.

Depending on the Build Execute Option selected, Application Designer will either directly build the triggers on the database or generate a script file of CREATE TRIGGER DDL statements. If you have opted to generate the script file, execute the DDL statements either through SPUFI or DSNTEP2. Because of the time it may take the script to complete, we recommend submitting this script in batch mode using DSNTEP2. You may also need to prefix the script with the SQL command `SET CURRENT SQLID = <ownerid>`.

Task 7-16: Running Additional Data Mover Scripts

To import additional data for your specific PeopleSoft database, or to make other required changes, you may need to run additional Data Mover scripts. These script files have the extension .dms and are sometimes referred to as "DMS scripts." They are located in the *PS_HOME*\scripts directory of your file server, and need to be run from the file server by means of Data Mover.

For the details on which additional application-specific Data Mover scripts to run, consult your application-specific installation instructions.

If you have installed a language other than English, you may need additional instructions on language-specific Data Mover scripts.

See Installing a Multilingual PeopleTools System Database.

Task 7-17: Installing a Multilingual PeopleTools System Database

This section discusses:

- Understanding the Multilingual Database Project
- Applying the Multilingual Database Project
- Populating the Translated System Data

Understanding the Multilingual Database Project

The information in this section applies if you are installing a multilingual PeopleSoft PeopleTools System database. If not, skip this task and go on to the task "Running VERSION Application Engine Program." If you are installing an application database (for example, HRMS, FSCM, EPM, and so on), you do not need to run this task.

If you are adding a new (Oracle-delivered) language to the PTSYS database, you must execute this step for that language. For example, if you want to add Polish to your current multilingual database, you should install Polish from PPLTLSML so you will get all objects. If you only "upgrade" your database to have Polish using PPLTLS84CURML, you will only get the objects that changed between 8.40 and the current release.

If you are installing a PeopleSoft PeopleTools System database and you want it to be multilingual, you need to perform the steps in the following section after the database has been loaded with Data Mover.

See Applying the Multilingual Database Project.

Note. When you log onto the multilingual database, be sure to select the base language of the database.

Task 7-17-1: Applying the Multilingual Database Project

This procedure describes how to apply the multilingual database project that contains translations of the PeopleSoft PeopleTools objects.

To apply the multilingual database project:

1. Launch Application Designer.
2. Select Tools, Copy Project, From File.
3. In the resulting dialog box, change the import directory to *PS_HOME*\projects.
4. Select *PPLTLSML* from the list of projects and click the Open button.
5. In the Upgrade Copy dialog box, make sure that all object types are selected.
6. Click the Options button, select the Copy Options tab, and ensure that only the non-English languages you have installed are selected.

   Please note that English and Common should *not be selected.*
7. Select the languages that you are currently installing from the Copy Options dialog box.
8. Click the Copy button.

   (The Reset Done Flags check box will be selected; accept this default.)

Task 7-17-2: Populating the Translated System Data

To populate the translated system data:

Note. You need to run the following script in User mode.

1. Launch Data Mover.
2. Open the pt852tls*xxx*.dms script using File, Open.
3. Select File, Run

   Note. The portion of the script name *xxx* is equivalent to the language code (that is, FRA, CFR, GER, JPN, and so on) of the languages you have installed. There will be a Data Mover script for each language.

Task 7-18: Running SQR Reports

This section discusses:

- Binding the dbcalls.bnd
- Running SQRs on the Client Workstation
- Creating a Shortcut to Run SQRs

Note. The following instructions describe how to run SQR reports from the client workstation. On the Windows client, you may prefer to create a shortcut to allow you to run the reports repeatedly. You can use these instructions to run SQRs required in the upcoming task "Checking the Database." You can also choose to run SQR reports from the command line in console mode.

Task 7-18-1: Binding the dbcalls.bnd

You need to bind the dbcalls.bnd before running SQR reports.

To bind dbcalls.bnd:

1. Using an ID with mainframe logon and BINDADD privileges, log on to DB2 Connect Command Line Processor:

   ```
   db2 => CONNECT TO <database name> USER <mainframe User Id>
   ```

   Note. Enter your current password for "mainframe User Id": <mainframe User Id password>.

2. The Windows SQR bind executable is located in the File or Report Server directory (for example, *PS_HOME*\bin\sqr\db2\BINW\dbcalls.bnd).
   - Issue the following bind command for an EBCDIC installation:

     ```
     db2 => bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd blocking all grant public⇒
      sqlerror continue
     ```

   - For a Unicode installation, you must bind the windows SQR executable with encoding unicode as follows:

     ```
     db2 ->  bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd encoding unicode blocking⇒
      all grant public sqlerror continue
     ```

Note. The executable program PSSQR.EXE is a wrapper program used by PeopleSoft Process Scheduler to run SQR reports. It is not designed to run manually outside of Process Scheduler. That is, the PeopleSoft system does not support running PSSQR from the command line.

Task 7-18-2: Running SQRs on the Client Workstation

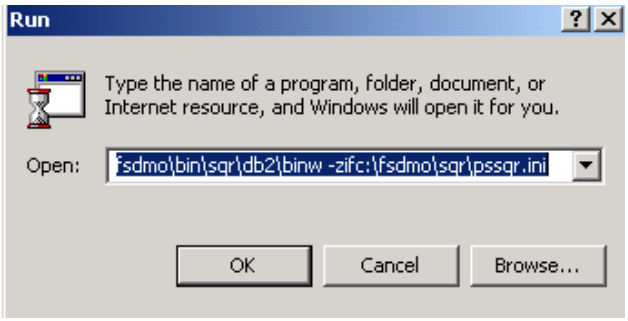
To run an SQR on the client workstation:

1. Select Start, Run, click Browse, and navigate to *PS_HOME*\bin\sqr\DB2\binw.

   Select sqrw.exe and click Open.

2. Add any needed flags at the end of the command line.

   Refer to the table that follows. For those flags that require attributes, append the attributes to the flags with no intervening spaces (for example, –fd:\psbase\psenv\fsdmo\).



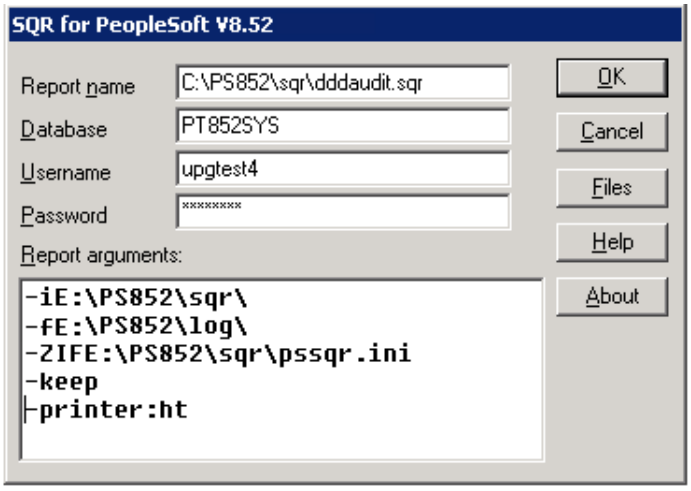
Running an SQR report on the client

The following table summarizes the SQR report arguments used by PeopleSoft software. (For a full listing of report arguments, press the Help button to view the SQR help topic for this dialog box.)

Flag	Description
-I	Specifies the directories that SQR will search for the #INCLUDE files. (A trailing slash is required.)
-f	Specifies the directory where the report output will be sent. If you use the –keep flag, specify a directory with an ending slash. If you use the –printer flag, specify a full pathname with a filename for the HTML file.
-ZIF	Sets the full path and name of the SQR initialization file. The -ZIF flag should point to your *PS_HOME*\sqr\pssqr.ini file.
-keep	Keeps the .SPF file after the program runs. This enables you to view the report with the SQR viewer.
-printer:ht	Generates the output file in HTML format. Specify the filename, with path location, with the –f flag.

3. Click OK.

   The SQR for PeopleSoft v8.52 dialog box appears, with the fields mentioned in the next step:



SQR for PeopleSoft dialog box

4. Enter the following values:

- Enter the report name.

  You must specify the full path.
- Enter the access ID in the Username field.
- Enter the access password in the Password field.
- Enter the database name.

5. Click OK to run the SQR report.

Task 7-18-3: Creating a Shortcut to Run SQRs

If you think you may need to run the SQR reports more than once, you may want to create a shortcut on the Windows client workstation. To save the report arguments:

1. Open Windows Explorer on the machine on which you want to run SQR.
2. Navigate to *PS_HOME*\bin\sqr\DB2\binw.
3. Right-click sqrw.exe and click Create Shortcut.
4. Right-click the shortcut that you just created and select Properties.
5. On the Shortcut tab, add the same sqr flags that you used in the previous task after sqrw.exe in the Target entry box.
6. Click OK.
7. To run the report, double-click the shortcut and specify the following information in the dialog box:
   - Report Name: Enter the full path and the name.
   - Database name
   - Username: Enter the access ID.
   - Password: Enter the access password.
   - Report arguments: Make any necessary modifications to the saved arguments.
8. Click OK.

Task 7-19: Updating PeopleSoft System Tables

This section discusses:

- Understanding PeopleSoft System Tables
- Updating PeopleSoft System Tables

Understanding PeopleSoft System Tables

In this task, you run SQR scripts that update PeopleTools tables with information from the DB2 system catalog tables.

- *SETSPACE.SQR* was run in an earlier task, but should be re-run at this point. It updates PSRECTBLSPC with the database and tablespace information captured from the DB2 system catalog table SYSIBM.SYSTABLES, inserts valid database and tablespace combinations defined in PSRECTBLSPC

that have not yet been defined in PSTBLSPCCAT, and provides an audit report of actions taken and invalid database and tablespace combinations defined in PSRECTBLSPC but not defined in the DB2 system catalog table SYSIBM.SYSTABLESPACE. You can run this SQR multiple times without negative impact.

- *SETTMPIN.SQR* inserts rows into PSRECTBLSPC to store the database and tablespace location for each temporary table instance defined in the DB2 system catalog table SYSIBM.SYSTABLES. You need to run this SQR after each time you create or refresh the temporary tables on your database. You can run this SQR multiple times without negative impact.

Note. This SQR will *not* facilitate regeneration of the temporary tables by ensuring that each instance is rebuilt in the database/tablespace location to which it was originally assigned. The purpose of the SQR is to capture the location of each temporary table instance after it has been created in the database, and sync PSRECTBLSPC with the DB2 system catalog.

Task 7-19-1: Updating PeopleSoft System Tables

To update PeopleSoft system tables initiate SQRW.exe as you did in the task Running SQR Reports and run the SETSPACE.SQR and SETTMPIN.SQR (if applicable) programs.

Note. Oracle also provides SETINDEX.SQR and SETBUFF.SQR, which will help the PeopleSoft DBA keep the PeopleSoft system tables in sync with the DB2 catalogs.

Task 7-20: Binding DB2 Plans

If you are not planning to run COBOL on the mainframe, this step is not necessary.

You need to bind the following DB2 Plans used by PTPSQLRT—the first one is for the Native Attach Facility for UNIX System Services, and the second one is for the Call Attach Facility. On the z/OS server, submit the following two JCL jobs:

```
HLQ.PSVVV.JCLLIB(BINDAADD)
HLQ.PSVVV.JCLLIB(BINDEADD)
```

The only acceptable message reads:

```
BIND SUCCESSFUL
```

If you receive any other message, it means you have encountered an error. Common bind errors include:

- Program PTPSQLRT failed to precompile (jobs PSCOBDA and/or PSCOBDE) and the DBRM was not generated. If this is the case, run PSCOBDA or PSCOBDE again, and carefully examine the return codes.
- If you get a "Plan Already Exists" error, do a bind/replace using BINDAREP and BINDEREP.

Task 7-21: Running VERSION Application Engine Program

Run the VERSION Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname>  -CT DB2ODBC -CO <userid> -CP⇒
 <userpswd> -R INSTALL  -AI VERSION
```


Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <userid> respectively. However, be aware that <userpswd> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <userpswd> that is the password you want to be associated with the <userid>.

See "Setting Up the Install Workstation."

Task 7-22: Changing the Base Language

The information in chapter 1, “Preparing for Installation,” will help you determine whether you should change your base language, and lists the currently supported languages.

See "Preparing for Installation," Planning Multilingual Strategy.

This task applies only if your users will be operating PeopleSoft applications *primarily* in one particular language other than English. It gives a performance boost to the language you designate as the base language, but requires more administrative overhead than leaving English as the base language. The details are spelled out in the following PeopleBook:

See *PeopleTools 8.52: Global Technology PeopleBook.*

Task 7-23: Checking the Database

Run and examine the SQR reports to verify that your database is complete.

See Updating PeopleTools System Tables.

To verify that the database is complete, run the following SQR reports from the *PS_HOME*\sqr directory:

- dddaudit.sqr
- sysaudit.sqr
- sysaud01.sqr
- swpaudit.sqr, if you plan to swap your base language

For further information about these reports, consult PeopleBooks. This documentation includes specific information on how to interpret the reports and how to fix any errors found there.

It is good practice to run and read the audit reports, which include sysaudit, sysaud01, dddaudit, swpaudit, and alter audit, after making changes such as applying patches, bundles, and upgrades to the database, to make sure that the tables are internally and externally in synch. It is also a good idea to schedule regular maintenance, for example weekly, in which you run and review the reports.

See *PeopleTools 8.52: Data Management PeopleBook,* "Ensuring Data Integrity."

See *PeopleTools 8.52: Global Technology PeopleBook,* "Using Related Language Tables."

Note. If any records show up in the VIEWS-2 or TABLE-3 section of dddaudit and are contained within the PPLTLS84CURDEL project, you may safely drop these records using the SQL query tool for your platform.

See Also

PeopleTools 8.52: Data Management PeopleBook

PeopleTools 8.52: System and Server Administration PeopleBook

Task 7-24: Running Alter Audit

Use the ALTER AUDIT process to check whether the PeopleSoft PeopleTools tables are synchronized with the underlying SQL data tables in your database. This process compares the data structures of your database tables with the PeopleSoft PeopleTools tables to uncover inconsistencies. The ALTER AUDIT process then reports its findings. At this point of time in the install, we do not expect to see differences between the database structure and the PeopleSoft PeopleTools tables.

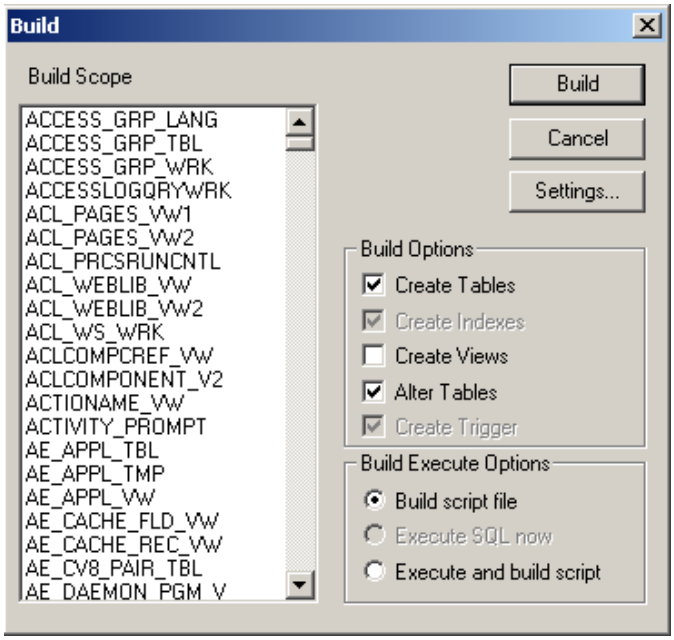
Note. If your application database was delivered on the PeopleSoft PeopleTools release you are installing, this task is optional.

Note. Triggers are always dropped and re-created during the alter process and will always show up in the generated Alter Audit script. You can ignore the generated script for triggers.

To alter PeopleSoft PeopleTools tables:

1. Launch Application Designer and sign on to the installed database with a valid PeopleSoft user ID.
2. Select File, New.
3. Select Project and click OK.
4. Select Insert, Definitions into Project.
5. Select *Records* from the Definition Type drop-down list box.
6. Select *Table* from the Type drop-down list box.
7. Click Insert, and then click Select All.
8. Click Insert, and then click Close.
9. Select Build, Project.

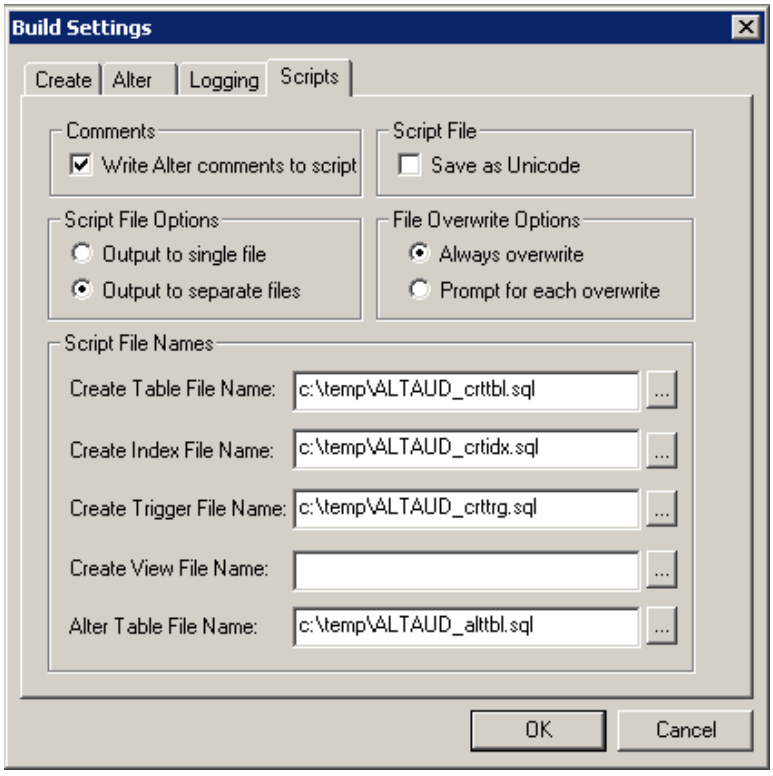
   The Build dialog box appears:



The Build dialog box

10. Select Create Tables and Alter Tables in the Build Options region (Create Indexes and Create Trigger will automatically be selected).
11. Select Build script file in the Build Execute Options region.
12. Click Settings.

    The Build Settings dialog box appears:

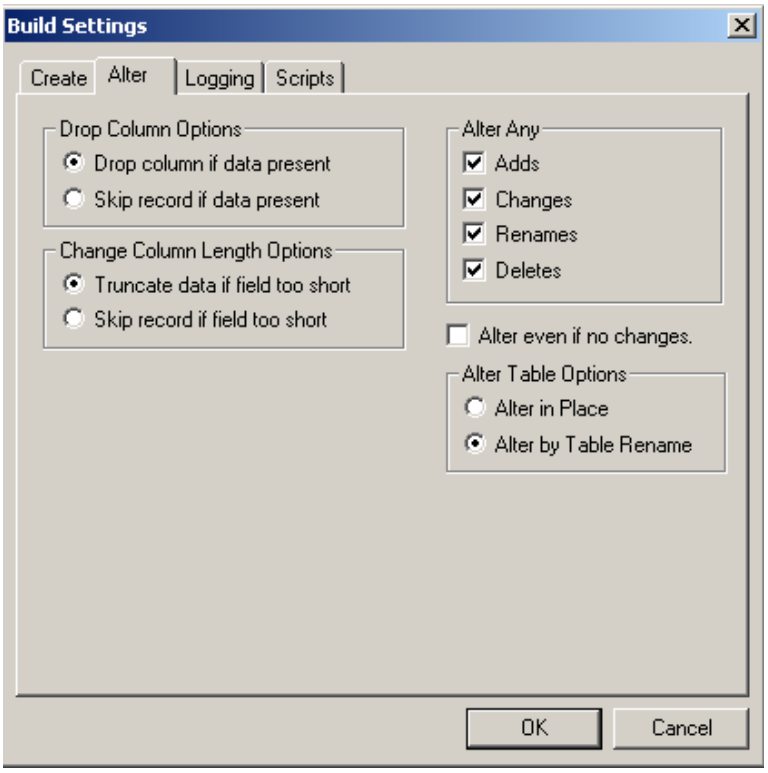


Build Settings dialog box: Scripts tab

13. Select the Scripts tab.
14. Select Write Alter comments to script.
15. Enter a unique output file name for each type.
16. Select the Alter tab and ensure that the Adds, Changes, Renames, and Deletes check boxes are selected in the Alter Any region.

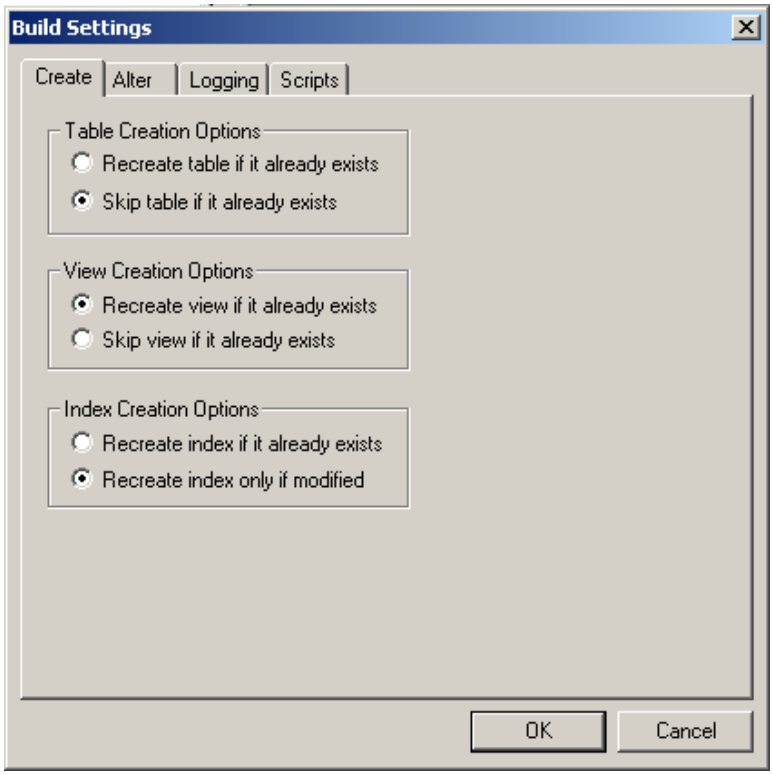
    Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.

    Make sure that Alter by Table Rename is selected in the Alter Table Options region.



Build Settings dialog box: Alter tab

17. Select the Create tab, and ensure that the options Skip table if it already exists, Recreate view if it already exists, and Recreate index only if modified are selected.



Build Setting dialog box: Create tab

18. Click OK.

    The Build dialog box reappears.

19. Click Build.
20. Click Close when the process is completed.
21. Edit the generated SQL script for the correct database name.
22. Edit the generated SQL script for the correct tablespace names and sizing parameters if you are not using delivered PeopleSoft tablespace names.
23. Run the generated SQL scripts in your platform-specific query tool to bring your database structure in sync with the PeopleTools tables.

Task 7-25: Disabling %UpdateStats

The %UpdateStats meta-SQL function allows an Application Engine program to update DB2 catalog statistics after it has populated temporary tables with transient data used for intermediate query result sets. This allows the DB2 optimizer to choose a better access path when these tables are joined to other tables. To optimally use %UpdateStats for DB2 z/OS, it is highly recommended that tables subject to this feature be placed in their own tablespace. %UpdateStats invokes the DB2 RUNSTATS utility through the IBM DSNUTILS stored procedure. Because RUNSTATS executes at the tablespace level, having multiple tables in a given tablespace can degrade the performance of an Application Engine program that invokes this utility through %UpdateStats. Consider using PSTAAT (see the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool") to optimize the table to tablespace mapping for Application Engine temporary tables. If you have not installed and authorized the DSNUTILS stored procedure for use in your environment, or, if you have not isolated Application Engine temporary tables to individual tablespaces, you may wish to consider disabling the %UpdateStats function by setting DBFLAGS to 1 in your Process Scheduler configuration file. See the previous section, Using %UpdateStats, or search PeopleBooks for more details on using DBFLAGS to disable %UpdateStats.

If you have not implemented the DSNUTILS stored procedure and/or followed the traditional installation path, you might consider disabling recognition of the %UpdateStats function by setting DBFLAGS to 1 in your Process Scheduler configuration file. See the previous section, "Using %UpdateStats," or search PeopleBooks for more details on using DBFLAGS to disable %UpdateStats.

See *PeopleTools 8.52: Data Management PeopleBook.*

CHAPTER 8A

Configuring the Application Server on Windows

This chapter discusses:

- Understanding the Application Server
- Prerequisites
- Preparing the Application Server File System for a PeopleTools-Only Upgrade
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain
- Configuring Asian Language Fonts

Understanding the Application Server

The information in this chapter is provided to help you configure your PeopleSoft application server.

Note. COBOL is not needed for PeopleSoft PeopleTools or for applications that contain no COBOL programs. Check the information on My Oracle Support, and your application-specific documentation, for the details on whether your application requires COBOL.

Oracle supports a Microsoft Windows application server to use with any of our supported databases for the PeopleSoft installation. For detailed information, consult the certification information on My Oracle Support. The application server support can be found on the certification pages under "Other Products".

Application servers are not supported on z/OS because Oracle Tuxedo cannot run on the mainframe. For this reason, you can only install an application server in a “physical” three-tier configuration—with the application server on a machine separate from the database server machine. You cannot run a “logical” three-tier configuration—with the application server on the same machine as the database server.

In PeopleSoft PeopleTools 8.51 and higher, the configuration and log files for application server domains reside in *PS_CFG_HOME*. If you do not set a PS_CFG_HOME environment variable before beginning the application server configuration, the system installs it in a default location based on the current user’s settings, as follows:

```
%USERPROFILE%\psft\pt\<peopletools_version>
```

See "Preparing for Installation," Defining Server Domain Configurations.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

Note. You can start application servers as a Windows service, which means that administrators no longer need to manually start each application server that runs on a Windows machine.

See Also

"Preparing for Installation," Understanding PeopleSoft Servers and Clients

"Setting Up Process Scheduler on Windows," Starting Process Scheduler as a Windows Service

PeopleTools 8.52: System and Server Administration PeopleBook, "Using PSADMIN Menus"

PeopleTools 8.52: Data Management PeopleBook

My Oracle Support, Certifications

"Setting Up the Install Workstation"

"Installing and Compiling COBOL on Windows"

Prerequisites

Before beginning this procedure, you should have completed the following tasks:

- Installed your application server.

  See "Using the PeopleSoft Installer," Understanding PeopleSoft Servers.
- Installed Tuxedo 10gR3 RP043

  See "Installing Additional Components."
- Granted authorization to a PeopleSoft user ID to start the application server.

  User ID: VP1 for Enterprise Performance Management and Financials/Supply Chain Management, and PS for HRMS, should be delivered with authorization to start the application server.
- Run the following SQL statements on your database server to review and if needed, update the PSCLASSDEFN table:

```
SELECT CLASSID, STARTAPPSERVER FROM PSCLASSDEFN
WHERE CLASSID IN (SELECT OPRCLASS FROM PSOPRCLS WHERE OPRID='<OPRID>')
UPDATE PSCLASSDEFN SET STARTAPPSERVER=1 WHERE CLASSID='<CLASSID>'
```

Note. Installers typically use VP1 or PS to test the application server, and the password for these users is stored in a fairly accessible text file. If these users are deleted or their passwords are changed, the application server will no longer be available. To avoid this problem, you can set up a new operator (called PSADMIN or PSASID, for instance) with privileges to start the application server. If you do this, you can use the new operator for your application servers and you won't need to change the password each time VP1 or PS is changed.

Task 8A-1: Preparing the Application Server File System for a PeopleTools-Only Upgrade

If you are installing into an existing PS_HOME or PS_CFG_HOME in preparation for a PeopleTools-only upgrade, review your system for files that you may need to remove or back up.

Task 8A-2: Setting Up COBOL for Remote Call

Remote Call is a PeopleCode feature that launches a COBOL program from an application server, PeopleCode program or a batch Application Engine PeopleCode program and waits for it to complete execution before continuing. The execution of a COBOL program via Remote Call is completely independent of the Process Scheduler. You need to set up a COBOL runtime environment and COBOL executables on the application server to support Remote Call.

See "Installing and Compiling COBOL on Windows."

If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

See *PeopleTools 8.52 Hardware and Software Requirements.*

Task 8A-3: Verifying Database Connectivity

Before continuing, it is critical to verify connectivity to the database that the application server domain will use. To verify connectivity, connect to the database server from the application server using the native SQL tool on the application server.

If you are running DB2 for z/OS, you can issue this command from the UNIX prompt:

```
db2 connect to <database name> user <z/OS ID> using <password>
```

If you are running DB2 for z/OS and are setting up your application server on a Windows machine, enter the preceding command at a DB2 Connect command window, or use DB2 Connect's Command Center or Client Configuration Assistant.

See Installing and Configuring DB2 Connect.

Task 8A-4: Creating, Configuring, and Starting an Initial Application Server Domain

This section discusses:

- Creating, Configuring, and Starting the Application Server Domain
- Testing the Three-Tier Connection
- Importing an Existing Application Server Domain Configuration

- Setting Up a Custom Application Server Domain Configuration
- Troubleshooting Common Errors

Task 8A-4-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. To run psadmin, go to the *PS_HOME*\appserv directory and enter the following command:

   ```
   psadmin
   ```

   Note. Make sure you change the directory from the *PS_HOME* on the file server to the *PS_HOME*, or high-level directory, on the application server.

2. When the menu appears, specify *1* for Application Server and press ENTER.
3. Specify *2* to Create a domain and press ENTER.
4. Specify the domain name. For example:

   ```
   Please enter name of domain to create :HR84
   ```

   Domain names are case sensitive and must be eight US-ASCII characters or less. The domain name is used to create a directory name under the *PS_CFG_HOME*\appserv directory.

   See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

5. Specify *4* for small if this is your initial domain installation, press ENTER.

   See *PeopleTools 8.52: System and Server Administration PeopleBook.*

6. After the system creates the domain, this prompt appears:

   ```
   Would you like to configure this domain now? (y/n) [y] :
   ```

   Enter *y*. The PeopleSoft Application Server Administration menu appears with a Quick-configure menu similar to this:

   ```
   ---------------------------------------------------------
   Quick-configure menu -- domain: HR84
   ---------------------------------------------------------
            Features                                Settings
           ==========                              ==========
     1) Pub/Sub Servers       : No        15) DBNAME         :[HR84]
     2) Quick Server          : No        16) DBTYPE         :[DB2ODBC]
     3) Query Servers         : No        17) UserId         :[QEDMO]
     4) Jolt                  : Yes       18) UserPswd       :[QEDMO]
     5) Jolt Relay            : No        19) DomainID       :[TESTSERV]
     6) WSL                   : No        20) AddToPATH      :[ ]
     7) PC Debugger           : No        21) ConnectID      :[people]
     8) Event Notification    : Yes       22) ConnectPswd    :[peop1e]
     9) MCF Servers           : No        23) ServerName     :[]
    10) Perf Collator         : No        24) WSL Port       :[7000]
   ```



```
11) Analytic Servers      : Yes       25) JSL Port       :[9000]
12) Domains Gateway       : No        26) JRAD Port      :[9100]

     Actions
    =========
13) Load config as shown
14) Custom configuration
 h) Help for this menu
 q) Return to previous menu

HINT: Enter 15 to edit DBNAME, then 13 to load

Enter selection (1-26, h, or q):
```

Note. If your installation includes more than one application server domain on a given machine, read the troubleshooting section for more information.

See Troubleshooting Common Errors.

7. If you need to modify any of the values for these settings, enter the number next to the parameter name, press ENTER, then type the new value, and press ENTER again.

   If you need to change any of the features, type the number next to the feature name and press ENTER.

8. Configure the WSL to boot by changing option 6 to Yes.

   Enter *6*, and press ENTER.

9. If you intend to use the PeopleSoft Report Distribution system, you must select *Yes* for feature 8, Event Notification.

   This enables the REN server, which is used by the “run to window” functionality of the Report Distribution system. *The Report Distribution system, MultiChannel Framework, and Optimization Framework use REN servers.* You must also remember to enter an Authentication Token Domain when installing the PeopleSoft Pure Internet Architecture (PIA).

10. If you are configuring an application server domain to support applications based on the PeopleSoft MultiChannel Framework (such as PeopleSoft CRM ERMS), select feature 9, MCF Servers.

    See *PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook,* "Configuring REN Servers."

11. If you are not installing a REN server, after you update the settings you can load the configuration by entering *13*, for Load config as shown, from the Quick-configure menu.

12. If you are installing a REN server:

    a. Enter *14* for Custom configuration.

    b. Reply *y*, and press ENTER, at this prompt:

       ```
       Do you want to change any config values <y/n> [n]?
       ```

    c. Reply *n*, and press ENTER, at this prompt:

       ```
       Do you want to change any values <y/n> [n]?
       ```

       Continue to enter *n*, for No, for all sections until you see the PSRENSRV section, and then answer *y*. (Be aware that there are several sections.)

d. Leave the defaults for all settings except for default_auth_token, which you should set to the domain name for your web server.

Note. The default_auth_token setting should be identical to the Authentication Token Domain that you set during PIA installation.

See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode."

e. Accept the defaults for the next series of questions until asked if you want Event Notification configured. In this case, answer *y*.

f. Accept the default for the remaining questions; the configuration will load automatically.

13. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.

14. Select *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

---

15. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.

16. If you want to shut down your PeopleSoft application server domain later, follow these simple steps:

    a. From the PeopleSoft Domain Administration menu, enter *2* for Domain shutdown menu.

    b. From the PeopleTools Domain Shutdown Menu, enter *1* for Normal shutdown.

    You see messages about the application server processes being shut down. The number of processes stopped will vary depending on the number of processes that started when you booted the domain.

    c. Enter *q* to quit the PeopleSoft Domain Administration Menu.

Task 8A-4-2: Testing the Three-Tier Connection

If you get an error message when you try to sign in to the Application Server in Application Designer (that is, three-tier mode), it may be due to an incorrect server name or port number, because the database server is not running, or because the application server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Select Start, Programs, PeopleTools 8.52, Configuration Manager to start Configuration Manager.

2. Select the Profile Tab. Highlight Default and select Edit.

3. On the Edit Profile dialog box, select *Application Server* as the Connection Type.

4. Enter values for these parameters:

    - Application Server Name
    - Machine Name or IP Address
    - Port Number (WSL)

- Domain Connection Password and Domain Connection Password (confirm)

  Specify a value for the password, and repeat your entry for confirmation. The password must be 8 characters or less. If you do not enter a value, the default value PS is entered.

  This password is required when you use three-tier mode in Application Designer to connect to the application server. If you do not set the Domain Connection Password in Configuration Manager or in the Application Server configuration file, the default value PS is used when you sign in to Application Designer in three-tier mode.

  See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Using PeopleSoft Configuration Manager."

5. Select Set to add the definition to the list and select OK to close the dialog box.
6. On the Configuration Manager dialog box, select the Startup tab.
7. Select *Application Server* from the Database Type list. Your application server name should be displayed.
8. Enter the values for User ID, Connect ID, and password.
9. Click OK.

Note. Confirm that the application server is running by booting it from psadmin. Select *1*, Boot this domain, from the PeopleSoft Domain administration menu. Select option *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot menu.

---

10. Select Start, Programs, PeopleTools 8.52, Application Designer.
11. In the PeopleSoft Signon dialog box:
    - Select *Application Server* as the Connection Type.
    - Confirm that the Application Server Name is correct.
    - Enter values for User ID and password.
12. Select OK to open Application Designer.

If you see the following error message when you try to sign in to the Application Server in Application Designer:

```
Network API: "Could not connect to application server 'Application Server Name'⇒
 Make sure the PeopleTools authentication server (PSAUTH) is booted."
```

This may indicate a problem with the Domain Connection Password. For example, if the password set in the Application Server configuration file does not match the value in Configuration Manager (either the default value or one set by the user), you may get this error message when you sign in to Application Designer in three-tier mode. Check the Application Server logs for more information.

Task 8A-4-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous PeopleSoft PeopleTools release, you can import it to create a new domain. You can import an existing domain configuration by specifying a file or by specifying the path to an existing domain. To import from a file, you must use the psappsrv.cfg file found inside an existing application server domain folder (you must specify the full path to psappsrv.cfg). This file can be located anywhere in the file system, but must be named psappsrv.cfg. To import from an existing domain configuration that you created in PeopleSoft PeopleTools 8.52, you must specify *PS_CFG_HOME* and the name of an existing application server domain. (If you are importing a domain from a release before PeopleSoft PeopleTools 8.50, note that the domains were created in *PS_HOME*, and that is the path that you should provide.)

To import an existing application server domain configuration:

1. Go to the *PS_HOME*\appserv directory and run psadmin.

   Note. Make sure you change the directory from the *PS_HOME* on the file server to the *PS_HOME* on the application server.

2. Specify *1* for Application Server:

```
--------------------------------
PeopleSoft Server Administration
--------------------------------
Config Home:  C:\psft_AppServ

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Service Setup
7) Replicate Config Home

q) Quit

Command to execute (1-7, q): 1
```

   The Config Home location corresponds to the current working directory. For information on how Config Home is set, see the System and Server Administration PeopleBook.

   See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

3. Specify *4* for *Import domain configuration*.

```
-------------------------------------------
PeopleSoft Application Server Administration
-------------------------------------------
  1) Administer a domain
  2) Create a domain
  3) Delete a domain
  4) Import domain configuration
```



```
  q) Quit

 Command to execute (1-4, q): 4
```

4. Specify *1* for *Import regular domain*.

```
--------------------------------------------
PeopleSoft Import Application Server Configuration
--------------------------------------------

  1) Import regular domain
  2) Import IB Master Configuration
  q) Quit

Command to execute (1-2, q) : 1
```

5. Specify whether to import the domain configuration from a file (1) or from an existing application domain configuration (2).

```
--------------------------------------------
PeopleSoft Import Application Server Configuration
--------------------------------------------
  1) Import from file
  2) Import from application domain
  q) Quit

Command to execute (1-2, q) :
```

6. If you selected *1*, provide the full path to the file psappsrv.cfg, and then specify the name of the domain you want to create. If you selected 2, go to the next step.

```
Enter full path to configuration file
  :C:\temp\oldconfig\psappsrv.cfg

Enter domain name to create
  :HR84
```

7. If you selected *2*, to *Import from application domain*, provide the full path to the *PS_CFG_HOME* of the existing domain.

```
If importing from PeopleTools 8.49 or earlier, provide PS_HOME for PS_CFG_HOME.

Enter PS_CFG_HOME of domain you wish to import: C:\Documents and Settings⇒
\JSMITH\psft\pt\8.52
```

If applicable, choose among the existing application server domains in the specified *PS_CFG_HOME*:

```
Tuxedo domain list:
  1)  HR84A
  2)  HR84B

Select domain number to import: 1

Enter a name for new domain:  HR84
```


After you create the domain, continue to the next task to verify that the imported configuration parameters are appropriate for the newly created domain. You may need to change the following values:

- DBName

  DBName can be the same or different, depending on which database the application server needs to point to.

- DBType

  DBType depends on the database type of DBName.

- UserId and UserPswd

  UserId and UserPswd are the user's choice.

- Workstation Listener Port

  Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine.

- Jolt Listener Port

  Jolt Listener Port will also need a different number if the old domain will be up and running in the same machine.

- Jolt Relay Adapter Listener Port

  Jolt Relay Adapter Listener Port will need a different number if the old domain will be up and running in the same machine, and will be using Jolt Relay Adapter.

Task 8A-4-4: Setting Up a Custom Application Server Domain Configuration

The Quick-configure menu is initially displayed when you choose to configure your domain. This menu is intended for the commonly adjusted parameters—those most likely to change from domain to domain. However, there are additional configuration parameters that are not available through the Quick-configure menu. For such configuration parameters, you must use the Custom Configuration option, which you can access from the Quick-configure menu. Feel free to skip this procedure if you have already created and configured your Application Server using the Quick-configure menu and want to move forward.

The following steps assume you will be using psadmin to specify parameter settings.

To reconfigure an application server domain:

1. Go to the *PS_HOME*\appserv directory and run psadmin.
2. Specify *1* for Application Server and press ENTER.
3. Specify *1* for Administer a domain and press ENTER.
4. Select the domain to administer and press ENTER.
5. Specify *4* for Configure this domain and press ENTER.

   The option Configure this domain performs the following tasks:

   - Shuts down the application server, if it is running. (Shutdown is required since the binary file PSTUXCFG must be deleted and re-created to enable new configuration values. If there are no processes running when shutdown is attempted, an error will be displayed but the script continues on. This is normal.)
   - Initiates an interactive dialog, prompting for configuration parameters.

- Updates psappsrv.cfg, generates psappsrv.ubb, and internally invokes Tuxedo's tmloadcf executable to create binary file PSTUXCFG used during the domain boot process.

6. Specify *14* for Custom Configuration and press ENTER.
7. Respond to this prompt:

```
Do you want to change any config values (y/n):
```

- Specify *y* to start an interactive dialog to change or examine parameter values, as described in the next step.

  Oracle recommends this option for more experienced users.

- Specify *n* if you have already edited psappsrv.cfg, skip the next step, and continue with step 9.

8. Complete the interactive dialog to specify configuration parameters.

   Configuration parameters are grouped into sections. For each section, you are asked whether you want to change any parameters in that section, as in the following example:

```
Values for config section - Startup
                DBName=
                DBType=
                UserId=
                UserPswd=
                ConnectId=
                ConnectPswd=
                ServerName=
                StandbyDBName=
                StandbyDBType=
                StandbyUserId=
                StandbyUserPswd=
Do you want to change any values (y/n)? [n]:  y
```

- Specify *y* to change any parameter values for the current configuration section displayed.

  You are prompted for each parameter value. Either specify a new value, or press ENTER to accept the default if applicable. After pressing ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.

- Enter the user ID and user password that has security to start the application server. All application databases are delivered with one or more application server security users, usually PS or VP1.
- The parameters StandbyDBName, StandbyDBType, StandbyUserId, and StandbyUserPswd, are used for a standby database in an Oracle environment.

  See *PeopleTools 8.52: Data Management PeopleBook,* "Administering PeopleSoft Databases on Oracle," Implementing Oracle Active Data Guard.

- The WSL, JSL, and JRAD port numbers, which are found in other sections of the configuration parameters, have default values of 7000, 9000, and 9100, respectively. These values must be unique for each application server domain. You may alter the port values if necessary to ensure that they are unique

- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

Note. When setting up your application server, make a note of the values you use for Database Name, Application Server Name (the machine name), and JSL Port. You will need to use these same values when installing the PeopleSoft Pure Internet Architecture.

See *PeopleTools 8.52: System and Server Administration PeopleBook.*

9. Select server process options.

   At this point, you will be prompted to select server process options. If this is your initial installation, we suggest you accept the defaults. A message similar to this appears:

```
Setting Log Directory to the default... [PS_SERVDIR\LOGS]
Configuration file successfully created.
Loading new configuration...
```

   "Loading new configuration" indicates that psadmin is generating a binary file named PSTUXCFG, which is used to boot the application server. At this point, your application server should be properly configured.

Task 8A-4-5: Troubleshooting Common Errors

For troubleshooting help, you can access a log file through the PeopleSoft Domain Administration menu. The following information is a list of possible errors you may encounter.

- Use psadmin menu option 6 for Edit configuration/log files menu to check for errors in <*PS_CFG_HOME*>\appserv\<*domain*>\LOGS\APPSRV_mmdd.log and <*PS_CFG_HOME*>\appserv\<*domain*>\LOGS\TUXLOG.mmddyy.
- If a PeopleSoft server such as PSAPPSRV fails, examine your configuration parameters. The failure of the PSAPPSRV process is often signalled by the message "Assume failed"—which means the process has failed to start. Check the SIGNON section for misspelled or invalid database name, an invalid or unauthorized OprId, or ConnectId or ServerName is missing or invalid. Finally, make sure the database connectivity is set correctly.
- If a WSL (or JSL) fails to start, try specifying another port number (it may be in use already by another application server domain process).
- If you are unable to start the BBL, check that your Tuxedo is installed fully and that the directory really exists.
- If the installation includes more than one application server domain on a single machine, before booting the second domain, adjust the REN server configuration to avoid conflict in one of these ways:
  - Use psadmin to disable Event Notification (option 8 on the Quick-configure menu) for the second and subsequent app server domains.
  - Change default_http_port to a value other than 7180.

See Also

PeopleTools 8.52: System and Server Administration PeopleBook

PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook

Task 8A-5: Configuring Asian Language Fonts

For text that is rendered by the Java Virtual Machine on the application server (for example, charting) the appropriate fonts must be available on the system. If characters are missing or fail to display after installation, additional configuration may be needed. Fonts are defined with a logical name (such as psjvm.1) in the database, and a system font name (such as HGGothic) on the application server. Mappings between the logical name and the system font name are defined on the application server in *PS_HOME*\class\PSOFTFonts.properties. These mappings generally do not need to be specified for non-Asian languages.

Note. psjvm.1 is used by default.

The information that follows is an example of the Japanese entries on Microsoft Windows:

```
ps.lang.1=JPN
JPN.psjvm.1=MS Mincho
JPN.psjvm.2=MS Gothic
```

In the example above, 'psjvm.1' and 'psjvm.2' can be used in charting style classes.

See Also

PeopleTools 8.52: PeopleCode API Reference PeopleBook, "Charting Class"

CHAPTER 8B

Configuring the Application Server on UNIX

This chapter discusses:

- Understanding the Application Server
- Understanding the Application Server Domain Processes
- Prerequisites
- Preparing the Application Server File System for a PeopleTools-Only Upgrade
- Setting Environment Variables
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain
- Configuring Asian Language Fonts

Understanding the Application Server

The information in this chapter is provided to help you configure your PeopleSoft application server.

Note. We do not support application servers on z/OS.

Note. COBOL is not needed for PeopleSoft PeopleTools or for applications that contain no COBOL programs. Check the information on My Oracle Support, and your application-specific documentation, for the details on whether your application requires COBOL.

Oracle supports application servers for the PeopleSoft installation on several UNIX and Linux operating system platforms. For detailed information, consult the certification information on My Oracle Support. The application server support can be found on the certification pages under "Other Products”.

Application servers are not supported on z/OS because Oracle Tuxedo cannot run on the mainframe. For this reason, you can only install an application server in a “physical” three-tier configuration—with the application server on a machine separate from the database server machine. You cannot run a “logical” three-tier configuration—with the application server on the same machine as the database server.

In PeopleSoft PeopleTools 8.51 and higher, the configuration and log files for application server domains reside in *PS_CFG_HOME*. If you do not set a PS_CFG_HOME environment variable before beginning the application server configuration, the system installs it in a default location based on the current user’s settings, as follows:

```
$HOME/psft/pt/<peopletools_version>
```

See "Preparing for Installation," Defining Server Domain Configurations.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

See Also

"Preparing for Installation," Understanding PeopleSoft Servers and Clients

PeopleTools 8.52: System and Server Administration PeopleBook, "Using PSADMIN Menus"

PeopleTools 8.52: Data Management PeopleBook

My Oracle Support, Certifications

"Setting Up the Install Workstation"

"Installing and Compiling COBOL on UNIX"

Understanding the Application Server Domain Processes

On most platforms (AIX, Solaris, Linux, and HP-UX) no changes are required from the system defaults, in order to allow the “small” and “development” domains that are shipped with PeopleSoft PeopleTools to boot successfully.

Refer to the performance documentation for guidance in configuring your system to run larger domains. That document describes the suggested minimum kernel settings for running PeopleSoft PeopleTools in a real-world environment.

See PeopleTools Performance Guidelines White Paper on My Oracle Support.

Permanently changing system-wide parameters generally requires root privileges, and any changes to the kernel configuration of your operating system should be done with care.

Prerequisites

Before beginning this procedure, you should have completed the following tasks:

- Installed your application server.

  See "Using the PeopleSoft Installer," Understanding PeopleSoft Servers.
- Installed Tuxedo 10gR3 RP043

  See "Installing Additional Components."
- Granted authorization to a PeopleSoft user ID to start the application server.

  User ID: VP1 for Enterprise Performance Management and Financials/Supply Chain Management, and PS for HRMS, should be delivered with authorization to start the application server.

- Run the following SQL statements on your database server to review and if needed, update the PSCLASSDEFN table:

```
SELECT CLASSID, STARTAPPSERVER FROM PSCLASSDEFN
WHERE CLASSID IN (SELECT OPRCLASS FROM PSOPRCLS WHERE OPRID='<OPRID>')
UPDATE PSCLASSDEFN SET STARTAPPSERVER=1 WHERE CLASSID='<CLASSID>'
```

Note. Installers typically use VP1 or PS to test the application server, and the password for these users is stored in a fairly accessible text file. If these users are deleted or their passwords are changed, the application server will no longer be available. To avoid this problem, you can set up a new operator (called PSADMIN or PSASID, for instance) with privileges to start the application server. If you do this, you can use the new operator for your application servers and you won't need to change the password each time VP1 or PS is changed.

Task 8B-1: Preparing the Application Server File System for a PeopleTools-Only Upgrade

If you are installing into an existing *PS_HOME* or *PS_CFG_HOME* in preparation for a PeopleTools-only upgrade, perform the following instructions to remove any obsolete files.

If you were using PeopleSoft PeopleTools 8.50 or earlier, remove *PS_HOME*/appserv/PSADMIN prior to installing the new release.

If you have any customized configuration files (such as psappsrv.cfg, psconfig.sh, pspt, pscbl.mak, psrun.mak, and so on), copy them to another directory so that they are not overwritten during the upgrade process. This enables you to preserve any tuned variables.

Configuration files are typically overwritten when you install the new release using the PeopleSoft Installer.

Task 8B-2: Setting Environment Variables

Telnet to your UNIX system. Log in and ensure the following environment variables are set appropriately.

Note. The environment variables for Tuxedo must be set explicitly; they are not set by running psconfig.sh. These can be also set using the .profile file in the user's home directory.

- $TUXDIR must be set to the correct Oracle Tuxedo installation directory. For example:

```
TUXDIR=/home/user/Oracle/tuxedo10gR3; export TUXDIR
```

- $TUXDIR/lib must be prepended to LD_LIBRARY_PATH, LIBPATH, or SHLIB_PATH, whichever is appropriate for your platform. For example:

```
LD_LIBRARY_PATH=$TUXDIR/lib:$LD_LIBRARY_PATH; export  LD_LIBRARY_PATH
```

- $TUXDIR/bin must be prepended to PATH. For example:

```
PATH=$TUXDIR/bin:$PATH; export PATH
```


One method to ensure that the following PeopleSoft environment variables are set is to source psconfig.sh. Go to the *PS_HOME* directory, and enter the following command:

```
. ./psconfig.sh
```

Note. After running psconfig.sh, you can invoke the psadmin utility from any location.

Task 8B-3: Setting Up COBOL for Remote Call

Remote Call is a PeopleCode feature that launches a COBOL program from an application server, PeopleCode program or a batch Application Engine PeopleCode program and waits for it to complete execution before continuing. The execution of a COBOL program via Remote Call is completely independent of the Process Scheduler. You need to set up a COBOL runtime environment and COBOL executables on the application server to support Remote Call.

See "Installing and Compiling COBOL on UNIX."

If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

See *PeopleTools 8.52 Hardware and Software Requirements.*

Task 8B-4: Verifying Database Connectivity

Before continuing, it is critical to verify connectivity to the database that the application server domain will use. To verify connectivity, connect to the database server from the application server using the native SQL tool on the application server.

If you are running DB2 for z/OS, you can issue this command from the UNIX prompt:

```
db2 connect to <database name> user <z/OS ID> using <password>
```

If you are running DB2 for z/OS and are setting up your application server on a Windows machine, enter the preceding command at a DB2 Connect command window, or use DB2 Connect's Command Center or Client Configuration Assistant.

See Installing and Configuring DB2 Connect.

Task 8B-5: Creating, Configuring, and Starting an Initial Application Server Domain

This section discusses:

- Creating, Configuring, and Starting the Application Server Domain
- Testing the Three-Tier Connection
- Importing an Existing Application Server Domain Configuration
- Setting Up a Custom Application Server Domain Configuration

- Troubleshooting Common Errors

Task 8B-5-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. To run psadmin, go to the *PS_HOME*/appserv directory and enter the following command:

   ```
   psadmin
   ```

   Note. Make sure you change the directory from the *PS_HOME* on the file server to the *PS_HOME*, or high-level directory, on the application server.

2. When the menu appears, specify *1* for Application Server and press ENTER.
3. Specify *2* to Create a domain and press ENTER.
4. Specify the domain name. For example:

   ```
   Please enter name of domain to create :HR84
   ```

   Domain names are case sensitive and must be eight characters or less. The domain name is used to create a directory name under the *PS_CFG_HOME*/appserv directory.

   See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

5. Specify *4* for small if this is your initial domain installation, press ENTER.

   See *PeopleTools 8.52: System and Server Administration PeopleBook.*

6. After the system creates the domain, this prompt appears:

   ```
   Would you like to configure this domain now? (y/n) [y] :
   ```

   Enter *y*. The PeopleSoft Application Server Administration menu appears with a Quick-configure menu similar to this:

   ```
   -------------------------------------------------------
   Quick-configure menu -- domain: HR84
   -------------------------------------------------------
            Features                                Settings
           ==========                              ==========
     1) Pub/Sub Servers       : No        15) DBNAME         :[HR84]
     2) Quick Server          : No        16) DBTYPE         :[DB2ODBC]
     3) Query Servers         : No        17) UserId         :[VP1]
     4) Jolt                  : Yes       18) UserPswd       :[VP1]
     5) Jolt Relay            : No        19) DomainID       :[TESTSERV]
     6) WSL                   : No        20) AddToPATH      :[ ]
     7) PC Debugger           : No        21) ConnectID      :[people]
     8) Event Notification    : Yes       22) ConnectPswd    :[peop1e]
     9) MCF Servers           : No        23) ServerName     :[]
    10) Perf Collator         : No        24) WSL Port       :[7000]
    11) Analytic Servers      : Yes       25) JSL Port       :[9000]
    12) Domains Gateway       : No        26) JRAD Port      :[9100]
   ```

```
     Actions
    =========
13) Load config as shown
14) Custom configuration
 h) Help for this menu
 q) Return to previous menu

HINT: Enter 15 to edit DBNAME, then 13 to load

Enter selection (1-26, h, or q):
```

Note. If your installation includes more than one application server domain on a given machine, read the troubleshooting section for more information.

See Troubleshooting Common Errors.

7. If you need to modify any of the values for these settings, enter the number next to the parameter name, press ENTER, then type the new value, and press ENTER again.

   If you need to change any of the features, type the number next to the feature name and press ENTER.

8. Configure the WSL to boot by changing option 6 to Yes.

   Enter *6*, and press ENTER.

9. If you intend to use the PeopleSoft Report Distribution system, you must select *Yes* for feature 8, Event Notification.

   This enables the REN server, which is used by the “run to window” functionality of the Report Distribution system. *The Report Distribution system, MultiChannel Framework, and Optimization Framework use REN servers.* You must also remember to enter an Authentication Token Domain when installing the PeopleSoft Pure Internet Architecture (PIA).

10. If you are configuring an application server domain to support applications based on the PeopleSoft MultiChannel Framework (such as PeopleSoft CRM ERMS), select feature 9, MCF Servers.

    See *PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook,* "Configuring REN Servers."

11. If you are not installing a REN server, after you update the settings you can load the configuration by entering *13*, for Load config as shown, from the Quick-configure menu.

12. If you are installing a REN server:

    a. Enter *14* for Custom configuration.

    b. Reply *y*, and press ENTER, at this prompt:

       ```
       Do you want to change any config values <y/n> [n]?
       ```

    c. Reply *n*, and press ENTER, at this prompt:

       ```
       Do you want to change any values <y/n> [n]?
       ```

       Continue to enter *n*, for No, for all sections until you see the PSRENSRV section, and then answer *y*. (Be aware that there are several sections.)

    d. Leave the defaults for all settings except for default_auth_token, which you should set to the domain name for your web server.

Note. The default_auth_token setting should be identical to the Authentication Token Domain that you set during PIA installation.

See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode."

e. Accept the defaults for the next series of questions until asked if you want Event Notification configured. In this case, answer *y*.

f. Accept the default for the remaining questions; the configuration will load automatically.

13. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.

14. Select *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

---

15. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.

16. If you want to shut down your PeopleSoft application server domain later, follow these simple steps:

    a. From the PeopleSoft Domain Administration menu, enter *2* for Domain shutdown menu.

    b. From the PeopleTools Domain Shutdown Menu, enter *1* for Normal shutdown.

    You see messages about the application server processes being shut down. The number of processes stopped will vary depending on the number of processes that started when you booted the domain.

    c. Enter *q* to quit the PeopleSoft Domain Administration Menu.

Task 8B-5-2: Testing the Three-Tier Connection

If you get an error message when you try to sign in to the Application Server in Application Designer (that is, three-tier mode), it may be due to an incorrect server name or port number, because the database server is not running, or because the application server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Select Start, Programs, PeopleTools 8.52, Configuration Manager to start Configuration Manager.

2. Select the Profile Tab. Highlight Default and select Edit.

3. On the Edit Profile dialog box, select *Application Server* as the Connection Type.

4. Enter values for these parameters:

    - Application Server Name
    - Machine Name or IP Address
    - Port Number (WSL)

- Domain Connection Password and Domain Connection Password (confirm)

  Specify a value for the password, and repeat your entry for confirmation. The password must be 8 characters or less. If you do not enter a value, the default value PS is entered.

  This password is required when you use three-tier mode in Application Designer to connect to the application server. If you do not set the Domain Connection Password in Configuration Manager or in the Application Server configuration file, the default value PS is used when you sign in to Application Designer in three-tier mode.

  See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Using PeopleSoft Configuration Manager."

5. Select Set to add the definition to the list and select OK to close the dialog box.
6. On the Configuration Manager dialog box, select the Startup tab.
7. Select *Application Server* from the Database Type list. Your application server name should be displayed.
8. Enter the values for User ID, Connect ID, and password.
9. Click OK.

Note. Confirm that the application server is running by booting it from psadmin. Select *1*, Boot this domain, from the PeopleSoft Domain administration menu. Select option *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot menu.

---

10. Select Start, Programs, PeopleTools 8.52, Application Designer.
11. In the PeopleSoft Signon dialog box:
    - Select *Application Server* as the Connection Type.
    - Confirm that the Application Server Name is correct.
    - Enter values for User ID and password.
12. Select OK to open Application Designer.

If you see the following error message when you try to sign in to the Application Server in Application Designer:

```
Network API: "Could not connect to application server 'Application Server Name'⇒
 Make sure the PeopleTools authentication server (PSAUTH) is booted."
```

This may indicate a problem with the Domain Connection Password. For example, if the password set in the Application Server configuration file does not match the value in Configuration Manager (either the default value or one set by the user), you may get this error message when you sign in to Application Designer in three-tier mode. Check the Application Server logs for more information.

Task 8B-5-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous PeopleSoft PeopleTools release, you can import it to create a new domain. You can import an existing domain configuration by specifying a file or by specifying the path to an existing domain. To import from a file, you must use the psappsrv.cfg file found inside an existing application server domain folder (you must specify the full path to psappsrv.cfg). This file can be located anywhere in the file system, but must be named psappsrv.cfg. To import from an existing domain configuration that you created in PeopleSoft PeopleTools 8.52, you must specify *PS_CFG_HOME* and the name of an existing application server domain. (If you are importing a domain from a release before PeopleSoft PeopleTools 8.50, note that the domains were created in *PS_HOME*, and that is the path that you should provide.)

To import an existing application server domain configuration:

1. Go to the *PS_HOME*/appserv directory and run psadmin.

   Note. Make sure you change the directory from the *PS_HOME* on the file server to the *PS_HOME* on the application server.

2. Specify *1* for Application Server:

```
--------------------------------
PeopleSoft Server Administration
--------------------------------
Config Home:  /home/psft_AppServ

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
q) Quit

Command to execute (1-6, q): 1
```

   The Config Home location corresponds to the current working directory. For information on how Config Home is set, see the System and Server Administration PeopleBook.

   See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

3. Specify *4* for *Import domain configuration*.

```
-------------------------------------------
PeopleSoft Application Server Administration
-------------------------------------------
  1) Administer a domain
  2) Create a domain
  3) Delete a domain
  4) Import domain configuration
  q) Quit
```



```
 Command to execute (1-4, q): 4
```

4. Specify *1* for *Import regular domain*.

```
--------------------------------------------
PeopleSoft Import Application Server Configuration
--------------------------------------------

  1) Import regular domain
  2) Import IB Master Configuration
  q) Quit

Command to execute (1-2, q) : 1
```

5. Specify whether to import the domain configuration from a file (1) or from an existing application domain configuration (2).

```
--------------------------------------------
PeopleSoft Import Application Server Configuration
--------------------------------------------
  1) Import from file
  2) Import from application domain
  q) Quit

Command to execute (1-2, q) :
```

6. If you selected *1*, provide the full path to the file psappsrv.cfg, and then specify the name of the domain you want to create. If you selected 2, go to the next step.

```
Enter full path to configuration file
:/home/oldconfig/psappsrv.cfg

Enter domain name to create
 :HR84
```

7. If you selected *2*, to *Import from application domain*, provide the full path to the *PS_CFG_HOME* of the existing domain.

```
If importing from PeopleTools 8.49 or earlier, provide PS_HOME for PS_CFG_HOME.

Enter PS_CFG_HOME of domain you wish to import: /home/JSMITH/pseopletools/8.52
```

If applicable, choose among the existing application server domains in the specified *PS_CFG_HOME*:

```
Tuxedo domain list:
  1)  HR84A
  2)  HR84B

Select domain number to import: 1

Enter a name for new domain:  HR84
```

After you create the domain, continue to the next task to verify that the imported configuration parameters are appropriate for the newly created domain. You may need to change the following values:

- DBName

  DBName can be the same or different, depending on which database the application server needs to point to.

- DBType

  DBType depends on the database type of DBName.

- UserId and UserPswd

  UserId and UserPswd are the user's choice.

- Workstation Listener Port

  Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine.

- Jolt Listener Port

  Jolt Listener Port will also need a different number if the old domain will be up and running in the same machine.

- Jolt Relay Adapter Listener Port

  Jolt Relay Adapter Listener Port will need a different number if the old domain will be up and running in the same machine, and will be using Jolt Relay Adapter.

Task 8B-5-4: Setting Up a Custom Application Server Domain Configuration

The Quick-configure menu is initially displayed when you choose to configure your domain. This menu is intended for the commonly adjusted parameters—those most likely to change from domain to domain. However, there are additional configuration parameters that are not available through the Quick-configure menu. For such configuration parameters, you must use the Custom Configuration option, which you can access from the Quick-configure menu. Feel free to skip this procedure if you have already created and configured your Application Server using the Quick-configure menu and want to move forward.

The following steps assume you will be using psadmin to specify parameter settings.

To reconfigure an application server domain:

1. Go to the *PS_HOME*/appserv directory and run psadmin.
2. Specify *1* for Application Server and press ENTER.
3. Specify *1* for Administer a domain and press ENTER.
4. Select the domain to administer and press ENTER.
5. Specify *4* for Configure this domain and press ENTER.

   The option Configure this domain performs the following tasks:

   - Shuts down the application server, if it is running. (Shutdown is required since the binary file PSTUXCFG must be deleted and re-created to enable new configuration values. If there are no processes running when shutdown is attempted, an error will be displayed but the script continues on. This is normal.)
   - Initiates an interactive dialog, prompting for configuration parameters.
   - Updates psappsrv.cfg, generates psappsrv.ubb, and internally invokes Tuxedo's tmloadcf executable to create binary file PSTUXCFG used during the domain boot process.

6. Specify *14* for Custom Configuration and press ENTER.
7. Respond to this prompt:

```
Do you want to change any config values (y/n):
```

   - Specify *y* to start an interactive dialog to change or examine parameter values, as described in the next step.

     Oracle recommends this option for more experienced users.
   - Specify *n* if you have already edited psappsrv.cfg, skip the next step, and continue with step 9.
8. Complete the interactive dialog to specify configuration parameters.

   Configuration parameters are grouped into sections. For each section, you are asked whether you want to change any parameters in that section, as in the following example:

```
Values for config section - Startup
                DBName=
                DBType=
                UserId=
                UserPswd=
                ConnectId=
                ConnectPswd=
                ServerName=
                StandbyDBName=
                StandbyDBType=
                StandbyUserId=
                StandbyUserPswd=
Do you want to change any values (y/n)? [n]:  y
```

   - Specify *y* to change any parameter values for the current configuration section displayed.

     You are prompted for each parameter value. Either specify a new value, or press ENTER to accept the default if applicable. After pressing ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
   - Enter the user ID and user password that has security to start the application server. All application databases are delivered with one or more application server security users, usually PS or VP1.
   - The parameters StandbyDBName, StandbyDBType, StandbyUserId, and StandbyUserPswd, are used for a standby database in an Oracle environment.

     See *PeopleTools 8.52: Data Management PeopleBook,* "Administering PeopleSoft Databases on Oracle," Implementing Oracle Active Data Guard.
   - The WSL, JSL, and JRAD port numbers, which are found in other sections of the configuration parameters, have default values of 7000, 9000, and 9100, respectively. These values must be unique for each application server domain. You may alter the port values if necessary to ensure that they are unique

- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

Note. When setting up your application server, make a note of the values you use for Database Name, Application Server Name (the machine name), and JSL Port. You will need to use these same values when installing the PeopleSoft Pure Internet Architecture.

See *PeopleTools 8.52: System and Server Administration PeopleBook.*

9. Select server process options.

   At this point, you will be prompted to select server process options. If this is your initial installation, we suggest you accept the defaults. A message similar to this appears:

```
Setting Log Directory to the default... [PS_SERVDIR/LOGS]
Configuration file successfully created.
Loading new configuration...
```

   "Loading new configuration" indicates that psadmin is generating a binary file named PSTUXCFG, which is used to boot the application server. At this point, your application server should be properly configured.

Task 8B-5-5: Troubleshooting Common Errors

For troubleshooting help, you can access a log file through the PeopleSoft Domain Administration menu. The following information is a list of possible errors you may encounter.

- Use the psadmin PeopleSoft Domain Administration menu option 6 for Edit configuration/log files menu to check for errors in <*PS_CFG_HOME*>/appserv/<*domain*>/LOGS/APPSRV_mmdd.LOG and <*PS_CFG_HOME*>/appserv/<*domain*>/LOGS/TUXLOG.mmddyy.
- If a PeopleSoft server such as PSAPPSRV fails, examine your configuration parameters. The failure of the PSAPPSRV process is often signalled by the message "Assume failed"—which means the process has failed to start. Check the SIGNON section for misspelled or invalid database name, an invalid or unauthorized OprId, or ConnectId or ServerName is missing or invalid. Finally, make sure the database connectivity is set correctly.
- If a WSL (or JSL) fails to start, try specifying another port number (it may be in use already by another application server domain process).
- If you are unable to start the BBL, check that your Tuxedo is installed fully and that the directory really exists.
- If the installation includes more than one application server domain on a single machine, before booting the second domain, adjust the REN server configuration to avoid conflict in one of these ways:
  - Use psadmin to disable Event Notification (option 8 on the Quick-configure menu) for the second and subsequent app server domains.
  - Change default_http_port to a value other than 7180.

Also check that you do not have older Tuxedo releases (such as Tuxedo 6.4) prepended in your PATH or runtime library (LIBPATH, SHLIB_PATH or LD_LIBRARY_PATH, depending on UNIX platform).

See Also

PeopleTools 8.52: System and Server Administration PeopleBook

PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook

Task 8B-6: Configuring Asian Language Fonts

For text that is rendered by the Java Virtual Machine on the application server (for example, charting) the appropriate fonts must be available on the system. If characters are missing or fail to display after installation, additional configuration may be needed. Fonts are defined with a logical name (such as psjvm.1) in the database, and a system font name (such as HGGothic) on the application server. Mappings between the logical name and the system font name are defined on the application server in *PS_HOME*/appserver/classes/PSOFTFonts.properties. These mappings generally do not need to be specified for non-Asian languages.

Note. On UNIX, the X11 font packages must be installed.

Note. psjvm.1 is used by default.

The information that follows is an example of the Japanese entries on HP-UX:

```
ps.lang.1=JPN
JPN.psjvm.1=HGGothicB
JPN.psjvm.2=HGMinchoL
```

In the example above, 'psjvm.1' and 'psjvm.2' can be used in charting style classes. Extra fonts and languages can be added if needed.

Note. *On all UNIX platforms*, the *PS_HOME*/jre/lib/fonts.propertiesXXX file (where XXX represents the locale that the machine is operating under) must contain the mappings for all the fonts that will be used by the application server to generate charts. On most platforms, the default font.propertiesXXX files contain mappings only for those fonts most commonly used by each locale. If you wish to generate charts using fonts that are not by default mapped into the font.propertiesXXX file for your locale, you must manually modify the default file to include this information. Find the font.propertiesXXX files containing the appropriate mapping information, and append that mapping information to the end of the font.propertiesXXX file that matches your machine's locale.

Note. *On HP-UX,* the path to the fonts must be entered in the JVM's font.propertiesXXX file (where XXX is the locale that the machine is operating under). Each full path must be separated by colons under the setting hp.fontpath. This file is located in *PS_HOME*/jre/lib. Following is an example:
`hp.fontpath=/usr/lib/X11/fonts/ms.st/typefaces:/usr/lib/X11/fonts/TrueType/japanese.st/typefaces:`

See Also

PeopleTools 8.52: PeopleCode API Reference PeopleBook, "Charting Class"

CHAPTER 9A

Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode

This chapter discusses:

- Understanding PeopleSoft Pure Internet Architecture
- Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation
- Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade
- Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in GUI Mode
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in GUI Mode
- Testing and Administering the PeopleSoft Pure Internet Architecture Installation
- Completing Post-Installation Steps

Understanding PeopleSoft Pure Internet Architecture

This chapter explains how to install and configure the components of the PeopleSoft Pure Internet Architecture (PIA) in GUI mode. It includes instructions for installing the PeopleSoft files on Oracle WebLogic and IBM WebSphere. Only complete the instructions for the web server product that you installed.

Note. See the chapter “Setting Up the PeopleSoft Pure Internet Architecture in Console Mode” for instructions on installing in silent mode on Microsoft Windows.

See "Installing Web Server Products."

The setup program for the PeopleSoft Pure Internet Architecture is installed to the web server machine when you run the PeopleSoft Installer and select the PeopleSoft Web Server option.

See "Using the PeopleSoft Installer."

Oracle only supports customer installations that use the version of the web servers packaged with PeopleSoft PeopleTools. *You must install the web server before you install the PeopleSoft Pure Internet Architecture.* Before you install the PeopleSoft Pure Internet Architecture, you must also have configured an application server, as described in the previous chapter.

The location where you install the PeopleSoft Pure Internet Architecture is referred to in this documentation as *PIA_HOME*. You can specify different locations for *PS_HOME* and *PIA_HOME*. After you complete the PeopleSoft Pure Internet Architecture installation, you can locate the installation files in the directory *PIA_HOME*/webserv.

For PeopleSoft PeopleTools 8.51 and later, if you are setting up the PeopleSoft Pure Internet Architecture on a Microsoft Windows platform, the directory and path that you specify for *PIA_HOME* may include spaces. However, parentheses in the directory name (for example, “C:\Program Files (x86)”) are *not* allowed for *PIA_HOME*.

See "Preparing for Installation," Defining Installation Locations.

If your web server is on a different machine than your application server, you need to make sure you have JRE installed on your web server to run the PeopleSoft Pure Internet Architecture installation.

The initial PeopleSoft Pure Internet Architecture setup automatically creates the default PeopleSoft site named ps. In subsequent PeopleSoft Pure Internet Architecture setups, change the site name from *ps* to a unique value. We recommend using the database name. This is handy for easy identification and ensures that the database web server files are installed in a unique web site.

The URL that you use to invoke the PeopleSoft Pure Internet Architecture must conform to ASN.1 specifications. That is, it may contain only alphanumeric characters, dots (“.”), or dashes (“-”). The URL must not begin or end with a dot or dash, or contain consecutive dots (“..”). If the URL includes more than one portion, separated by dots, do not use a number to begin a segment if the other segments contain letters. For example, "mycompany.second.country.com" is correct, but "mycompany.2nd.country.com" is wrong.

Warning! Do not use GUI mode to install the PeopleSoft Pure Internet Architecture if you want to install on a IBM WebSphere server *and* you are running on a UNIX platform. In this situation, use console mode to set up the PeopleSoft Pure Internet Architecture.

Review the following additional notes before beginning the PeopleSoft Pure Internet Architecture installation:

- If you want to connect between multiple application databases, you need to implement single signon.
- If the PeopleSoft Pure Internet Architecture installation encounters an error, it will indicate which log files to refer to.

  See "Installing Web Server Products."
- The machine on which you run the PeopleSoft Pure Internet Architecture install must be running in *256 color mode*. This is not necessary for UNIX or console mode.
- When installing on Microsoft Windows Server 2008, change the font size to the default value.

  If you use the installer with a non-default font size, some of the fields on the installer windows may appear with an incorrect length. To change the font size:

  a. Right-click the desktop and select Personalize.

  b. Click Adjust font size (DPI).

  c. Select the default, 96 DPI.

The PeopleSoft Pure Internet Architecture installation includes the following products:

- *PeopleSoft Pure Internet Architecture.* This product is the centerpiece of the PeopleSoft architecture that enables users to work on a machine with only a supported browser installed. This option installs the servlets required for deploying PeopleSoft Applications and for the PeopleSoft portal. The portal packs and PeopleSoft Portal Solutions have their own installation instructions, which are available on My Oracle Support. For an overview of the various types of portals, consult the following PeopleBook.

  See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*
- *PeopleSoft Report Repository.* This product works in conjunction with Process Scheduler to allow report distribution over the web.

- *PeopleSoft Integration Gateway.* This product is the entry and exit point for all messages to and from the Integration Broker. Its Java-based Connector architecture allows asynchronous and synchronous messages to be sent over a variety of standard protocols, many that are delivered at install, or through custom connectors.

  Important! For PeopleSoft PeopleTools 8.50 and higher, review the section on security properties for Integration Gateway. When setting the properties in the integrationGateways.properties file, the property secureFileKeystorePasswd must be encrypted, and the secureFileKeystorePath must be set.

  See *PeopleTools 8.52: Integration Broker Administration PeopleBook,* "Managing Integration Gateways."

- *PeopleSoft CTI Console.* This product works in conjunction with CTI vendor software to enable call center agents to take advantage of browser based teleset management and automatic population of application pages with relevant data associated with incoming calls, such as customer or case details.

  See *PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook.*

- *Environment Management Hub.* The Environment Management hub is a web application that is installed with the PeopleSoft Pure Internet Architecture and portal. It is started along with the rest of the web applications when the user boots the web server. You cannot start the Environment Management Hub on a server that is configured to run HTTPS; in other words, if you plan to run Environment Management, your PIA server needs to be configured in HTTP mode.

  See *PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook.*

See Also

PeopleTools 8.52: Security Administration PeopleBook

PeopleTools 8.52: System and Server Administration PeopleBook

"Using the PeopleSoft Installer," Verifying Necessary Files for Installation on Windows

Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation

You have the option to specify an authentication domain when you install the PeopleSoft Pure Internet Architecture on Oracle WebLogic or WebSphere.

Note. The authentication domain was referred to as the Authentication Token Domain in previous releases, and that term is still seen in the software.

When an authentication domain is specified during the PeopleSoft Pure Internet Architecture install, that value gets used as the Cookie domain in the web server configuration. The main requirements when setting a cookie domain are:

- The host must have a fully qualified domain name (FQDN). The requirement that you must have a domain name does not imply that you must have a DNS, but you do need some type of naming service such as DNS or some managed ..\etc\hosts file that contains a list of the servers with their domain name.
- The cookie domain value being set must begin with a dot (.ps.com is valid, ps.com is NOT valid).

- The cookie domain value being set must contain at least 1 embedded dot (.ps.com is valid, .corp.ps.com is valid, .com is NOT valid).
- The cookie domain value can only be a single domain name. It cannot be a delimiter-separated list of domains.

By default, the browser only sends cookies back to the machine that set the cookie. So if web server crm.yourdomain.com sets a cookie, the browser will only send it back there. You can make the browser send the single signon cookie to all servers at yourdomain.com by typing your domain name in the Authentication Token Domain list box of web server crm.

Specifying the authentication domain may be necessary in certain cases. For example, if you plan to use the PeopleSoft portal technology, be sure to read the supporting documentation to determine whether setting the authentication domain is required for correct operation.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Specify an authentication domain if you plan to run a REN Server. REN Servers are required for PeopleSoft MultiChannel Framework, Reporting, and some PeopleSoft CRM applications supported by PeopleSoft MultiChannel Framework.

See *PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook.*

Specify an authentication domain if you plan to use Business Objects Enterprise.

See "Installing and Configuring Software for Crystal Reports," Installing SAP BusinessObjects Enterprise XI 3.1.

Task 9A-1: Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade

If you are installing into an existing *PS_HOME* or *PS_CFG_HOME* in preparation for a PeopleTools-only upgrade, perform the following instructions to remove any obsolete files.

Stop the web server before performing the PeopleSoft Pure Internet Architecture installation or uninstallation.

Depending on your web server platform, complete the following steps to clean up previous PeopleSoft Pure Internet Architecture sites:

- Oracle WebLogic

  Shut down Oracle WebLogic and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform.

  Alternatively, delete the contents of one of the following directories:

  - For PeopleSoft PeopleTools 8.43.x or earlier: <*weblogic_home*>\wlserver6.1\config\<*domain_name*>*
  - For PeopleSoft PeopleTools 8.44.x to 8.49.x: <*PS_HOME*>\webserv\<*domain_name*>*
  - For PeopleSoft PeopleTools 8.50.x or later: <*PIA_HOME*>\webserv\<*domain_name*>*
- IBM WebSphere

  Shut down IBM WebSphere and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform.

Task 9A-2: Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in GUI Mode

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic
- Uninstalling the PeopleSoft Pure Internet Architecture on Oracle WebLogic

Prerequisites

This section describes how to install the PeopleSoft Pure Internet Architecture on Oracle WebLogic. Before installing the PeopleSoft Pure Internet Architecture (PIA) on Oracle WebLogic, you must have installed the Oracle WebLogic software. PeopleSoft PeopleTools 8.52 supports 64-bit Oracle WebLogic 10.3.4.

See "Installing Web Server Products," Installing Oracle WebLogic.

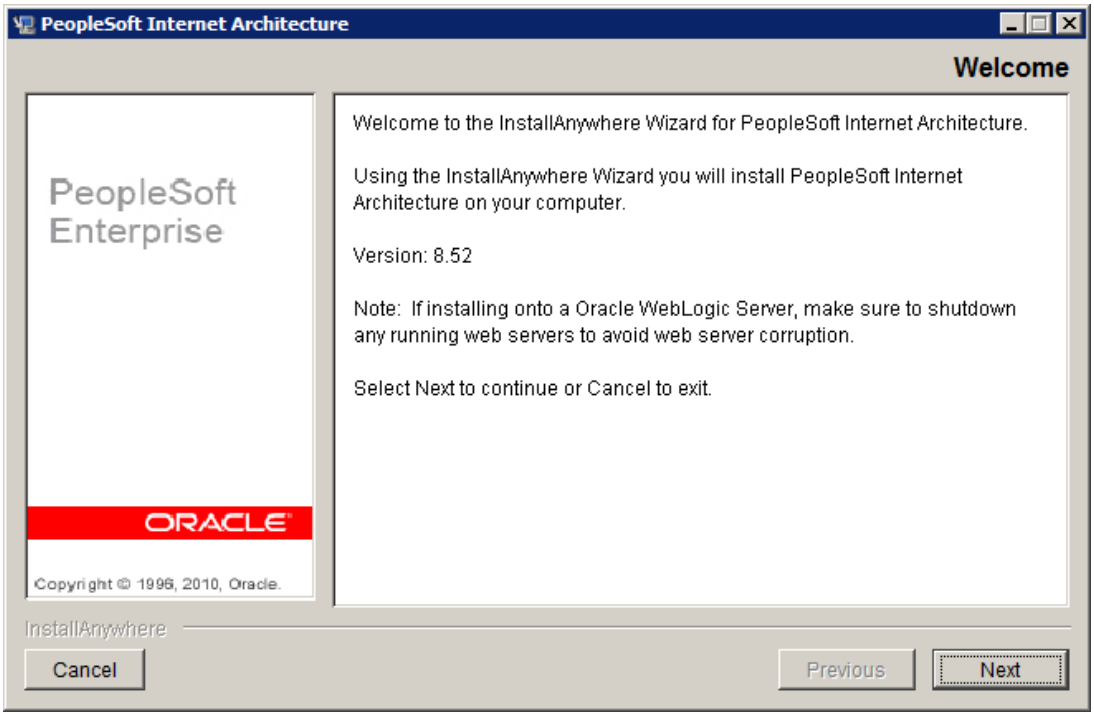
See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Oracle WebLogic."

Task 9A-2-1: Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic

To install the PeopleSoft Pure Internet Architecture on Oracle WebLogic:

1. Go to *PS_HOME*\setup\PsMpPIAInstall and run `setup.bat`.
2. Click Next on the Welcome to the InstallAnywhere Wizard for PeopleSoft Internet Architecture window.

   The windows displays the PeopleSoft PeopleTools version, 8.52 in this example, and includes this note: “If installing onto a Oracle WebLogic Server, make sure to shutdown any running web servers to avoid web server corruption.”

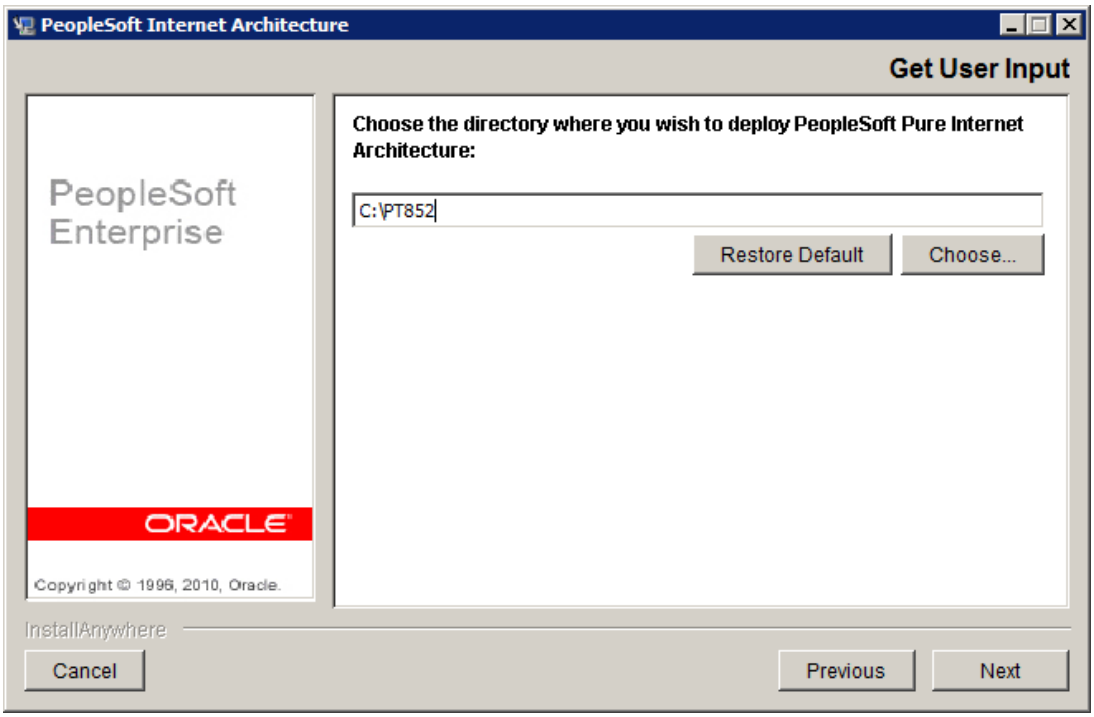


PeopleSoft Internet Architecture Welcome window

3. Enter the location where you want to install the PeopleSoft Pure Internet Architecture, referred to in this documentation as *PIA_HOME*.

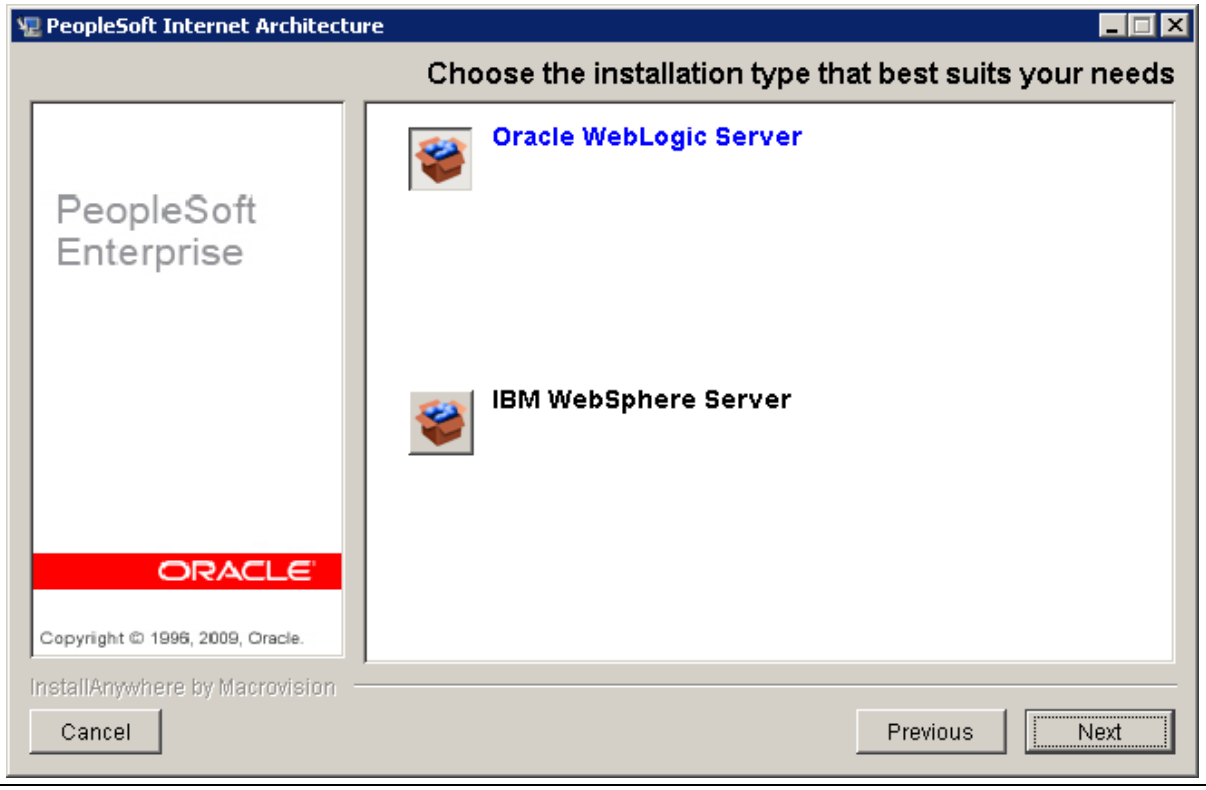
   In this example, the directory is C:\PT852, which is the same as *PS_HOME*. The default location for *PIA_HOME* is the same as *PS_CFG_HOME*, for example C:\Documents and Settings\ps_user\psft\pt\8.52.

   See "Preparing for Installation," Planning Your Initial Configuration.



Specifying the installation location for the PeopleSoft Internet Architecture

4. Select Oracle WebLogic Server and click Next.



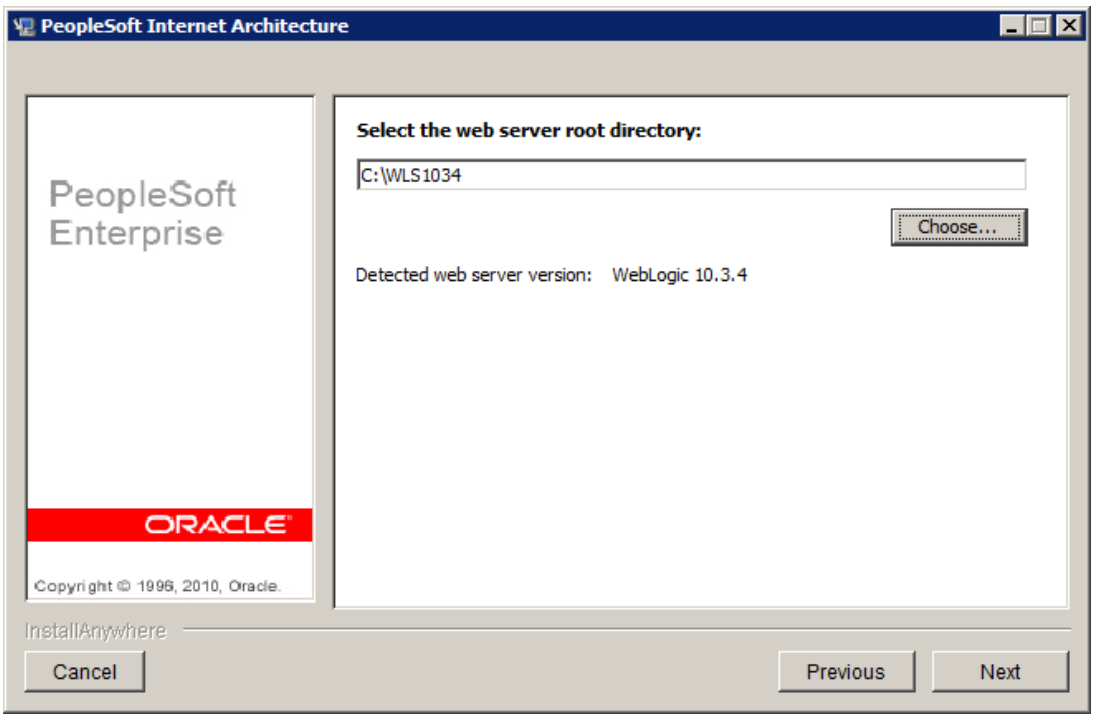
Selecting the installation type for PeopleSoft Pure Internet Architecture

5. Specify the root directory where Oracle WebLogic is installed, *WLS_HOME,* and click Next.

In this example, the root directory for Oracle WebLogic 10.3.4 is C:\WLS1034.

Note. If you enter an incorrect path for Oracle WebLogic, you receive an error message "Detected web server version: no choices available." Check that you have Oracle WebLogic installed, and in the designated directory.

If you specify a 32-bit installation of Oracle WebLogic, a message appears asking you to confirm the decision. Keep in mind that PeopleSoft PeopleTools 8.51 and later releases require 64-bit Oracle WebLogic.



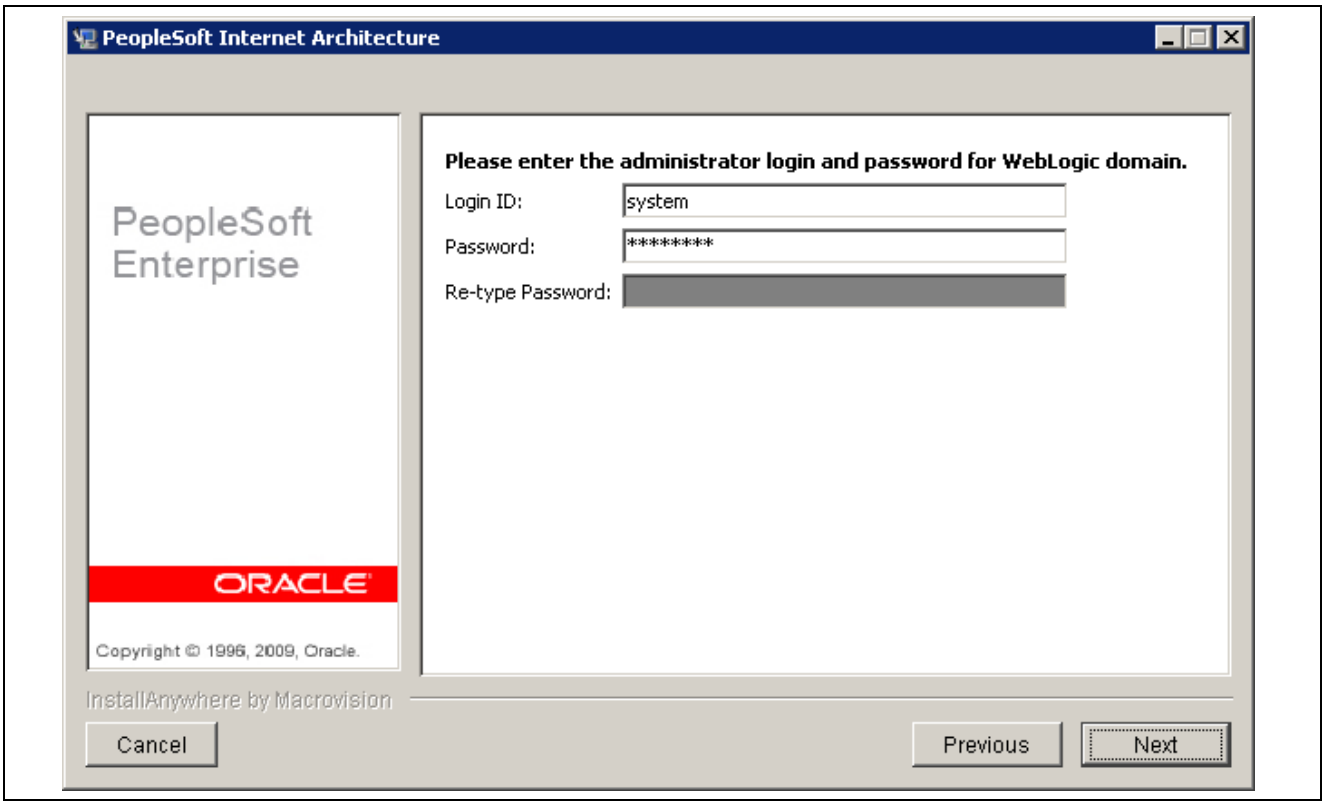
Selecting the web server root directory on the PeopleSoft Internet Architecture window

6. Enter the administrator login ID and password for the new domain to be created.

   The password must be at least 8 alphanumeric characters with at least one number or special character.

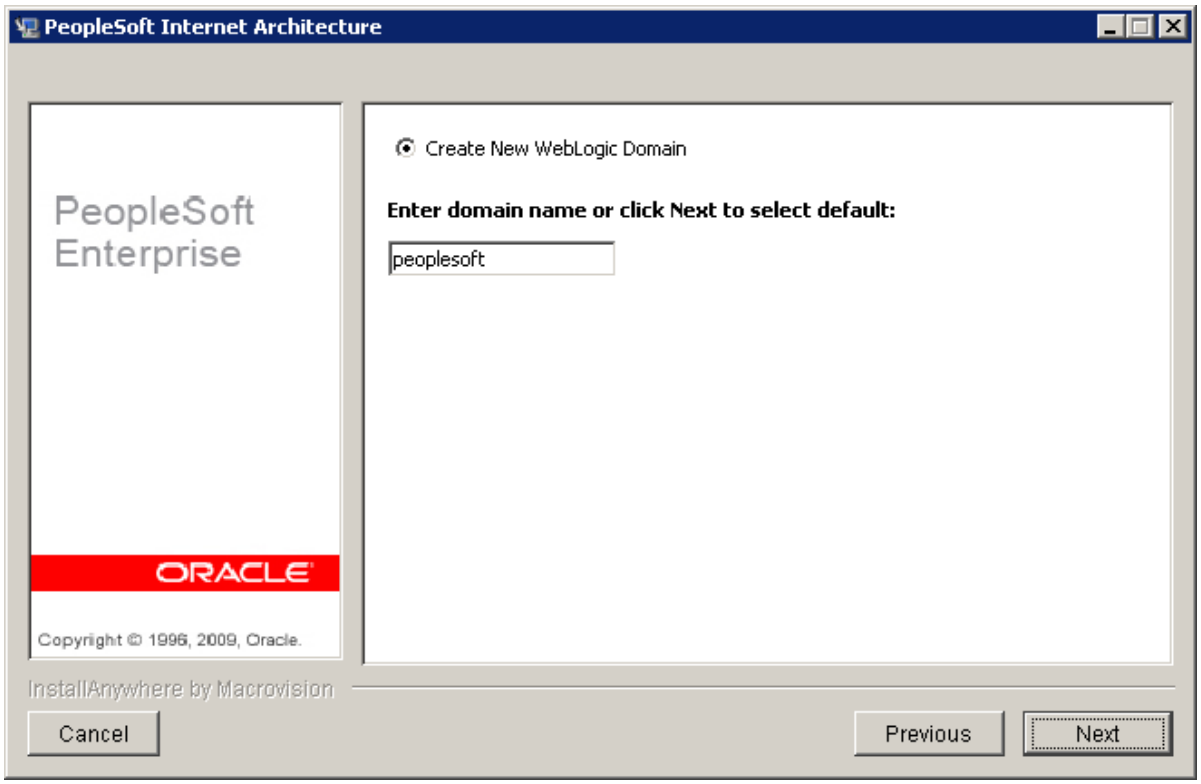
   Note. The default login ID is system, and the default password is Passw0rd (with a capital "P" and zero rather than the letter "o"). It is good practice to change to a password other than the default.

   Click Next to continue.



Specifying administrator login and password on the PeopleSoft Internet Architecture window

7. If the PIA installer cannot detect any existing Oracle WebLogic domains, only the option Create New WebLogic Domain is available.

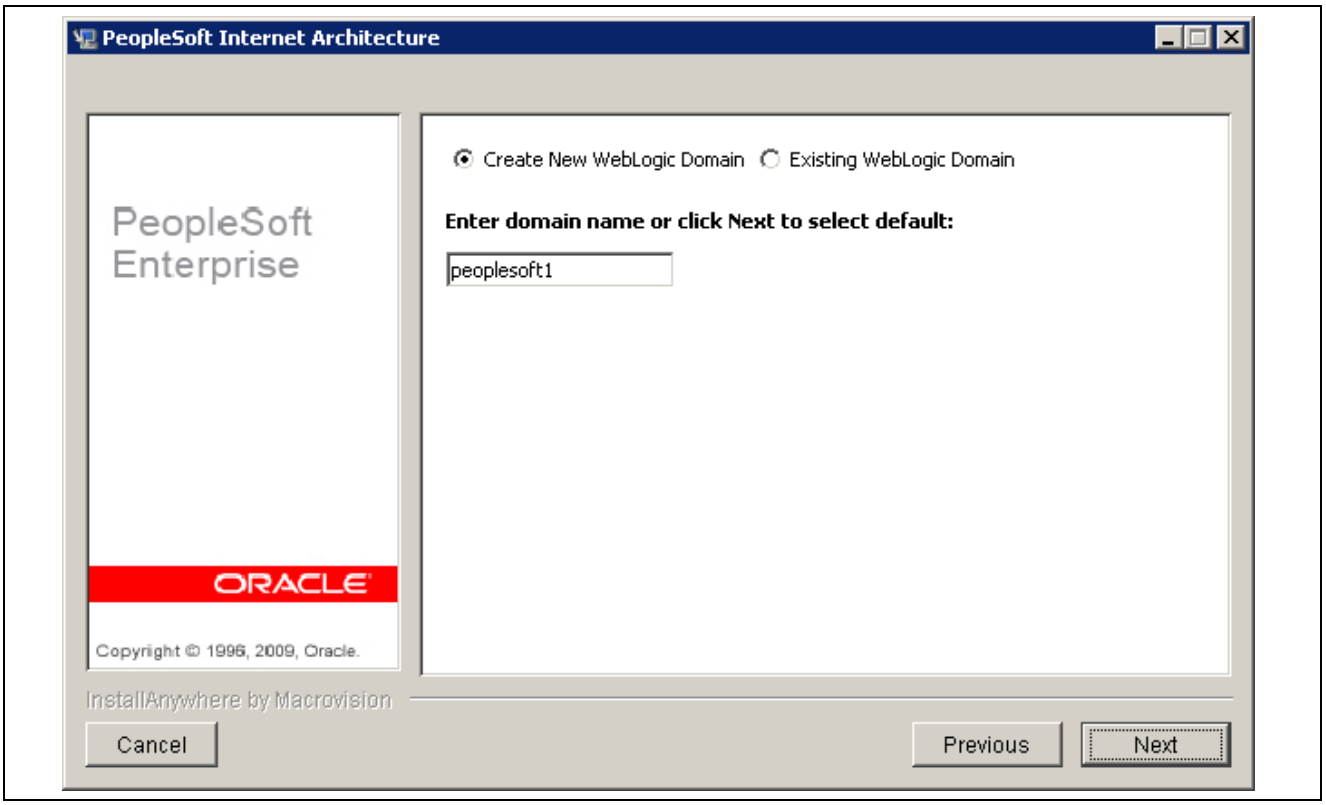


Entering new domain name on the PeopleSoft Internet Architecture window

8. If there are existing Oracle WebLogic domains on your system, select one of the options Create New WebLogic Domain or Existing WebLogic Domain.

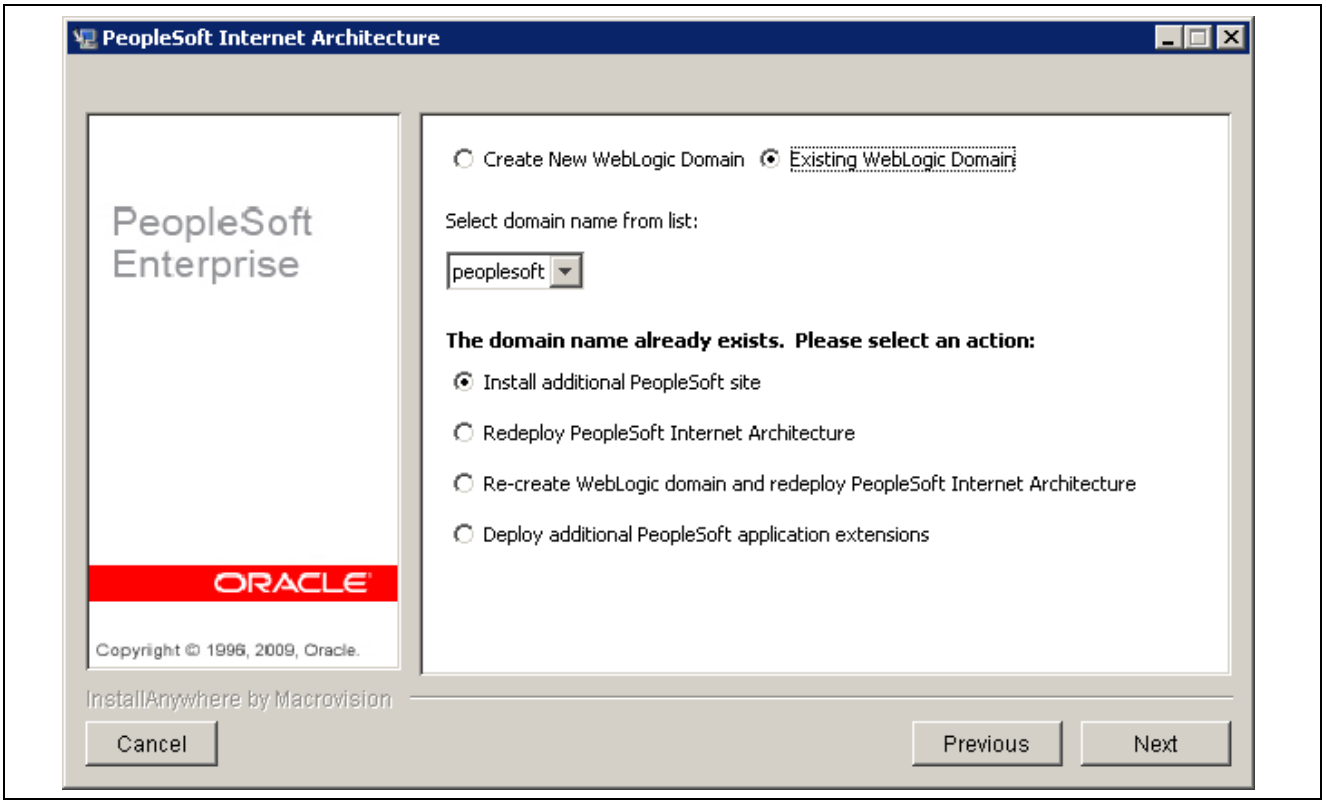
   If you select Create New WebLogic Domain, the installation process automatically generates a valid domain name in the domain name field.

   If you attempt to enter an invalid domain name, you see a prompt asking you to enter a new domain name or choose an existing domain.



Choosing a new or existing WebLogic domain

9. If you select Existing WebLogic Domain, specify the domain name and select one of the following options:



Selecting an existing WebLogic domain

- *Install additional PeopleSoft site*

  This option is relevant only to the PeopleSoft PORTAL web application, and does not modify or revert any other configuration settings. Select this option to install only the necessary files for defining an additional PeopleSoft site onto an existing Oracle WebLogic configuration. The new site will be accessed using its name in the URL. A site named "CRM" would be accessed using a URL similar to http://mywebserver_machine/CRM. To reset or re-create an existing PeopleSoft site, simply enter that site's name as the site to create. On your web server, a PeopleSoft site is comprised of the following directories within the PORTAL web application:

  <*WEBLOGIC_DOMAIN*>\applications\peoplesoft\PORTAL\<*site*>*

  <*WEBLOGIC_DOMAIN*>\applications\peoplesoft\PORTAL\WEB-INF\psftdocs\<*site*>*

- *Redeploy PeopleSoft Internet Architecture*

  This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to redeploy all of the class files and jar files that comprise web components of PeopleSoft Pure Internet Architecture. Oracle WebLogic Server configuration files, scripts and any existing PeopleSoft (PORTAL) sites are not overwritten, unless you specify an existing PeopleSoft site during this setup.

- *Re-create WebLogic domain and redeploy PeopleSoft Internet Architecture*

  This option affects Oracle WebLogic Server configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to completely remove an existing Oracle WebLogic domain and create the newly specified PeopleSoft site.

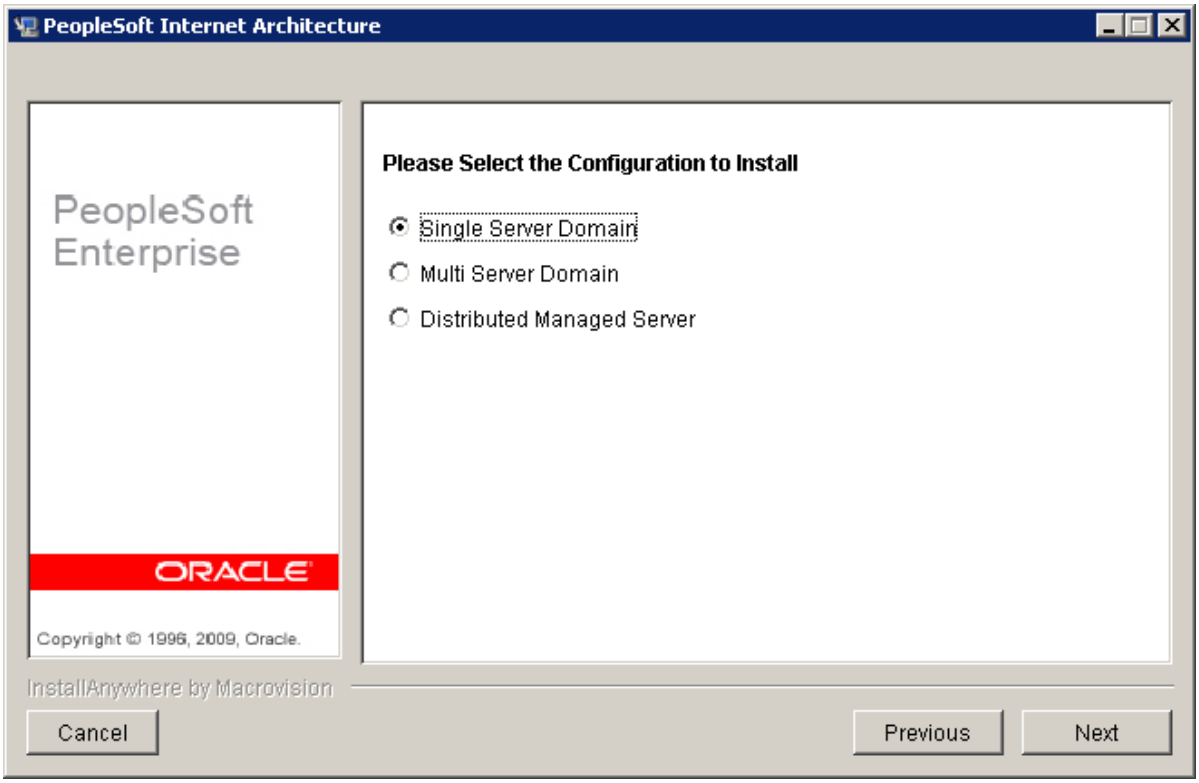
Warning! Re-creating an existing domain will delete everything previously installed into that domain.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*

- *Deploy additional PeopleSoft application extensions*

  This option is solely for use with PeopleSoft applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see if this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

10. If there are application packages in the archives directory, you'll be asked whether you want to deploy them. (If you are using an existing domain, you'll only be prompted if you selected Deploy additional PeopleSoft extensions.)
11. Select the type of domain to create—single server, multi server, or distributed managed server.



Choosing the domain type

There are three domain configuration options:

- *Single Server Domain*

  This domain configuration contains one server named PIA, and the entire PeopleSoft application is deployed to it. This configuration is intended for single user or very small scale, nonproduction environments. This configuration is very similar to the Oracle WebLogic domain provided in PeopleSoft PeopleTools 8.40 through 8.44.

- *Multi Server Domain*

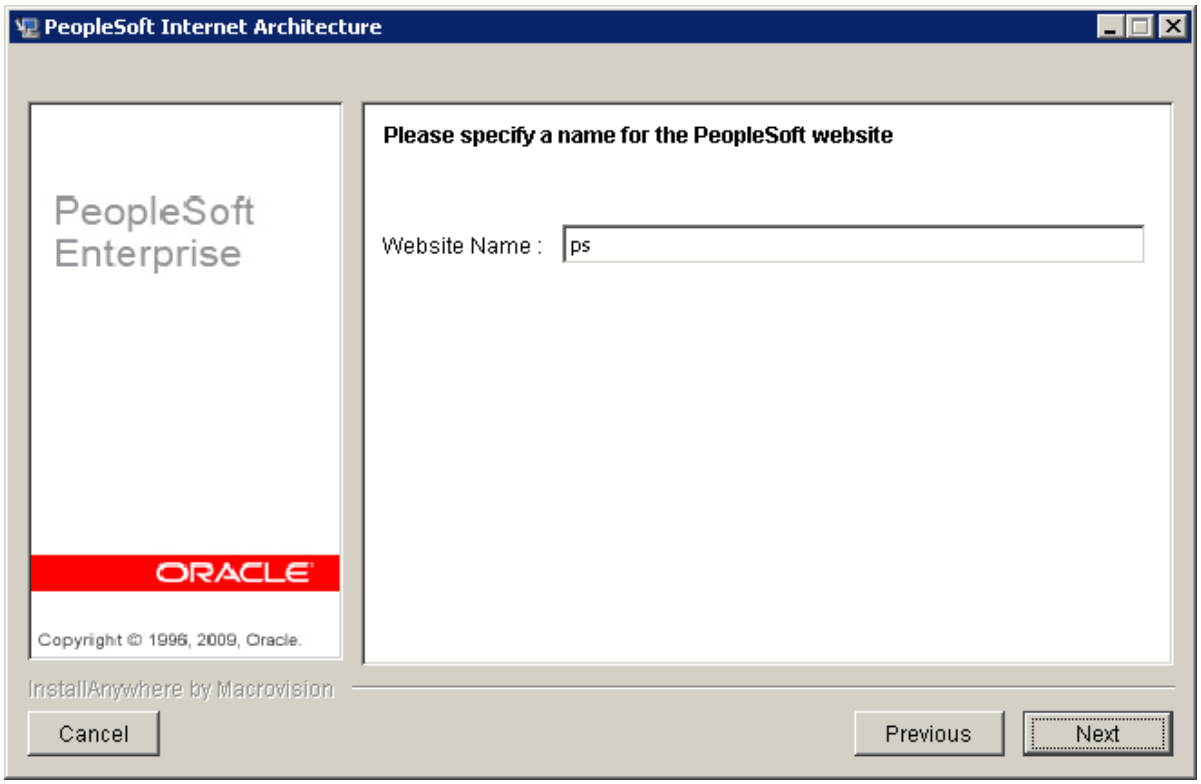
  This domain configuration contains seven unique server definitions, an Oracle WebLogic cluster, and the PeopleSoft application split across multiple servers. This configuration is intended for a production environment.

- *Distributed Managed Server*

  This option is an extension of the Multi Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

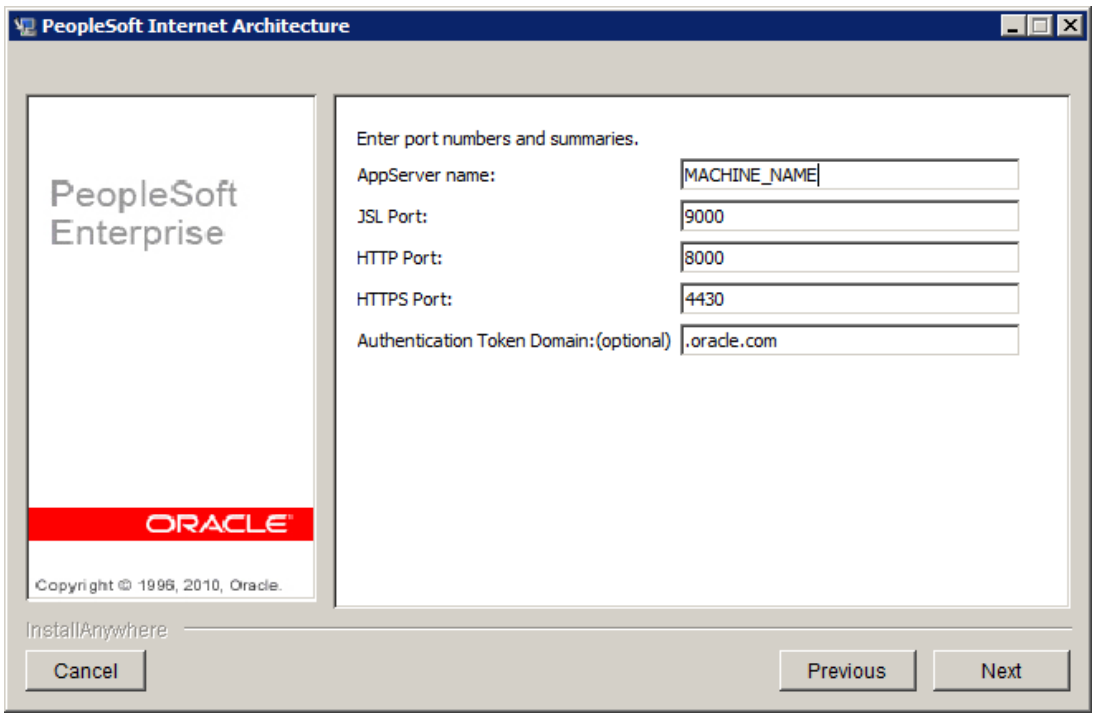
12. Enter a PeopleSoft web site name; the default is ps.

Warning! The site name can include underscores (_), but an underscore cannot be followed by a numeric character or the string “newwin” (for example, my_site_3 or my_newwin_site).



Specifying the PeopleSoft website name

13. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the Authentication Token Domain (optional), and click Next.



Specifying application server name, port numbers, and authentication token domain

- *AppServer name*

  For the AppServer name setting, enter the name of your application server.

- *JSL Port*

  For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000.)

  See "Configuring the Application Server on <Windows or UNIX>."

- *Authentication Token Domain*

  Note. The value you enter for Authentication Token Domain must match the value you specify when configuring your application server, as described earlier in this book. In addition, certain installation configurations require that you specify an authentication domain.

  See Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.

  If you enter a value for Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is http://MachineName/ps/signon.html. If you do enter a value for the authentication domain (for example, .myCompany.com), the URL to invoke PeopleSoft Pure Internet Architecture is http://MachineName.myCompany.com/ps/signon.html. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example http://MachineName:8080/ps/signon.html if there is no authentication domain, or http://MachineName.myCompany.com:8080/ps/signon.html if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

  See Understanding the PeopleSoft Pure Internet Architecture.

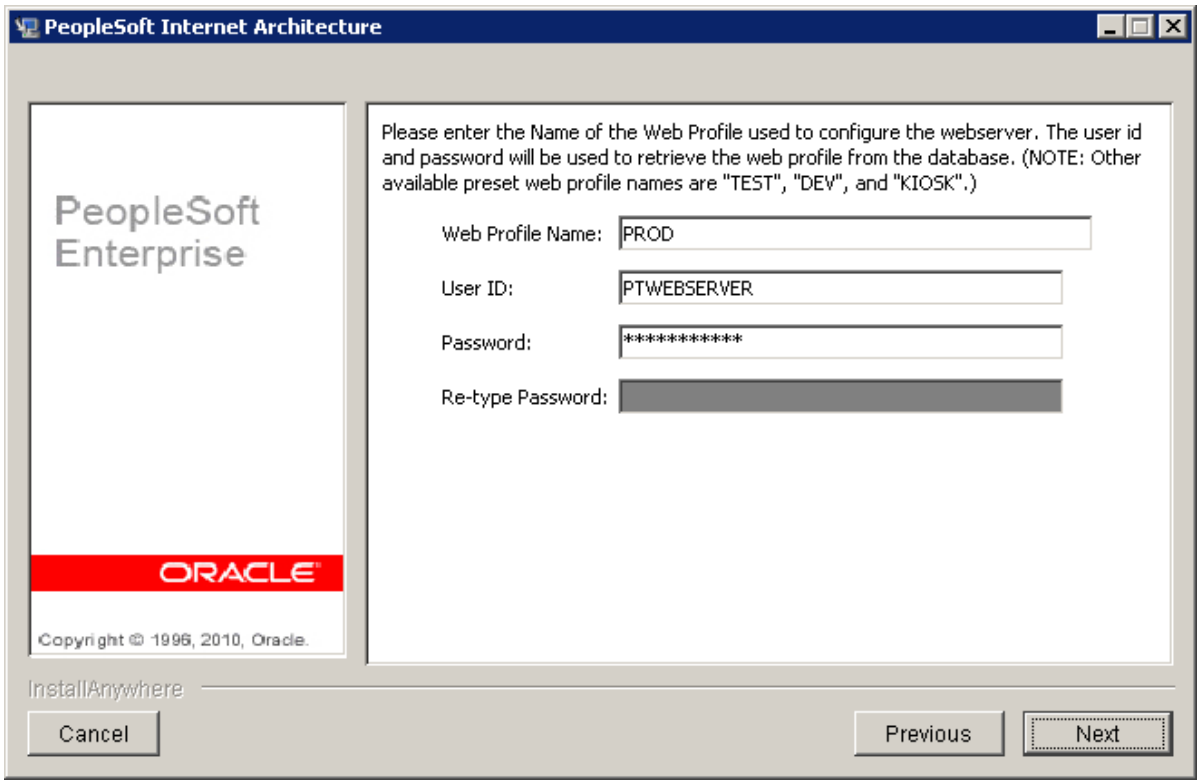
14. Accept the default for the web profile, PROD, or enter another name.

    The example below shows the default web profile name, PROD, and user ID, PTWEBSERVER.

    The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security in the following PeopleBook.

    See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

    Note. If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step, as shown in this example. See *PeopleTools 8.52: Security Administration PeopleBook* for the steps required to add a User Profile.



Specifying web profile information

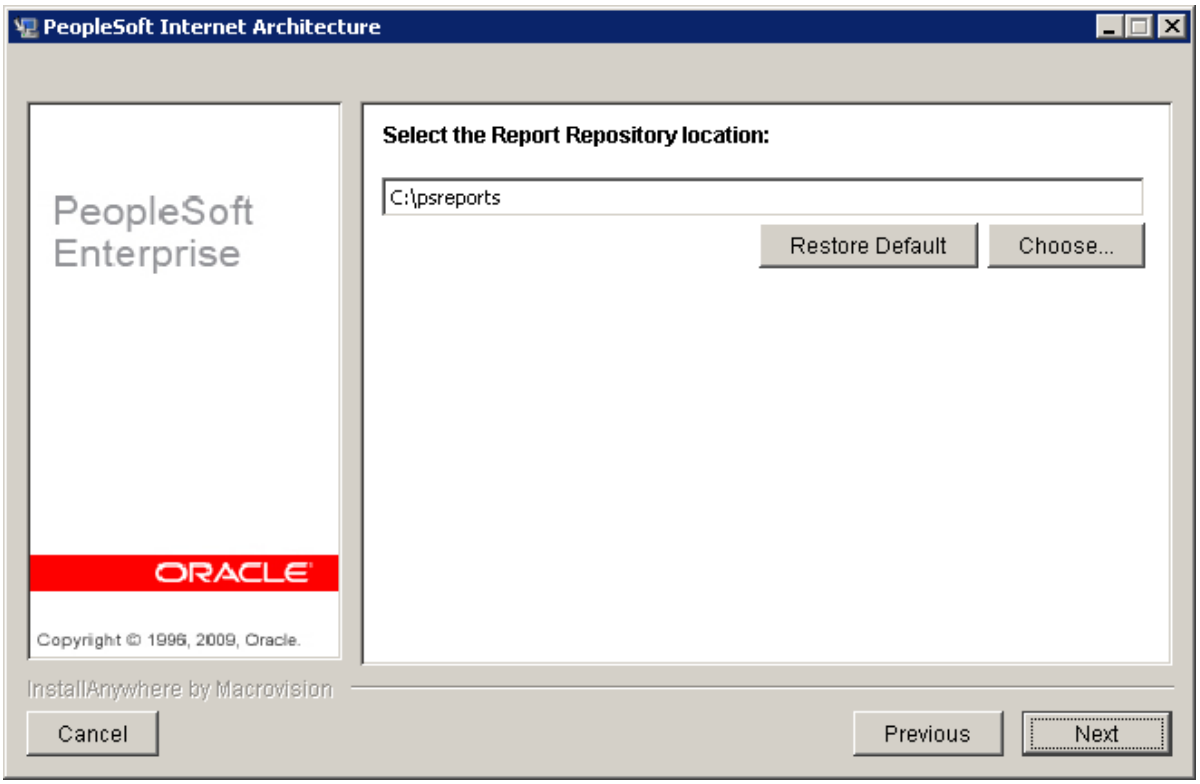
15. Specify the root directory for the Report Repository, and click Next.

    Make sure that the report repository directory is shared. You must have write access to the Report Repository directory. The default is C:\psreports, as shown in the example below.

    Note. In setting up the Process Scheduler to transfer reports, if you choose the FTP transfer protocol, use the same directory for the Home Directory as you use here for the report repository.

    See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*

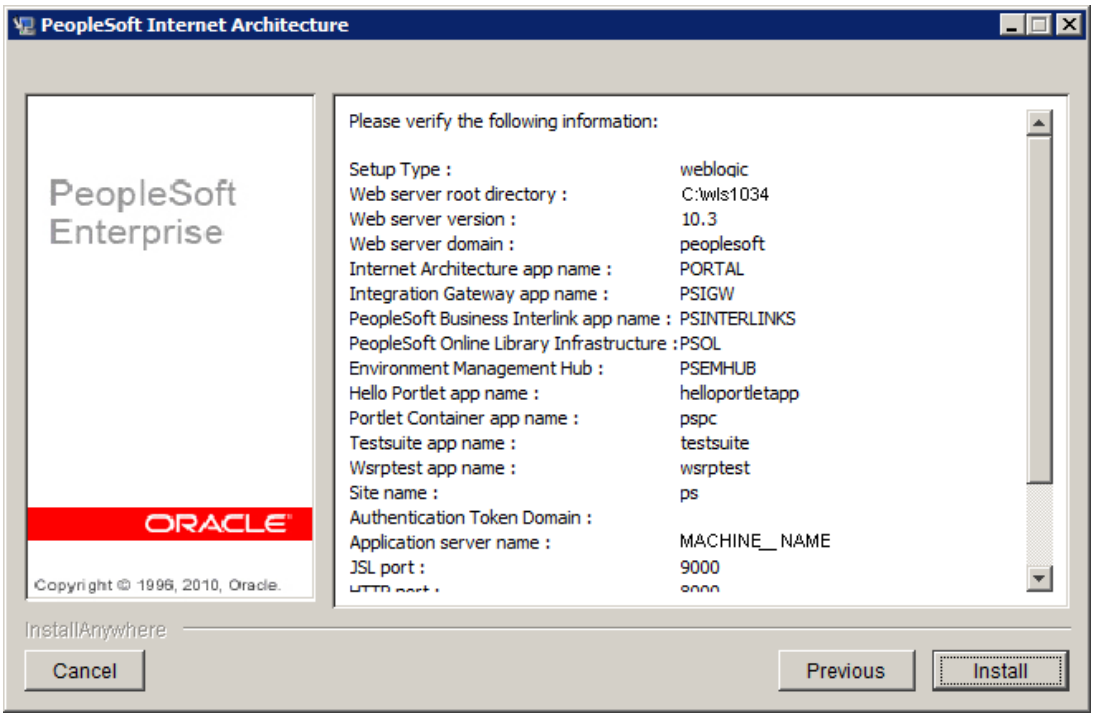
    See "Setting Up Process Scheduler on Windows," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.



Specifying the Report Repository location

16. Verify all of your selections (click Back if you need to make any changes), and click Install to begin the installation.

    The window summaries the installation information, such as web server software, web server root directory, version, and so on.



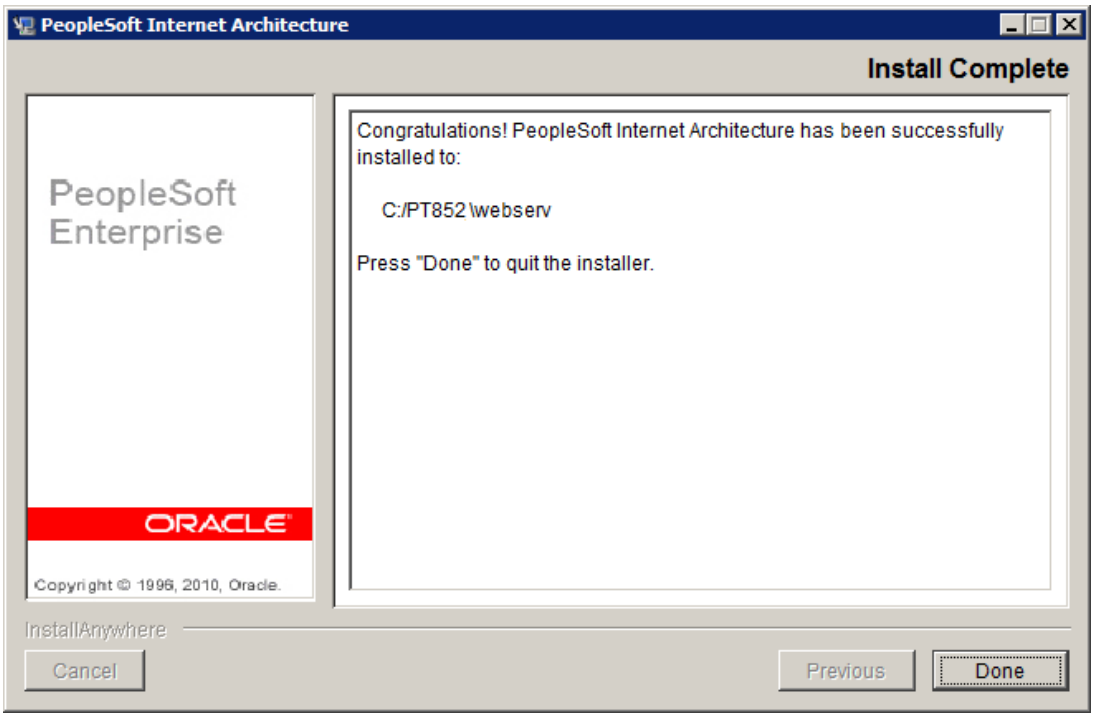
Summary information for the PeopleSoft Internet Architecture installation

An indicator appears showing the progress of your installation.

17. Click Finish to complete the installation.

    The default installation directory, shown on the Install Complete window, is <*PIA_HOME*>\webserv\<*domain_name*>. In this example the installation directory is C:\PT852\webserv.

Note. If you are installing into an existing domain, you need to restart that domain.



PeopleSoft Internet Architecture Install Complete window

Task 9A-2-2: Uninstalling the PeopleSoft Pure Internet Architecture on Oracle WebLogic

To remove a PIA domain deployed on Oracle WebLogic, delete the folder <*PIA_HOME*>\webserv\<*domain_name*>. If there is more than one domain, delete the *domain_name* folder for every domain you want to uninstall.

Task 9A-3: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in GUI Mode

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere
- Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

Prerequisites

The information in this section applies to the installation of PeopleSoft Pure Internet Architecture (PIA) on an IBM WebSphere Application Server. PeopleSoft PeopleTools 8.52 requires a 64-bit IBM WebSphere ND installation. Review these points before beginning the installation:

- Before installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server Network Deployment, (referred to here as IBM WebSphere ND) you must have installed the IBM WebSphere ND software.
- Each IBM WebSphere Application Server runs one PeopleSoft Pure Internet Architecture application. If you need to install more than one PeopleSoft Pure Internet Architecture application on your IBM WebSphere Application Server, you must run the PIA installation again.
- When installing PIA on IBM WebSphere ND, you must work with a local copy of the PIA installation software; you cannot install remotely. If you are doing the installation on a machine other than the one on which you installed PeopleSoft PeopleTools, copy the *PS_HOME*\setup\PsMpPIAInstall directory to the local machine and keep the same directory structure.
- Both IBM WebSphere Application Server Network Deployment and PeopleSoft Pure Internet Architecture need to be installed and deployed using the same user ID. Following this requirement avoids any security and profile management issues.

See Also

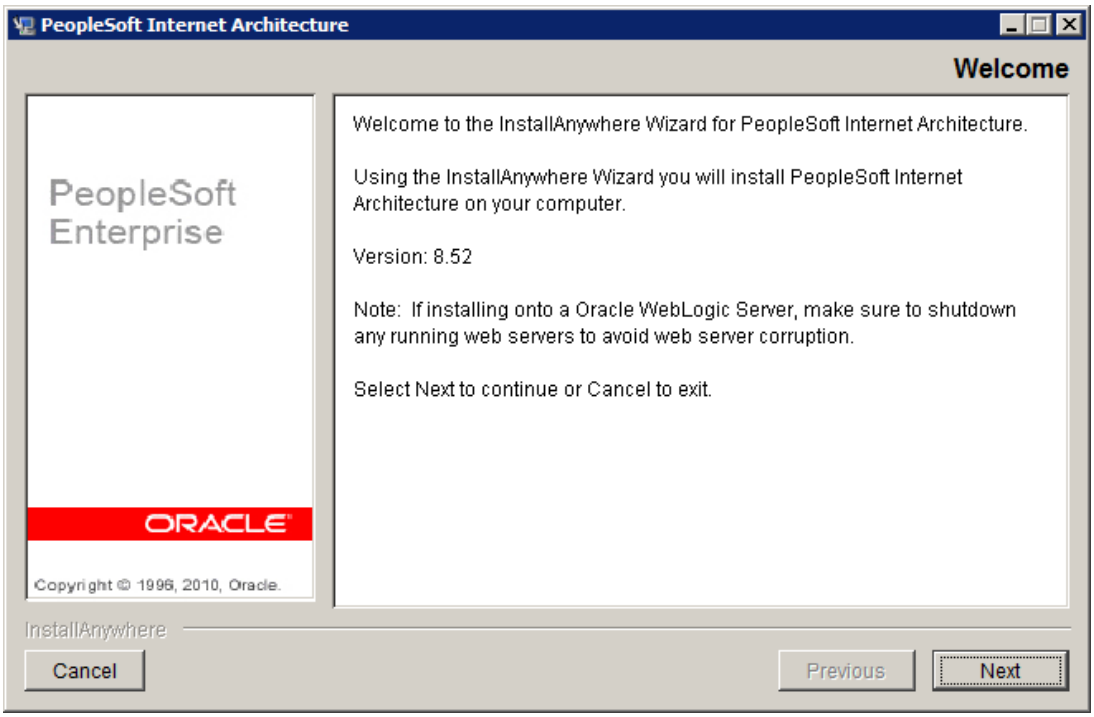
"Installing Web Server Products," Installing IBM WebSphere Application Server

Task 9A-3-1: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere

To install PIA on IBM WebSphere ND:

1. Go to *PS_HOME*\setup\PsMpPIAInstall.
2. Double-click on `setup.bat`.

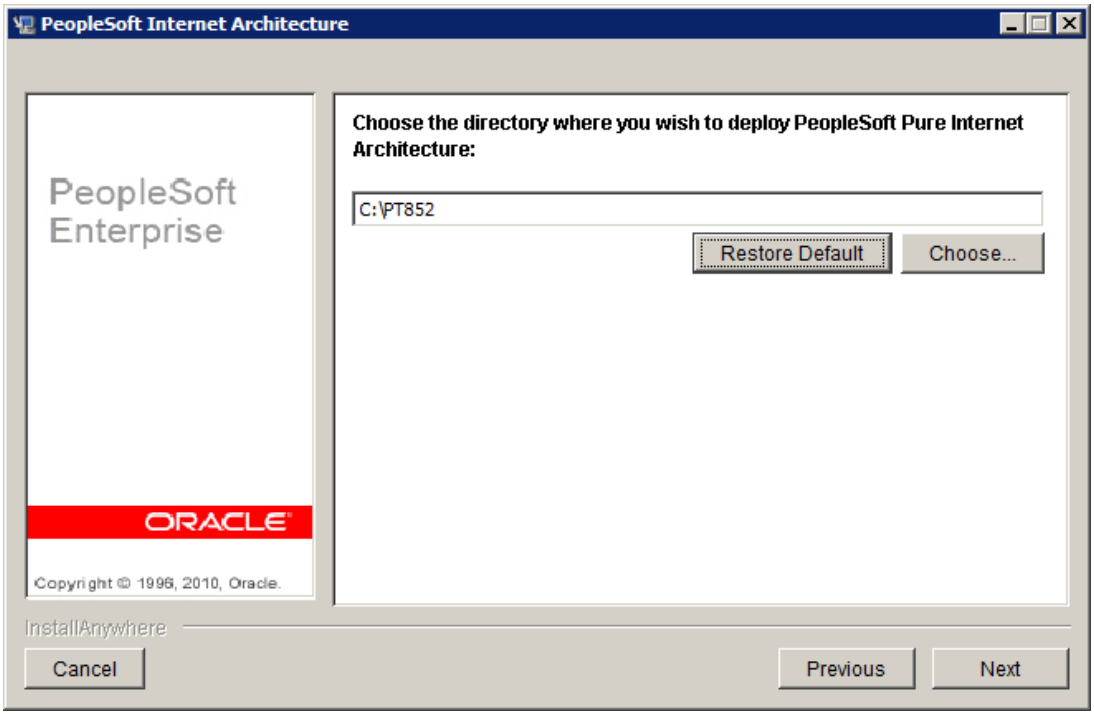
   The Welcome window appears.



PeopleSoft Internet Architecture Installation Welcome window

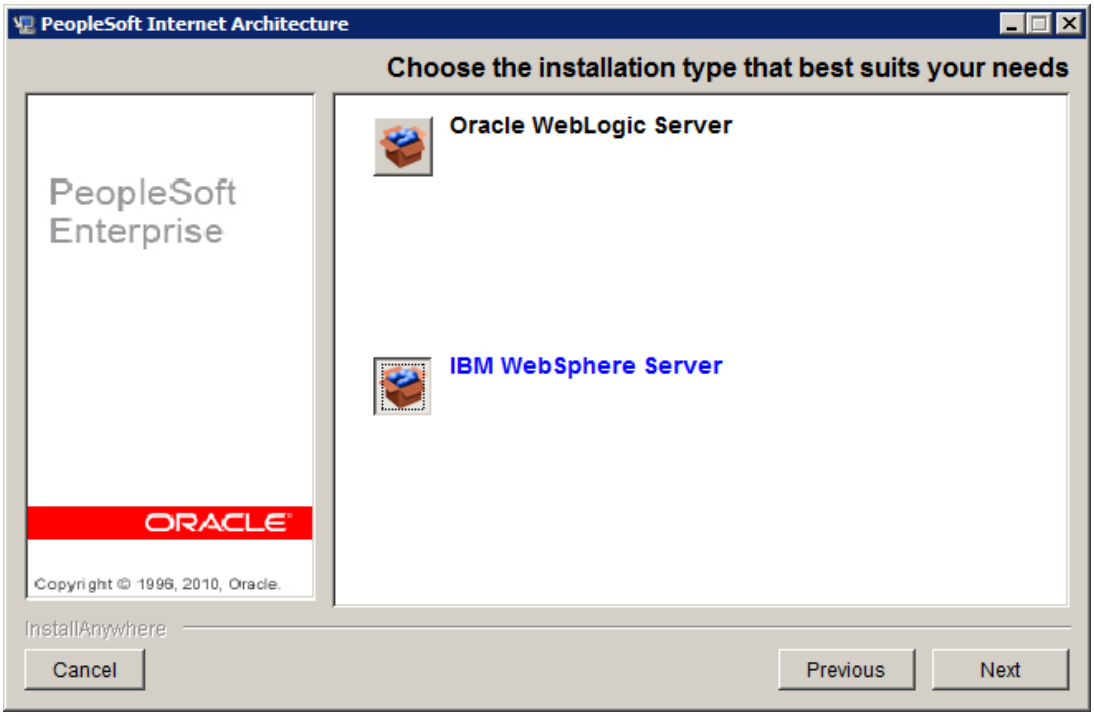
3. Click Next in the Welcome window, and specify the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to here as *PIA_HOME*.

   The default path for *PIA_HOME* is the *PS_CFG_HOME* path. In this example, the directory is the same as *PS_HOME*, C:\PT852.



Specifying the installation location for PeopleSoft Pure Internet Architecture

4. Select the option IBM WebSphere Server and click Next.

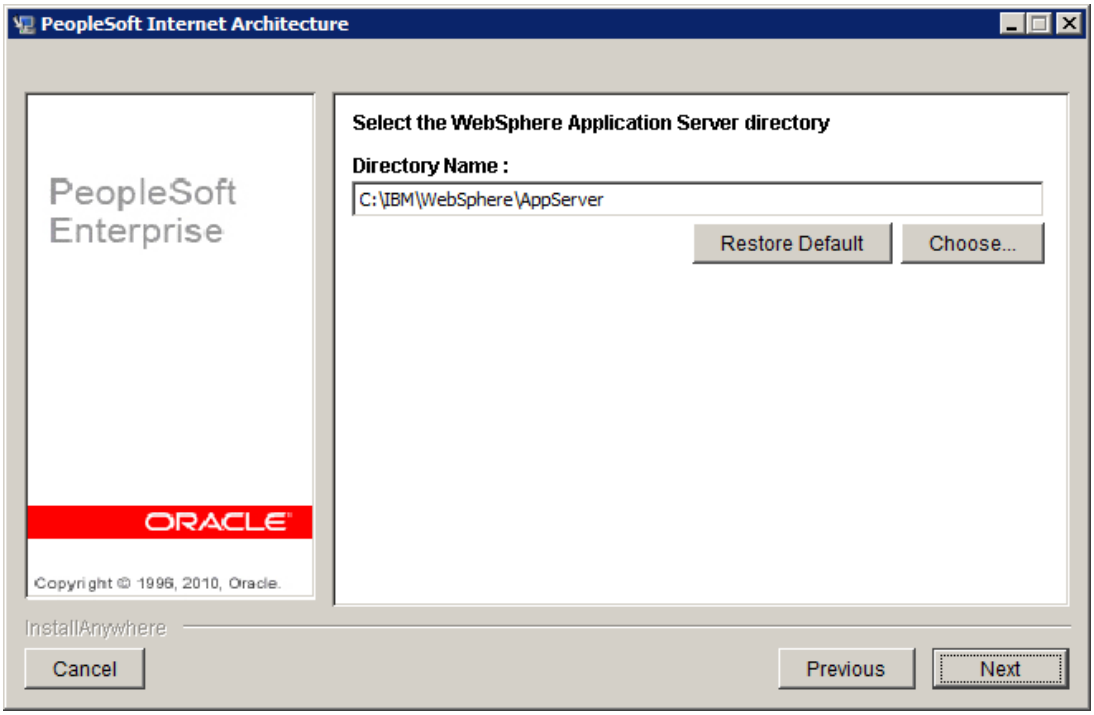


Selecting IBM WebSphere Server for PeopleSoft Pure Internet Architecture

5. Specify the directory where IBM WebSphere ND was installed, referred to as *WAS_HOME*.

   The directory in this example is C:\IBM\WebSphere\AppServer. Click Next.

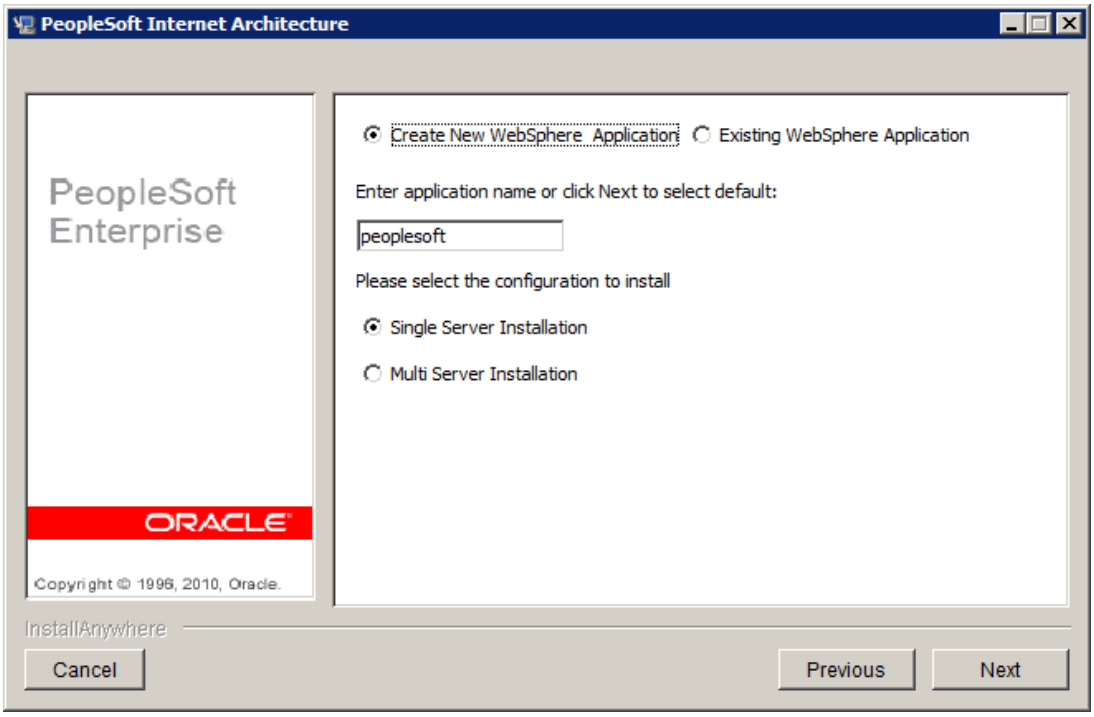
Note. If you specify a 32-bit installation of IBM WebSphere ND, a message appears asking you to confirm the decision. Keep in mind that PeopleSoft PeopleTools requires 64-bit IBM WebSphere ND.



Specifying the IBM WebSphere Application Server directory for the PeopleSoft Pure Internet Architecture

6. Choose whether to create a new IBM WebSphere application (domain) or to use an existing application, and specify the name of the application (referred to as *application_name* below). Enter an application name for this web server (for example, peoplesoft) and select the type of server you want to install.

Note. The name you specify here for each application must be unique for each IBM WebSphere node.

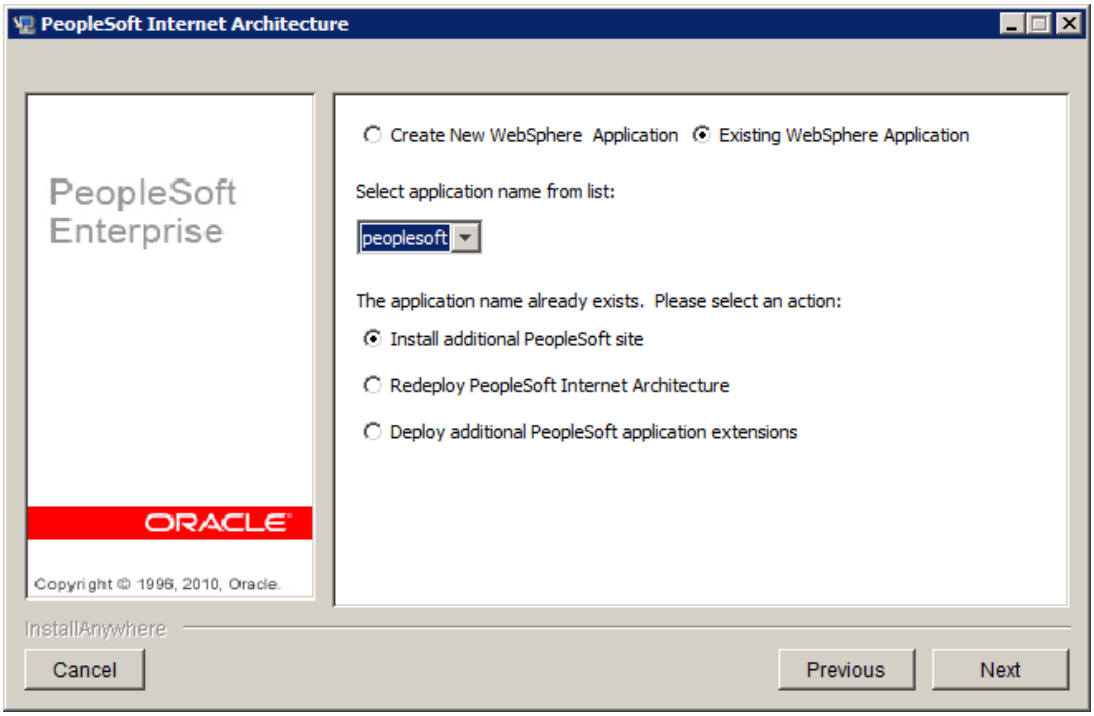


Specifying a new IBM WebSphere domain in a single server installation

- If you select Create New WebSphere Application, the install automatically generates a valid application name in the application name field. If you attempt to enter an invalid application name, you'll be prompted to enter a new application name or choose an existing application.
- If there is already a WebSphere application in *PIA_HOME*, the option Existing WebSphere Application is active, as described in the next step.

7. If you select the Existing WebSphere Application option, you can choose from a drop-down list of existing applications, and can select whether to install an additional PeopleSoft site, redeploy PeopleSoft Pure Internet Architecture, or deploy additional PeopleSoft application extensions. You can also choose a single-server of multi-server installation.

Note. Make sure the server is up and running before installing an additional PeopleSoft site, redeploying PIA, or deploying additional PeopleSoft application extensions.



Specifying an existing IBM WebSphere application

Install additional PeopleSoft site

Select this option to install only the necessary files for defining an additional PeopleSoft site onto the existing IBM WebSphere ND web server configuration.

Redeploy PeopleSoft Internet Architecture

This selection affects all of the PIA web applications installed to the local WebSphere Application Server profile. Select this option to redeploy applications that comprise web components of PIA.

Deploy additional PeopleSoft application extensions

This option is solely for use with PeopleSoft product applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see whether this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

Single-server installation

The Single Server Installation option creates one WebSphere Application Server profile to hold all the PeopleSoft web applications. The installer uses the Application Name you enter for the new profile's name.

Multi-server installation

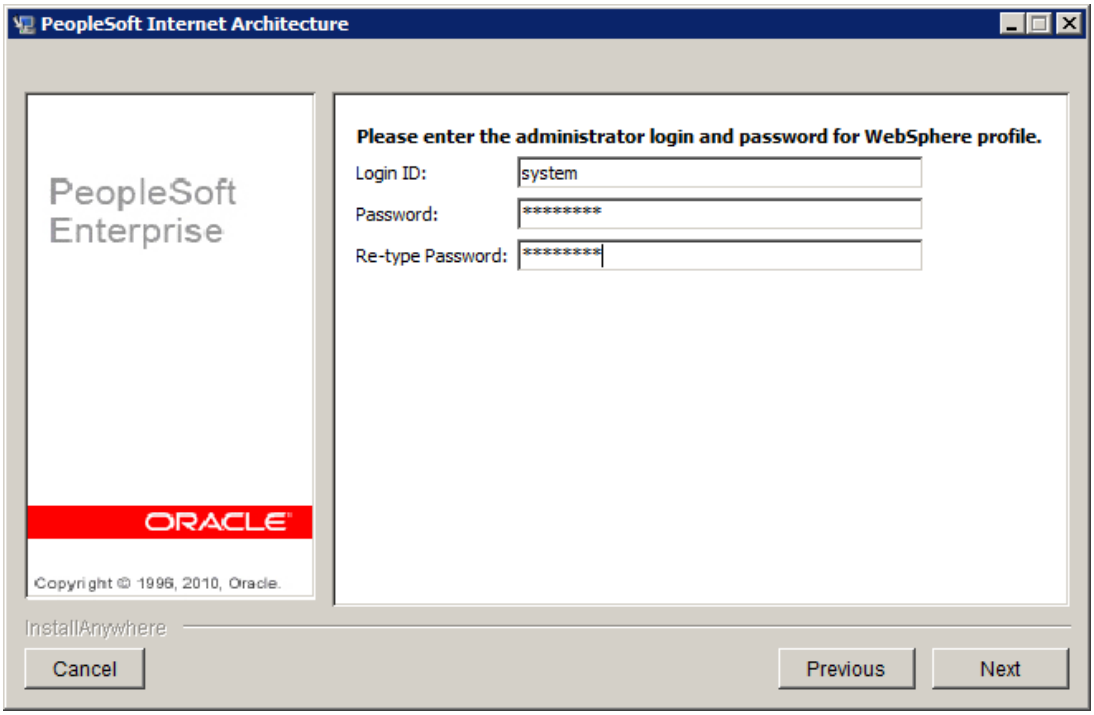
The Multi Server Installation option creates a single profile with the name you entered above, *application_name*. The *application_name* profile includes two servers, which deploy discrete functionality and are found on different ports, as specified in the following table:

Server Name	Purpose	HTTP or HTTPS Port Number
server1	PORTAL applications	X
psemhub	PeopleSoft Environment Management Framework applications (PSEMHUB)	X+1

8. Enter the IBM WebSphere administrator Login ID and password.

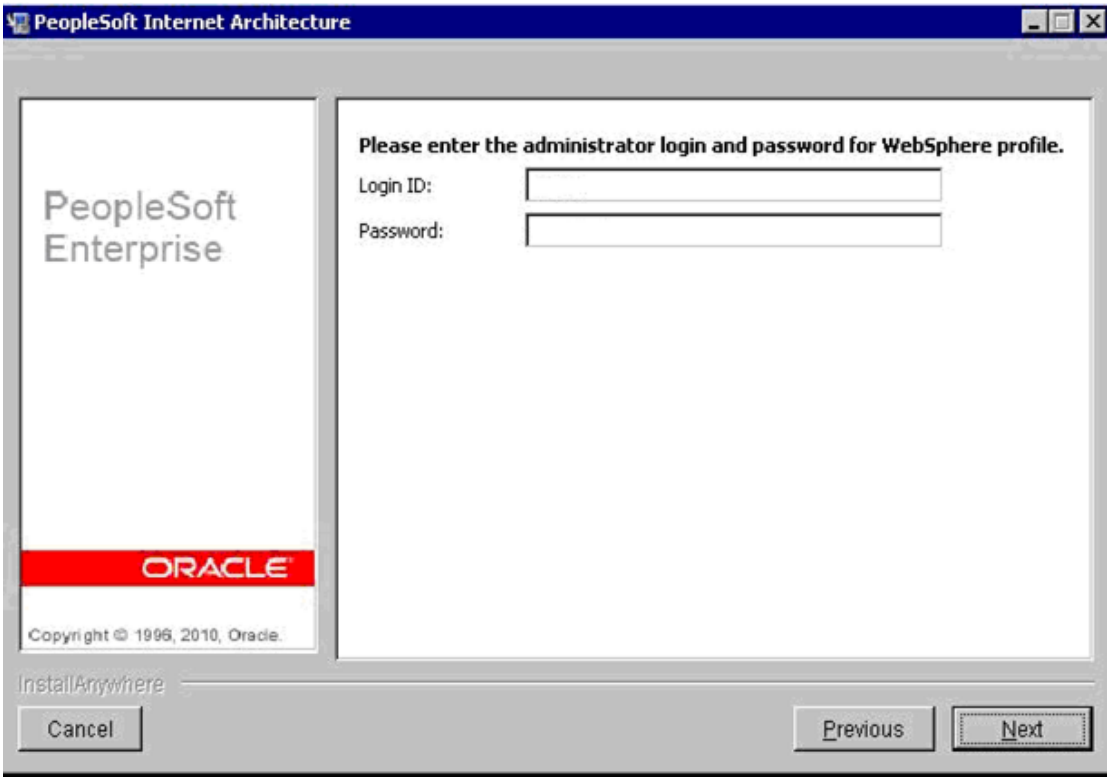
Note. The default Login ID is system, and the default password is Passw0rd (with a capital "P" and zero rather than the letter "o"). Use these criteria to log into the IBM WebSphere administrative console.

If you selected Create New WebSphere Application in the previous step, the following window appears.



Entering the IBM WebSphere administrator login and password

If you selected the Existing WebSphere Application option, and either Install additional PeopleSoft site or Redeploy PeopleSoft Internet Architecture, the following window appears. Enter the same Login ID and password as you entered for the original IBM WebSphere Application creation. If the Login ID and password do not match the original values, you cannot continue with the PIA installation.



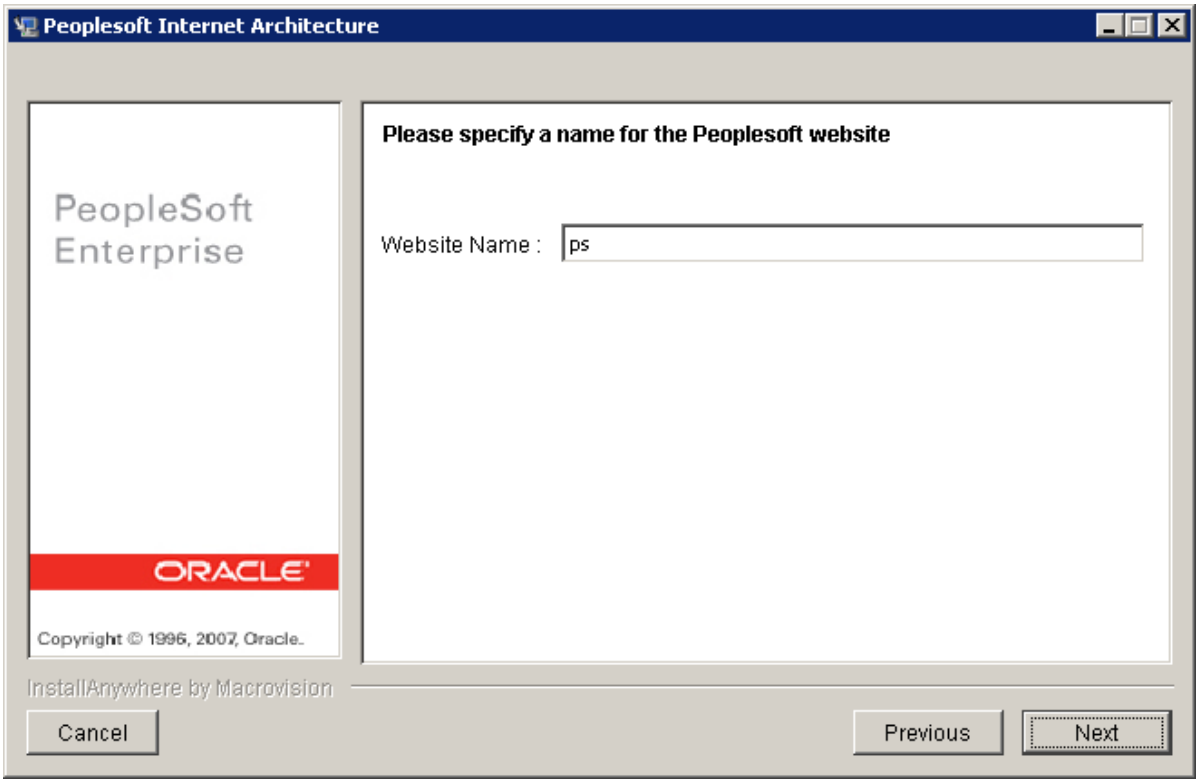
Entering the administrator login and password for an existing IBM WebSphere application

9. If there are PeopleSoft application packages in the archives directory, you'll be asked whether you want to deploy them.

   If you are using an existing domain, you'll only be prompted if you selected Deploy additional PeopleSoft extensions.

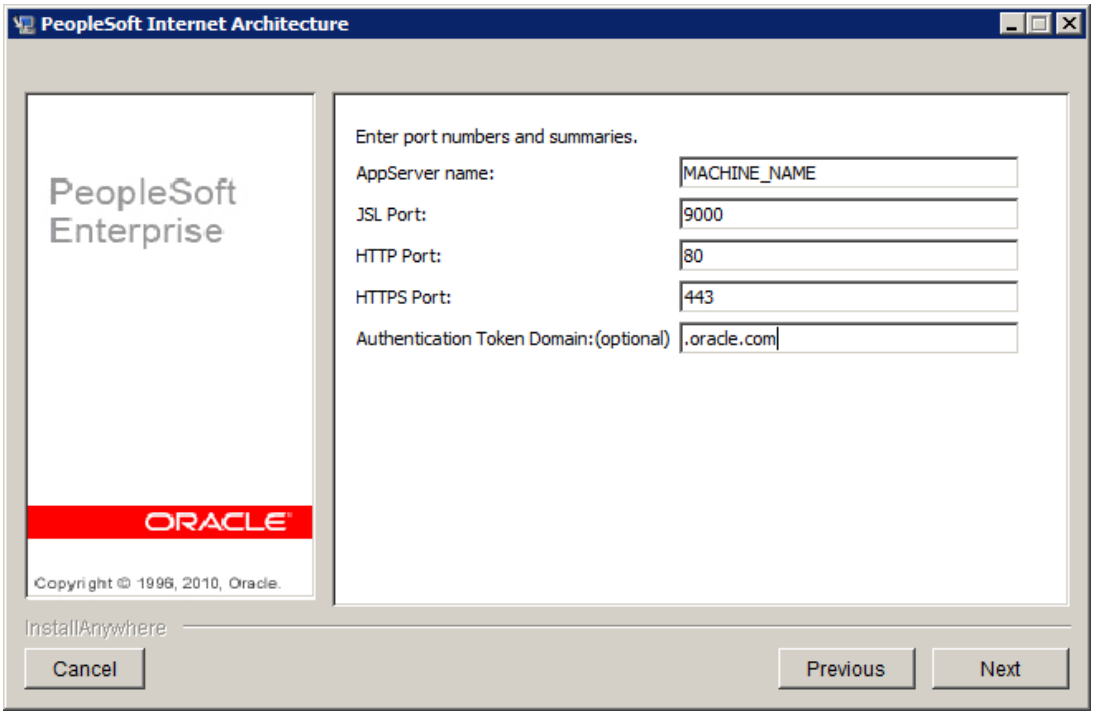
10. Enter a PeopleSoft web site name; the default is ps.

Warning! The site name can include underscores (_), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my_site_3 or my_newwin_site).



Entering the PeopleSoft web site name

11. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the authentication token domain, and click Next.



Specifying the Application Server, port numbers, and authentication token domain for PeopleSoft Pure Internet Architecture

- *AppServer name*

  For AppServer name, enter the name of your application server.

- *JSL port*

  For the JSL port, enter the JSL port number you specified when setting up your application server. (The default value is 9000.)

  See "Configuring the Application Server on Windows."

- *HTTP and HTTPS ports*

  When you enter HTTP and HTTPS port numbers, they will not be recognized until you restart your WebSphere server.

  In the case of Multi Server Installation type, HTTP and HTTPS ports *cannot* be consecutive numbers. The range for port number will be <Port#>-<Port#>+1 for the two application servers that the install creates. For example, if you select HTTP Port as 5555 and HTTPS port as 5560 then the ports are assigned as given below.

Server Name	HTTP Port Number	HTTPS Port Number
server1	5555	5560
psemhub	5556	5561

- *Authentication Token Domain*

  The value you enter for Authentication Token Domain must match the value you specify for the authentication domain when configuring your application server, as described earlier in this book. In addition, certain installation configurations require that you specify an authentication domain.

  See Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.

  If you enter a value for the Authentication Token Domain, the URL to invoke PIA must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PIA is http://MachineName:port/ps/signon.html. If you do enter a value for the authentication domain (for example, .myCompany.com), the URL to invoke PIA is http://MachineName.myCompany.com:port/ps/signon.html. The URL must also comply with the naming rules given earlier in this chapter.

  See "Understanding the PeopleSoft Pure Internet Architecture."

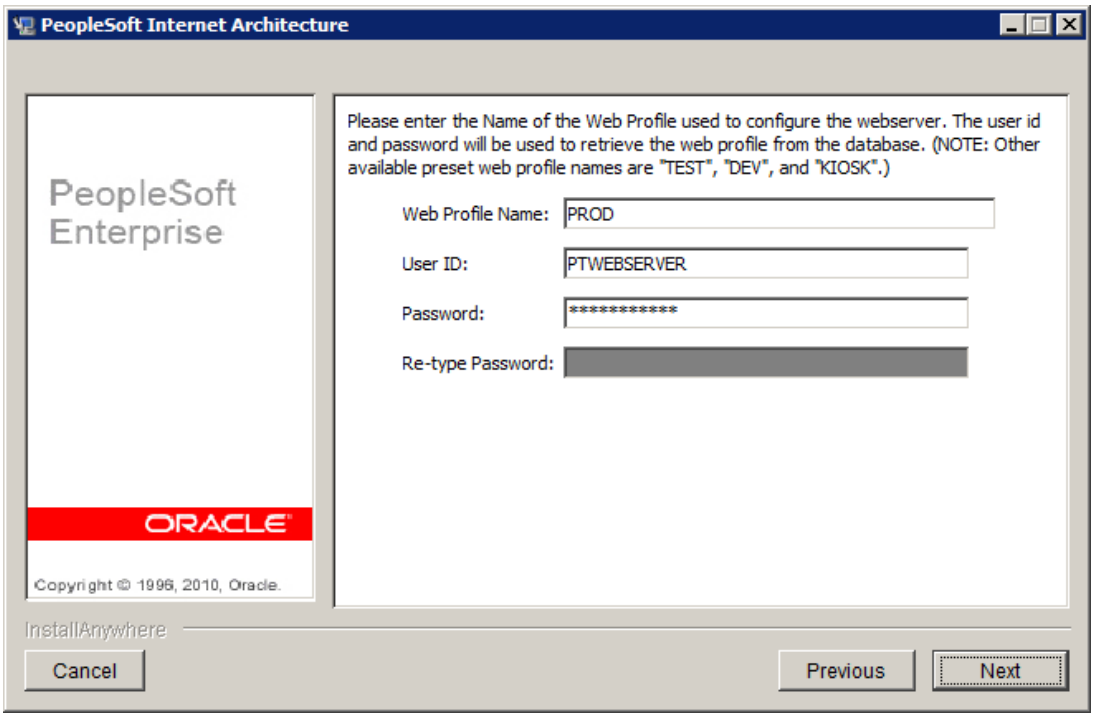
12. Accept the default for the web profile, PROD, or enter another name.

    The following example shows the default web profile name, PROD, and user ID, PTWEBSERVER.

    The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security.

    See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Note. If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step, as shown in this example. See *PeopleTools 8.52: Security Administration PeopleBook* for the steps required to add a User Profile.



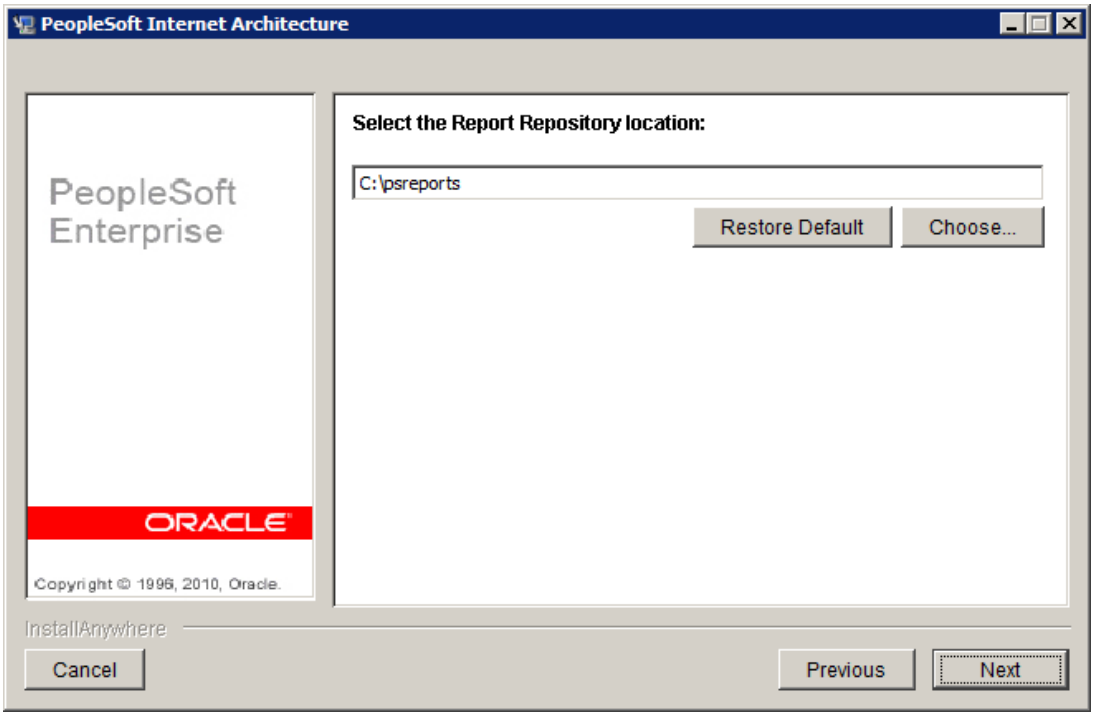
Specifying the Web Profile, User ID, and password

13. Specify the root directory for the Report Repository (c:\psreports by default), and click Next.

    Make sure that the report repository directory is shared, and that you have write access.

    Note. In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

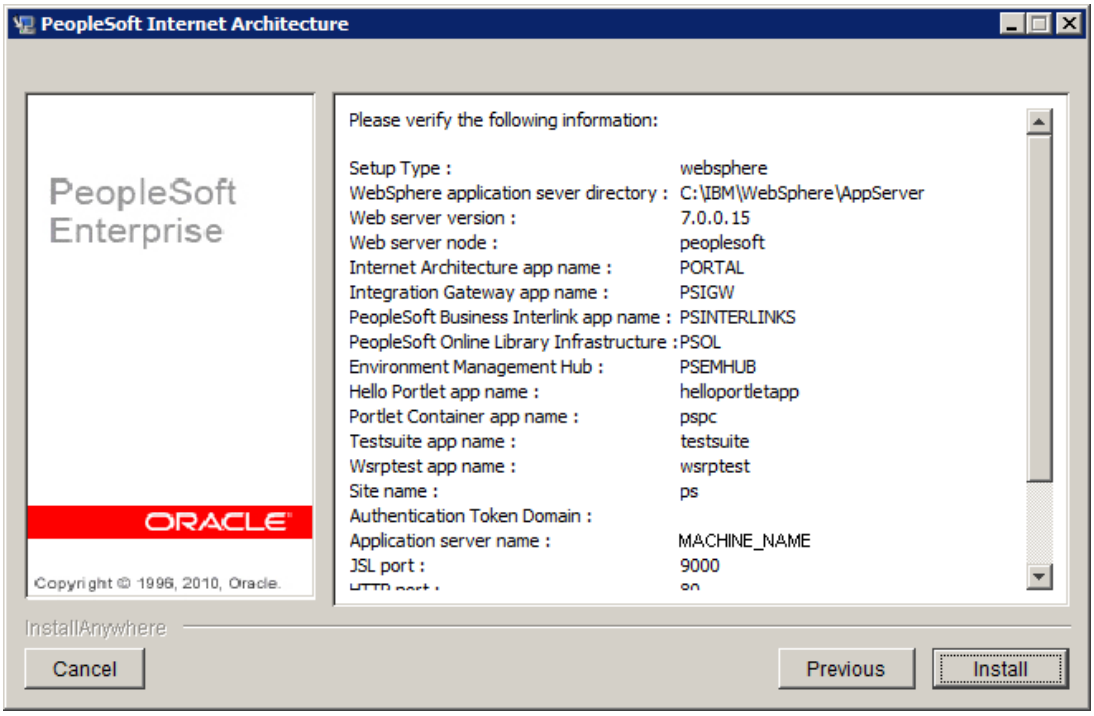
    See "Setting Up Process Scheduler on Windows," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.



Specifying the Report Repository location for PeopleSoft Pure Internet Architecture

14. Verify all your selections.

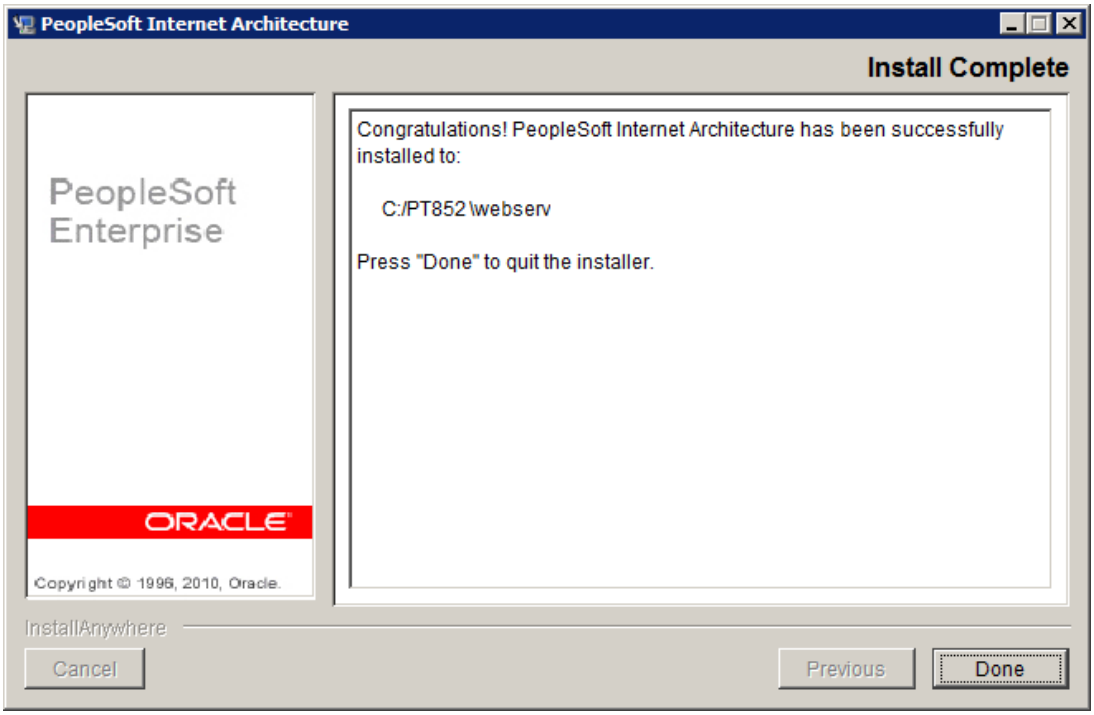
    The window lists the installation information, such as the web server type, directory, version, and so on. Click Back if you need to make any changes and click Next to begin the installation. An indicator shows the progress of your installation.



Verifying the installation options for PeopleSoft Pure Internet Architecture

15. Click Done to complete the installation.

    The window shows the installation directory, which is C:\PT852\webserv in this example. The default installation directory for a specific profile is <*PIA_HOME*>\webserv\<*profile_name*>.



PeopleSoft Pure Internet Architecture Install Complete window

Task 9A-3-2: Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

You cannot uninstall PeopleSoft Pure Internet Architecture simply by deleting <*PIA_HOME*>\webserv\<*profile_name*>, without uninstalling it from IBM WebSphere Administration Console. If you do so, the IBM WebSphere registry becomes corrupt, and subsequent attempts to install PeopleSoft Pure Internet Architecture will fail. Instead, if necessary, you must uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere as described here.

To uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere:

1. Open IBM WebSphere Administration Console at http://<machine-name>:9060/ibm/console
2. Log in as any user.
3. Choose Applications, Enterprise Applications.
4. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Stop.
5. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Uninstall.
6. Save your configuration.
7. Stop WebSphere server using the following commands:

   On Windows:


```
<PIA_HOME>\webserv\<profile_name>\bin\stopServer.bat server1
```

On UNIX or Linux:

```
<PIA_HOME>\webserv\<profile_name>\bin\stopServer.sh server1
```

8. In addition to uninstalling the application, you need to remove the WebSphere Application Server profile (that got created during PIA install) to complete the PIA uninstallation.

   To uninstall profile run the following steps:

   a. Go to <*PIA_HOME*>\webserv\<*profile_name*>\bin

   b. Run the following command

      On Windows:

      ```
      manageprofiles.bat -delete -profileName <profile_name>
      ```

      On UNIX

      ```
      manageprofiles.sh -delete -profileName <profile_name>
      ```

      where <profile_name> indicates the application name that you have selected during the PIA install.

   c. Delete the directory <*PIA_HOME*>\webserv\<*profile_name*>

Task 9A-4: Testing and Administering the PeopleSoft Pure Internet Architecture Installation

This section discusses:

- Verifying the PeopleSoft Pure Internet Architecture Installation
- Starting and Stopping Oracle WebLogic
- Starting and Stopping IBM WebSphere Application Servers
- Using PSADMIN to Start and Stop Web Servers
- Accessing the PeopleSoft Signon

Verifying the PeopleSoft Pure Internet Architecture Installation

After installing the PeopleSoft Pure Internet Architecture, you should make sure that your configuration is functional. You can test this by signing on to PeopleSoft, navigating within the menu structure, and accessing pages. (Make sure the application server is configured and booted.) This section includes procedures to start and stop the Oracle WebLogic or IBM WebSphere web servers whenever necessary.

Task 9A-4-1: Starting and Stopping Oracle WebLogic

If you are using the Oracle WebLogic web server, you need to sign on to Oracle WebLogic before using these commands. If you are using IBM WebSphere instead, go on to the next section. Use the following commands in the Oracle WebLogic domain directory.

Note. Starting from Oracle WebLogic 9.2 and later releases, all the Life-cycle management scripts and other batch scripts for the PIA server on Oracle WebLogic are located in <*PIA_HOME*>\webserv\<*domain_name*>\bin folder.

- To start Oracle WebLogic Server as a Windows service, use the following command:

  Single Server:

  ```
  installNTservicePIA.cmd
  ```

  Multiple Servers or Distributed Servers:

  ```
  installNTservice.cmd ServerName
  ```

  The resulting Windows service name will be *WebLogicDomain-WebLogicServer*. For example, to install a server named *PIA* as a Windows service in a domain named *peoplesoft*, run `installNTservice.cmd PIA` and you will see "peoplesoft-PIA" as a service.

- To remove an Oracle WebLogic server Windows service, use the following command:

  ```
  uninstallNTservicePIA.cmd Server Name
  ```

  Note. If you modify setenv.cmd, then you must uninstall the service using `uninstallNTServicePIA.cmd ServerName`, and then re-run `installNTServicePIA.cmd ServerName`.

- To start Oracle WebLogic Server as a foreground process on a single server, use the following commands:

  ```
  startPIA.cmd (on Windows)
  startPIA.sh (on UNIX)
  ```

- To start Oracle WebLogic Server as a foreground process on multiple-servers or distributed servers, use the following commands:

  a. Execute:

  ```
  startWebLogicAdmin.cmd (on Windows)
  startWebLogicAdmin.sh (on UNIX)
  ```

  b. Then:

  ```
  startManagedWebLogic.cmd ManagedServerName (on Windows)
  startManagedWebLogic.sh ManagedServerName (on UNIX)
  ```

- To stop the server, use the following commands:

  - Single Server:

  ```
  stopPIA.cmd (on Windows)
  stopPIA.sh (on UNIX)
  ```

  - Multiple Servers or Distributed Servers:

  ```
  stopWebLogic.cmd ManagedServerName (on Windows)
  stopWebLogic.sh ManagedServerName (on UNIX)
  ```

  See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*

Note. For more information on working with Oracle WebLogic multiple or distributed servers, search My Oracle Support.

Task 9A-4-2: Starting and Stopping IBM WebSphere Application Servers

This section discusses:

- Starting and Stopping IBM WebSphere Application Servers on Windows
- Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux
- Verifying the IBM WebSphere Installation

Starting and Stopping IBM WebSphere Application Servers on Windows

To start and stop the WebSphere Application Server Network Deployment 7.0 (WebSphere ND), use the WebSphere First Steps utility:

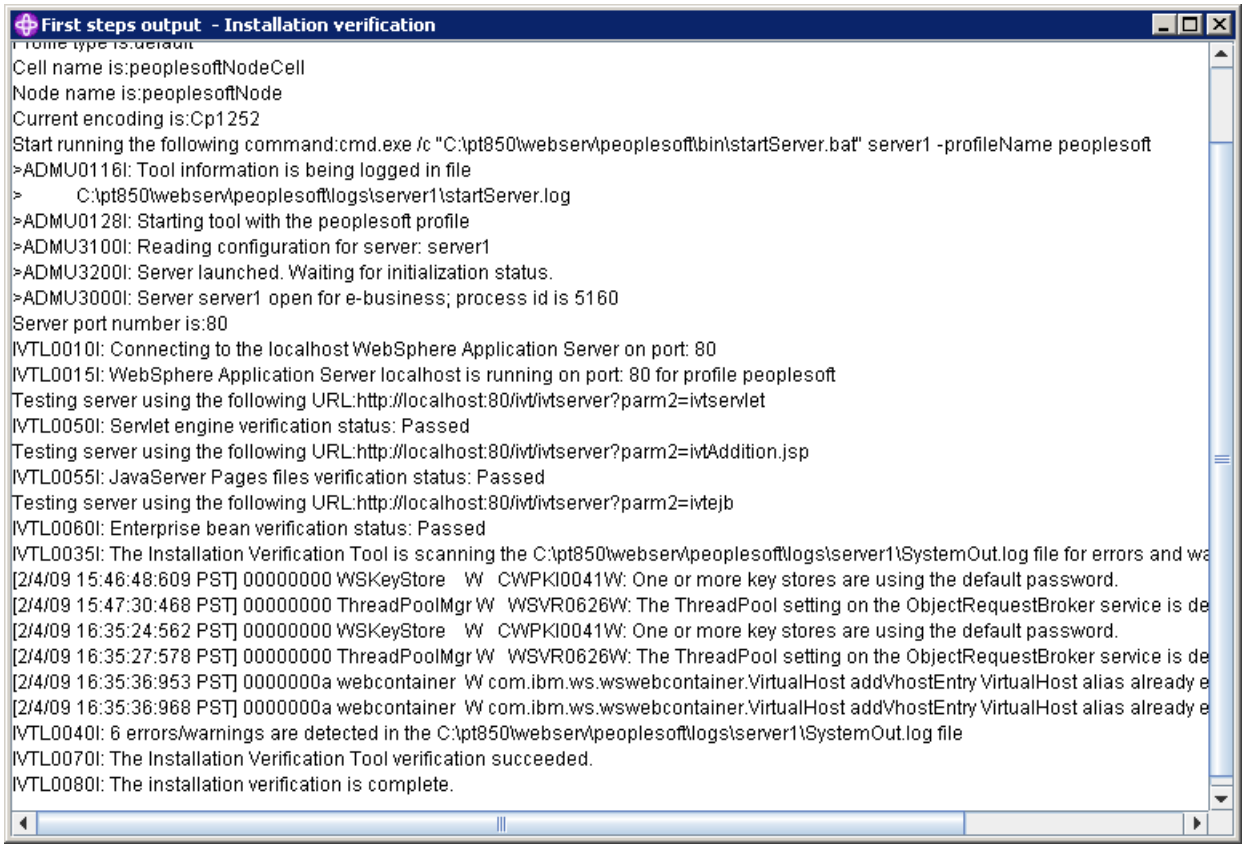
1. Select Start, Programs, IBM WebSphere, Application Server Network Deployment V7.0, Profiles*,profile_name*, First steps.

   The following example shows the First steps window for the default profile *peoplesoft*:

WebSphere Application Server First Steps window

2. Select the link Start the server.

   If the server starts properly, a verification window appears with several messages about the initialization process, as in this example:



First steps output - Installation verification window

3. To verify whether the server was installed and can start properly, click the link Installation Verification on the First Step window.

Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux

To start WebSphere ND on UNIX or Linux, use the following command:

```
<PIA_HOME>/webserv/<profile_name>/bin/startServer.sh <server_name>
```

For example:

```
/home/pt852/webserver/peoplesoft/bin/startServer.sh server1
```

To stop WebSphere ND, use the following command:

```
<PIA_HOME>/webserv/<profile_name>/bin/stopServer.sh <server_name>
```

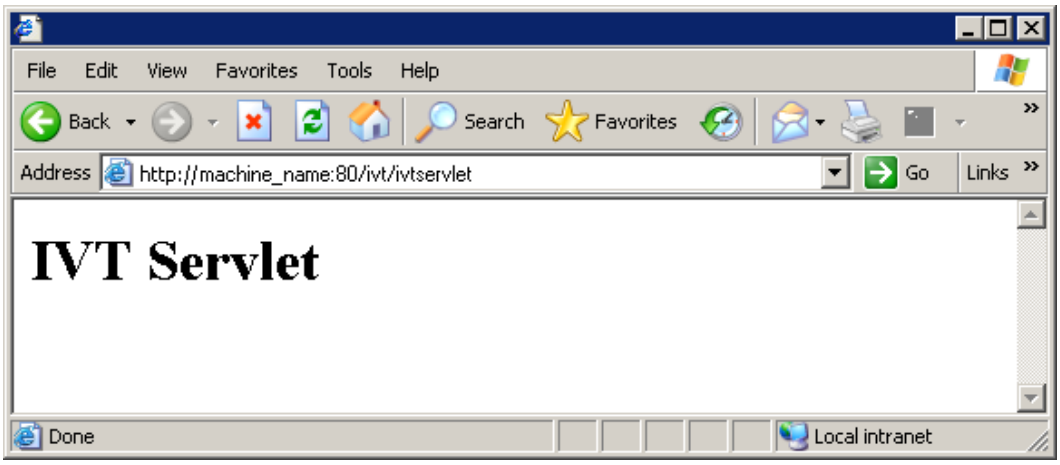
Verifying the IBM WebSphere Installation

Use this method to verify the WebSphere ND and PIA installation for both Windows and UNIX.

To verify the WebSphere ND and PIA installation, copy the following URL into a browser address bar, substituting your machine name and the http port number:

```
http://<machine_name>:<http_port>/ivt/ivtservlet
```

You should see the text “IVT Servlet” in the browser, as in this example:



IVT Servlet window

You should also sign into the PeopleSoft application, as described in a later section, to verify the installation.

See Accessing the PeopleSoft Signon.

Task 9A-4-3: Using PSADMIN to Start and Stop Web Servers

In addition to the methods given in the previous sections for starting and stopping Oracle WebLogic and IBM WebSphere web servers, in PeopleSoft PeopleTools 8.52 you can use PSADMIN to administer a web server domain.

See *PeopleTools 8.52: System and Server Administration PeopleBook*

To start and stop web servers:

1. Go to the *PS_HOME*/appserv directory and run PSADMIN.
2. Specify *4* for Web (PIA) Server.

```
--------------------------------
PeopleSoft Server Administration
--------------------------------

  Config Home:  C:\psft_AppServ

  1) Application Server
  2) Process Scheduler
  3) Search Server
  4) Web (PIA) Server
  5) Switch Config Home
  6) Service Setup
  7) Replicate Config Home
  q) Quit

Command to execute (1-7, q): 4
```

The location of Config Home is the current working directory. The PSADMIN utility determines the Config Home directory by checking for the PS_CFG_HOME environment variable. If that is not set, it checks for the presence of domains in the default *PS_CFG_HOME* location. If none exists, it uses the *PS_HOME* location from which it was launched.

See "Preparing for Installation," Defining Server Domain Configurations.

3. Select *1* for Administer a domain.

```
-----------------------------
PeopleSoft PIA Administration
-----------------------------

  PIA Home:   C:\psft_WebServ

  1) Administer a domain
  2) Create a domain
  3) Delete a domain

  q) Quit

Command to execute: 1
```

The PSADMIN utility determines the PIA Home location displayed here by first checking for a PIA_HOME environment variable. If none is set, it checks for the PS_CFG_HOME environment variable. If neither is set, it uses the default PS_CFG_HOME directory.

4. Select the domain you want to administer by entering the appropriate number.

```
-----------------------------------------------------
PeopleSoft PIA Domain Administration - Choose a Domain
-----------------------------------------------------
1) OnWls1034R607
2) peoplesoft

q) Quit

Command to execute: 2
```

5. To start a web server domain, enter *1*, Boot this domain.

```
------------------------------------
PeopleSoft PIA Domain Administration
------------------------------------

  PIA Home:   C:\psft_WebServ
  PIA Domain: peoplesoft: stopped

  1) Boot this domain
  2) Shutdown this domain
  3) Get the status of this domain
  4) Configure this domain
  5) Edit configuration files
  6) View log files
  7) Administer a site
  8) Delete a site
  9) Windows Service Setup
```



```
  q) Quit

Command to execute: 1
```

The boot command invokes the startPIA.cmd script, and you see the progress and a status message on the console window.

```
Starting the domain.................
The domain has started.
```

6. To stop a web server domain, select *2*, Shutdown this domain.

   The shutdown command invokes the stopPIA.cmd script, and you see the progress and a status message on the console window.

```
Stopping the domain.....
Verifying domain status..........
The domain has stopped.
```

7. To set up a Windows service, select *9*, Windows Service Setup.
8. Select *1* to install a service, or *2* to remove it.

   This command invokes the installNTservice script, and creates a service named *WebLogicDomain-WebLogicServer*.

```
---------------------
Windows Service Setup
---------------------

  PIA Home:   C:\psft_websrv
  PIA Domain: peoplesoft: started

  1) Install Service
  2) Uninstall Service

  q) Quit

Command to execute:
```

Task 9A-4-4: Accessing the PeopleSoft Signon

To access the PeopleSoft signon:

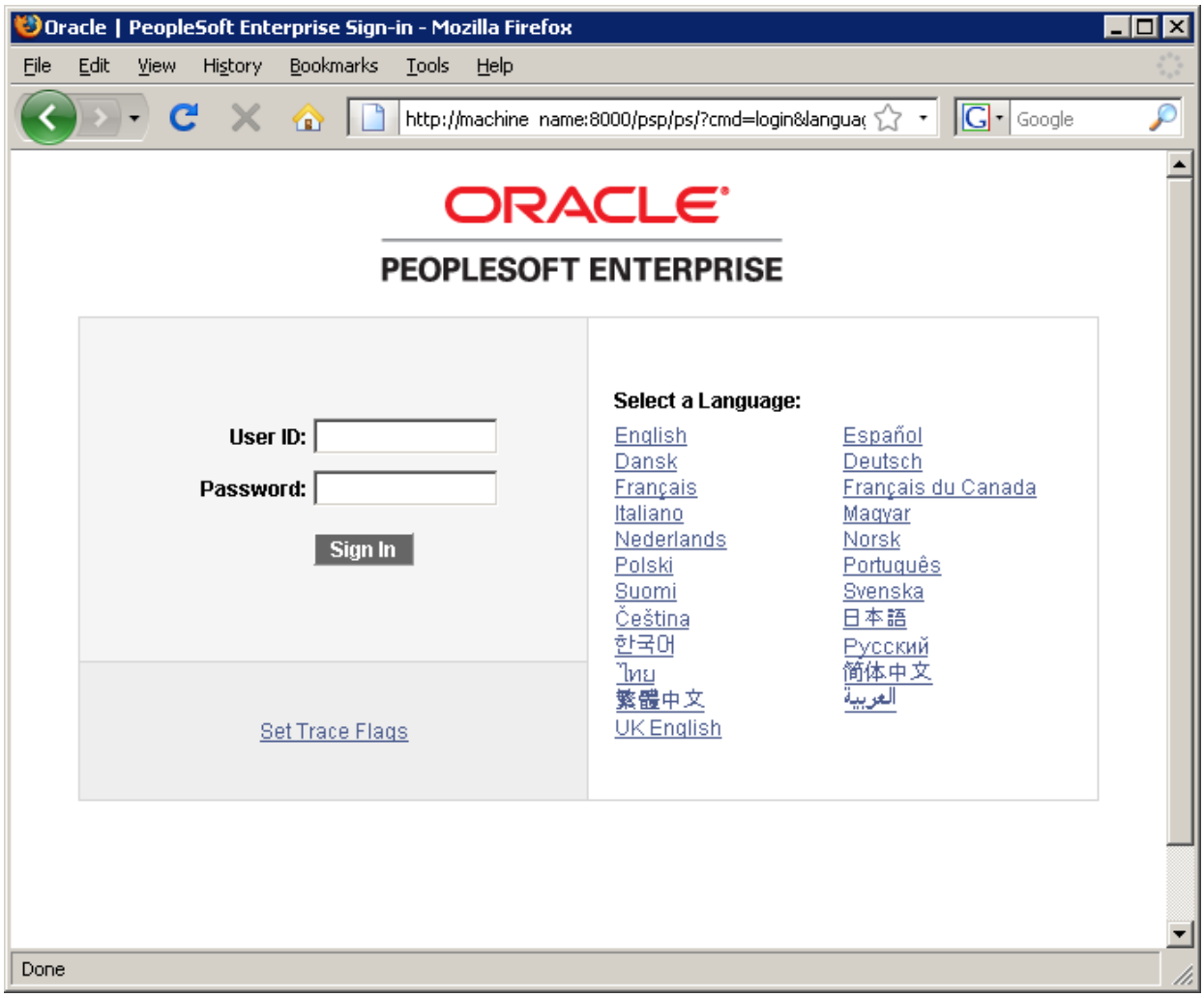
1. Open your web browser.
2. Enter the name of the site you want to access—for example (the default value for <*site_name*> is ps):

   http://<*machine_name*>:<*http_port*>/<*site_name*>/signon.html

---

Note. PeopleSoft Pure Internet Architecture installed on IBM WebSphere server listens at the HTTP/HTTPS ports specified during the PeopleSoft Pure Internet Architecture install. Invoke PeopleSoft Pure Internet Architecture through a browser by using the specified HTTP or HTTPS ports—that is, http://<*WebSphere_machine_name*>:<*server_port*>/<*site_name*>/signon.html (if AuthTokenDomain is not specified) or http://<*WebSphere_machine_name.mycompany.com*>:<*server_port*>/<*site_name*> /signon.html (if you specified .mycompany.com as the AuthTokenDomain).

This will take you to the sign-in window corresponding to your browser's language preference. This example shows the sign-in window in a Mozilla Firefox browser, before signing in.



Oracle PeopleSoft Enterprise Sign in window

Note. If you do not see the signon screen, check that you supplied all the correct variables and that your application server and the database server are running.

3. Sign in to the PeopleSoft system by entering a valid user ID and password.

Note. The user ID and password are case sensitive. You need to enter the user ID and password using UPPERCASE characters.

Different applications use different default user IDs and passwords. For instance, for HRMS applications you enter PS for the user ID and the password. For Financials applications, you enter VP1 for the user ID and the password. Your application-specific install instructions contain any custom, delivered user IDs that you should use for the demonstration environment.

Task 9A-5: Completing Post-Installation Steps

This section discusses:

- Updating the Installation Table
- Updating PeopleTools Options
- Updating Database Information

Task 9A-5-1: Updating the Installation Table

After you complete the installation process, creating the database, installing the Application Server, and installing the PeopleSoft Pure Internet Architecture, you must complete this additional step. The license codes from the Oracle license code site mentioned earlier install all products available in the installation package. This post-installation step ensures that only the products for which you are licensed are active in the installation. The location of the installation table in the PeopleSoft Pure Internet Architecture menu varies depending upon the application that you installed.

To update the installation table:

1. Sign on to the PeopleSoft Pure Internet Architecture in a browser.
2. Select Setup *Application_name* (where Application_name is the PeopleSoft application you installed), Install, Installation Table.

   Select the Products tab.
3. Clear the check boxes for the products for which you have not obtained a license.

See Also

"Using the PeopleSoft Installer," Obtaining License Codes

Accessing the PeopleSoft Signon

Task 9A-5-2: Updating PeopleTools Options

You can set the following options on the PeopleTools Options page:

- Multi-Currency — Select this check box if you plan to use currency conversion.

  See *PeopleTools 8.52: Global Technology PeopleBook,* "Controlling Currency Display Format."
- Base Time Zone — Enter a value for the base time zone for your PeopleTools database.

  See *PeopleTools 8.52: Global Technology PeopleBook* "Setting and Maintaining Time Zones."
- Data Field Length Checking — Select Others from the drop-down list.

  Note. The MBCS option is not supported for DB2 for z/OS.

  See *PeopleTools 8.52: Global Technology PeopleBook,* "Selecting and Configuring Character Sets and Language Input and Output."
- Sort Order Option — If you specified a non-binary sort order for your database, choose the Sort Order Option that most closely approximates your database sort order.

See *PeopleTools 8.52: Global Technology PeopleBook,* "Sorting in PeopleTools."

Task 9A-5-3: Updating Database Information

The database information updated in this procedure is used by the PeopleSoft software update tools to identify your PeopleSoft database when searching for updates. These steps should be followed for all additional databases that you create to enable the accurate identification of your databases.

1. Sign on to your PeopleSoft database.
2. Navigate to PeopleTools, Utilities, Administration, PeopleTools Options.
3. Specify long and short names for your environment. For example:
   - Environment Long Name — Customer HR Demo Database
   - Environment Short Name — HR Demo DB
4. Select a system type from the drop-down list. For example, Demo Database.
5. Save your changes.

CHAPTER 9B

Setting Up the PeopleSoft Pure Internet Architecture in Console Mode

This chapter discusses:

- Understanding PeopleSoft Pure Internet Architecture
- Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation
- Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade
- Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in Console Mode
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in Console Mode
- Installing the PeopleSoft Pure Internet Architecture in Silent Mode
- Testing and Administering the PeopleSoft Pure Internet Architecture Installation
- Completing Post-Installation Steps

Understanding PeopleSoft Pure Internet Architecture

This chapter explains how to install and configure the components of the PeopleSoft Pure Internet Architecture in console mode and in silent mode. It includes instructions for installing the PeopleSoft files on Oracle WebLogic and IBM WebSphere. Only complete the instructions for the web server product that you installed.

Note. The console mode installation is typically used on UNIX platforms.

See "Installing Web Server Products."

The setup program for the PeopleSoft Pure Internet Architecture is installed to the web server machine when you run the PeopleSoft Installer and select the PeopleSoft Web Server option.

See "Using the PeopleSoft Installer."

Oracle only supports customer installations that use the version of the web servers packaged with PeopleSoft PeopleTools. *You must install the web server before you install the PeopleSoft Pure Internet Architecture.* Before you install the PeopleSoft Pure Internet Architecture, you must also have configured an application server, as described in the previous chapter.

The location where you install the PeopleSoft Pure Internet Architecture is referred to in this documentation as *PIA_HOME*. You can specify different locations for *PS_HOME* and *PIA_HOME*. After you complete the PeopleSoft Pure Internet Architecture installation, you can locate the installation files in the directory *PIA_HOME*/webserv.

For PeopleSoft PeopleTools 8.51 and later, if you are setting up the PeopleSoft Pure Internet Architecture on a Microsoft Windows platform, the directory and path that you specify for *PIA_HOME* may include spaces. However, parentheses in the directory name (for example, “C:\Program Files (x86)”) are *not* allowed for *PIA_HOME*.

See "Preparing for Installation," Defining Installation Locations.

Before performing the steps in this chapter, verify that Sun’s international version of JRE version 6 or higher is properly installed on the system and its path is in the system’s environment variable PATH.

If your web server is on a different machine than your application server, you need to make sure you have JRE installed on your web server to run the PeopleSoft Pure Internet Architecture installation.

Note. If you encounter the error message “No Matching JVM,” you need to specify the location of the Java Runtime Environment (JRE) to the installer using the –javahome command line parameter; for example: `<PS_HOME>/setup/PsMpPIAInstall/setup.sh -tempdir <temporary_directory> -javahome <jredir>`.

The initial PeopleSoft Pure Internet Architecture setup automatically creates the default PeopleSoft site named ps. In subsequent PeopleSoft Pure Internet Architecture setups, change the site name from *ps* to a unique value. We recommend using the database name. This is handy for easy identification and ensures that the database web server files are installed in a unique web site.

The URL that you use to invoke the PeopleSoft Pure Internet Architecture must conform to ASN.1 specifications. That is, it may contain only alphanumeric characters, dots (".."), or dashes ("-"). The URL must not begin or end with a dot or dash, or contain consecutive dots (".."). If the URL includes more than one portion, separated by dots, do not use a number to begin a segment if the other segments contain letters. For example, "mycompany.second.country.com" is correct, but "mycompany.2nd.country.com" is wrong.

Review the following additional notes before beginning the PeopleSoft Pure Internet Architecture installation:

- If you want to connect between multiple application databases, you need to implement single signon.
- If the PeopleSoft Pure Internet Architecture installation encounters an error, it will indicate which log files to refer to.

  See "Installing Web Server Products."
- The machine on which you run the PeopleSoft Pure Internet Architecture install must be running in *256 color mode*. This is not necessary for UNIX or console mode.

Note. We do not support web servers on z/OS.

The PeopleSoft Pure Internet Architecture installation includes the following products:

- *PeopleSoft Pure Internet Architecture.* This product is the centerpiece of the PeopleSoft architecture that enables users to work on a machine with only a supported browser installed. This option installs the servlets required for deploying PeopleSoft Applications and for the PeopleSoft portal. The portal packs and PeopleSoft Portal Solutions have their own installation instructions, which are available on My Oracle Support. For an overview of the various types of portals, consult the following PeopleBook.

  See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*
- *PeopleSoft Report Repository.* This product works in conjunction with Process Scheduler to allow report distribution over the web.
- *PeopleSoft Integration Gateway.* This product is the entry and exit point for all messages to and from the Integration Broker. Its Java-based Connector architecture allows asynchronous and synchronous

messages to be sent over a variety of standard protocols, many that are delivered at install, or through custom connectors.

Important! For PeopleSoft PeopleTools 8.50 and higher, review the section on security properties for Integration Gateway. When setting the properties in the integrationGateways.properties file, the property secureFileKeystorePasswd must be encrypted, and the secureFileKeystorePath must be set.

See *PeopleTools 8.52: Integration Broker Administration PeopleBook,* "Managing Integration Gateways."

- *PeopleSoft CTI Console.* This product works in conjunction with CTI vendor software to enable call center agents to take advantage of browser based teleset management and automatic population of application pages with relevant data associated with incoming calls, such as customer or case details.

  See *PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook.*

- *Environment Management Hub.* The Environment Management hub is a web application that is installed with the PeopleSoft Pure Internet Architecture and portal. It is started along with the rest of the web applications when the user boots the web server. You cannot start the Environment Management Hub on a server that is configured to run HTTPS; in other words, if you plan to run Environment Management, your PIA server needs to be configured in HTTP mode.

  See *PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook.*

See Also

PeopleTools 8.52: Security Administration PeopleBook

PeopleTools 8.52: System and Server Administration PeopleBook

Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation

You have the option to specify an authentication domain when you install the PeopleSoft Pure Internet Architecture on Oracle WebLogic or WebSphere.

Note. The authentication domain was referred to as the Authentication Token Domain in previous releases, and that term is still seen in the software.

When an authentication domain is specified during the PeopleSoft Pure Internet Architecture install, that value gets used as the Cookie domain in the web server configuration. The main requirements when setting a cookie domain are:

- The host must have a fully qualified domain name (FQDN). The requirement that you must have a domain name does not imply that you must have a DNS, but you do need some type of naming service such as DNS or some managed ../etc/hosts file that contains a list of the servers with their domain name.
- The cookie domain value being set must begin with a dot (.ps.com is valid, ps.com is NOT valid).
- The cookie domain value being set must contain at least 1 embedded dot (.ps.com is valid, .corp.ps.com is valid, .com is NOT valid).
- The cookie domain value can only be a single domain name. It cannot be a delimiter-separated list of domains.

By default, the browser only sends cookies back to the machine that set the cookie. So if web server crm.yourdomain.com sets a cookie, the browser will only send it back there. You can make the browser send the single signon cookie to all servers at yourdomain.com by typing your domain name in the Authentication Token Domain list box of web server crm.

Specifying the authentication domain may be necessary in certain cases. For example, if you plan to use the PeopleSoft portal technology, be sure to read the supporting documentation to determine whether setting the authentication domain is required for correct operation.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Specify an authentication domain if you plan to run a REN Server. REN Servers are required for PeopleSoft MultiChannel Framework, Reporting, and some PeopleSoft CRM applications supported by PeopleSoft MultiChannel Framework.

See *PeopleTools 8.52: PeopleSoft MultiChannel Framework PeopleBook.*

Specify an authentication domain if you plan to use Business Objects Enterprise.

See "Installing and Configuring Software for Crystal Reports," Installing SAP BusinessObjects Enterprise XI 3.1.

Task 9B-1: Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade

If you are installing into an existing *PS_HOME* or *PS_CFG_HOME* in preparation for a tools-only upgrade, perform the following instructions to remove any obsolete files.

Stop the web server before performing the PeopleSoft Pure Internet Architecture installation or uninstallation.

Depending on your web server platform, complete the following steps to clean up previous PeopleSoft Pure Internet Architecture sites:

- Oracle WebLogic

  Shut down Oracle WebLogic and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform. Alternatively, delete the contents of one of the following directories:

  - For PeopleSoft PeopleTools 8.43.x or earlier: <*weblogic_home*>\wlserver6.1\config\<*domain_name*>*
  - For PeopleSoft PeopleTools 8.44.x to 8.49.x: <*PS_HOME*>\webserv\<*domain_name*>*
  - For PeopleSoft PeopleTools 8.50.x or later: <*PIA_HOME*>\webserv\<*domain_name*>*

- IBM WebSphere

  Shut down IBM WebSphere and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform.

Task 9B-2: Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in Console Mode

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic
- Uninstalling the PeopleSoft Pure Internet Architecture from Oracle WebLogic

Task 9B-2-1: Prerequisites

This section describes how to install the PeopleSoft Pure Internet Architecture on Oracle WebLogic. Before you install the PeopleSoft Pure Internet Architecture (PIA) on Oracle WebLogic, you must have installed the Oracle WebLogic software. PeopleSoft PeopleTools 8.52 supports 64-bit Oracle WebLogic 10.3.4.

See "Installing Web Server Products," Installing Oracle WebLogic Server.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Oracle WebLogic."

Task 9B-2-2: Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic

To install the PeopleSoft Pure Internet Architecture on Oracle WebLogic:

1. Change directory to *PS_HOME*/setup/PsMpPIAInstall and run one of these commands:

   ```
   setup.sh -tempdir <temporary_directory>
   ```

   See "Using the PeopleSoft Installer," Prerequisites.

   A welcome message appears.

2. Press ENTER at the Welcome prompt to continue.

   ```
   Welcome to the InstallShield Wizard for PeopleSoft Internet Architecture.
   Using the InstallShield Wizard you will install PeopleSoft Internet⇒
    Architecture on your computer.
   Version: 8.52
   If installing onto a BEA WebLogic Server, make sure to shutdown any running⇒
    webservers to avoid web server configuration.
   Press 1 for Next, 3 to Cancel, or 5 to Redisplay [1]/
   ```

3. Enter the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to here as *PIA_HOME*.

   ```
   Choose the directory where you wish to deploy the PeopleSoft Pure Internet⇒
    Architecture:

     Please specify a directory name or press Enter
   [/home/PT852]:
   ```

4. Enter *1* to select the Oracle WebLogic Server.


```
Choose the installation type that best suits your needs
  ->1- Oracle WebLogic Server
    2- IBM WebSphere Server

To select an item enter its number, or 0 when you are finished [0]:
```

5. Enter the top-level directory where Oracle WebLogic is installed.

```
Select the web server root directory [/opt/bea]: /data4/WLS_HOME

Detected web server version: WebLogic 10.3.4
```

Note. You will get an error message if you specify a directory that does not contain Oracle WebLogic, or that contains an incorrect Oracle WebLogic version, or a 32-bit Oracle WebLogic.

6. Enter the administrator login and password for your Oracle WebLogic domain, or accept the default values. Press ENTER to continue.

   The password must be at least 8 alphanumeric characters with at least one number or special character.

Note. The default login ID is system, and the default password is Passw0rd (with a capital "P" and zero rather than the letter "o"). It is good practice to change to a password other than the default.

```
Please enter the administrator login and password for WebLogic domain.

Login ID [system]:

Password [Passw0rd]:

Re-type Password [Passw0rd]:
```

7. At this prompt you must choose whether to create a new Oracle WebLogic domain or to use an existing domain.

```
->1- Create New WebLogic Domain
  2- Existing WebLogic Domain
```

8. If you select Create New WebLogic domain, the installation process automatically generates a valid domain name in the domain name field.

   If you attempt to enter an invalid domain name, you see a prompt asking you to enter a new domain name or choose an existing domain.

```
Enter domain name or click Next to select default [peoplesoft]:
```

9. If you select Existing WebLogic Domain, select the domain name from the list:

```
Select application name from list:
->1- ptwls
  2- ptwls2
```

10. If you select Existing WebLogic Domain, select one of these options:

Note. You only see the option Existing WebLogic Domain if there is already a domain in *PIA_HOME*.

- *Install additional PeopleSoft site*

  This option is relevant only to the PeopleSoft PORTAL web application, and does not modify or revert any other configuration settings. Select this option to install only the necessary files for defining an additional PeopleSoft site onto an existing Oracle WebLogic configuration. The new site will be accessed using its name in the URL. A site named "CRM" would be accessed using a URL similar to http://<mywebserver_machine>/CRM. To reset or re-create an existing PeopleSoft site, simply enter that site's name as the site to create. On your web server, a PeopleSoft site is comprised of the following directories within the PORTAL web application:

  <*WEBLOGIC_DOMAIN*>/applications/peoplesoft/PORTAL/<*site*>/*

  <*WEBLOGIC_DOMAIN*>/applications/peoplesoft/PORTAL/WEB-INF/psftdocs/<*site*>/*

- *Redeploy PeopleSoft Internet Architecture*

  This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to redeploy all of the class files and jar files that comprise web components of PeopleSoft Pure Internet Architecture. Oracle WebLogic Server configuration files, scripts and any existing PeopleSoft (PORTAL) sites are not overwritten, unless you specify an existing PeopleSoft site during this setup.

- *Re-create WebLogic domain and redeploy PeopleSoft Internet Architecture*

  This option affects Oracle WebLogic Server configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to completely remove an existing Oracle WebLogic domain and create the newly specified PeopleSoft site.

Warning! Re-creating an existing domain will delete everything previously installed into that domain.

See *PeopleTools 8.52 PeopleBook: PeopleTools Portal Technologies.*

- *Deploy additional PeopleSoft application extensions*

  This option is solely for use with PeopleSoft applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see if this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

11. Specify the name of the domain.
12. If there are application packages in the archives directory, select whether you want to deploy them. (If you are using an existing domain, you see a prompt for this only if you elected to Deploy Additional PeopleSoft Extensions.)
13. Select the type of domain to create—single server, multi server, or distributed managed server.

```
Please select the configuration to install.

  ->1- Single Server Domain
    2- Multi Server Domain
    3- Distributed Managed Server
```

There are three domain configuration options:

- *Single Server Domain*

  This domain configuration contains one server, named PeopleSoft Pure Internet Architecture and the entire PeopleSoft application is deployed to it. This configuration is intended for single user or very small scale, nonproduction environments. This configuration is very similar to the Oracle WebLogic domain provided in PeopleSoft PeopleTools 8.40 through 8.44.

- *Multi Server Domain*

  This domain configuration is contains seven unique server definitions, a Oracle WebLogic cluster, and the PeopleSoft Application split across multiple servers. This configuration is the intended for a production environment.

- *Distributed Managed Server*

  This option is an extension of the Multi Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

14. Enter a PeopleSoft web site name; the default is ps.

Warning! The site name can include underscores (_), but an underscore cannot be followed by a numeric character or the string “newwin” (for example, my_site_3 or my_newwin_site).

```
Please specify a name for the PeopleSoft web site:
Website name [ps]:
```

15. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the Authentication Token Domain (optional).

```
Enter port numbers and summaries.

AppServer name [APPSRVNAME]:

JSL Port [9000]:

HTTP Port [80]:

HTTPS Port [443]:

Authentication Token Domain (optional) []:
```

- *AppServer name*

  For the AppServer name setting, enter the name of your application server.

  See "Configuring the Application Server on <Windows or UNIX>."

  See "Understanding the PeopleSoft Pure Internet Architecture."

- *JSL Port*

  For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000.)

- *HTTP and HTTPS Port*

  The values for the HTTP and HTTPS ports should be greater than 1024. Any port number less than 1024 is reserved and only Root has access to it.

- *Authentication Token Domain*

  The value you enter for the Authentication Token Domain must match the value you specify when configuring your application server, as described earlier in this book. In addition, certain installation configurations require that you specify an authentication domain.

  See Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.

  If you enter a value for the Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is http://MachineName/ps/signon.html. If you do enter a value for authentication domain (for example, .myCompany.com), the URL to invoke PeopleSoft Pure Internet Architecture is http://MachineName.myCompany.com/ps/signon.html. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example http://MachineName:8080/ps/signon.html if there is no authentication domain, or http://MachineName.myCompany.com:8080/ps/signon.html if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

16. Accept the default for the web profile, PROD, or enter another name.

    The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security in the following PeopleBook.

    See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

```
Please enter the Name of the Web Profile used to configure the web server. The⇒
 user id and password will be used to retrieve the web profile from the⇒
 database. (NOTE: Other available preset web profile names are "TEST", "DEV",⇒
 and "KIOSK".)

Web Profile Name [PROD]:
User ID [PTWEBSERVER]:
Password [PTWEBSERVER]:
Re-type Password [PTWEBSERVER]:
```

Note. If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step, as shown in this example. See *PeopleTools 8.52: Security Administration PeopleBook* for the steps required to add a User Profile.

---

17. Specify the root directory for the Report Repository.

    The default directory is <*user_home*>/PeopleSoft Internet Architecture/psreports, where <user_home> is the home directory for the current user.

    You must have write access to the specified directory.

Note. In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

See "Setting Up Process Scheduler," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

```
Select the Report Repository location:
Please specify a directory name or press Enter [/ds1/home/PeopleSoft Internet⇒
 Architecture/psreports]:
```

18. Verify all of your selections and press Enter to begin the installation.

    You see a progress indicator showing the progress of your installation.

19. When the installation is complete, exit from the console window.

    The default installation directory is <*PIA_HOME*>/webserv/<*domain_name*>/, where <*domain*> is the web server domain (peoplesoft by default).

Task 9B-2-3: Uninstalling the PeopleSoft Pure Internet Architecture from Oracle WebLogic

To remove a PIA domain deployed on Oracle WebLogic, delete the <*PIA_HOME*>/webserv/<*domain_name*> directory. If there is more than one PIA domain, delete the *domain_name* directory for every domain you want to uninstall.

Task 9B-3: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in Console Mode

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server ND
- Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

Prerequisites

The information in this section applies to the installation of PeopleSoft Pure Internet Architecture (PIA) on an IBM WebSphere Application Server. PeopleSoft PeopleTools 8.52 requires a 64-bit IBM WebSphere installation. Review these points before you begin the installation:

- Before installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server, you must have installed the IBM WebSphere ND software.

  See "Installing Web Server Products," Installing IBM WebSphere Application Server.

- Each IBM WebSphere Application Server runs one PeopleSoft Pure Internet Architecture application. If you need to install more than one PeopleSoft Pure Internet Architecture application on your WebSphere Application Server, you must run the PIA installation again.
- When installing PIA on IBM WebSphere ND, you must work with a local copy of the PIA installation software; you cannot install remotely. If you are doing the installation on a machine other than the one on which you installed PeopleSoft PeopleTools, copy the *PS_HOME*/setup/PsMpPIAInstall directory to the local machine.

- Both IBM WebSphere Application Server Network Deployment and PeopleSoft Pure Internet Architecture must be installed and deployed using the same user id. Following this restriction avoids any security and profile management issues.

See Also

"Installing Web Server Products," Installing IBM WebSphere Application Server

Task 9B-3-1: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server ND

To install the PeopleSoft Pure Internet Architecture on IBM WebSphere ND:

1. Change directory to *PS_HOME*/setup/PsMpPIAInstall and run this command:

   ```
   setup.sh
   ```

   A welcome message appears.
2. Select Enter to continue.
3. Choose the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to in this documentation as *PIA_HOME*.
4. Enter *2*, to select the IBM WebSphere Application Server:

   ```
   ->1- Oracle WebLogic Server
     2- IBM WebSphere Server
   ```

5. Enter the directory where you installed IBM WebSphere ND, or press ENTER to accept the default:

   ```
   Select the WebSphere Application Server directory:
   Directory Name: [/opt/IBM/WebSphere/AppServer]
   ```

   Note. If you specify a 32-bit installation of IBM WebSphere ND, a message appears asking you to confirm the decision. Keep in mind that PeopleSoft PeopleTools 8.51 and later releases require 64-bit IBM WebSphere ND.

6. Choose whether to create a new application, or use an existing application:

   ```
   ->1- Create New WebSphere Application
     2- Existing WebSphere Application
   ```

7. If you specify *1*, Create New WebSphere Application, enter an application name for this web server.
8. Select the type of server you want to install, and press ENTER to continue:

   ```
   Select the server install type:
    ->1- Single Server Installation
      2- Multi Server Installation
   ```

   The Single Server Installation option creates one IBM WebSphere Application Server profile to hold all the PeopleSoft web applications. The installer uses the Application Name you enter for the new profile's name.

   The Multi Server Installation option creates a single profile with the name you entered above, *application_name*. The *application_name* profile includes two servers, which deploy discrete functionality and are found on different ports, as specified in the following table:

Server Name	Purpose	HTTP or HTTPS Port Number
server1	PORTAL applications	X
psemhub	PeopleSoft Environment Management Framework applications (PSEMHUB)	X+1

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with IBM WebSphere."

9. If you specify *2*, Existing WebSphere Application, select a domain name from the list:

```
Select domain name from list

->1- AppSrv01
  2- ptwas
  3- peoplesoftA
  4- hcdmo
```

10. After specifying an existing domain, select one of the options below and press ENTER to continue.

```
The PeopleSoft application "peoplesoftA" already exists.
Select from the following:
 ->1- Install additional PeopleSoft site
   2- Redeploy PeopleSoft Internet Architecture
   3- Deploy additional PeopleSoft application extensions
```

Note. Make sure the server is up and running before choosing any of these options.

- *Install additional PeopleSoft site*

  Select this option to install only the necessary files for defining an additional PeopleSoft site onto the existing IBM WebSphere web server configuration.

- *Redeploy PeopleSoft Internet Architecture*

  This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local IBM WebSphere Application Server profile. Select this option to redeploy PeopleSoft Application that comprise web components of PeopleSoft Pure Internet Architecture.

- *Deploy additional PeopleSoft application extensions*

  This option is solely for use with PeopleSoft product applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see whether this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

11. Enter the administrator login and password for the IBM WebSphere Application profile, or accept the default values.

    The default login ID is system, and the default password is Passw0rd (with a capital “P” and zero rather than the letter “o”).

```
Please enter the administrator login ID and password for WebSphere profile.
Login ID [system]:
Password [Passw0rd]:
Retype Password [Passw0rd]:
```


If you selected the option Existing WebSphere Application, enter the same Login ID and password as you entered for the original IBM WebSphere profile creation. If the Login ID and password do not match the original values, you will not be able to continue with the PIA installation.

12. If you select the option Deploy additional PeopleSoft application extension, select the application packages you want to deploy:

```
->1- EMP PeopleSoft Activity Based Mgmt
```

13. Enter a web site name; the default is ps.

Warning! The site name can include underscores (_), but an underscore cannot be followed by a numeric character or the string “newwin” (for example, my_site_3 or my_newwin_site).

14. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the authentication token domain (optional).

```
Enter port numbers and summaries.

AppServer name:

    [<App Server Machine Name>]

JSL Port:

    [9000]

HTTP Port:

    [8000]

HTTPS Port:

    [4430]

Authentication Token Domain:(optional) []
```

Note. For the AppServer name setting, enter the name of your application server. For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000.)

See "Configuring the Application Server on UNIX."

Note. The HTTP/HTTPS port numbers are reset to those that you just specified when you restart your IBM WebSphere server.

Note. The value you enter for the Authentication Token Domain must match the value you specify when configuring your application server, as described earlier in this book. In addition, certain installation configurations require that you specify an authentication domain. See Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.

Note. If you enter a value for the Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is http://MachineName/ps/signon.html. If you do enter a value for the authentication domain (for example, .myCompany.com), the URL to invoke PeopleSoft Pure Internet Architecture is http://MachineName.myCompany.com/ps/signon.html. In addition, if the web server for the database is using an HTTP port other than the default port of 9080, the URL must include the port number, for example http://MachineName:8080/ps/signon.html if there is no authentication domain, or http://MachineName.myCompany.com:8080/ps/signon.html if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

See "Understanding the PeopleSoft Pure Internet Architecture."

15. Accept the default for the web profile, PROD, or enter another name.

    The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security.

    See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Note. If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step. See *PeopleTools 8.52: Security Administration PeopleBook* for the steps required to add a User Profile.

---

16. Specify the root directory for the Report Repository.

    You can install to any location, but the directory must have write access. The default directory is *user_home*/PeopleSoft Internet Architecture/psreports, where *user_home* is the home directory for the current user.

Note. In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

See "Setting Up Process Scheduler," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

17. Verify your selections and press Enter to start the installation. You see an indicator showing the progress of your installation.
18. When the installation is complete, exit from the console window.

    The default installation directory is <*PIA_HOME*>\webserv\<*profile_name*>.

Task 9B-3-2: Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

You cannot uninstall PeopleSoft Pure Internet Architecture simply by deleting <*PIA_HOME*>/webserv /<*profile_name*>, without uninstalling it from IBM WebSphere Administration Console. If you do so, the IBM WebSphere registry becomes corrupt, and subsequent attempts to install PeopleSoft Pure Internet Architecture will fail. Instead, if necessary, you must uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere ND as described here:

To uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere:

1. Open IBM WebSphere Administration Console at http://*machine-name*:9060/ibm/console
2. Log in as any user.
3. Choose Applications, Enterprise Applications.
4. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Stop.
5. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Uninstall.
6. Save your configuration.
7. Stop IBM WebSphere server using the following commands:

   On Windows:

   ```
   <PIA_HOME>\webserv\<profile_name>\bin\stopServer.bat server1
   ```

   On UNIX:

   ```
   <PIA_HOME>\webserv\<profile_name>\bin\stopServer.sh server1
   ```

8. In addition to uninstalling the application, you need to remove the IBM WebSphere Application Server profile (that was created during PIA install) to complete the PIA uninstallation.

   To uninstall profile run the following steps:

   a. Go to <*PIA_HOME*>/webserv/<*profile_name*>/bin

   b. Run the following command:

      On Windows:

      ```
      manageprofiles.bat -delete -profileName profile_name
      ```

      On UNIX:

      ```
      manageprofiles.sh -delete -profileName profile_name
      ```

      where *profile_name* indicates the application name that you have selected during the PIA install.

   c. Delete the directory <*PIA_HOME*>/webserv/<*profile_name*>

Task 9B-4: Installing the PeopleSoft Pure Internet Architecture in Silent Mode

This section discusses:

- Understanding the Silent Installation and the Response File
- Editing the Response File
- Running the Silent Mode Installation

Understanding the Silent Installation and the Response File

You can carry out a silent installation of the PeopleSoft Pure Internet Architecture by providing all the required settings in a response file. With silent installation there is no user interaction. Silent mode installation of PeopleSoft Pure Internet Architecture is supported for both Microsoft Windows and UNIX operating systems platforms, and for both IBM WebSphere and Oracle WebLogic web servers.

Task 9B-4-1: Editing the Response File

You need a response file to start the installer in silent mode. The PeopleSoft Pure Internet Architecture installer comes with a response file template (resp_file.txt) that can be found under *PS_HOME*\setup\PsMpPIAInstall\scripts. Modify the values in the response file according to your installation requirements. The response file should contain all the input parameters that are needed for deploying PeopleSoft Pure Internet Architecture, such as PS_CFG_HOME, DOMAIN_NAME, SERVER_TYPE, and so on. For example:

- Specify `SERVER_TYPE=weblogic` to deploy on Oracle WebLogic.
- Specify `SERVER_TYPE=websphere` to deploy on IBM WebSphere.

Sample Response file:

```
#PIA home
PS_CFG_HOME=C:/PT8.52

# Name of the PIA domain
DOMAIN_NAME=peoplesoft

# Web server type. Possible values are "weblogic", "websphere"
SERVER_TYPE=weblogic

# WebLogic home, the location where Oracle WebLogic is installed (for WebLogic⇒
 deployment only)
BEA_HOME=c:/bea

# WebSphere Home, the location where IBM WebSphere is installed (for WebSphere⇒
 deployment only)
WS_HOME=C:/IBM/WebSphere/AppServer

# admin console user id/password for securing WebLogic/WebSphere admin console⇒
 credential
# values given below are default and will be straight away accepted.
# If the value of USER_PWD is changed, UNCOMMENT the variable USER_PWD_RETYPE and⇒
 give it same value as USER_PWD
USER_ID=system
USER_PWD=Passw0rd
#USER_PWD_RETYPE=Passw0rd
```



```
# Install action to specify the core task that installer should perform.
# For creating new PIA domain - CREATE_NEW_DOMAIN.
# For redeploying PIA - REDEPLOY_PSAPP.
# For recreating PIA domain - REBUILD_DOMAIN.
# For installing additional PSFT site - ADD_SITE
INSTALL_ACTION=CREATE_NEW_DOMAIN

# Domain type to specify whether to create new domain or modify existing domain.⇒
 #Possible values are "NEW_DOMAIN", "EXISTING_DOMAIN".
DOMAIN_TYPE=NEW_DOMAIN

# Install type to specify whether the installation is a single server or multi⇒
 server #deployment. Possible values are "SINGLE_SERVER_INSTALLATION", #"MULTI_⇒
SERVER_INSTALLATION"
INSTALL_TYPE=SINGLE_SERVER_INSTALLATION

# WebSite Name
WEBSITE_NAME=ps

# AppServer Name
APPSERVER_NAME=

# Appserver JSL Port
JSL_PORT=

# HTTP Port
HTTP_PORT=80

# HTTPS Port
HTTPS_PORT=443

# Authentication Domain (optional)
AUTH_DOMAIN=

# Web Profile Name Possible Values are "DEV","TEST","PROD","KIOSK"
WEB_PROF_NAME=DEV

# Web Profile User ID
WEB_PROF_USERID=PTWEBSERVER

# Web Profile Password
# If the value of WEB_PROF_PWD is changed, UNCOMMENT the variable WEB_PROF_PWD_⇒
RETYPE and give it same value as WEB_PROF_PWD
WEB_PROF_PWD=PTWEBSERVER
#WEB_PROF_PWD_RETYPE=PTWEBSERVER

# Directory path for reports
REPORTS_DIR=
```


Task 9B-4-2: Running the Silent Mode Installation

Use the response file that you modified for your configuration. Substitute the location where you saved the response file for <*path_to_response_file*> in the following procedures:

To install the PeopleSoft Pure Internet Architecture in silent mode on Microsoft Windows:

1. In a command prompt, go to *PS_HOME*\setup\PsMpPIAInstall.
2. Run the following command:

```
setup.bat -i silent -DRES_FILE_PATH=<path_to_response_file>
```

To install the PeopleSoft Pure Internet Architecture in silent mode on UNIX or Linux:

1. Go to *PS_HOME*/setup/PsMpPIAInstall.
2. Run the following command:

```
setup.sh -i silent -DRES_FILE_PATH=<path_to_response_file>
```

Task 9B-5: Testing and Administering the PeopleSoft Pure Internet Architecture Installation

This section discusses:

- Verifying the PeopleSoft Pure Internet Architecture Installation
- Starting and Stopping Oracle WebLogic
- Starting and Stopping IBM WebSphere Application Servers
- Using PSADMIN to Start and Stop Web Servers
- Accessing the PeopleSoft Signon

Verifying the PeopleSoft Pure Internet Architecture Installation

After installing the PeopleSoft Pure Internet Architecture, you should make sure that your configuration is functional. You can test this by signing on to PeopleSoft, navigating within the menu structure, and accessing pages. (Make sure the application server is configured and booted.) This section includes procedures to start and stop the Oracle WebLogic or IBM WebSphere web servers whenever necessary.

Task 9B-5-1: Starting and Stopping Oracle WebLogic

If you are using the Oracle WebLogic web server, you need to sign on to Oracle WebLogic before using these commands. If you are using IBM WebSphere instead, go on to the next section. Use the following commands in the Oracle WebLogic domain directory.

Note. Starting from Oracle WebLogic 9.2 and later releases, all the Life-cycle management scripts and other batch scripts for the PIA server on Oracle WebLogic are located in <*PIA_HOME*>\webserv\<*domain_name*>\bin folder.

- To start Oracle WebLogic Server as a foreground process on a single server, use the following commands:


```
startPIA.cmd (on Windows)
startPIA.sh (on UNIX)
```

- To start Oracle WebLogic Server as a foreground process on multiple-servers or distributed servers, use the following commands:

  a. Execute:

  ```
  startWebLogicAdmin.cmd (on Windows)
  startWebLogicAdmin.sh (on UNIX)
  ```

  b. Then:

  ```
  startManagedWebLogic.cmd ManagedServerName (on Windows)
  startManagedWebLogic.sh ManagedServerName (on UNIX)
  ```

- To stop the server, use the following commands:
  - Single Server:

  ```
  stopPIA.cmd (on Windows)
  stopPIA.sh (on UNIX)
  ```

  - Multiple Servers or Distributed Servers:

  ```
  stopWebLogic.cmd ManagedServerName (on Windows)
  stopWebLogic.sh ManagedServerName (on UNIX)
  ```

  See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook.*

Note. For more information on working with Oracle WebLogic multiple or distributed servers, search My Oracle Support.

Task 9B-5-2: Starting and Stopping IBM WebSphere Application Servers

This section discusses:

- Starting and Stopping IBM WebSphere Application Servers on Windows
- Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux
- Verifying the IBM WebSphere Installation

Starting and Stopping IBM WebSphere Application Servers on Windows

To start and stop the WebSphere Application Server Network Deployment 7.0 (WebSphere ND), use the WebSphere First Steps utility:

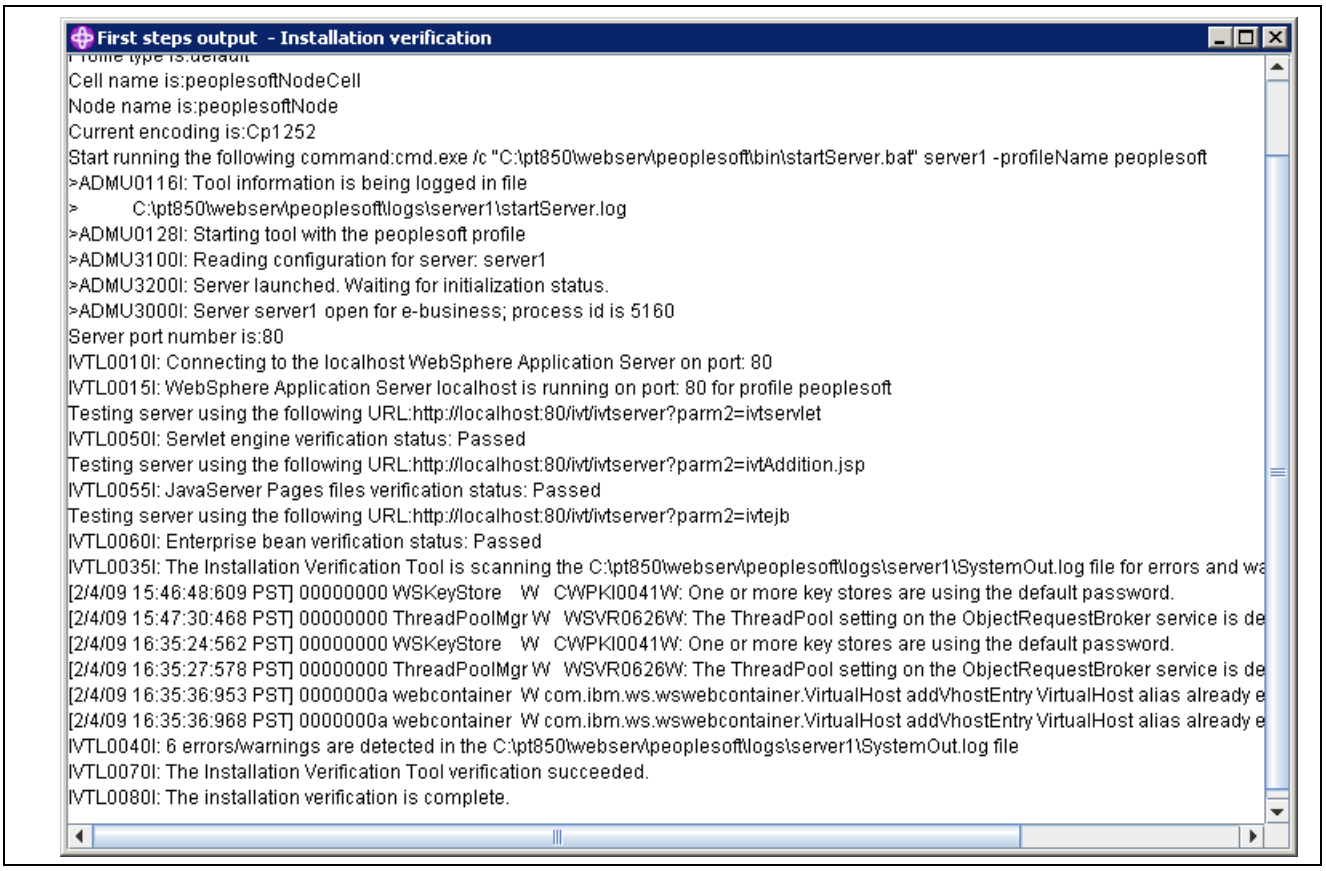
1. Select Start, Programs, IBM WebSphere, Application Server Network Deployment V7.0, Profiles,*profile_name*, First steps.

   The following example shows the First steps window for the default profile *peoplesoft*:

WebSphere Application Server First Steps window

2. Select the link Start the server.

   If the server starts properly, a verification window appears with several messages about the initialization process, as in this example:



First steps output - Installation verification window

3. To verify whether the server was installed and can start properly, click the link Installation Verification on the First Step window.

Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux

To start WebSphere ND on UNIX or Linux, use the following command:

```
<PIA_HOME>/webserv/<profile_name>/bin/startServer.sh <server_name>
```

For example:

```
/home/pt852/webserver/peoplesoft/bin/startServer.sh server1
```

To stop WebSphere ND, use the following command:

```
<PIA_HOME>/webserv/<profile_name>/bin/stopServer.sh <server_name>
```

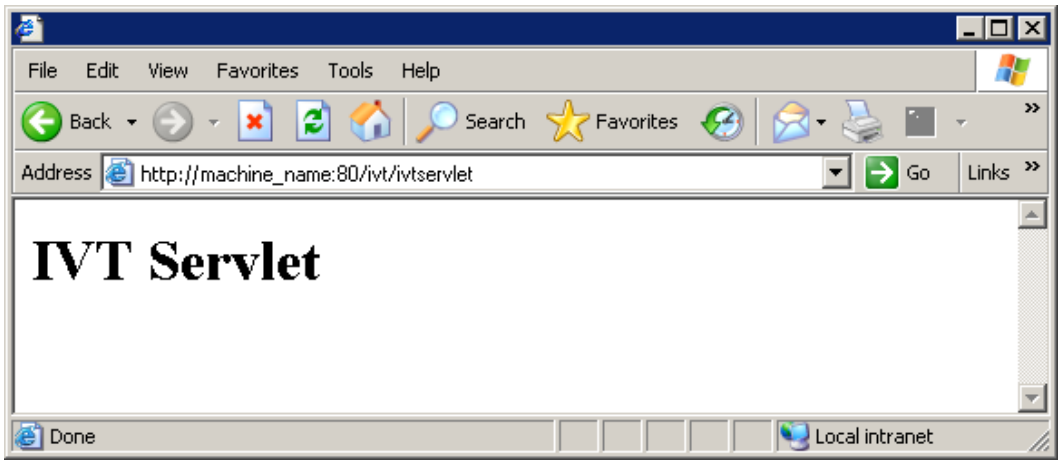
Verifying the IBM WebSphere Installation

Use this method to verify the WebSphere ND and PIA installation for both Windows and UNIX.

To verify the WebSphere ND and PIA installation, copy the following URL into a browser address bar, substituting your machine name and the http port number:

```
http://<machine_name>:<http_port>/ivt/ivtservlet
```

You should see the text “IVT Servlet” in the browser, as in this example:



IVT Servlet window

You should also sign into the PeopleSoft application, as described in a later section, to verify the installation.

See Accessing the PeopleSoft Signon.

Task 9B-5-3: Using PSADMIN to Start and Stop Web Servers

In addition to the methods given in the previous sections for starting and stopping Oracle WebLogic and IBM WebSphere web servers, in PeopleSoft PeopleTools 8.52 you can use PSADMIN to administer a web server domain.

See *PeopleTools 8.52: System and Server Administration PeopleBook*

To start and stop web servers:

1. Go to the *PS_HOME*/appserv directory and run PSADMIN.
2. Specify *4* for Web (PIA) Server.

```
--------------------------------
PeopleSoft Server Administration
--------------------------------

  Config Home:  /home/psft_AppServ

  1) Application Server
  2) Process Scheduler
  3) Search Server
  4) Web (PIA) Server
  5) Switch Config Home
  6) Replicate Config Home
  q) Quit

Command to execute (1-6, q): 4
```

The location of Config Home is the current working directory. The PSADMIN utility determines the Config Home directory by checking for the PS_CFG_HOME environment variable. If that is not set, it checks for the presence of domains in the default *PS_CFG_HOME* location. If none exists, it uses the *PS_HOME* location from which it was launched.

See "Preparing for Installation," Defining Server Domain Configurations.

3. Select *1* for Administer a domain.

```
----------------------------
PeopleSoft PIA Administration
----------------------------

  PIA Home:   /home/psft_WebServ

  1) Administer a domain
  2) Create a domain
  3) Delete a domain

  q) Quit

Command to execute: 1
```

The PSADMIN utility determines the PIA Home location displayed here by first checking for a PIA_HOME environment variable. If none is set, it checks for the PS_CFG_HOME environment variable. If neither is set, it uses the default PS_CFG_HOME directory.

4. Select the domain you want to administer by entering the appropriate number.

```
-----------------------------------------------------
PeopleSoft PIA Domain Administration - Choose a Domain
-----------------------------------------------------
1) OnWls1034R607
2) peoplesoft

q) Quit

Command to execute: 2
```

5. To start a web server domain, enter *1*, Boot this domain.

```
-----------------------------------
PeopleSoft PIA Domain Administration
-----------------------------------

  PIA Home:   /home/psft_websrv
  PIA Domain: peoplesoft

  1) Boot this domain
  2) Shutdown this domain
  3) Get the status of this domain
  4) Configure this domain
  5) Edit configuration files
  6) View log files
  7) Administer a site
  8) Delete a site

  q) Quit
```



```
Command to execute: 1
```

The boot command invokes the startPIA.sh script, and you see the progress and a status message on the console window.

```
Starting the domain.................
The domain has started.
```

6. To stop a web server domain, select *2*, Shutdown this domain.

   The shutdown command invokes the stopPIA.sh script, and you see the progress and a status message on the console window.

```
Stopping the domain.....
Verifying domain status..........
The domain has stopped.
```

7. Select *1* to install a service, or *2* to remove it.

   This command invokes the installNTservice script, and creates a service named *WebLogicDomain-WebLogicServer*.

```
---------------------
Windows Service Setup
---------------------

  PIA Home:   C:\psft_websrv
  PIA Domain: peoplesoft: started

  1) Install Service
  2) Uninstall Service

  q) Quit

Command to execute:
```

Task 9B-5-4: Accessing the PeopleSoft Signon

To access the PeopleSoft signon:

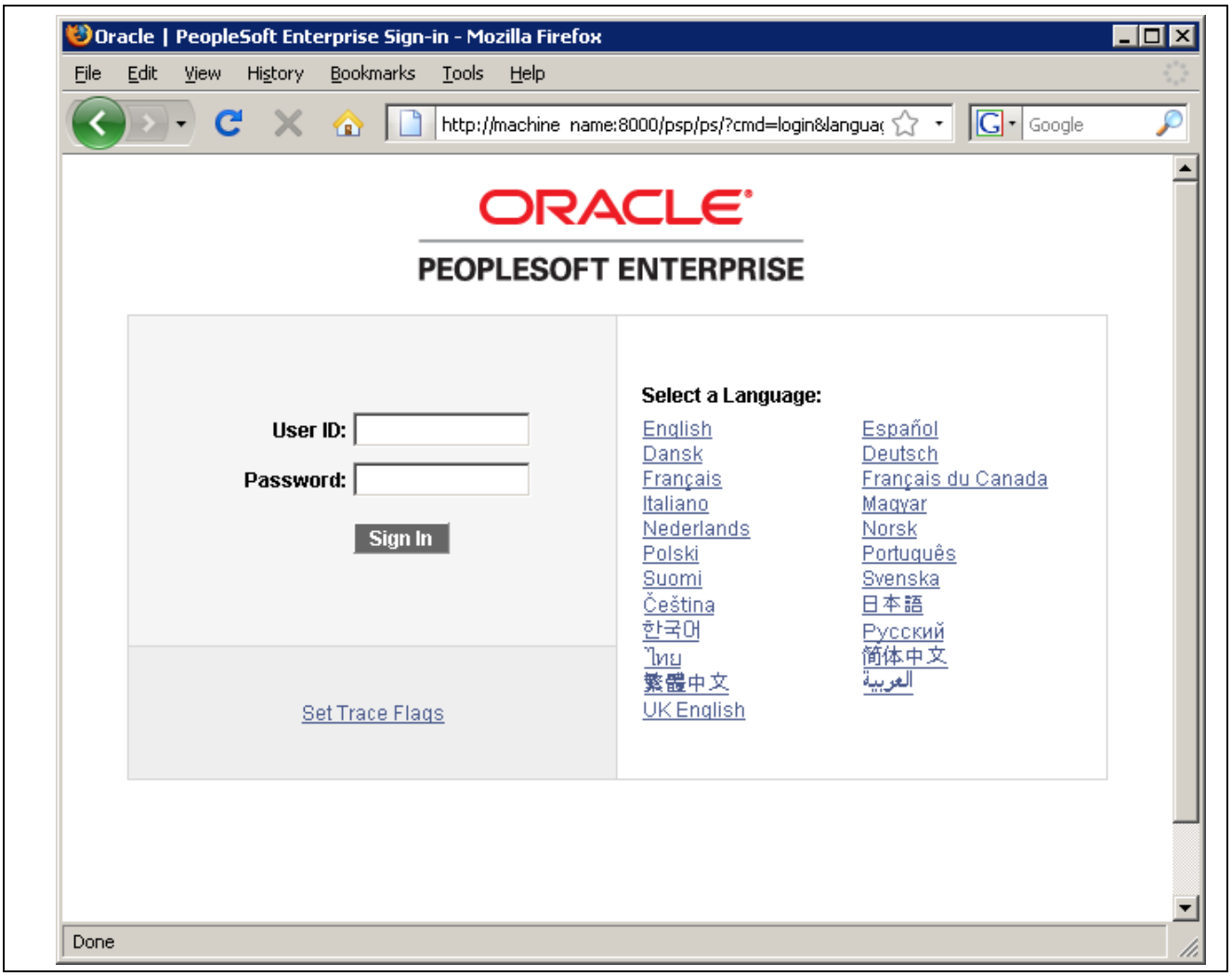
1. Open your web browser.
2. Enter the name of the site you want to access—for example (the default value for <*site_name*> is ps):

   http://<*machine_name*>:<*http_port*>/<*site_name*>/signon.html

---

Note. PeopleSoft Pure Internet Architecture installed on IBM WebSphere server listens at the HTTP/HTTPS ports specified during the PeopleSoft Pure Internet Architecture install. Invoke PeopleSoft Pure Internet Architecture through a browser by using the specified HTTP or HTTPS ports—that is, http://<*WebSphere_machine_name*>:<*server_port*>/<*site_name*>/signon.html (if AuthTokenDomain is not specified) or http://<*WebSphere_machine_name.mycompany.com*>:<*server_port*>/<*site_name*> /signon.html (if you specified .mycompany.com as the AuthTokenDomain).

This will take you to the sign-in window corresponding to your browser's language preference. This example shows the sign-in window in a Mozilla Firefox browser, before signing in.



Oracle PeopleSoft Enterprise Sign in window

Note. If you do not see the signon screen, check that you supplied all the correct variables and that your application server and the database server are running.

3. Sign in to the PeopleSoft system by entering a valid user ID and password.

Note. The user ID and password are case sensitive. You need to enter the user ID and password using UPPERCASE characters.

Different applications use different default user IDs and passwords. For instance, for HRMS applications you enter PS for the user ID and the password. For Financials applications, you enter VP1 for the user ID and the password. Your application-specific install instructions contain any custom, delivered user IDs that you should use for the demonstration environment.

Task 9B-6: Completing Post-Installation Steps

This section discusses:

- Updating the Installation Table
- Updating PeopleTools Options
- Updating Database Information

Task 9B-6-1: Updating the Installation Table

After you complete the installation process, creating the database, installing the Application Server, and installing the PeopleSoft Pure Internet Architecture, you must complete this additional step. The license codes from the Oracle license code site mentioned earlier install all products available in the installation package. This post-installation step ensures that only the products for which you are licensed are active in the installation. The location of the installation table in the PeopleSoft Pure Internet Architecture menu varies depending upon the application that you installed.

To update the installation table:

1. Sign on to the PeopleSoft Pure Internet Architecture in a browser.
2. Select Setup *Application_name* (where Application_name is the PeopleSoft application you installed), Install, Installation Table.

   Select the Products tab.
3. Clear the check boxes for the products for which you have not obtained a license.

See Also

"Using the PeopleSoft Installer," Obtaining License Codes

Accessing the PeopleSoft Signon

Task 9B-6-2: Updating PeopleTools Options

You can set the following options on the PeopleTools Options page:

- Multi-Currency — Select this check box if you plan to use currency conversion.

  See *PeopleTools 8.52: Global Technology PeopleBook,* "Controlling Currency Display Format."
- Base Time Zone — Enter a value for the base time zone for your PeopleTools database.

  See *PeopleTools 8.52: Global Technology PeopleBook* "Setting and Maintaining Time Zones."
- Data Field Length Checking — Select Others from the drop-down list.

  Note. The MBCS option is not supported for DB2 for z/OS.

  See *PeopleTools 8.52: Global Technology PeopleBook,* "Selecting and Configuring Character Sets and Language Input and Output."
- Sort Order Option — If you specified a non-binary sort order for your database, choose the Sort Order Option that most closely approximates your database sort order.

  See *PeopleTools 8.52: Global Technology PeopleBook,* "Sorting in PeopleTools."

Task 9B-6-3: Updating Database Information

The database information updated in this procedure is used by the PeopleSoft software update tools to identify your PeopleSoft database when searching for updates. These steps should be followed for all additional databases that you create to enable the accurate identification of your databases.

1. Sign on to your PeopleSoft database.
2. Navigate to PeopleTools, Utilities, Administration, PeopleTools Options.
3. Specify long and short names for your environment. For example:
   - Environment Long Name — Customer HR Demo Database
   - Environment Short Name — HR Demo DB
4. Select a system type from the drop-down list. For example, Demo Database.
5. Save your changes.

CHAPTER 10A

Setting Up Process Scheduler on Windows

This chapter discusses:

- Prerequisites
- Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Environment Variables
- Setting Up Process Scheduler Server Agent
- Starting Process Scheduler as a Windows Service (Optional)
- Configuring the Process Scheduler for Word for Windows (Optional)
- Configuring Setup Manager
- Installing Products for PS/nVision

Prerequisites

Before setting up your Process Scheduler, you must:

- Install Tuxedo (except for z/Linux).

  See "Installing Additional Components."
- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).

  See "Preparing for Installation."
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Set up your COBOL batch environment if you need to run COBOL processes through Process Scheduler. COBOL is no longer required to start a Process Scheduler Server Agent because the program for Process Scheduler has been rewritten in C++. If the PeopleSoft modules purchased do not contain any COBOL modules, the COBOL run time libraries are not required. Also, COBOL is not required for applications that contain no COBOL programs. Consult My Oracle Support for the details on whether your application requires COBOL.

  See "Preparing for Installation," Planning Your Initial Configuration.
- Install the Microsoft Office products Microsoft Word and Microsoft Excel.

- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.

In PeopleSoft PeopleTools 8.50 and later, the configuration and log files for Process Scheduler server domains reside in *PS_CFG_HOME*. If you do not set a PS_CFG_HOME environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

`%USERPROFILE%\psft\pt\<peopletools_version>`

See "Preparing for Installation," Defining Server Domain Configurations.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

See Also

PeopleTools 8.52 Hardware and Software Requirements

PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook

My Oracle Support, Certifications

Task 10A-1: Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade

If you are installing into an existing *PS_HOME* or *PS_CFG_HOME* in preparation for a tools-only upgrade, review your system for files that you may need to remove or back up.

Task 10A-2: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Changing User Account to Start ORACLE ProcMGR V10gR3 with VS2008
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly both in Windows and within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

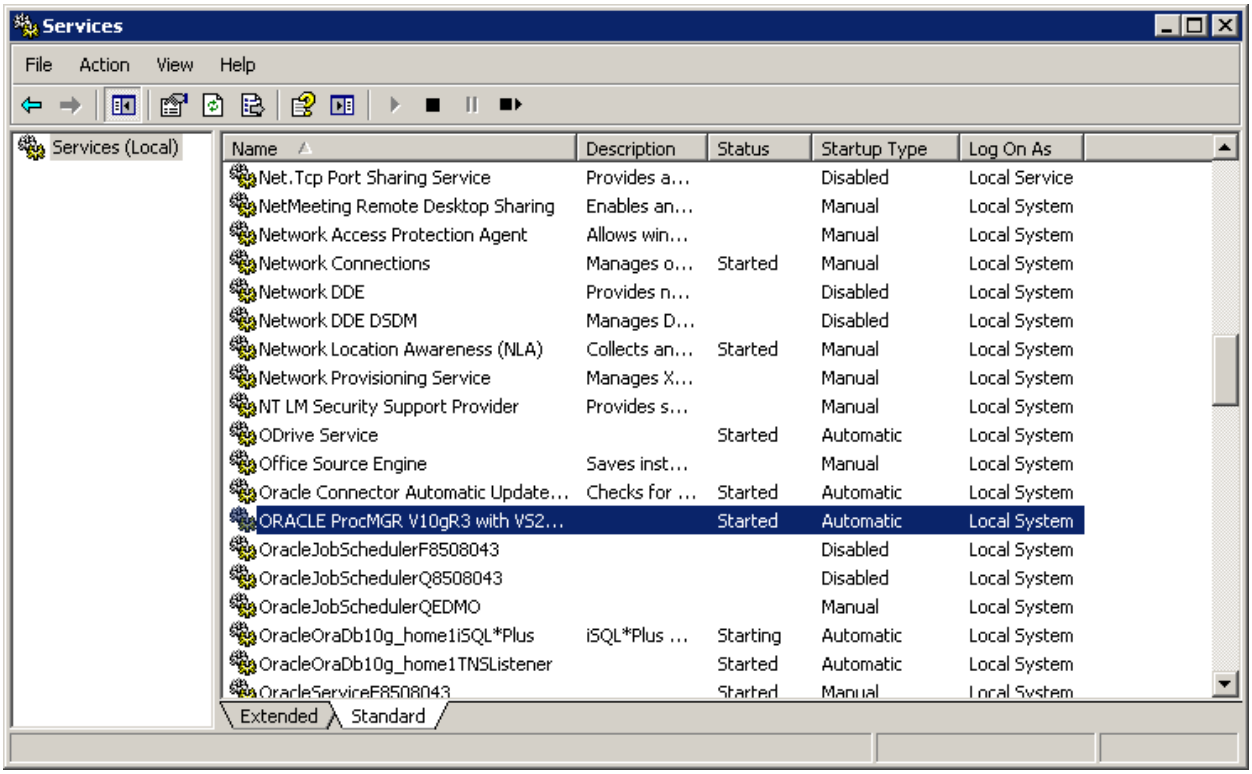
In the next section you set up ORACLE ProcMGR V10gR3 with VS2008 with a network user ID. When you install Oracle Tuxedo, the ORACLE ProcMGR V10gR3 with VS2008 service is set up by default to be started by local system account—a user account that does not have access to the Windows network. If the Process Scheduler server or processes initiated through Process Scheduler will be using a network printer, accessing files from a network drive, or using Windows utilities such as XCOPY that may access UNC paths, you need to change the user account used to start ORACLE ProcMGR V10gR3 with VS2008 with a network user account.

Task 10A-2-1: Changing User Account to Start ORACLE ProcMGR V10gR3 with VS2008

To change User Account to start ORACLE ProcMGR V10gR3 with VS2008:

1. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.

   In the Services dialog box, find the service labeled *ORACLE ProcMGR V10gR3 with VS2008.* This service is installed automatically when you install Tuxedo.



Windows Services dialog box

2. If the Stop button is enabled, click on it to stop the current ORACLE ProcMGR V10gR3 with VS2008 process.

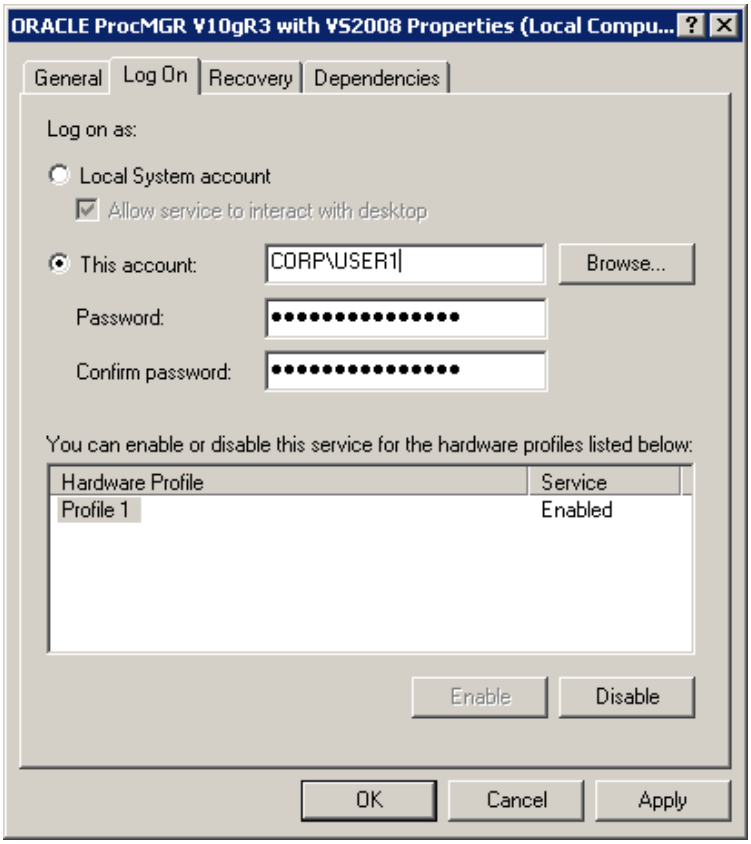
   a. Click Yes when a message informs you of the status change.

   b. Double-click ORACLE ProcMGR V10gR3 with VS2008.

      The Properties dialog box appears.

3. Select the option This account on the Log On tab.

   Enter an account name and password.

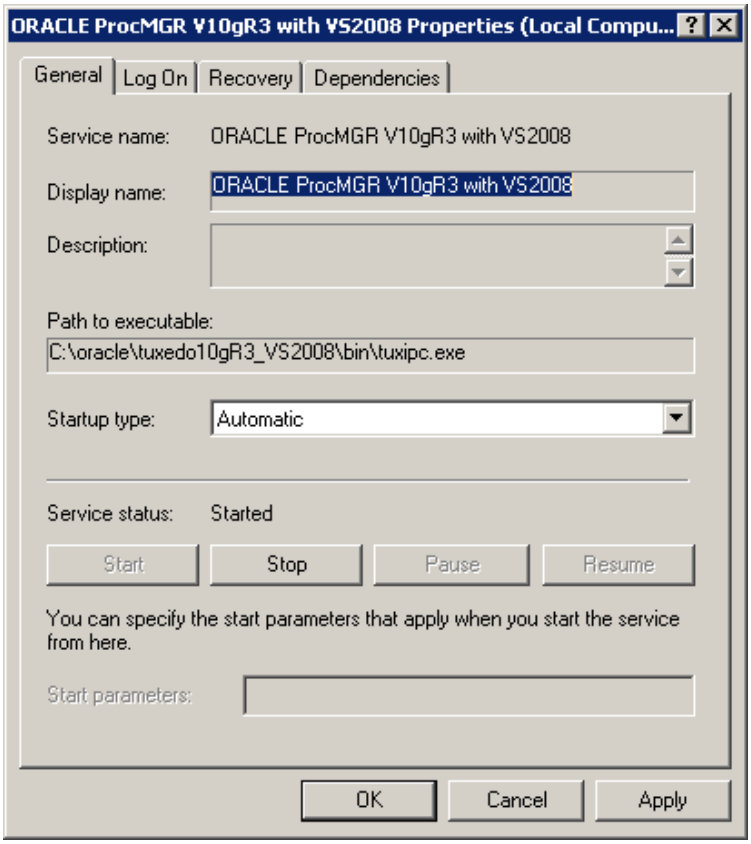


ORACLE ProcMGR V10gR3 with VS2008 Properties dialog box: Log On tab

Note. When you configure your Tuxedo server as outlined in the chapter, "Configuring the Application Server," the user ID designated to be the Application Server Administrator must have read/write permissions to the PeopleSoft file directory and read permission to the %TUXDIR% directory, such as C:\oracle\tuxedo10gR3_vs2008.

4. Select the General tab.

   Make sure that Startup Type is set to Automatic, and click OK.



ORACLE ProcMGR V10gR3 with VS2008 Properties dialog box: General tab

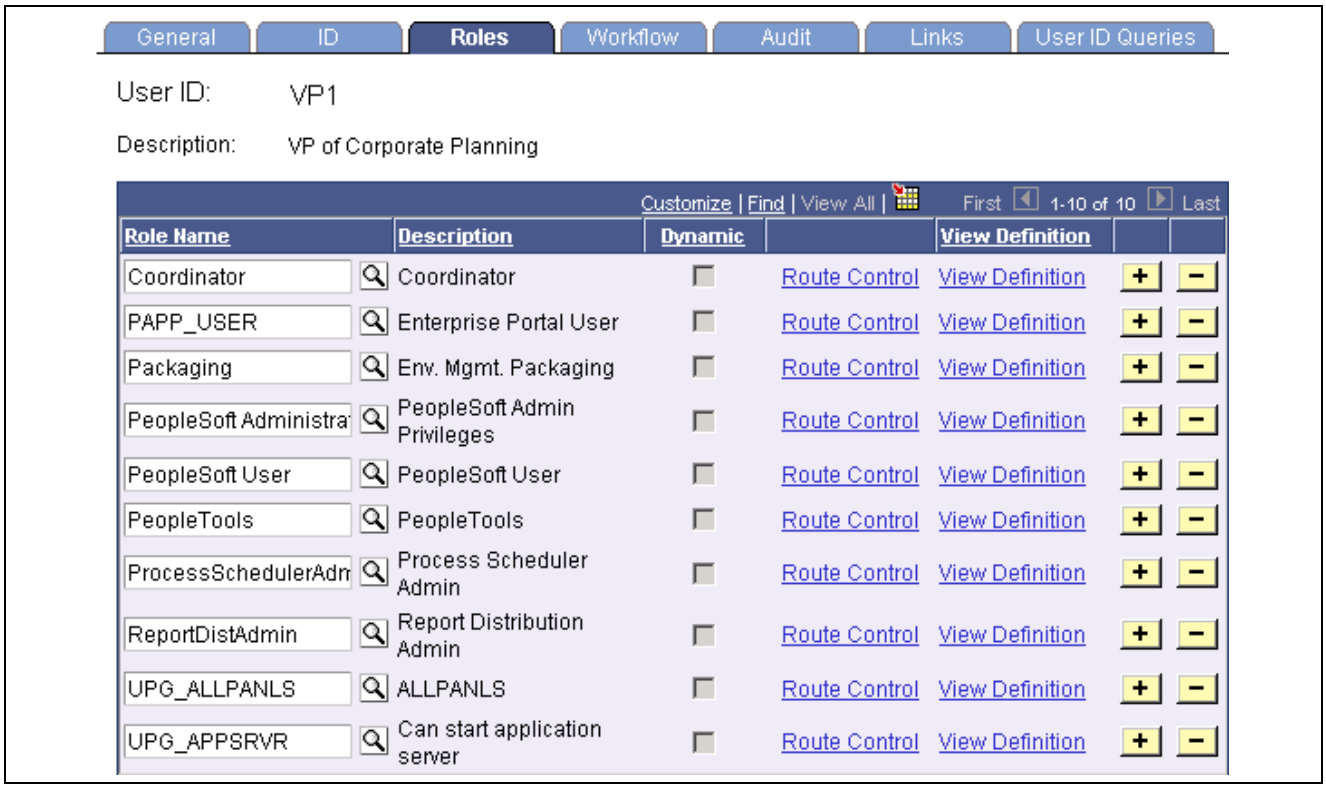
5. Click Start.

   A message in the Properties dialog box will indicate the "Started" status. Click OK to close the dialog box.

Task 10A-2-2: Granting Process Scheduler Administrative Rights

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools, Security, User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.
4. Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.



Process Scheduler window: Roles tab

5. Repeat the instructions in step 4 to add the role *ReportDistAdmin*.

   This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.

6. Click Save to save your changes.
7. Select the General tab and jot down the Permission List name assigned to the Process Profile field.
8. From the Portal menu, choose PeopleTools, Security, Permissions & Roles, Permission Lists.
9. In the Search dialog, enter the Permission List you noted in step 7.
10. Select the Can Start Application Server check box.
11. Click Save to save your changes.

Task 10A-3: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution
- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol
- Starting the Distribution Agent

- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS_CDM_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of Posting signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

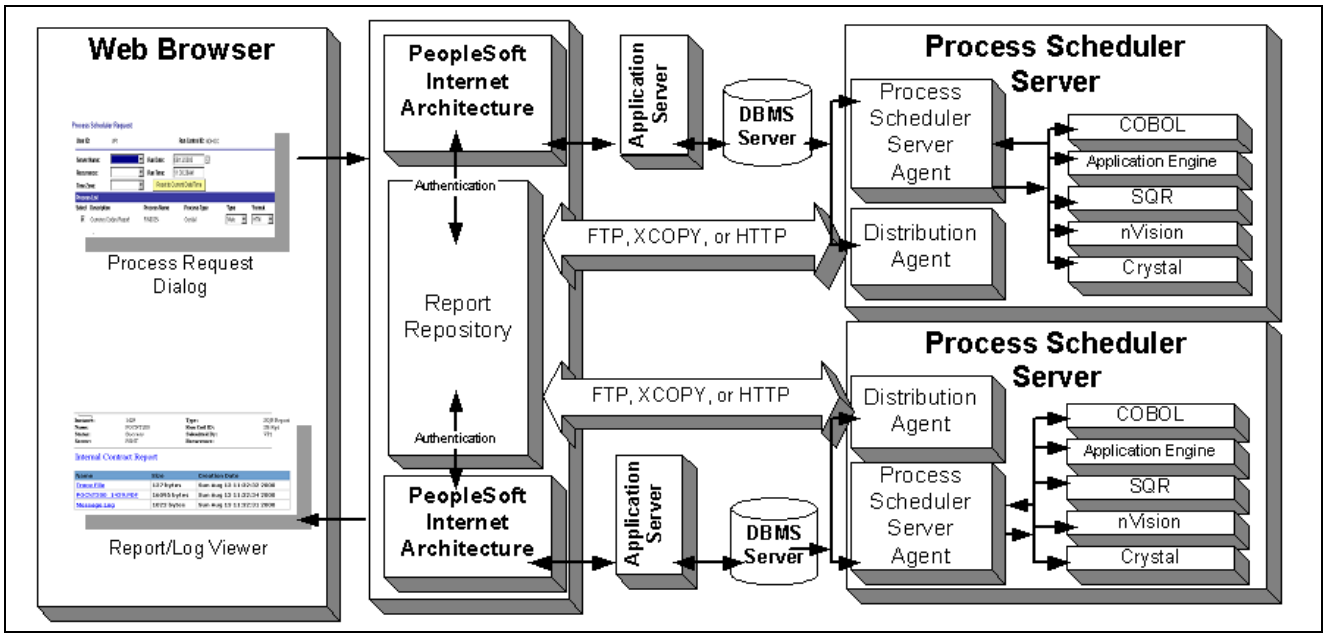
- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name\<date yyyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is Web/Window, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

- The web browser gives access to the Process Request dialog and the Report or Log Viewer.
- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Repository.

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP, XCOPY, or HTTP/HTTPS.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security PeopleBook.

See *PeopleTools 8.52: Security Administration PeopleBook.*

Task 10A-3-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as the PeopleSoft Pure Internet Architecture, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PeopleSoft Pure Internet Architecture, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter http://<*machineName*>.peoplesoft.com/<*site_name*>/signon.html instead of http://<*machineName*>/<*site_name*>/signon.html.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

  See *PeopleTools 8.52: Security Administration PeopleBook,* "Implementing Single Signon."
- Set up single signon with a password, like this:

- Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
- Click Search and then select the node marked as Default Local Node.
- Select *Password* for the Authentication Option.
- Enter a password of your choice.
- Enter the password again in the Confirm Password field.
- Enter the user ID for which you are setting up single signon in the Default User ID field.
- Save the Node Definition.
- Sign off of PIA.
- Reboot your application server.

See Also

PeopleTools 8.52: Security Administration PeopleBook

Task 10A-3-2: Determining the Transfer Protocol

We recommend using HTTP as your transfer protocol.

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. If you have a Windows Process Scheduler and a Windows web server, you can use either an XCOPY, FTP, or HTTP/HTTPS. (If FTP information is not specified, Process Scheduler will perform an XCOPY.) If you have any other combination of servers (such as a Windows or z/OS Process Scheduler and a UNIX web server), you must use FTP or HTTP/HTTPS.

Note. If you are using FTP, the FTP service must be set up in your web server.

Note. If you are on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

Task 10A-3-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of “Running with No Report Node.” Once a node is defined for the Process Scheduler server and in the next cycle the Process Scheduler server checks the state of the system, the Distribution Agent dynamically sets up its environment.

Task 10A-3-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use XCOPY
- Defining the Report Node to Use FTP

Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash ('/') in both cases:

- *Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<*user_home*>/PeopleSoft Internet Architecture/psreports

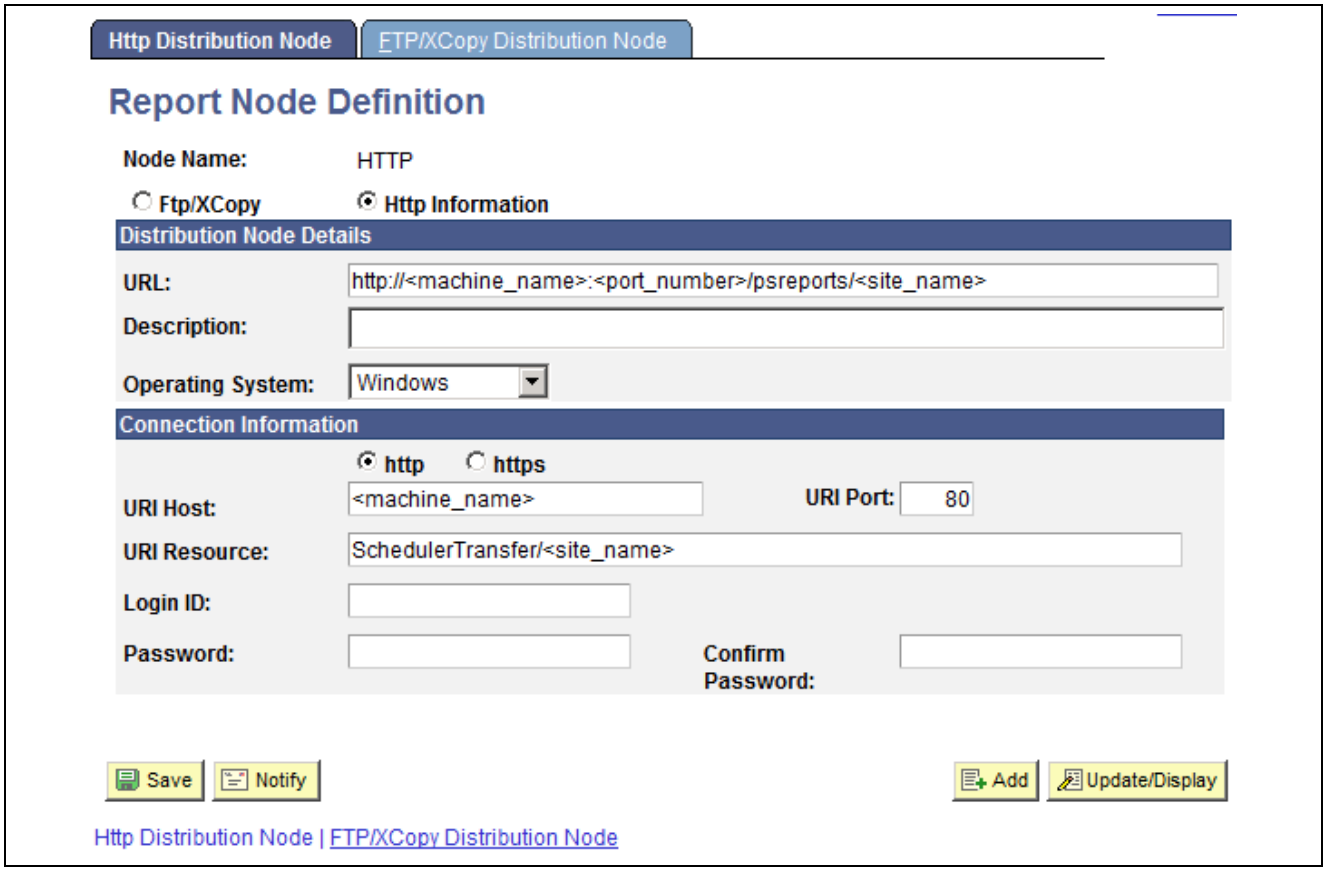
  For <user_home> substitute the home directory for the current user.

Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select the Add a New Value link and enter the Report node name.

   The Report Node Definition page appears. You are on the Http Distribution Node page.
3. Verify that the Http Information option is selected.



Report Node Definition page for HTTP

4. Enter the *URL* of the web server using the following format:

   `http://<machine_name>:<port_number>/psreports/<site_name>`

   Replace <*machine_name*> with the name of your machine. Use the fully qualified host name for your web server. If you are using an http port other than 80, you need to specify the port number.

   Note. If you specify the Authentication Token Domain name during the PeopleSoft Pure Internet Architecture installation, you must include a fully qualified domain name for the URL instead of the IP address.

   - *Description:* Enter a description of the server (optional).
   - *Operating System:* Select the web server operating system.
5. Enter the following Connection Information:
   - *http/https:* Select the http option if you are *not* using SSL (default). Select the https option if you are using SSL. Note that if you are using SSL you need to have Client Certificates installed on your web server.
   - *URI Host:* Enter the machine name for the report repository.

     Note. In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

   - *URI Port:* Enter the port number, which must match the port number of your web server (defaults are http = 80, https = 443). If you change a port number you will lose the default values for both protocols.
   - *URI Resource:* Enter SchedulerTransfer/<site name>.

     Note. The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools 8.52: Security Administration PeopleBook*.

   - *Login ID:* Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
   - *Password:* Enter the password for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
   - *Confirm Password:* Enter the password a second time as a confirmation. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
6. Click Save to save your entries.
7. To add additional report nodes, select Add to return to the Search page.

The following fields are shared between the FTP/XCOPY Distribution Node page and the Http Distribution page:

- URL
- Description
- Operating System
- Login ID
- Password

- Confirm Password.

When you enter the information on one page, the information is also displayed on the shared fields of the other page but the fields are grayed out.

Note. If you complete the information for one protocol and then change your selection to another protocol, the shared fields will become active on the other page and grayed out on the original page. When you save, the system automatically clears the fields that are not shared.

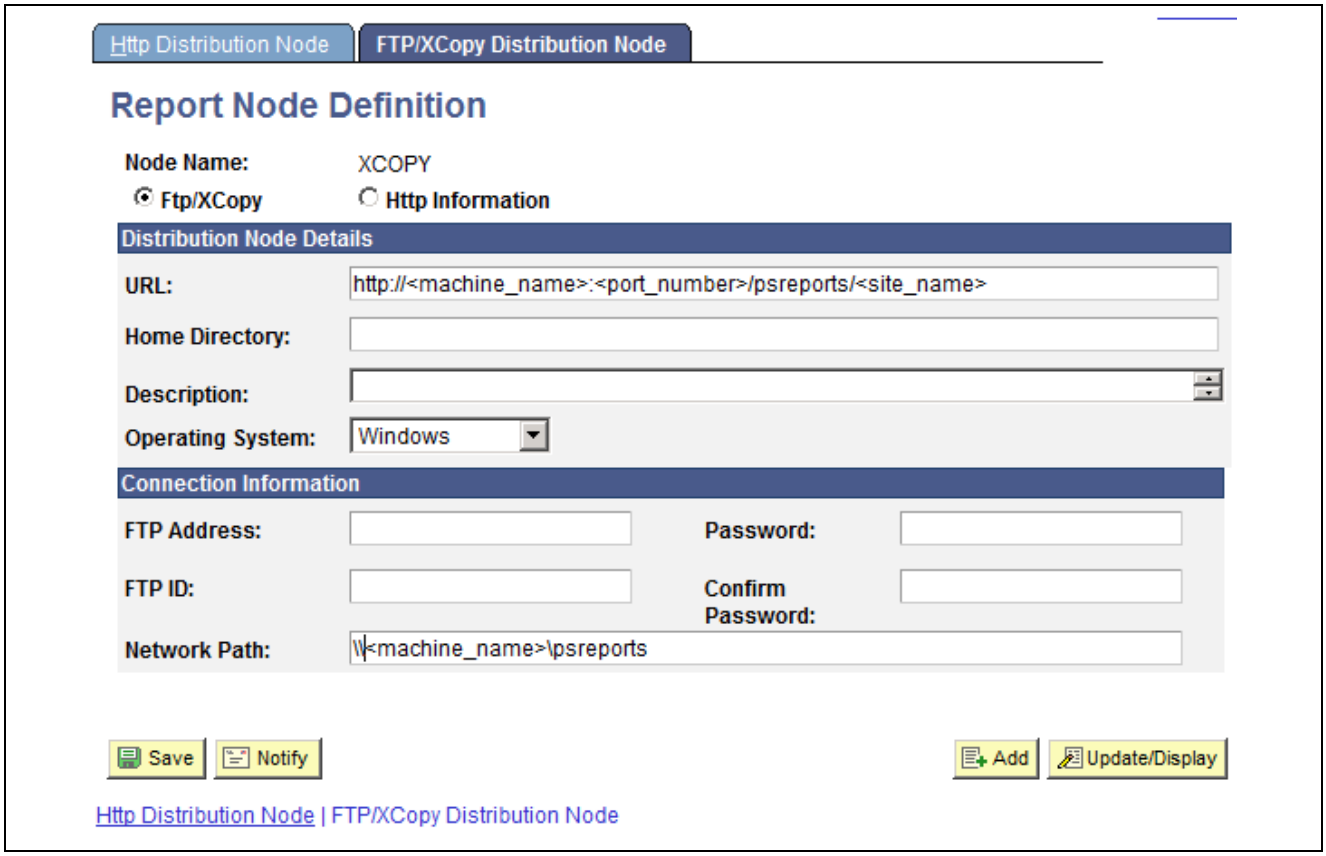
Defining the Report Node to Use XCOPY

If you use XCOPY the following parameters must be configured: URL, Operating System (must be Windows Server), Network Path (must be DOS or UNC paths and should be a shared directory with write permissions for the account running the Process Scheduler). Both the Process Scheduler machine and the Report Repository machine must be Windows for XCOPY to be used.

To define the report node to use XCOPY:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. Select the FTP/XCopy option.

   The FTP/XCopy Distribution page appears.



Report Node Definition page for XCOPY

4. Enter the URL of the web server using this format:

```
http://<machine_name>:<port_number>/psreports/<site_name>
```


Replace <*machine name*> with the name of your web server.

If you are using an http port other than 80, you need to specify the port number. In this case, <*site name*> refers to the directory where you installed the PIA files.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

5. Under Network Path replace <*machine name*> with the name of your machine.

   Make sure that this directory is shared with the login or logins accounts used to start Process Scheduler. Enter the path that points to your Report Repository share. Use UNC format instead of mapped drive format.

6. Select Windows as the operating system.
7. Select Save to save your entries.
8. To add additional report nodes, select Add to return to the Search page.

Defining the Report Node to Use FTP

If you use FTP the following parameters must be configured: URL, Home Directory, Operating System, FTP Address, FTP ID, Password, Confirm Password. In addition, if your FTP server is a Windows server, you may have to set up the FTP service.

Note. The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be accomplished, it is critical that the following setup is done:

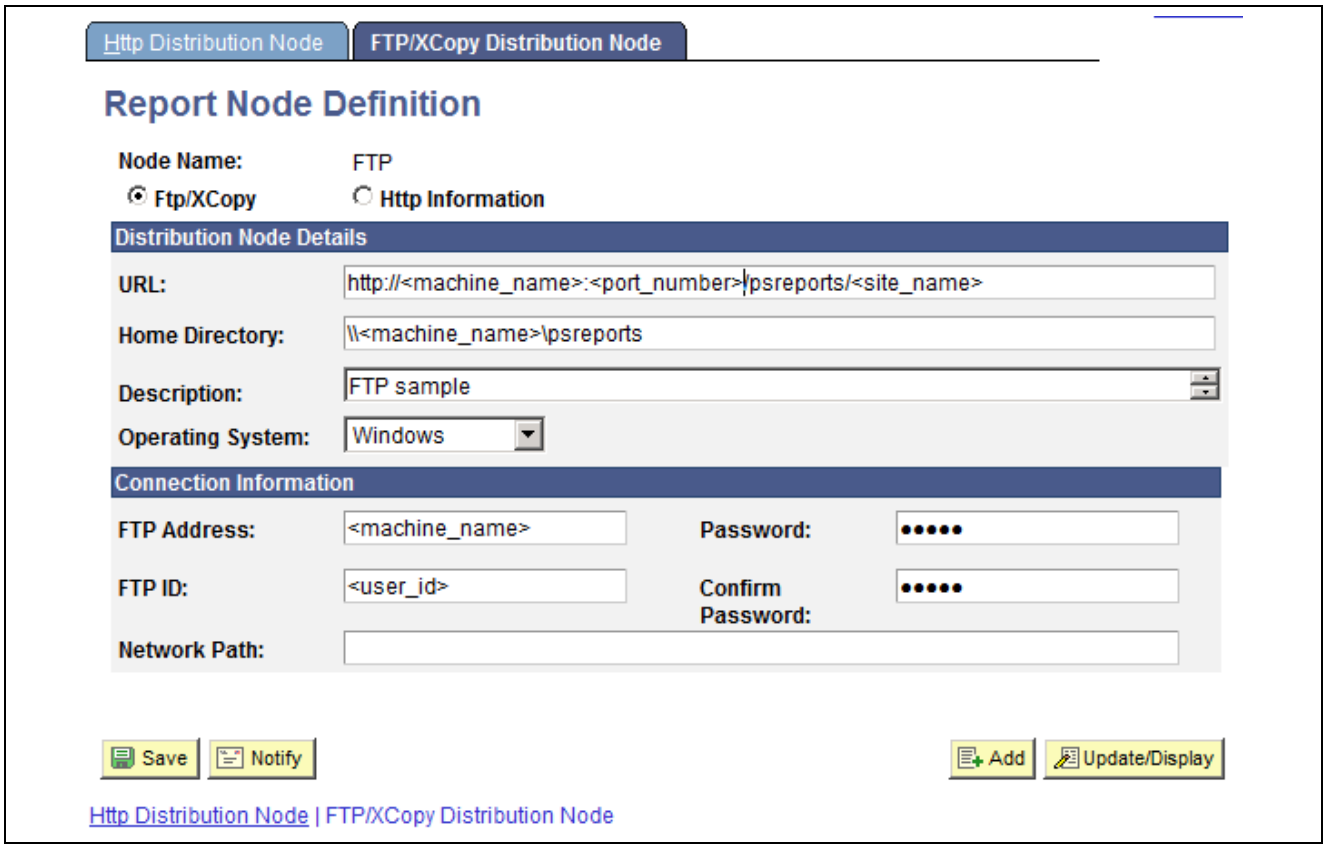
The value entered in the URL must be accurate. Verify that the machine name, port number, and site number are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. Select the FTP/XCopy option.

   The FTP/XCopy Distribution node page appears.



Report Node Definition page for FTP

4. Enter the URL of the web server using this format:

   `http://<machine_name>:<port_number>/psreports/<site_name>`

   Replace <*machine name*> with the name of your web server. If you are using an http port other than 80, you need to specify the port number. The variable <*site name*> refers to the directory where you installed the PIA files; this will default to ps for the first installation.

   Note. If you specify the Authentication Token Domain name during the PeopleSoft Pure Internet Architecture installation, you must include a fully qualified domain name for the URL instead of the IP address.

   Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

5. Enter the following additional parameters:

- *Home Directory:* Enter the directory specified during the installation of PeopleSoft Pure Internet Architecture as the Report Repository. The FTP user ID must have write access to this directory. Note that this is not a required field for HTTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.

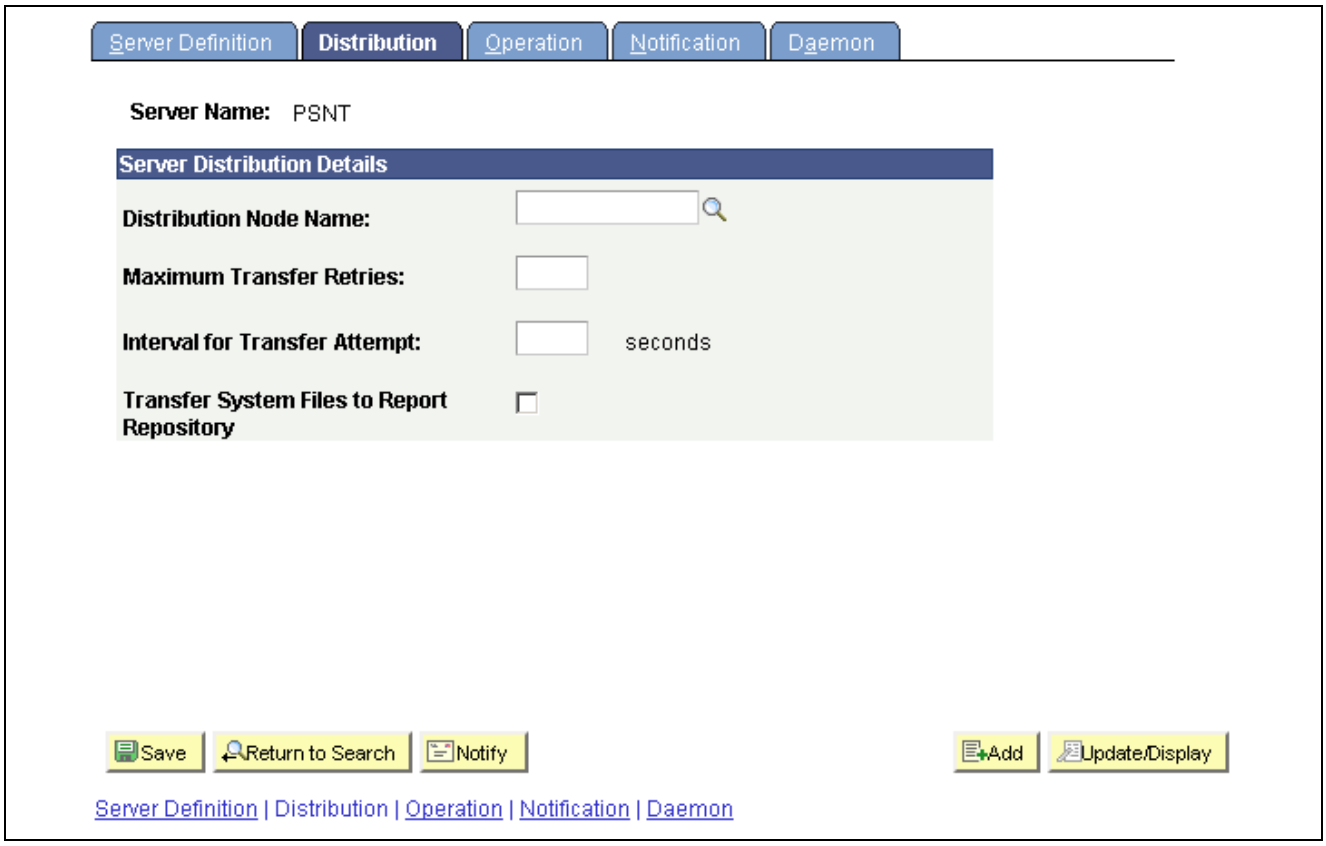
  For Windows, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in c:\psreports\—because you are using the FTP protocol to interpret this parameter.
- *Description:* Enter a description of the server (optional).
- *Operating System:* Select the operating system of the Report Repository.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
- *FTP ID:* FTP user ID.
- *Password:* Enter the password for the user ID specified in the FTP ID field.
- *Confirm Password:* Enter the password a second time as a confirmation.

6. Select Save to save your entries.
7. To add additional report nodes, select Add to return to the Search page.

Task 10A-3-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Choose PeopleTools, Process Scheduler, Servers.
2. Enter the Server Name (such as PSNT). The Server Definition page appears.
3. Select the Distribution tab.



Server Definition page: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.
5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.
7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft Application. To navigate from PIA to Report Repository, you need to setup single signon in order to avoid getting prompt for second signon.

Task 10A-3-6: Setting Up Sending and Receiving of Report Folders in the Report Manager

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools 8.52: PeopleSoft Integration Broker PeopleBook.*

See *PeopleTools 8.52: Integration Broker Service Operations Monitor PeopleBook.*

Task 10A-4: Setting Environment Variables

To set the appropriate Tuxedo environment variables, carry out these steps. (If you have already set these variables on the machine you are using as your Process Scheduler Server, you can skip this task.)

See "Installing Additional Components," Installing Oracle Tuxedo on Microsoft Windows.

To set the variables:

1. Choose Start, Settings, Control Panel.
2. Double-click the System icon.
3. Make sure that the NLSPATH environment variable is set.

   NLSPATH does not need to be explicitly set since Oracle Tuxedo sets NLSPATH in its own registry tree. This value can be displayed using Control Panel, Tuxedo, on the Environment tab. However, the installation of certain products, such as IBM DB2 connectivity (DB2 for z/OS and DB2 for Linux, UNIX, and Windows) sets NLSPATH to a value that causes Oracle Tuxedo to fail. The solution is to either set NLSPATH=c:\tuxedo\locale\c, or to delete it entirely and let Oracle Tuxedo pick up the value from its registry tree. If you are running DB2 for Linux, UNIX, and Windows, the solution instead is to append the c:\tuxedo\locale\c directory in the NLSPATH directory.

Search the Oracle Tuxedo documentation for additional information on NLSPATH.

Task 10A-5: Setting Up Process Scheduler Server Agent

This section discusses:

- Understanding Process Scheduler Server Agent
- Creating and Configuring a Process Scheduler Server
- Reconfiguring a Process Scheduler Server
- Verifying the Process Scheduler Server Status

Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSNT	Microsoft Windows

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the Process Scheduler PeopleBook.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook*

Note. When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

Task 10A-5-1: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure a Process Scheduler server.

You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file psprcs.cfg located in the *PS_CFG_HOME*\appserv\prcs*database name* directory. The following steps assume you are using PSADMIN to specify parameter settings.

Note. For Cube Builder users, if Essbase Server is installed on a different machine than the Process Scheduler, you must install Essbase Client 11.1.2 on the process scheduler server machine. You must also ensure that the %ESSBASEPATH% and %ARBORPATH% environmental variables are properly set in the Process Scheduler.

If the Process Scheduler server is running on a machine with a 64-bit Microsoft Windows environment, configure it to use the 32-bit Essbase Runtime Client.

Note. If you use the configuration file psprcs.cfg, be aware that in the PeopleSoft PeopleTools 8.49 release and later, the section [Output Dest Exceptions] has been modified to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

To create and configure a Process Scheduler Server:

1. From *PS_HOME*\appserv on the batch server, type psadmin and press ENTER to access the PeopleSoft Server Administration menu.
2. Select *2* to access the Process Scheduler submenus.

```
---------------------------------------------
PeopleSoft Server Administration
---------------------------------
Config Home: C:\psft_PrcsSchSrv

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
q) Quit

Command to execute (1-6 q): 2
```

3. Select *2* from the PeopleSoft Process Scheduler Administration menu.

```
-------------------------------------------
```



```
PeopleSoft Process Scheduler Administration
-------------------------------------------
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit

Command to execute (1-4, q) : 1
```

4. When prompted for the name of the database that your server will access, enter the name of the database and press ENTER:

```
Please enter name of Database that server will access :
```

5. Specify 1 for *nt* for the configuration templates.

   The *nt* configuration is based on the operating system Process Scheduler server will be booted from.

```
Process Scheduler Configuration templates:

 1) nt

 2) os390

 Select config template number:
```

6. After the system creates the domain, you see the prompt

```
Would you like to configure this Process Scheduler Server now? (y/n) [y] :
```

   Choose y; you'll see a Quick-configure menu something like this:

```
------------------------------------------------------------
Quick-configure menu -- Scheduler for Database: HRDMO
------------------------------------------------------------
     Features                      Settings
    ==========                    ==========
  1) Master Schdlr  : Yes    5) DBNAME     :[HRDMO]
  2) App Eng Server : Yes    6) DBTYPE     :[DB2ODBC]
                             7) PrcsServer :[PSNT]
                             8) UserId     :[PS]
                             9) UserPswd   :[PS]
                            10) ConnectID  :[people]
                            11) ConnectPswd:[peop1e]
                            12) ServerName :[]
      Actions               13) Log/Output Dir:[%PS_SERVDIR%\log_output]
     =========              14) SQRBIN     :[%PS_HOME%\bin\sqr\ODB\binw]
  3) Load config as shown   15) AddToPATH  :[%WINDIR%;%WINDIR%\SYSTEM32]
  4) Custom configuration   16) DBBIN      :[C:\<connectivity directory>]
  h) Help for this menu     17) Crystal Path:[]
  q) Return to previous menu
```

```
HINT: Enter 5 to edit DBNAME, then 3 to load

Enter selection (1-16, h, or q):
```

7. If you need to modify any of these settings, enter the number next to the parameter name, type the new value, and press ENTER. This table lists the parameters and gives brief descriptions.

Parameter	Description
Master Schdlr	Flag to enable the Master Scheduler Server (PSMSTPRC). Default is to enable the server. See PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.
App Eng Server	Flag to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). Default is set to run AE using PSAESRV. See PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.
Load config as shown	Load the selections you made in the Quick Configure menu.
Custom configuration	Make custom selections in PSADMIN, using options that are not available in the Quick Configure menu.
DBNAME	Specify the database name that is associated with a PeopleSoft Process Scheduler Server Agent, such as HRDMO, FSDMO, SADMO, and so on.
DBTYPE	Specify the database type: DB2ODBC (for DB2 for z/OS).
PrcsServer	Specify the process server name. This must match the name defined in the Server Definition table, such as *PSNT* or *PSUNX*.
UserId	Enter the user ID. For Enterprise Resource Planning (ERP), this is typically *VP1,* and for Human Resources (HR) it's *PS.*
UserPswd	Enter the user password. For Enterprise Resource Planning, this is typically *VP1,* and for Human Resources it's *PS.*
ConnectID	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password. This value is required.
ServerName	Enter the server name

Parameter	Description
Log/Output Dir	Specify the directory in which files that are generated by the program are written. When PeopleSoft Process Scheduler initiates a process request, it creates a subdirectory in the format <Process Type ID>_<Program Name>_<Process Instance> that contains the generated files. For instance, the SQR program XRFWIN that ran with process instance 20 has all reports, trace, and log files in the subdirectory SQR_XRFWIN_20. It is also the optional directory used with the Output Destination field when scheduling a request. This variable (%%OutputDirectory%%) can be used in the File/Printer field of the Process Scheduler Request dialog box.
SQRBIN	Enter the path to the SQR executables.
AddToPATH	(Optional for Tuxedo) Specify an additional directory that is appended to the PATH environment variable.
DBBIN	Enter the path to the database drivers; that is, your connectivity software.
Crystal Path	If you are using SAP Crystal Reports, enter the path to the Crystal executables (for example, C:\Program Files\Business Objects\BusinessObjects Enterprise 12.0\win32_x86)

For descriptions of the PSADMIN options that do not appear in the Quick-configure menu, consult the following. For a basic install, in most cases you can accept the defaults.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.*

8. When you have updated the settings as needed, choose *3*, *Load config as shown*, from the Quick-Configure menu to save your settings to the Process Scheduler configuration file, pstuxcfg.
9. To start Process Scheduler, choose *1*, for Administer Domain.

Note. The Crystal and ODBC libraries and components are automatically configured when Process Scheduler is configured. Successful configuration of the Crystal components requires Crystal 2008 .NET Runtime to be installed on the machine. You can download the Runtime redistributable from Oracle E-Delivery. Admin privileges are required for this task to complete successfully.

---

10. On the PeopleSoft Process Scheduler Administration menu, choose *1* for *Boot this domain*.

```
--------------------------------
PeopleSoft Process Scheduler Administration
--------------------------------

Domain Name: HRDMO

1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
```



```
7) Clean IPC resources of this domain
q) Quit

Command to execute (1-7, q) :
```

11. Choose *1*, Boot (Serial Boot), or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

12. If you want to stop Process Scheduler Server, from the PeopleSoft Domain Administration menu, choose *2*, *Domain Shutdown menu*, and then enter the number corresponding to the name of the appropriate database.

Note. If you see the following message, then the server is already down:

```
Command to execute (1-2, q) [q]: 1
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008, Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.
No bulletin board exists. Entering boot mode.
> TMADMIN_CAT:111: ERROR: No such command.
```

Task 10A-5-2: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. Alternatively, you can use PSADMIN as described in this section. Feel free to skip this procedure if you have already created and configured your Process Scheduler Server using the Quick-configure menu and want to move forward with your installation.

Note. If you want to configure the Process Scheduler Server while it is running, you need to stop and restart the server to load the new settings.

To reconfigure a Process Scheduler Server:

1. Go to *PS_HOME*\appserv and enter:

   ```
   psadmin
   ```

2. Select *2* for Process Scheduler in the PeopleSoft Server Administration menu.
3. In the PeopleSoft Process Scheduler Administration menu, select *1* for Administer a domain.
4. Select the database for which the Process Scheduler needs to be configured.
5. At the prompt

   ```
   Do you want to change any config values (y/n)? [n]:
   ```

   Specify *y* to start an interactive dialog that lets you examine or change parameter values.

6. Now you specify configuration parameters one by one. Configuration parameters are grouped into sections. At each section, you are asked whether to change any parameters—for example:


```
Values for config section - Startup
  DBName=
  DBType=
  UserId=
  UserPswd=
  ConnectId=
  ConnectPswd=
  ServerName=
  StandbyDBName=
  StandbyDBType=
  StandbyUserId=
  StandbyUserPswd=
Do you want to change any values (y/n)? [n]:
```

- Specify *y* to change any parameter values for the current section. You are prompted for each parameter value. Either specify a new value or press ENTER to accept the default. After you press ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- The parameters StandbyDBName, StandbyDBType, StandbyUserID, and StandbyUserPswd are used for a standby database in an Oracle database environment.

  See *PeopleTools 8.52: Data Management PeopleBook,* "Administering PeopleSoft Databases on Oracle," Implementing Oracle Active Data Guard.
- If you do not want to change any values, specify *n* and you are prompted for the next configuration section.

7. Once you have selected all your parameters, you see this message

```
You will need to shut down and start up the server to read the new settings.
```

For descriptions of the Process Scheduler options in the PSADMIN, consult the following. In most cases you can accept the defaults.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.*

Task 10A-5-3: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose option *3*, for *Domain status menu*.

```
--------------------------------
PeopleSoft Process Scheduler Administration
--------------------------------

Domain Name: HRDMO

1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
```



```
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit

Command to execute (1-7, q) : 3
```

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

   For example:

```
Database list:

  1)  HRDMO

Select item number to start: 1
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008 Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.

> Prog Name      Queue Name  Grp Name      ID RqDone Load Done Current Service
---------      ----------  --------      -- ------ --------- ---------------
BBL.exe        46845       PSSERVER+      0      9       450 (  IDLE )
PSMONITORSRV.e MONITOR     MONITOR        1      0         0 (  IDLE )
PSAESRV.exe    00101.00001 AESRV          1      0         0 (  IDLE )
PSAESRV.exe    00101.00002 AESRV          2      0         0 (  IDLE )
PSAESRV.exe    00101.00003 AESRV          3      0         0 (  IDLE )
PSPRCSRV.exe   SCHEDQ      BASE         101      0         0 (  IDLE )
PSMSTPRC.exe   MSTRSCHQ    BASE         102      0         0 (  IDLE )
PSDSTSRV.exe   DSTQ        BASE         103      0         0 (  IDLE )
>
```

You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

If the user has the process security rights to update the server status, the *Refresh* button can be used to refresh the screen, too.

See Setting Up Process Scheduler Security.

This example of the Server List page shows two Process Scheduler servers with status Down, and one with status Running.

Process List | Server List

Refresh

Server	Hostname	Last Update Date/Time	Dist Node	Master	CPU (%)	Memory (%)	Active	Status	Details
PSNT	PTLAB95	10/28/2003 9:53:33AM	https	N	1	29	0	Down	Details
QEPSNT2	PTLAB95	10/28/2003 9:53:45AM	https	N	1	29	0	Down	Details
QE_HPX1	pt-hp07	10/28/2003 10:05:47AM	https	Y	21	34	1	Running	Details

Process Monitor page: Server List tab

Task 10A-6: Starting Process Scheduler as a Windows Service (Optional)

You can start the Process Scheduler Server as a Windows service. This means that administrators do not need to manually boot each Process Scheduler Server that runs on a Windows machine. Instead, each time you boot the Microsoft Windows server where the Process Scheduler Server resides, the Process Scheduler Server will boot automatically. You can also still manually boot Process Scheduler Servers on your Microsoft Windows server.

Note. If you have set up TUXDIR and TEMP as new SYSTEM variables, you need to reboot your machine before any Windows services will pick up the value of these environment variables.

Note. You can also set up application servers and search servers as a Windows service using the instructions provided here.

The following directions assume that the Process Scheduler is already configured on the Microsoft Windows server.

To set up the Windows Service for a Process Scheduler Server:

1. Open the System utility within the Control Panel, and set the variables, listed with a brief explanation in the following table, in the System Variables section of the Environment tab.

   Note. Even if the following variables are in the User Variables section, they must also be in the System Variables section because the Windows service will be started under the System Account.

Variable	Value
TEMP	Specify the location of the TEMP directory on the Windows server, as in C:\TEMP.
TUXDIR	Specify the location of the Tuxedo directory on the Windows server, as in C:\tuxedo.

2. Reboot the Windows computer if any changes or additions were made for the system variables.
3. Run the PeopleSoft PSADMIN utility (psadmin.exe in the *PS_HOME*\appserv directory).
4. Select *4* from the PeopleSoft Server Administration menu.

```
--------------------------------
PeopleSoft Server Administration
```



```
 --------------------------------
  1) Application Server
  2) Process Scheduler
  3) Search Server
  4) Service Setup
  5) Replicate Config Home
  q) Quit

Command to execute (1-4, q): 4
```

5. Select *1* from the PeopleSoft Services Administration menu.

```
-------------------------------------------
PeopleSoft Services Administration
-------------------------------------------
 1) Configure a Service
 2) Install a Service
 3) Delete a Service
 4) Edit a Service Configuration File
 q) Quit

Command to execute (1-4, q) : 1
```

When asked if you want to change configuration values, enter y.

6. Enter the name of the Process Scheduler databases that you intend to include as part of the Windows service.

```
Values for config section - NT Services
  Service Start Delay=60
  Application Server Domains=HRDMO
  Process Scheduler Databases=HRDMO
  Search Server Domains=HRDMO

Do you want to change any values (y/n)? [n]:
```

If you specify more than one Process Scheduler database, separate each entry with a comma.

Note. You can use PSADMIN to set up Process Scheduler Servers, application servers, or search servers as a Windows service. The Windows Service psntsrv.exe automatically starts application servers, Process Scheduler servers, and search servers that reside on the same Microsoft Windows machine. Occasionally, psntsrv.exe would attempt to initiate a connection between an application server, Process Scheduler server, or search server and a database on the same machine that was not ready to receive requests. As a result the connection would fail. When you set up these servers as a Windows Service, you can specify a Service Start Delay, in seconds, that elapses before a service attempts to start any application server domains, Process Scheduler servers, or search servers. This allows the RDBMS to boot and become available to accept requests. The default setting for the Service Start Delay parameter is 60 seconds.

Note. The NT Services section of the PSADMIN modifies the psntsrv.cfg file located in the *PS_CFG_HOME*\appserv directory. You can edit this file manually by selecting *4*, *Edit a Service Configuration File* from the PeopleSoft Services Administration menu. If you edit it, you need to delete and then install the service again.

7. Select option *2* from the PeopleSoft Services Administration menu.

```
-----------------------------------------
PeopleSoft Services Administration
 -----------------------------------------
   1) Configure a Service
   2) Install a Service
   3) Delete a Service
   4) Edit a Service Configuration File
   q) Quit

Command to execute (1-4, q) : 2
```

8. Return to the Control Panel, choose *Administrative Tools*, and launch the *Services* utility.
9. On the Services dialog, scroll to find the entry that adheres to the following naming convention, and select it:

   ```
   PeopleSoft <PS_CFG_HOME>
   ```

   For example:

   ```
   PeopleSoft C:\Documents and Settings\asmith\psft\pt\8.52
   ```

   Note. The default Startup mode is Manual.

10. Click *Startup*.
11. On the Service dialog in the Startup Type group, select *Automatic*, and in the Log On As group, select *System Account*. Then click OK.

    Note. The *Log On As* setting needs to reflect that which you set for your ORACLE ProcMGR V10gR3 with VS2008 and Tlisten processes. Oracle recommends that you set these services to *System Account* when you install Tuxedo. The *Log On As* value only affects the application server because Process Scheduler runs independently from Tuxedo. See the chapter "Installing Additional Components" for more information on installing Tuxedo, and refer to the chapter "Configuring the Application Server" for the details on configuring the application server.

12. On the Services dialog, make sure the PeopleSoft service is selected, and click Start.
13. Use the Process Monitor to verify that the Process Scheduler Server is running. You can also use Task Manager to verify that the executables involved with the service are running.

For the Process Scheduler, make sure that the psprcsrv.exe is running. If you have customized the name of psprcsrv.exe, make sure the appropriate executable is running.

Task 10A-7: Configuring the Process Scheduler for Word for Windows (Optional)

Some applications process documents using Word for Windows. Here is how to configure Word to work with the Process Scheduler.

Note. Microsoft Word must already be installed on the server; it is not included with the PeopleSoft PeopleTools install.

To configure Process Scheduler for Word for Windows:

1. Locate the Process Scheduler configuration file psprcs.cfg in *PS_CFG_HOME*\appserv\prcs\<*database_name*> directory and open it for editing.
2. In the [Process Scheduler] section, edit the WINWORD entry so that it points to the directory where winword.exe is installed—for example, “WINWORD=C:\Program Files\Microsoft Office\OFFICE 11”.
3. If spaces exist in the WINWORD path in the Process Scheduler configuration file (psprcs.cfg), Word for Windows reports will fail. You will need to modify the Process Type Definition and add quotes around the entry in the Command Line field, for example " %%WINWORD%%\winword.exe".
4. Change the Microsoft Word macro security to allow macros to be run.

   Start Microsoft Word and select Tools, Macro, Security. Select the *Low* security setting and click OK.
5. If you are running on Microsoft Windows 2008, modify your macros to include the following line:

   ```
   Application.AutomationSecurity=msoAutomationSecurityLow
   ```

   You can see an example by viewing the macros in *PS_HOME*\winword\Wordsamp.doc.

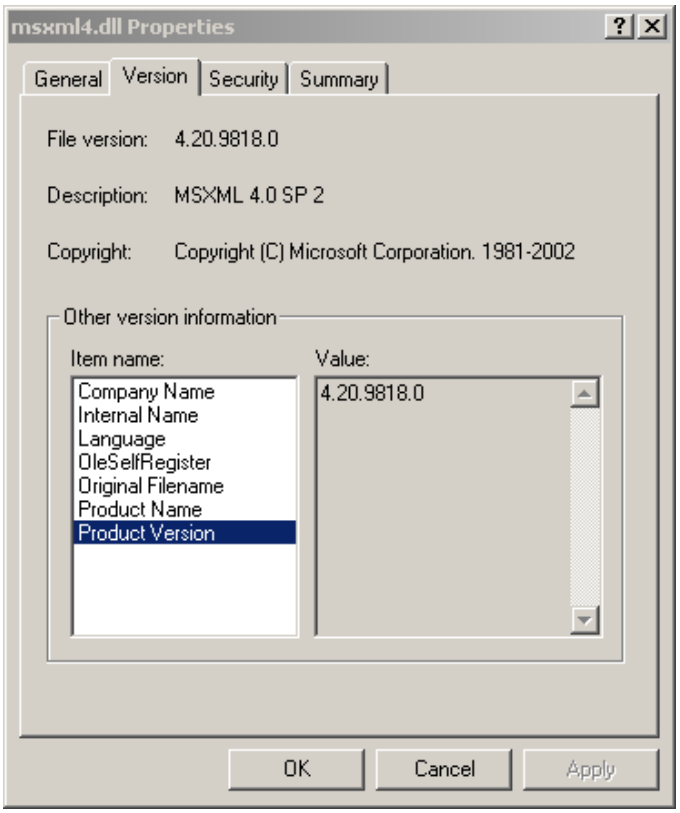
Task 10A-8: Configuring Setup Manager

Before you can use Setup Manager, you must fulfill these requirements:

- To use the Excel to CI template-generation feature of Setup manager, the Process Scheduler must be PSNT.

  That is, Process Scheduler must be installed on a Microsoft Windows machine.
- Process Scheduler must be running.
- Any Process Scheduler environment variables (especially %PS_FILEDIR%) must be specified.
- A supported version Microsoft Office must be present on the process scheduler server, and Microsoft Excel must be installed.
- The MSXML COM object for Microsoft Excel, msxml4.dll, must be present on the system.

  For confirmation, navigate to %SystemRoot%\system32\msxml4.dll. Right-click and select Properties. On the msxml4.dll Properties dialog box, select the Version tab, and then Product Version. As shown on this example of the msxml4.dll Properties dialog box, the version number must be 4.20 or above.



msxml4.dll Properties dialog box: Version tab

See Also

PeopleTools 8.52: Setup Manager PeopleBook

Microsoft support, support.microsoft.com

Task 10A-9: Installing Products for PS/nVision

This section discusses:

- Understanding the PS/nVision Setup
- Installing Products for PS/nVision in Excel Automation Mode
- Installing Products for PS/nVision in Open XML Mode

Understanding the PS/nVision Setup

Beginning with the PeopleSoft PeopleTools 8.52 release, PS/nVision can operate in the following two modes on PeopleSoft Process Scheduler (batch server):

- Excel automation mode
- Open XML mode

See Also

PeopleTools 8.52: PS/nVision PeopleBook, "Getting Started with PS/nVision"

Task 10A-9-1: Installing Products for PS/nVision in Excel Automation Mode

Excel automation mode is the default mode for PS/nVIsion on the PeopleSoft Process Scheduler.

To set up PS/nVision in Excel automation mode:

- For all batch servers, install Microsoft Excel on the batch server. The minimum supported version is Microsoft Excel 2007.
- If the batch server is on a 64-bit Microsoft Windows 2008 machine, create an empty “Desktop” folder with this path:

  C:\Windows\SysWOW64\config\systemprofile\Desktop
- If the batch server is on a 32-bit Microsoft WIndows 2008 machine, create an empty “Desktop” folder with this path:

  C:\Windows\System32\config\systemprofile\Desktop

Task 10A-9-2: Installing Products for PS/nVision in Open XML Mode

This section discusses:

- Installing Microsoft .NET Framework 3.5 SP1
- Verifying the Microsoft .NET Framework 3.5 SP1 Installation on Windows 2008 R2
- Installing Open XML SDK 2.0

Installing Microsoft .NET Framework 3.5 SP1

Use these instructions to set up PS/nVision in Open XML mode. Microsoft Open XML SDK 2.0 requires Microsoft .NET Framework 3.5 SP1. Use the information in this section to install Microsoft Open XML SDK, and to install Microsoft .NET Framework 3.5 SP1, if it is not already installed on the computer.

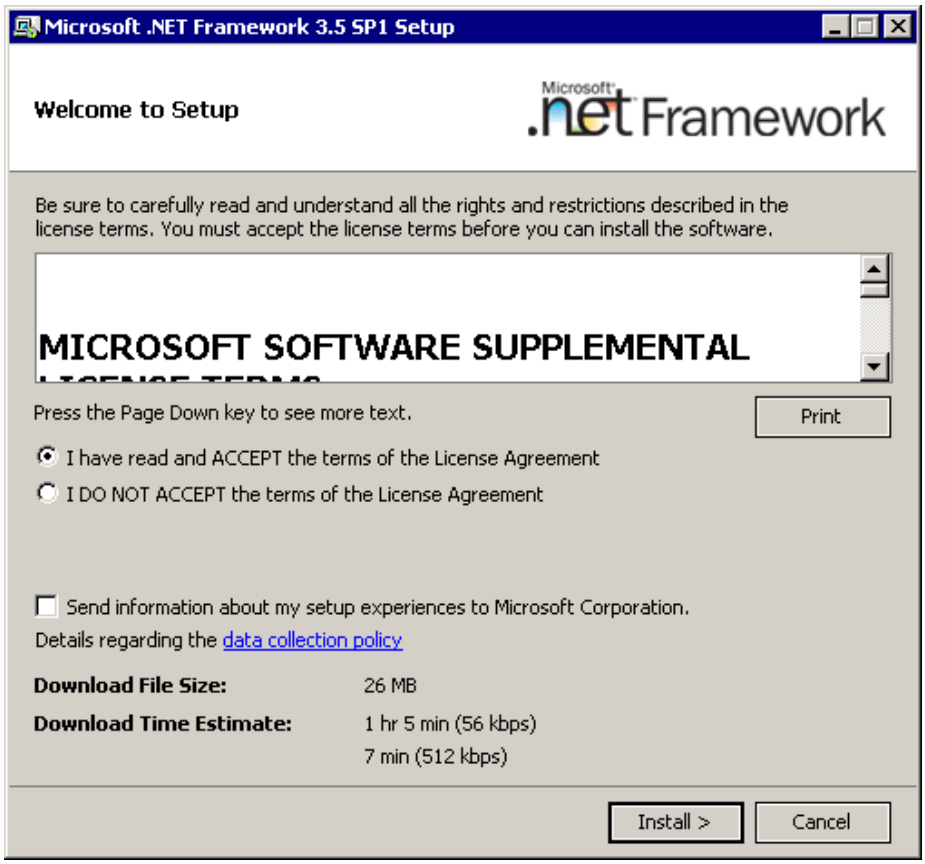
Use the steps in this section to install Microsoft .NET Framework 3.5 SP1.

Note. If your operating system is Microsoft Windows 2008 R2, see the following section.

See Verifying the Microsoft .NET Framework 3.5 SP1 Installation on Windows 2008 R2.

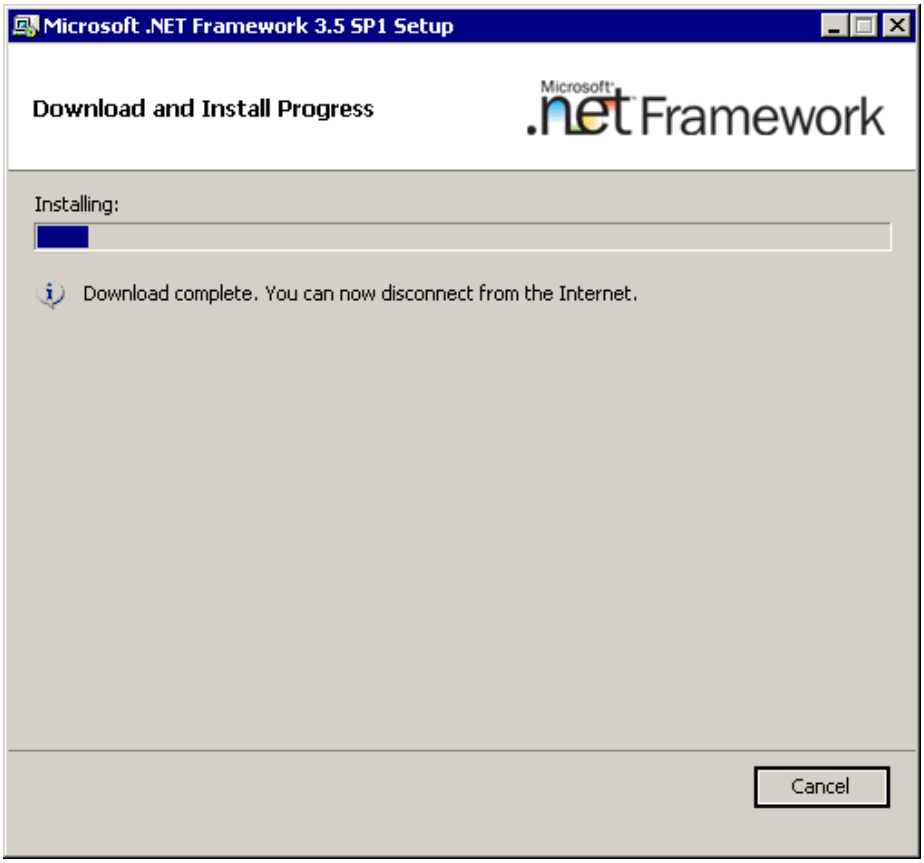
---

1. If there are any versions of Microsoft .NET Framework installed on your computer:
   a. Select Start, Programs, Control Panel, Add/Remove Programs
   b. Locate the existing Microsoft .NET Framework installations and remove them.
2. Go to *PS_HOME*\setup\dotnet35redist.
3. Run the dotnetfx35.exe.file.
4. Review the license agreement, select the option I have read and ACCEPT the terms of the License Agreement, and then click Install.



Microsoft .NET Framework 3.5 SP1 Setup Welcome to Setup window

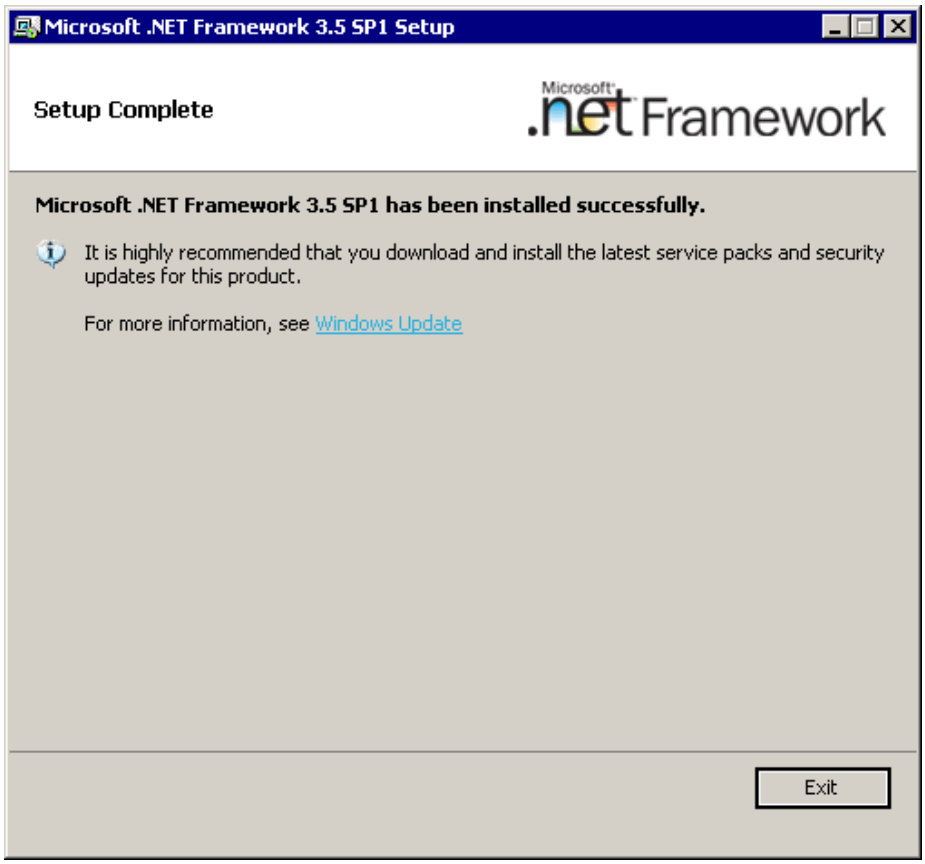
A progress window appears. Do *not* close the installer window when you see this message: "Download complete. You can now disconnect from the Internet," as the installation continues after this point.



Microsoft .NET Framework 3.5 SP1 Setup Download and Install window

5. Click Exit when the installation is complete.

   The Setup Complete window includes the message “Microsoft .NET Framework 3.5 SP1 has been installed successfully.”



Microsoft .NET Framework 3.5 SP1 Setup Complete window

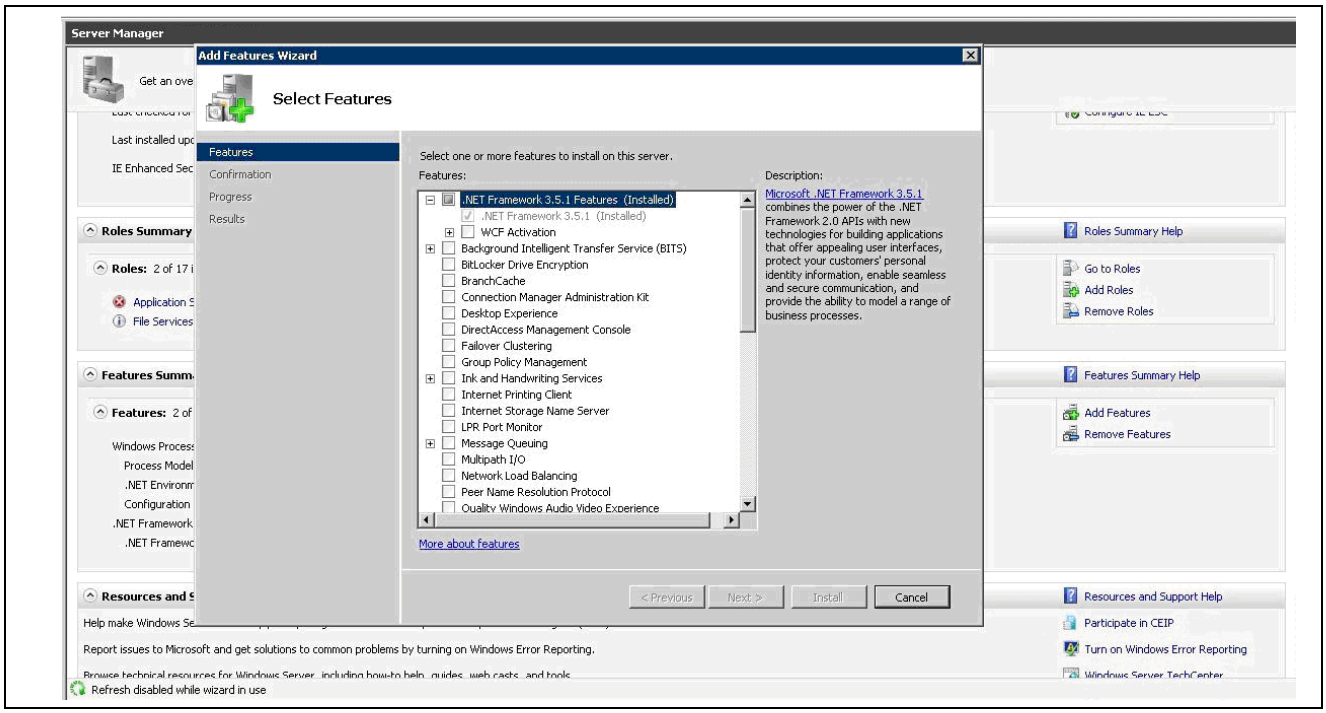
Verifying the Microsoft .NET Framework 3.5 SP1 Installation on Windows 2008 R2

If your operating system is Microsoft Windows 2008 R2, Microsoft .NET Framework 3.5 SP1 is included as a feature. To verify that Microsoft .NET Framework 3.5 SP1 is installed and enabled:

1. Open Server Manager.
2. Verify if Microsoft .NET Framework 3.5 SP1 is listed as a feature in the Feature Summary section.

   If yes, then Microsoft .NET Framework 3.5 SP1 is already installed on this computer and it is enabled.
3. If Microsoft .NET Framework 3.5 SP1 is not listed in the feature summary, then click Add Features to open the Add Feature wizard.

   In this example, Microsoft .NET Framework 3.5 SP1 is listed as .NET Framework 3.5.1 (Installed).



Add Features Wizard dialog box

4. If Microsoft .NET Framework 3.5 SP1 is listed in the list of features, it means it is installed on this computer, but not enabled.

   To enable this feature, select the check box for Microsoft .NET Framework 3.5 SP1 and complete the Add Feature process. Consult the Microsoft Windows documentation for information on completing the process.

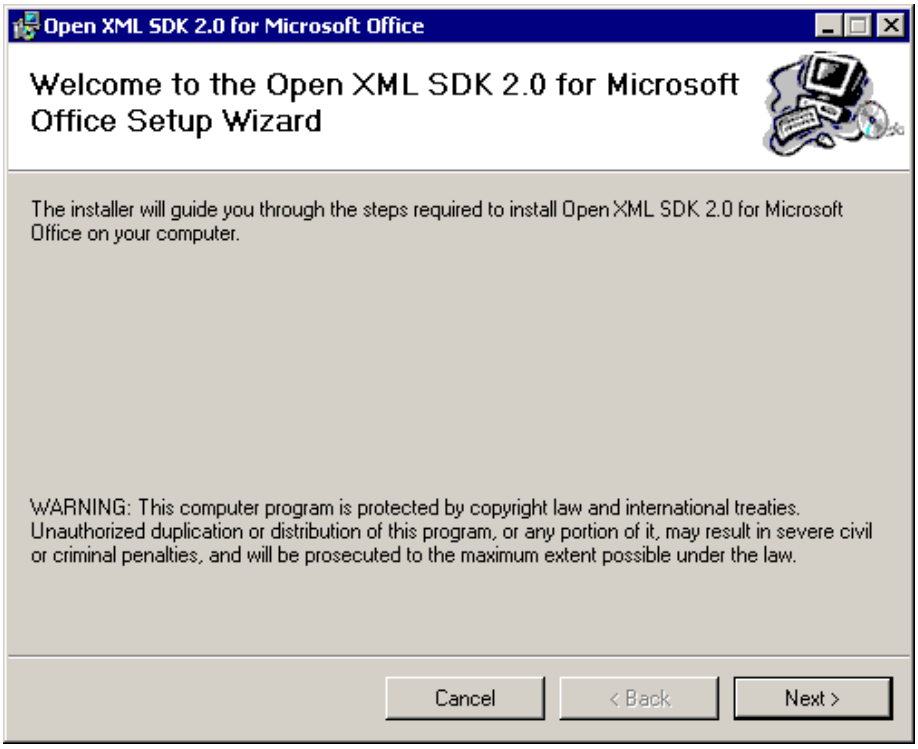
5. If Microsoft .NET Framework 3.5 SP1 is not listed in the list of features, then it is *not* installed on this box. Refer to the previous section to install Microsoft .NET Framework 3.5 SP1.

   See Installing Microsoft .NET Framework 3.5 SP1.

Installing Open XML SDK 2.0

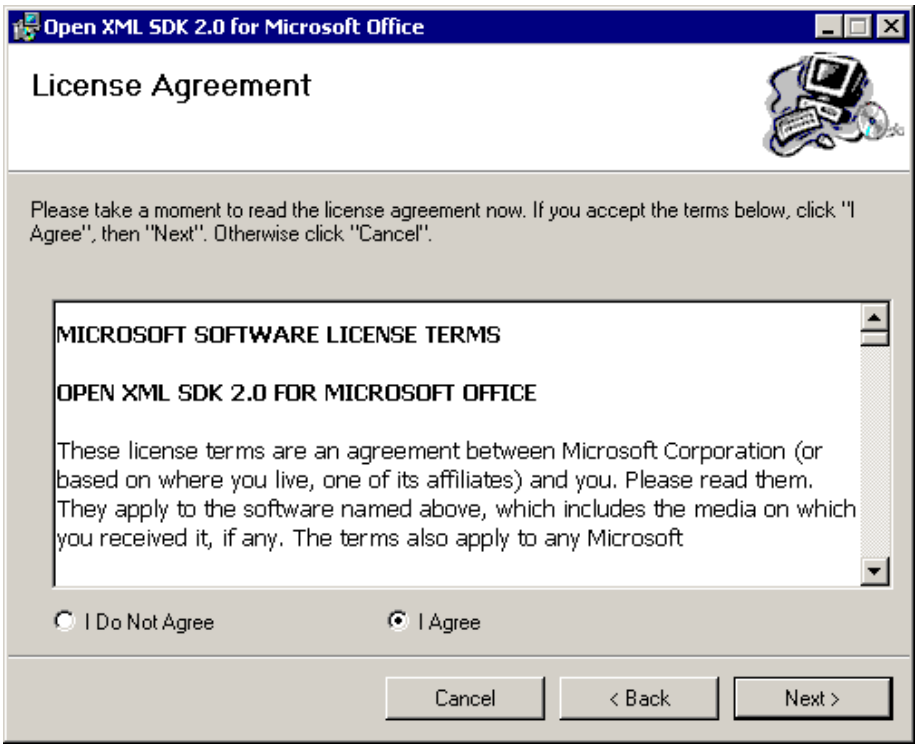
To install Microsoft Open XML SDK V2.0:

1. Go to *PS_HOME*\setup\OpenXmlSDK.
2. Run the OpenXMLSDKv2.msi file.
3. Click Next on the welcome window.



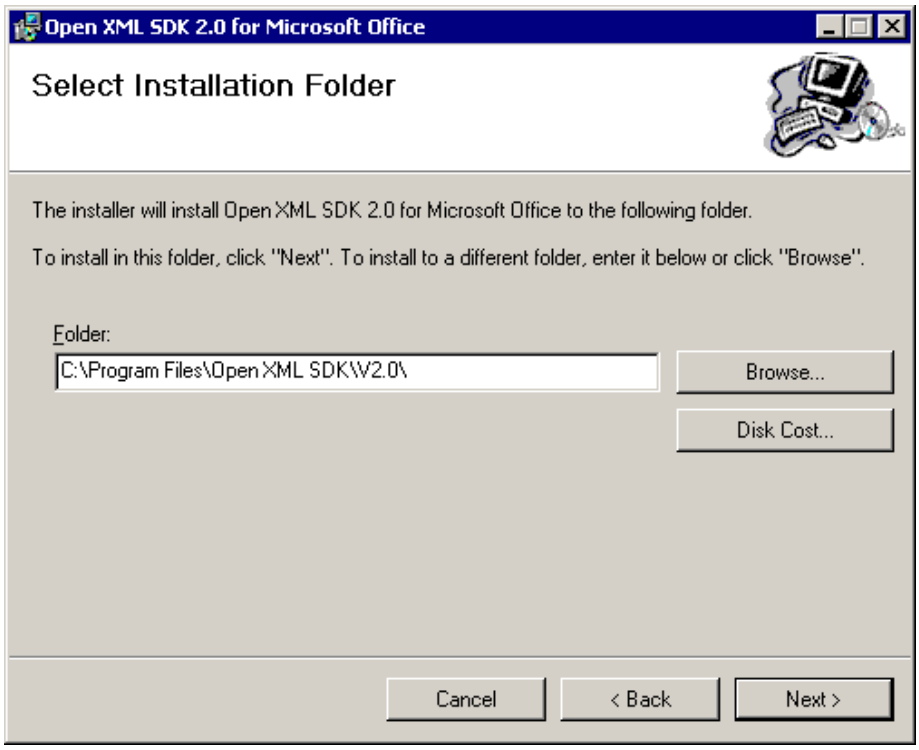
Microsoft Open XML SDK 2.0 welcome window

4. Review the license agreement, select the option I agree, and then click Next.



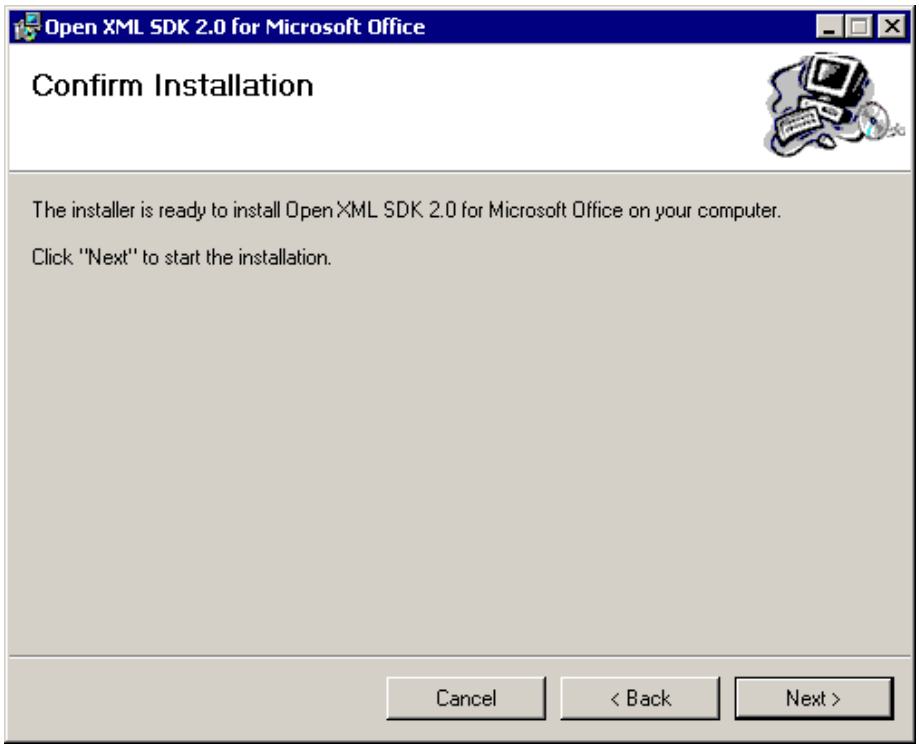
Microsoft Open XML SDK 2.0 License Agreement window

5. Accept the default location for the installation, C:\Program Files\Open XML SDK\V2.0, and then click Next.



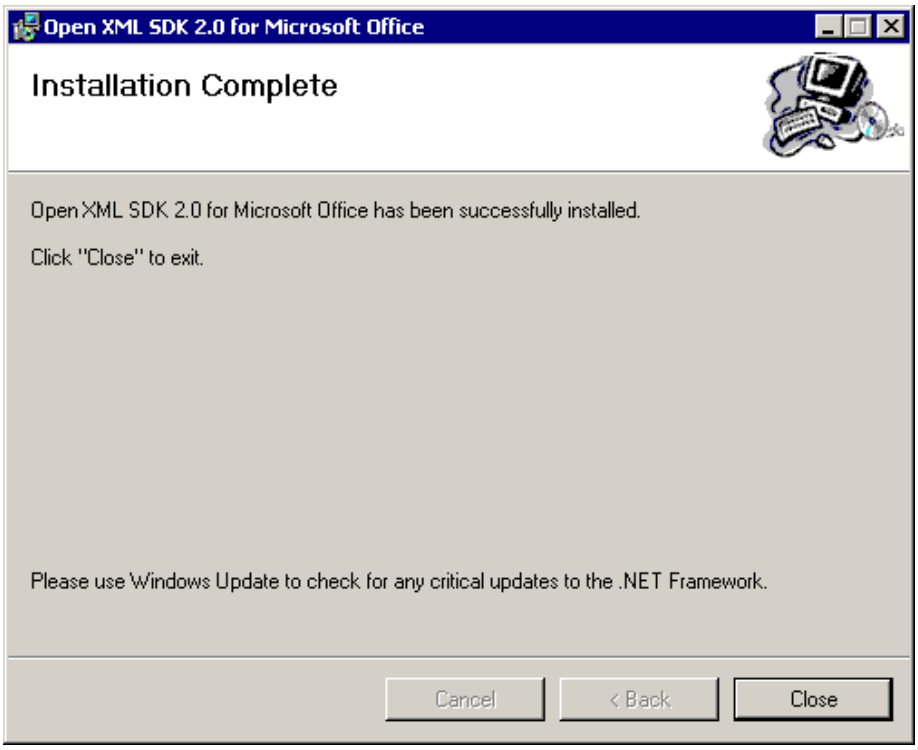
Microsoft Open XML SDK 2.0 Select Installation Folder window

6. Click Next on the Confirm Installation window to begin the installation.



Microsoft Open XML SDK 2.0 Confirm Installation window

7. Click Close when the installation is complete.



Microsoft Open XML SDK 2.0 Installation Complete window

CHAPTER 10B

Setting Up Process Scheduler on UNIX

This chapter discusses:

- Prerequisites
- Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade.
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Up Process Scheduler Server Agent

Prerequisites

If your database runs on z/OS, you need to set up a Microsoft Windows batch environment on a Microsoft Windows application server or on a dedicated Microsoft Windows workstation for Microsoft Windows-specific batch processes, such as Crystal Reports, nVision reports, Cube Builder, or Microsoft Word. These processes are Microsoft Windows-specific applications that cannot be executed by the Process Scheduler on z/OS.

Before setting up your Process Scheduler, you must:

- Install Tuxedo (except for z/Linux).

  See "Installing Additional Components."
- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).

  See "Preparing for Installation."
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.

In PeopleSoft PeopleTools 8.50 and later, the configuration and log files for Process Scheduler server domains reside in *PS_CFG_HOME*. If you do not set a PS_CFG_HOME environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

`$HOME/psft/pt/<peopletools_version>`

See "Preparing for Installation," Defining Server Domain Configurations.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

See Also

PeopleTools 8.52 Hardware and Software Requirements

PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook

My Oracle Support, Certifications

Task 10B-1: Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade.

If you are installing into an existing *PS_HOME* or *PS_CFG_HOME* in preparation for a PeopleTools-only upgrade, perform the following instructions to remove any obsolete files.

If you were using PeopleSoft PeopleTools 8.50 or earlier, remove *PS_HOME*/appserv/PSADMIN prior to installing the new release. If you have any customized configuration files (such as psappsrv.cfg, psconfig.sh, pspt, pscbl.mak, psrun.mak, psprcs.cfg, and so on), copy them to another directory so that they are not overwritten during the upgrade process. This enables you to preserve any tuned variables.

Configuration files are typically overwritten when you install the new release using the PeopleSoft Installer.

Task 10B-2: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

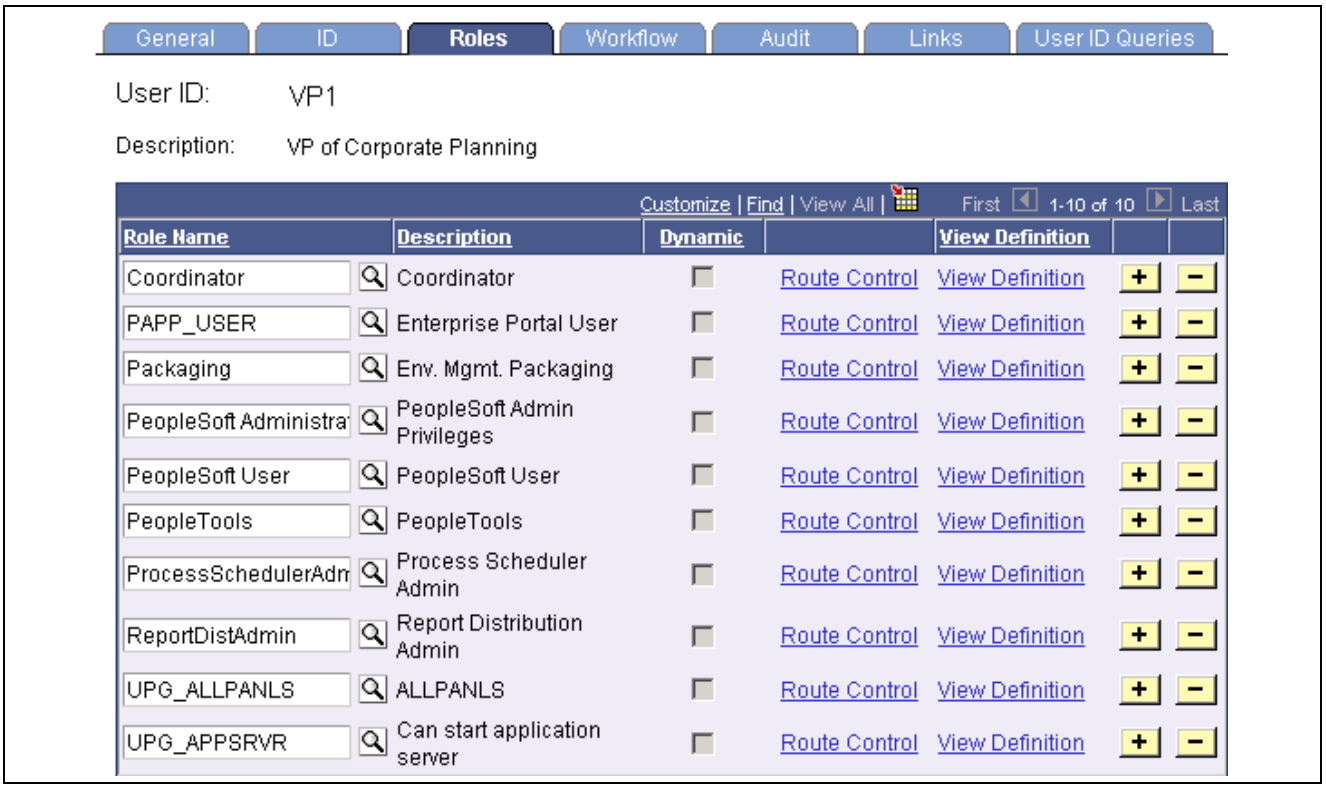
You must carry out this task to start Process Scheduler successfully.

Task 10B-2-1: Granting Process Scheduler Administrative Rights

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools, Security, User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.

4. Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.



Process Scheduler window: Roles tab

5. Repeat the instructions in step 4 to add the role *ReportDistAdmin*.

   This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.

6. Click Save to save your changes.
7. Select the General tab and jot down the Permission List name assigned to the Process Profile field.
8. From the Portal menu, choose PeopleTools, Security, Permissions & Roles, Permission Lists.
9. In the Search dialog, enter the Permission List you noted in step 7.
10. Select the Can Start Application Server check box.
11. Click Save to save your changes.

Task 10B-3: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution
- Setting Up Single Signon to Navigate from PIA to Report Repository

- Determining the Transfer Protocol
- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS_CDM_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of Posting signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name\<date yyyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is Web/Window, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

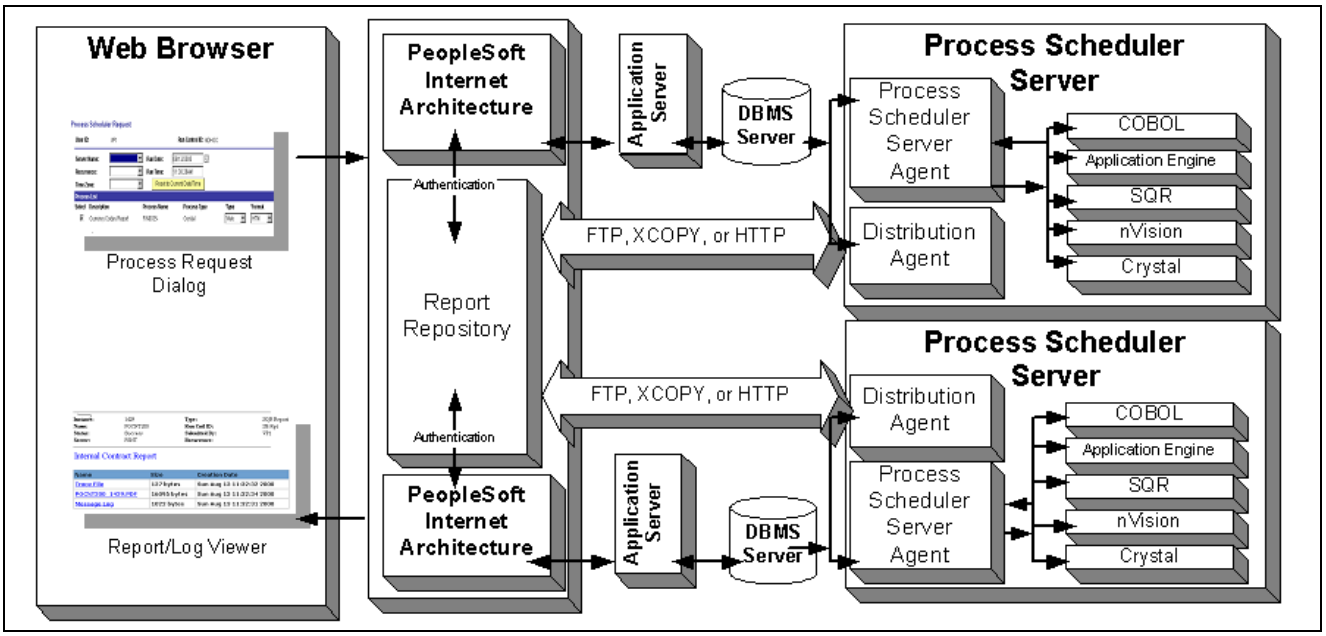
The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

- The web browser gives access to the Process Request dialog and the Report or Log Viewer.
- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

  Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Repository.

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.

- The transfer protocol between Process Scheduler and the Report Repository may be FTP, XCOPY, or HTTP/HTTPS.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security PeopleBook.

See *PeopleTools 8.52: Security Administration PeopleBook.*

Task 10B-3-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as the PeopleSoft Pure Internet Architecture, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PeopleSoft Pure Internet Architecture, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter http://<*machineName*>.peoplesoft.com/<*site_name*>/signon.html instead of http://<*machineName*>/<*site_name*>/signon.html.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

  See *PeopleTools 8.52: Security Administration PeopleBook,* "Implementing Single Signon."

- Set up single signon with a password, like this:
  - Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
  - Click Search and then select the node marked as Default Local Node.
  - Select *Password* for the Authentication Option.
  - Enter a password of your choice.
  - Enter the password again in the Confirm Password field.
  - Enter the user ID for which you are setting up single signon in the Default User ID field.
  - Save the Node Definition.
  - Sign off of PIA.
  - Reboot your application server.

See Also

PeopleTools 8.52: Security Administration PeopleBook

Task 10B-3-2: Determining the Transfer Protocol

We recommend using HTTP as your transfer protocol.

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. If you have a Windows Process Scheduler and a Windows web server, you can use either an XCOPY, FTP, or HTTP/HTTPS. (If FTP information is not specified, Process Scheduler will perform an XCOPY.) If you have any other combination of servers (such as a Windows or z/OS Process Scheduler and a UNIX web server), you must use FTP or HTTP/HTTPS.

Note. If you are using FTP, the FTP daemon must be set up in your web server.

Note. If you are on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

Task 10B-3-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." Once a node is defined for the Process Scheduler server and in the next cycle the Process Scheduler server checks the state of the system, the Distribution Agent dynamically sets up its environment.

Task 10B-3-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use FTP

Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash ('/') in both cases:

- *Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<*user_home*>/PeopleSoft Internet Architecture/psreports

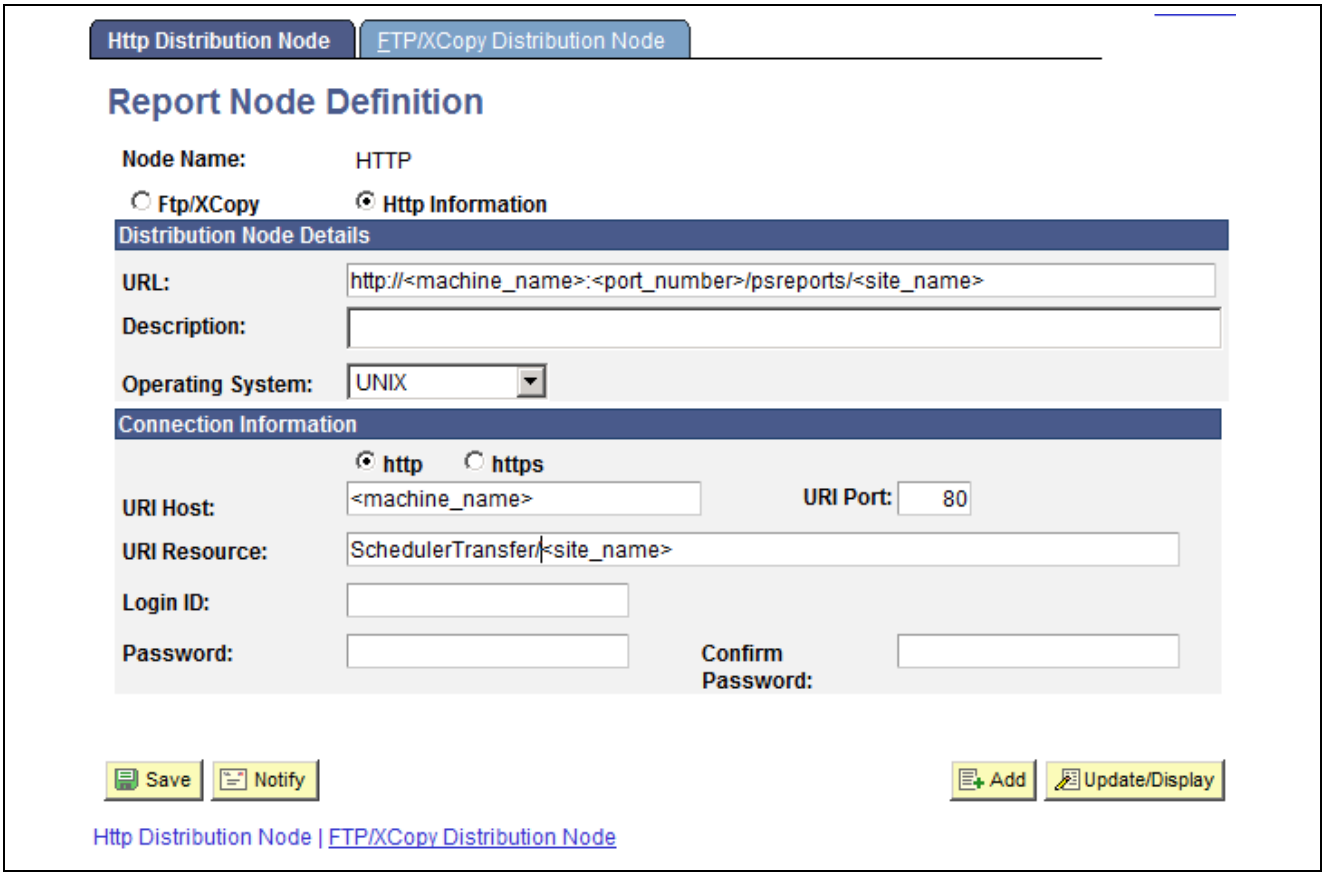
  For <user_home> substitute the home directory for the current user.

Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select the Add a New Value link and enter the Report node name.

   The Report Node Definition page appears. You are on the Http Distribution Node page.
3. Verify that the Http Information option is selected.



Report Node Definition page for HTTP

4. Enter the *URL* of the web server using the following format:

   `http://<machine_name>:<port_number>/psreports/<site_name>`

   Replace <*machine_name*> with the name of your machine. Use the fully qualified host name for your web server. If you are using an http port other than 80, you need to specify the port number.

   Note. If you specify the Authentication Token Domain name during the PeopleSoft Pure Internet Architecture installation, you must include a fully qualified domain name for the URL instead of the IP address.

   - *Description:* Enter a description of the server (optional).
   - *Operating System:* Select the web server operating system.
5. Enter the following Connection Information:
   - *http/https:* Select the http option if you are *not* using SSL (default). Select the https option if you are using SSL. Note that if you are using SSL you need to have Client Certificates installed on your web server.
   - *URI Host:* Enter the machine name for the report repository.

     Note. In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

   - *URI Port:* Enter the port number, which must match the port number of your web server (defaults are http = 80, https = 443). If you change a port number you will lose the default values for both protocols.
   - *URI Resource:* Enter SchedulerTransfer/<site name>.

     Note. The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools 8.52: Security Administration PeopleBook*.

   - *Login ID:* Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
   - *Password:* Enter the password for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
   - *Confirm Password:* Enter the password a second time as a confirmation. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
6. Click Save to save your entries.
7. To add additional report nodes, select Add to return to the Search page.

The following fields are shared between the FTP/XCOPY Distribution Node page and the Http Distribution page:

- URL
- Description
- Operating System
- Login ID
- Password

- Confirm Password.

When you enter the information on one page, the information is also displayed on the shared fields of the other page but the fields are grayed out.

Note. If you complete the information for one protocol and then change your selection to another protocol, the shared fields will become active on the other page and grayed out on the original page. When you save, the system automatically clears the fields that are not shared.

Defining the Report Node to Use FTP

If you use FTP the following parameters must be configured: URL, Home Directory, Operating System, FTP Address, FTP ID, Password, Confirm Password. In addition, if your FTP server is a Windows server, you may have to set up the FTP service.

Note. The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be accomplished, it is critical that the following setup is done:

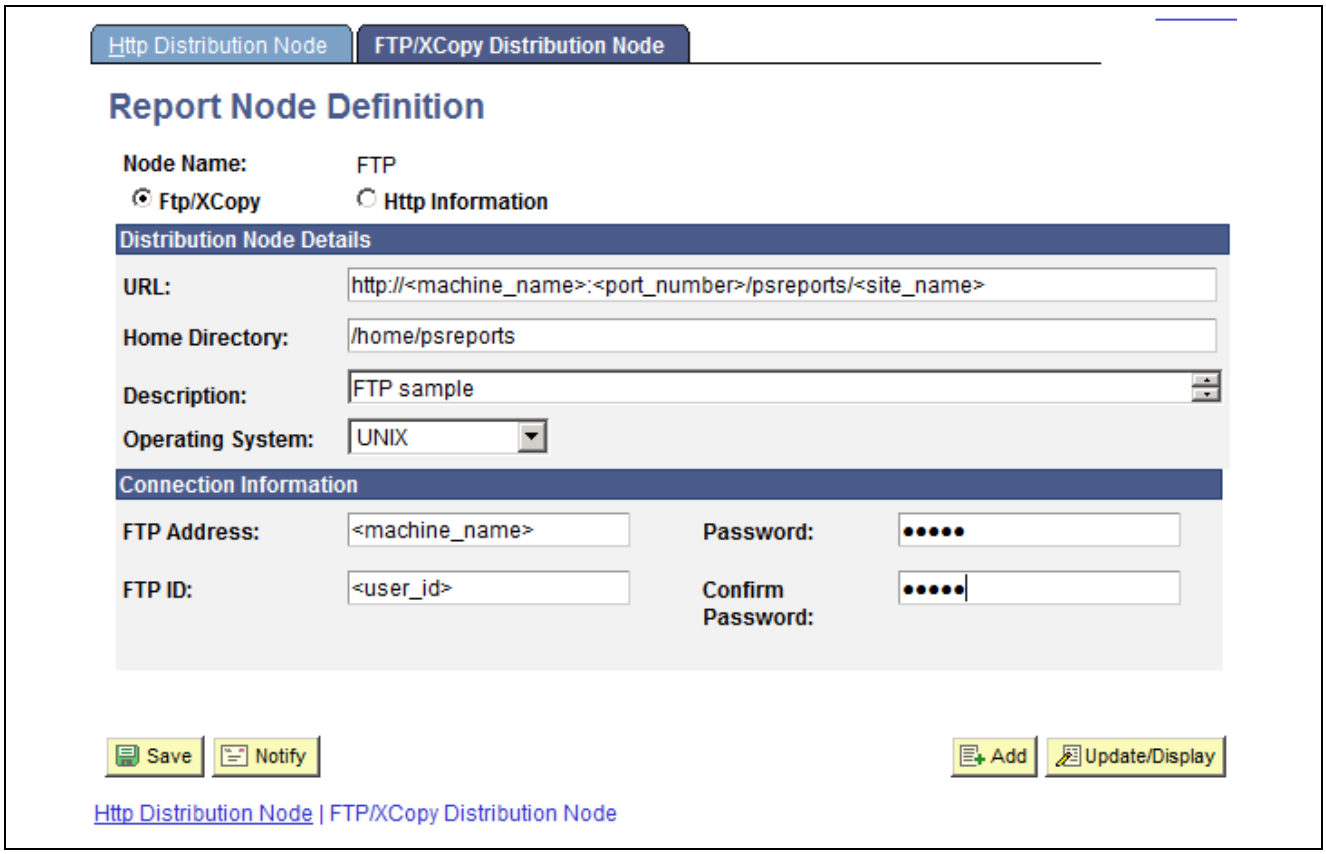
The value entered in the URL must be accurate. Verify that the machine name, port number, and site number are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. Select the FTP/XCopy option.

   The FTP/XCopy Distribution node page appears.



Report Node Definition page for FTP

4. Enter the URL of the web server using this format:

   `http://<machine_name>:<port_number>/psreports/<site_name>`

   Replace <*machine name*> with the name of your web server. If you are using an http port other than 80, you need to specify the port number. The variable <*site name*> refers to the directory where you installed the PIA files; this will default to ps for the first installation.

   Note. If you specify the Authentication Token Domain name during the PeopleSoft Pure Internet Architecture installation, you must include a fully qualified domain name for the URL instead of the IP address.

   Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

5. Enter the following additional parameters:

   - *Home Directory:* Enter the directory specified during the installation of PeopleSoft Pure Internet Architecture as the Report Repository. The FTP user ID must have write access to this directory. Note that this is not a required field for HTTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.

     For UNIX, the default directory is <*user_home*>/PeopleSoft Internet Architecture/psreports/.

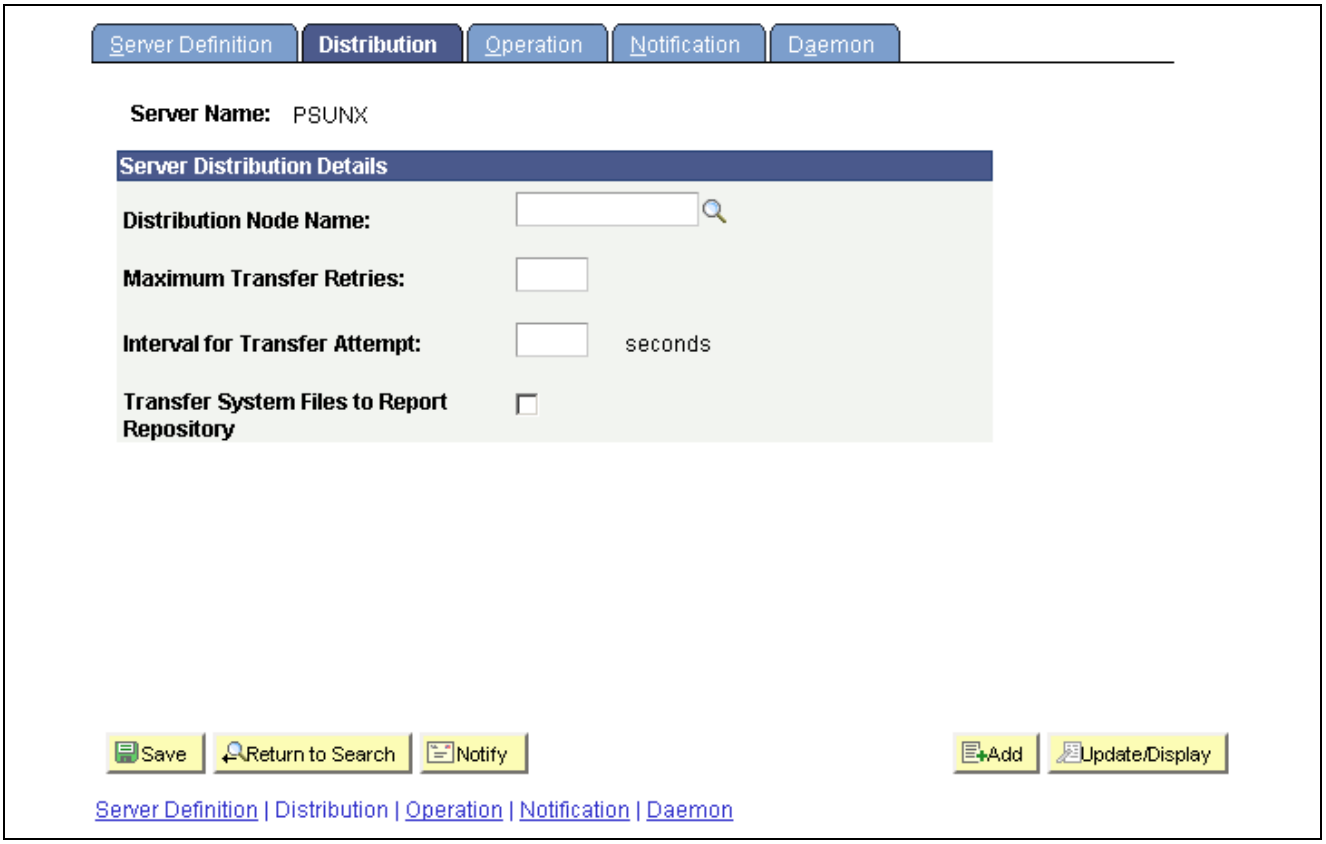
- *Description:* Enter a description of the server (optional).
- *Operating System:* Select the operating system of the Report Repository.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
- *FTP ID:* FTP user ID.
- *Password:* Enter the password for the user ID specified in the FTP ID field.
- *Confirm Password:* Enter the password a second time as a confirmation.

6. Select Save to save your entries.
7. To add additional report nodes, select Add to return to the Search page.

Task 10B-3-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Choose PeopleTools, Process Scheduler, Servers.
2. Enter the Server Name (such as PSUNX). The Server Definition page appears.
3. Select the Distribution tab.



Server Definition page: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.

5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.
7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft Application. To navigate from PIA to Report Repository, you need to setup single signon in order to avoid getting prompt for second signon.

Task 10B-3-6: Setting Up Sending and Receiving of Report Folders in the Report Manager

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools 8.52: PeopleSoft Integration Broker PeopleBook.*

See *PeopleTools 8.52: Integration Broker Service Operations Monitor PeopleBook.*

Task 10B-4: Setting Up Process Scheduler Server Agent

This section discusses:

- Understanding Process Scheduler Server Agent
- Changing the Default Operating System
- Creating and Configuring a Process Scheduler Server
- Reconfiguring a Process Scheduler Server
- Verifying the Process Scheduler Server Status

Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSUNX	UNIX

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the Process Scheduler PeopleBook.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook*

Note. When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

Task 10B-4-1: Changing the Default Operating System

By default, Process Scheduler is set up to run a process request from a Process Scheduler Server Agent started in a Microsoft Windows server when the value of the *ServerName* field in the Process Request Dialog page is left blank. If you plan to run all processes other than Microsoft Windows-based programs (that is, nVision or Crystal Reports) from UNIX, you must change the default operating system.

Note. If you do not change the default operating system from Windows to UNIX and you do not plan to set up a Process Scheduler Server Agent in Microsoft Windows, process requests that are created will be directed to a Microsoft Windows-based operating system and will remain in the "Queued" status.

To change the default operating system for process requests that were not assigned a Process Scheduler Server Name:

1. Select PeopleTools, Process Scheduler, System Settings.
2. Under *Primary Operating System*, choose *UNIX* from the drop-down list.
3. Click on the *System Purge Options* tab. Enter the date for the next purge of process requests in the *Next Purge Date* field.
4. Enter the time for the next purge of process requests in the *Next Purge Time* field. The default time is 12:00:00AM.
5. Enter a *Recurrence* if you want to set a regular purging basis.
6. Choose *Save*.

Task 10B-4-2: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure a Process Scheduler server.

You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file psprcs.cfg located in the *PS_CFG_HOME*/appserv/prcs/*database name* directory. The following steps assume you are using PSADMIN to specify parameter settings.

Note. If you use the configuration file psprcs.cfg, be aware that in the PeopleSoft PeopleTools 8.49 release and later, the section [Output Dest Exceptions] has been modified to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

To create and configure a Process Scheduler Server:

1. From *PS_HOME*/appserv on the batch server, type psadmin and press ENTER to access the PeopleSoft Server Administration menu.
2. Select *2* to access the Process Scheduler submenus.


```
-------------------------------------------
PeopleSoft Server Administration
---------------------------------
Config Home: /home/psft_PrcsSchSrv

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
q) Quit

Command to execute (1-6 q): 2
```

3. Select *2* from the PeopleSoft Process Scheduler Administration menu.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit

Command to execute (1-4, q) : 1
```

4. When prompted for the name of the database that your server will access, enter the name of the database and press ENTER:

```
Please enter name of Database that server will access :
```

5. After the system creates the domain, you see the prompt

```
Would you like to configure this Process Scheduler Server now? (y/n) [y] :
```

Choose y; you'll see a Quick-configure menu something like this:

```
-------------------------------------------------------------
Quick-configure menu -- Scheduler for Database: HRDMO
-------------------------------------------------------------
      Features                      Settings
     ==========                    ==========
  1) Master Schdlr  : Yes     5) DBNAME     :[HRDMO]
  2) App Eng Server : Yes     6) DBTYPE     :[DB2ODBC]
                              7) PrcsServer :[PSUNX]
                              8) UserId     :[QEDMO]
                              9) UserPswd   :[QEDMO]
                             10) ConnectID  :[people]
                             11) ConnectPswd:[peop1e]
                             12) ServerName :[]
      Actions                13) Log/Output Dir:[%PS_SERVDIR%/log_output]
```



```
    =========                14) SQRBIN     :[%PS_HOME%/bin/sqr/ODB/bin]
  3) Load config as shown    15) AddToPATH  :[%PS_HOME%/cblbin]
  4) Custom configuration
  h) Help for this menu
  q) Return to previous menu

HINT: Enter 5 to edit DBNAME, then 3 to load

Enter selection (1-15, h, or q):
```

6. If you need to modify any of these settings, enter the number next to the parameter name, type the new value, and press ENTER. This table lists the parameters and gives brief descriptions.

Parameter	Description
Master Schdlr	Flag to enable the Master Scheduler Server (PSMSTPRC). Default is to enable the server. See PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.
App Eng Server	Flag to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). Default is set to run AE using PSAESRV. See PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.
Load config as shown	Load the selections you made in the Quick Configure menu.
Custom configuration	Make custom selections in PSADMIN, using options that are not available in the Quick Configure menu.
DBNAME	Specify the database name that is associated with a PeopleSoft Process Scheduler Server Agent, such as HRDMO, FSDMO, SADMO, and so on.
DBTYPE	Specify the database type: DB2ODBC (for DB2 for z/OS).
PrcsServer	Specify the process server name. This must match the name defined in the Server Definition table, such as *PSNT* or *PSUNX*.
UserId	Enter the user ID. For Enterprise Resource Planning (ERP), this is typically *VP1,* and for Human Resources (HR) it's *PS.*
UserPswd	Enter the user password. For Enterprise Resource Planning, this is typically *VP1,* and for Human Resources it's *PS.*
ConnectID	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password. This value is required.
ServerName	Enter the server name

Parameter	Description
Log/Output Dir	Specify the directory in which files that are generated by the program are written. When PeopleSoft Process Scheduler initiates a process request, it creates a subdirectory in the format <Process Type ID>_<Program Name>_<Process Instance> that contains the generated files. For instance, the SQR program XRFWIN that ran with process instance 20 has all reports, trace, and log files in the subdirectory SQR_XRFWIN_20. It is also the optional directory used with the Output Destination field when scheduling a request. This variable (%%OutputDirectory%%) can be used in the File/Printer field of the Process Scheduler Request dialog box.
SQRBIN	Enter the path to the SQR executables.
AddToPATH	(Optional for Tuxedo) Specify an additional directory that is appended to the PATH environment variable.
DBBIN	Enter the path to the database drivers; that is, your connectivity software.

For descriptions of the PSADMIN options that do not appear in the Quick-configure menu, consult the following. For a basic install, in most cases you can accept the defaults.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.*

7. When you have updated the settings as needed, choose *3*, *Load config as shown*, from the Quick-Configure menu to save your settings to the Process Scheduler configuration file, pstuxcfg.
8. To start Process Scheduler, choose *1*, for Administer Domain.
9. On the PeopleSoft Process Scheduler Administration menu, choose *1* for *Boot this domain*.

```
--------------------------------
PeopleSoft Process Scheduler Administration
--------------------------------

Domain Name: HRDMO

1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit

Command to execute (1-7, q) :
```

10. Choose *1*, Boot (Serial Boot), or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

11. If you want to stop Process Scheduler Server, from the PeopleSoft Domain Administration menu, choose *2*, *Domain Shutdown menu*, and then enter the number corresponding to the name of the appropriate database.

Note. If you see the following message, then the server is already down:

```
Command to execute (1-2, q) [q]: 1
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008, Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.
No bulletin board exists. Entering boot mode.
> TMADMIN_CAT:111: ERROR: No such command.
```

Task 10B-4-3: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. Alternatively, you can use PSADMIN as described in this section. Feel free to skip this procedure if you have already created and configured your Process Scheduler Server using the Quick-configure menu and want to move forward with your installation.

Note. If you want to configure the Process Scheduler Server while it is running, you need to stop and restart the server to load the new settings.

To reconfigure a Process Scheduler Server:

1. Go to *PS_HOME*/appserv and enter:

   ```
   psadmin
   ```

2. Select *2* for Process Scheduler in the PeopleSoft Server Administration menu.
3. In the PeopleSoft Process Scheduler Administration menu, select *1* for Administer a domain.
4. Select the database for which the Process Scheduler needs to be configured.
5. At the prompt

   ```
   Do you want to change any config values (y/n)? [n]:
   ```

   Specify *y* to start an interactive dialog that lets you examine or change parameter values.

6. Now you specify configuration parameters one by one. Configuration parameters are grouped into sections. At each section, you are asked whether to change any parameters—for example:

   ```
   Values for config section - Startup
     DBName=
     DBType=
     UserId=
     UserPswd=
     ConnectId=
     ConnectPswd=
     ServerName=
     StandbyDBName=
   ```



```
  StandbyDBType=
  StandbyUserId=
  StandbyUserPswd=
Do you want to change any values (y/n)? [n]:
```

- Specify *y* to change any parameter values for the current section. You are prompted for each parameter value. Either specify a new value or press ENTER to accept the default. After you press ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- The parameters StandbyDBName, StandbyDBType, StandbyUserID, and StandbyUserPswd are used for a standby database in an Oracle database environment.

  See *PeopleTools 8.52: Data Management PeopleBook,* "Administering PeopleSoft Databases on Oracle," Implementing Oracle Active Data Guard.
- If you do not want to change any values, specify *n* and you are prompted for the next configuration section.

7. Once you have selected all your parameters, you see this message

```
You will need to shut down and start up the server to read the new settings.
```

For descriptions of the Process Scheduler options in the PSADMIN, consult the following. In most cases you can accept the defaults.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.*

Task 10B-4-4: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose option *3*, for *Domain status menu*.

```
--------------------------------
PeopleSoft Process Scheduler Administration
--------------------------------

Domain Name: HRDMO

1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit

Command to execute (1-7, q) : 3
```

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

   For example:


```
Database list:

  1)  HRDMO

Select item number to start: 1
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008 Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.

> Prog Name      Queue Name  Grp Name      ID RqDone Load Done Current Service
---------      ----------  --------      -- ------ --------- ---------------
DDL            46845       pt-ibm20       0      9       450 (  IDLE )
PSMONITORSRV   MONITOR     MONITOR        1      0         0 (  IDLE )
PSAESRV        00101.00001 AESRV          1      0         0 (  IDLE )
PSAESRV        00101.00002 AESRV          2      0         0 (  IDLE )
PSAESRV        00101.00003 AESRV          3      0         0 (  IDLE )
PSPRCSRV       SCHEDQ      BASE         101      0         0 (  IDLE )
PSMSTPRC       MSTRSCHQ    BASE         102      0         0 (  IDLE )
PSDSTSRV       DSTQ        BASE         103      0         0 (  IDLE )
>
```

Note. You can also do this using the following command line argument:

```
psadmin -p status -d <DBNAME>
```

Note. You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

CHAPTER 10C

Setting Up Process Scheduler on z/OS

This chapter discusses:

- Prerequisites
- Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade
- Granting Required Authorization in DB2 and UNIX System Services
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Up Process Scheduler Server Agent

Prerequisites

If your database runs on z/OS, you need to set up a Microsoft Windows batch environment on a Microsoft Windows application server or on a dedicated Microsoft Windows workstation for Microsoft Windows-specific batch processes, such as Crystal Reports, nVision reports, Cube Builder, or Microsoft Word. These processes are Microsoft Windows-specific applications that cannot be executed by the Process Scheduler on z/OS.

Before setting up your Process Scheduler, you must:

- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).

  The Process Scheduler running on z/OS USS uses the DB2 ODBC component to connect to DB2. DB2 ODBC must be installed by your DB2 systems programmer; installation details are available in the IBM DB2 Installation Guide.

- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Set up your COBOL batch environment if you need to run COBOL processes through Process Scheduler. COBOL is no longer required to start a Process Scheduler Server Agent because the program for Process Scheduler has been rewritten in C++. If the PeopleSoft modules purchased do not contain any COBOL modules, the COBOL run time libraries are not required. Also, COBOL is not required for applications that contain no COBOL programs. Consult My Oracle Support for the details on whether your application requires COBOL.

  See "Preparing for Installation," Planning Your Initial Configuration.

- Install JDK/JRE 1.6.0 (z/OS Java 2 kit) on z/OS.
- Apply all the required IBM patches listed in the document "Important PTFs for the PeopleSoft on DB2 for z/OS."

See "Important PTFs for the PeopleSoft on DB2 for z/OS," My Oracle Support (search for the article name).

- Set up your database connectivity to access the PeopleSoft database from UNIX System Services with ODBC for z/OS.
- Install IBM's system stored procedure DSNUTILS. This is only required if you intend to run %UPDATESTAT meta-SQL coded in Application Engine, COBOL and Process Scheduler. If you do not have DSNUTILS installed, make sure you set the DBFLAGS parameter in the Process Scheduler Configuration file to "1" to disable performing this statistics within.

  See "Creating a Database," Planning Your Installation.
- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.
- PeopleSoft binaries are compiled and linked with IBM's XPLINK (Extra option Linkage) option enabled. In order for all PeopleSoft executables to successfully run from UNIX System Services (USS), it is recommended to include the IBM Language Environment Run Time library CEE.SCEERUN2 dataset concatenated into your system library using IBM's LNKLIST utility. This IBM library CEE.SCEERUN2 may have been renamed in your system. It will be the dataset containing the CELHV003 load module.

In PeopleSoft PeopleTools 8.50 and later, the configuration and log files for Process Scheduler server domains reside in *PS_CFG_HOME*. If you do not set a PS_CFG_HOME environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

`%USERPROFILE%\psft\pt\<peopletools_version>`

See "Preparing for Installation," Defining Server Domain Configurations.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

See Also

PeopleTools 8.52 Hardware and Software Requirements

PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook

My Oracle Support, Certifications

Task 10C-1: Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade

If you are installing into an existing *PS_HOME* or *PS_CFG_HOME* in preparation for a tools-only upgrade, perform the following instructions to remove any obsolete files.

Task 10C-2: Granting Required Authorization in DB2 and UNIX System Services

This section discusses:

- Setting UNIX System Services Authorization
- Setting DB2 Authorization

Task 10C-2-1: Setting UNIX System Services Authorization

This section discusses:

- Providing Read/Write Access to the Designated Log/Output Directory
- Providing Access to TSO and USS

Providing Read/Write Access to the Designated Log/Output Directory

All processes released by Process Scheduler will create and write files to an Hierarchical File System (HFS) directory in UNIX System Services (USS). This HFS directory is designated by the *Log/Output Directory* parameter found in the *Process Scheduler* section of the Process Scheduler Configuration file. By default the log/output directory will be

```
$PS_HOME/appserv/prcs/<database name>/log_output
```

JCL's generated by Process Scheduler to submit COBOL or SQR include step(s) that will copy the log file(s) and reports (for SQR) to the Log/Output directory in USS. If the JCL job card includes the USER/PASSWORD parameter, the user ID specified in the USER parameter must also be given read/write access to this HFS directory. In this case, where multiple mainframe ID's will be writing to this directory, you need to set up a group ID (GID) in RACF and assign the mainframe user ID to this GID. Once you have established this in RACF, make sure the group ID is the owning group of the log/output directory.

As an example, HRASB and PSOFT IDs are required to write to the log/output directory. A DBAUNIX group ID is set up so both HRASB and PSOFT are connected to this group in RACF. For the group to have read/write access, the mode of the directory is changed (using the UNIX command `chmod`) so UID and GID have read/write access.

```
$ ls -l
total 152
drwxrwx---  11 HRASB    DBAUNIX     8192 Dec  5 17:43 log_output
```

Providing Access to TSO and USS

All mainframe user IDs involved in submitting a JCL in TSO or Process Scheduler and Application Engine in USS must be set up in RACF to have access to both TSO and USS environments. Certain procedures in Process Scheduler will perform a OCOPY (from a JCL) or OPUT as a TSO command in USS to transfer files from a PDS into an HFS directory. These procedures are triggered when posting reports and log files from a COBOL and/or SQR. The Distribution Agent will temporarily copy the files from a partitioned dataset (PDS) or sequential file into a designated HFS directory before posting the files to the repository.

To verify that the mainframe ID has all the proper authorization to perform the transfer, you can issue this test from USS.

To verify the mainframe ID's authorization:

1. Log in to the USS with the user ID that will be used to boot Process Scheduler
2. Enter the following command in USS:

```
tso OPUT "'<Partitioned data set(member)>' '<HFS file>"
```

As an example:

```
$ tso OPUT "'FS.FS840A8.JCLLIB(SQRSAMP)' '/tmp/test.txt'"
OPUT 'FS.FS840A8.JCLLIB(SQRSAMP)' '/tmp/test.txt'
IGD103I SMS ALLOCATED TO DDNAME SYS00001
```

In this example, the PDS member SQRSAMP is copied into the HFS file /tmp/test.txt.

See Also

IBM publications available at: http://www-1.ibm.com/servers/eserver/zseries/zos/unix/bpxa1pub.html

Systems Planning Guide (SA22-7800)

User's Guide (SA22-7801)

Task 10C-2-2: Setting DB2 Authorization

This section discusses:

- Setting Authorization for DB2 Plan for ODBC for OS390
- Setting Authorization for DB2 Plans for COBOL
- Setting Authorization for DB2 Plan for SQR

Setting Authorization for DB2 Plan for ODBC for OS390

The privilege to execute the DB2 plan for the CLI/ODBC package DSNAOCLI must be given to the mainframe ID used to login to UNIX System Services to start Process Scheduler Server Agent. When Process Scheduler or Application Engine program connects to the DB2 database, CLI/ODBC authenticates the connection based on the user ID that initiates the program from UNIX System Services.

```
Grant EXECUTE on PLAN <PLAN for CLI Package DSNAOCLI> To <Unix Service Login ID>
```

Setting Authorization for DB2 Plans for COBOL

Enter the following command to set authorization for DB2 Plans for COBOL:

```
Grant EXECUTE on PLAN <SQLRT Plan PTPSQLRA and PTPSQLRE> To <Access-Id> or⇒
 <Ownerid>;
```

The <SQLRT Plan PTPSQLRA and PTPSQLRE > refers to the plans created here:

See "Creating a Database," Binding DB2 Plans.

Setting Authorization for DB2 Plan for SQR

Enter the following command to set authorization for DB2 Plan for SQR:


```
Grant EXECUTE on PLAN <SQR PLAN> To <Access-Id> or <Ownerid>;
```

The <SQR PLAN> refers to the plan created when installing SQR for z/OS.

Task 10C-3: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

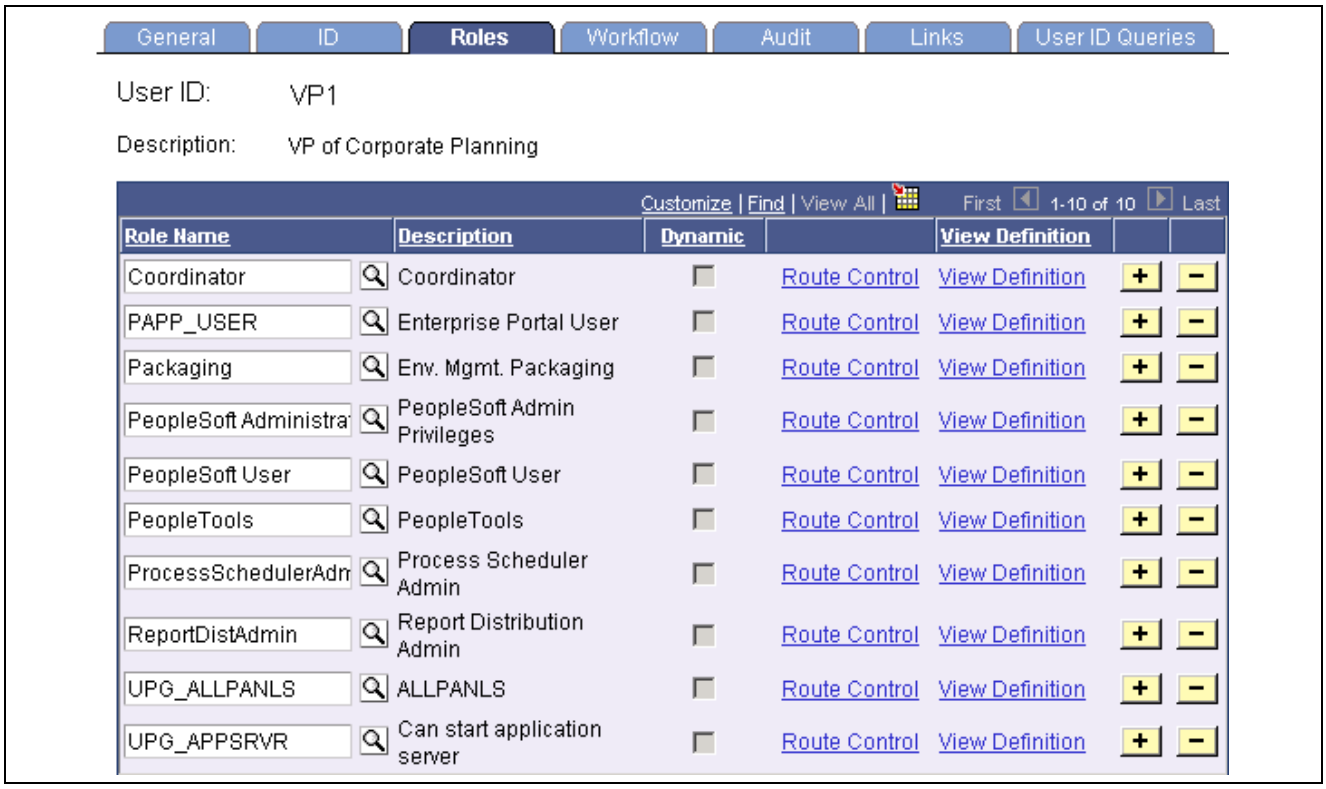
This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

Task 10C-3-1: Granting Process Scheduler Administrative Rights

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools, Security, User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.
4. Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.



Process Scheduler window: Roles tab

5. Repeat the instructions in step 4 to add the role *ReportDistAdmin*.

   This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.

Note. When setting up Process Scheduler on UNIX or Windows, you must have the right user ID to start an application server. This authorization is not required to bring up Process Scheduler in z/OS UNIX System Services because Process Scheduler is not booted through Tuxedo in this platform.

Task 10C-4: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution
- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol
- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS_CDM_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of Posting signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

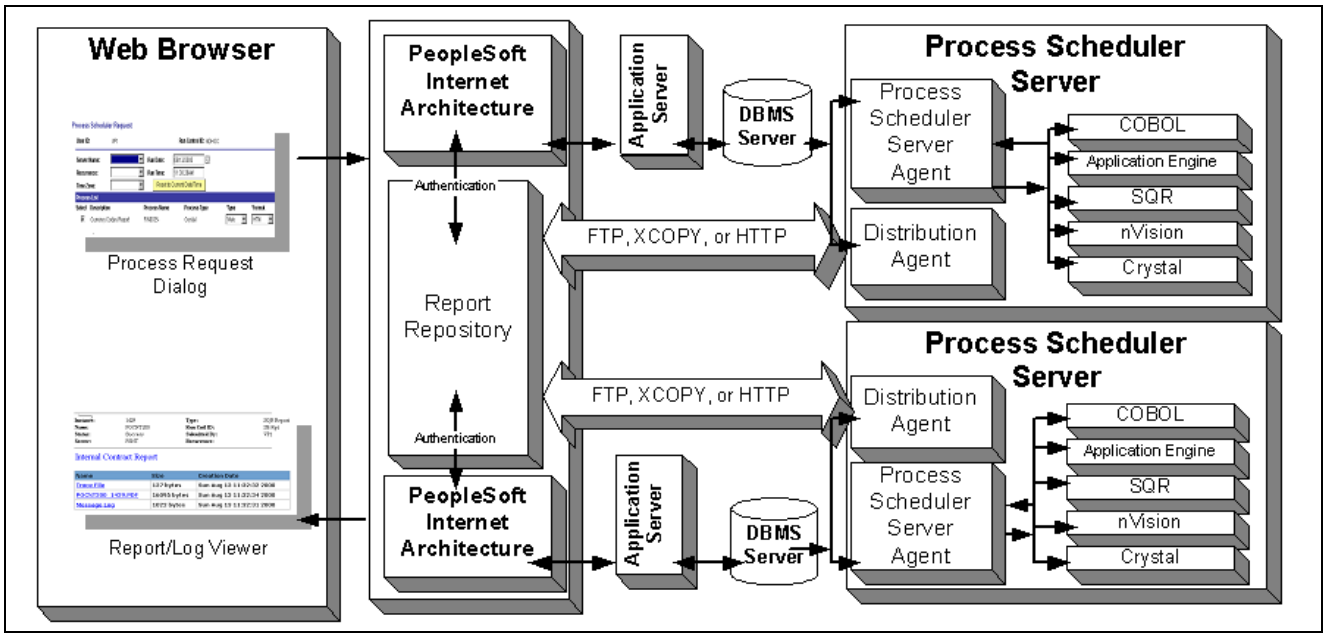
- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name\<date yyyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is Web/Window, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

- The web browser gives access to the Process Request dialog and the Report or Log Viewer.
- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Repository.

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP, XCOPY, or HTTP/HTTPS.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security PeopleBook.

See *PeopleTools 8.52: Security Administration PeopleBook.*

Task 10C-4-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as the PeopleSoft Pure Internet Architecture, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PeopleSoft Pure Internet Architecture, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter http://<*machineName*>.peoplesoft.com/<*site_name*>/signon.html instead of http://<*machineName*>/<*site_name*>/signon.html.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

  See *PeopleTools 8.52: Security Administration PeopleBook,* "Implementing Single Signon."
- Set up single signon with a password, like this:

- Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
- Click Search and then select the node marked as Default Local Node.
- Select *Password* for the Authentication Option.
- Enter a password of your choice.
- Enter the password again in the Confirm Password field.
- Enter the user ID for which you are setting up single signon in the Default User ID field.
- Save the Node Definition.
- Sign off of PIA.
- Reboot your application server.

See Also

PeopleTools 8.52: Security Administration PeopleBook

Task 10C-4-2: Determining the Transfer Protocol

We recommend using HTTP as your transfer protocol.

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. If you have a Windows Process Scheduler and a Windows web server, you can use either an XCOPY, FTP, or HTTP/HTTPS. (If FTP information is not specified, Process Scheduler will perform an XCOPY.) If you have any other combination of servers (such as a Windows or z/OS Process Scheduler and a UNIX web server), you must use FTP or HTTP/HTTPS.

Note. If you are on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

Task 10C-4-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." Once a node is defined for the Process Scheduler server and in the next cycle the Process Scheduler server checks the state of the system, the Distribution Agent dynamically sets up its environment.

Task 10C-4-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use FTP

Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools 8.52: PeopleTools Portal Technologies PeopleBook,* "Configuring the Portal Environment."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash ('/') in both cases:

- *Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<*user_home*>/PeopleSoft Internet Architecture/psreports

  For <user_home> substitute the home directory for the current user.

Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select the Add a New Value link and enter the Report node name.

   The Report Node Definition page appears. You are on the Http Distribution Node page.
3. Verify that the Http Information option is selected.
4. Enter the *URL* of the web server using the following format:

   `http://<machine_name>:<port_number>/psreports/<site_name>`

   Replace <*machine_name*> with the name of your machine. Use the fully qualified host name for your web server. If you are using an http port other than 80, you need to specify the port number.

   Note. If you specify the Authentication Token Domain name during the PeopleSoft Pure Internet Architecture installation, you must include a fully qualified domain name for the URL instead of the IP address.

   - *Description:* Enter a description of the server (optional).
   - *Operating System:* Select the web server operating system.
5. Enter the following Connection Information:
   - *http/https:* Select the http option if you are *not* using SSL (default). Select the https option if you are using SSL. Note that if you are using SSL you need to have Client Certificates installed on your web server.
   - *URI Host:* Enter the machine name for the report repository.

     Note. In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.
   - *URI Port:* Enter the port number, which must match the port number of your web server (defaults are http = 80, https = 443). If you change a port number you will lose the default values for both protocols.
   - *URI Resource:* Enter SchedulerTransfer/<site name>.

     Note. The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools 8.52: Security Administration PeopleBook*.

- *Login ID:* Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
- *Password:* Enter the password for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
- *Confirm Password:* Enter the password a second time as a confirmation. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.

6. Click Save to save your entries.
7. To add additional report nodes, select Add to return to the Search page.

The following fields are shared between the FTP/XCOPY Distribution Node page and the Http Distribution page:

- URL
- Description
- Operating System
- Login ID
- Password
- Confirm Password.

When you enter the information on one page, the information is also displayed on the shared fields of the other page but the fields are grayed out.

Note. If you complete the information for one protocol and then change your selection to another protocol, the shared fields will become active on the other page and grayed out on the original page. When you save, the system automatically clears the fields that are not shared.

Defining the Report Node to Use FTP

If you use FTP the following parameters must be configured: URL, Home Directory, Operating System, FTP Address, FTP ID, Password, Confirm Password. In addition, if your FTP server is a Windows server, you may have to set up the FTP service.

Note. The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be accomplished, it is critical that the following setup is done:

The value entered in the URL must be accurate. Verify that the machine name, port number, and site number are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. Select the FTP/XCopy option.

   The FTP/XCopy Distribution node page appears.
4. Enter the URL of the web server using this format:


```
http://<machine_name>:<port_number>/psreports/<site_name>
```

Replace <*machine name*> with the name of your web server. If you are using an http port other than 80, you need to specify the port number. The variable <*site name*> refers to the directory where you installed the PIA files; this will default to ps for the first installation.

Note. If you specify the Authentication Token Domain name during the PeopleSoft Pure Internet Architecture installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

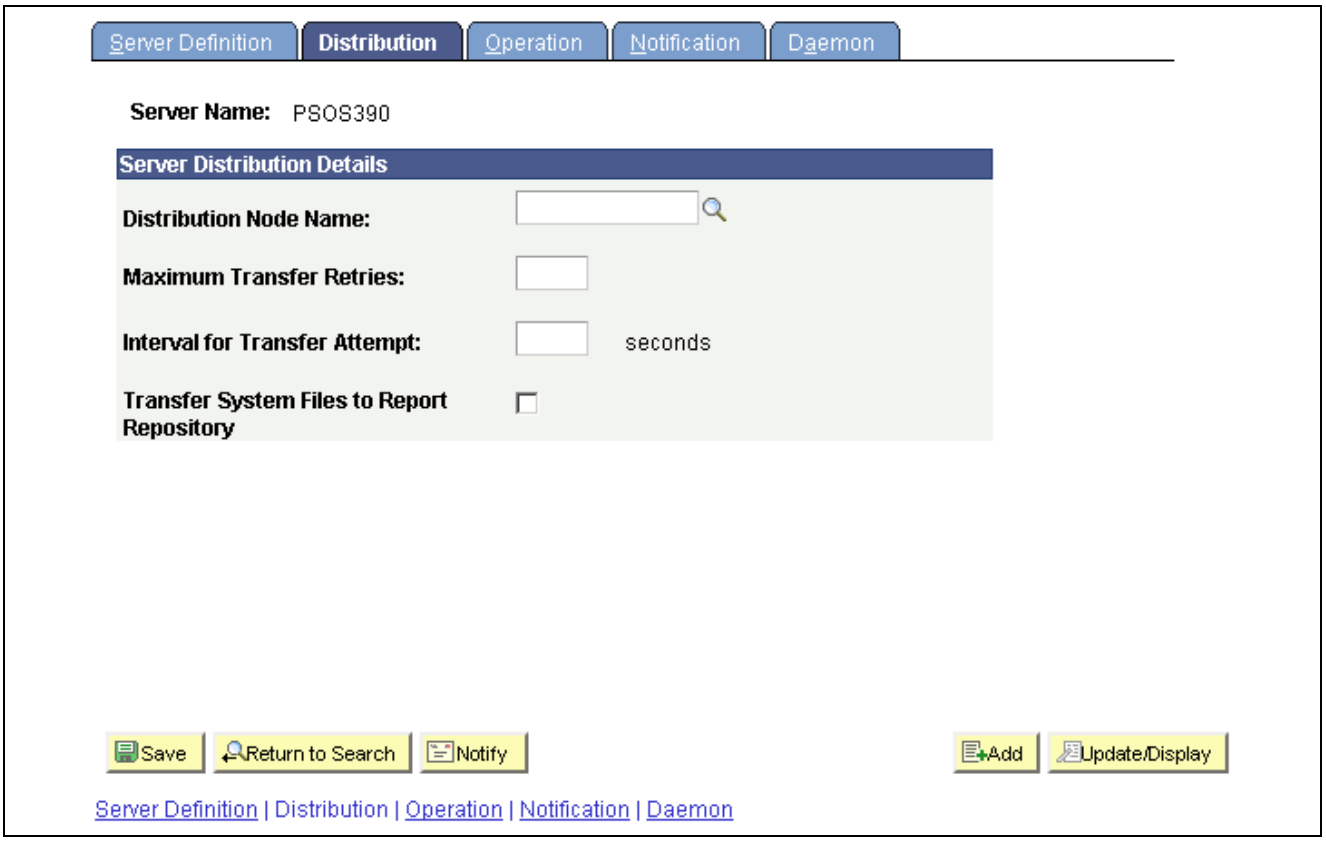
---

5. Enter the following additional parameters:
   - *Home Directory:* Enter the directory specified during the installation of PeopleSoft Pure Internet Architecture as the Report Repository. The FTP user ID must have write access to this directory. Note that this is not a required field for HTTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
   - *Description:* Enter a description of the server (optional).
   - *Operating System:* Select the operating system of the Report Repository.
   - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
   - *FTP ID:* FTP user ID.
   - *Password:* Enter the password for the user ID specified in the FTP ID field.
   - *Confirm Password:* Enter the password a second time as a confirmation.
6. Select Save to save your entries.
7. To add additional report nodes, select Add to return to the Search page.

Task 10C-4-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Choose PeopleTools, Process Scheduler, Servers.
2. Enter the Server Name (such as PSOS390). The Server Definition page appears.
3. Select the Distribution tab.



Server Definition page: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.
5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.
7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft Application. To navigate from PIA to Report Repository, you need to setup single signon in order to avoid getting prompt for second signon.

Task 10C-4-6: Setting Up Sending and Receiving of Report Folders in the Report Manager

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools 8.52: PeopleSoft Integration Broker PeopleBook.*

See *PeopleTools 8.52: Integration Broker Service Operations Monitor PeopleBook.*

Task 10C-5: Setting Up Process Scheduler Server Agent

This section discusses:

- Understanding Process Scheduler Server Agent
- Changing the Default Operating System
- Setting Up Your Environment
- Validating and Editing the ODBC Initialization File
- Creating a Process Scheduler Server
- Configuring Process Scheduler Server
- Working with Shell JCL Templates
- Starting a Process Scheduler Server
- Verifying the Process Scheduler Server Status
- Stopping the Process Scheduler Server

Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSOS390	z/OS

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the Process Scheduler PeopleBook.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook*

Note. When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

Task 10C-5-1: Changing the Default Operating System

By default, Process Scheduler is set up to run a process request from a Process Scheduler Server Agent started in a Microsoft Windows server when the value of the *ServerName* field in the Process Request Dialog page is left blank. If you plan to run all processes other than Microsoft Windows-based programs (that is, nVision or Crystal Reports) from z/OS, you must change the default operating system.

Note. If you do not change the default operating system from Microsoft Windows to z/OS and you do not plan to set up a Process Scheduler Server Agent in Windows, process requests that are created will be directed to a Windows-based operating system and will remain in the "Queued" status.

To change the default operating system for process requests that were not assigned a Process Scheduler Server Name:

1. Select PeopleTools, Process Scheduler, System Settings.
2. Under *Primary Operating System*, choose *OS390* from the drop-down list.
3. Click on the *System Purge Options* tab. Enter the date for the next purge of process requests in the *Next Purge Date* field.
4. Enter the time for the next purge of process requests in the *Next Purge Time* field. The default time is 12:00:00AM.
5. Enter a *Recurrence* if you want to set a regular purging basis.
6. Choose *Save*.

Task 10C-5-2: Setting Up Your Environment

Alternatively, make sure the following environment variables are set in the profile file in the user's home directory:

Run psconfig.sh file from *PS_HOME*:

```
. ./psconfig.sh
```

Task 10C-5-3: Validating and Editing the ODBC Initialization File

The PeopleSoft Batch Transfer program generates the ODBC initialization file based on the parameters entered in the PeopleSoft Server Transfer panel. The ODBC initialization file is written to:

```
$PS_HOME/appserv/odbc.ini
```

The ODBC initialization file contains the following key information:

- DB2 subsystem name
- Plan name for the DSNAOCLI CLI package
- Method used to attach to DB2 (default is RRSAF)

Here is an example of an initialization file for a DB2 subsystem called DSNW with DB2 plan DSNACLI:

```
[COMMON]
MVSDEFAULTSSID=DSNW
APPLTRACE=0
APPLTRACEFILENAME=
MULTICONTEXT=1
CONNECTTYPE=1

; Set up the DB2 Subsystem Definition
 [DSNW]
MVSATTACHTYPE=RRSAF
PLANNAME=DSNACLI
```

Verify that all the information contained in this file is accurate. If you plan to set up multiple Process Scheduler Server Agents for different instances of a PeopleSoft database and these databases reside in different DB2 subsystems, you must create a different ODBC initialization file for each DB2 subsystem.

Task 10C-5-4: Creating a Process Scheduler Server

This section describes how to create a Process Scheduler server.

Note. You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file psprcs.cfg located in the *PS_CFG_HOME*/appserv/prcs/*database name* directory. The following steps assume you are using PSADMIN to specify parameter settings.

Note. If you use the configuration file psprcs.cfg, be aware that in the PeopleSoft PeopleTools 8.49 release and later, the section [Output Dest Exceptions] has been modified to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

To create a Process Scheduler Server:

1. From *PS_HOME*/appserv on the batch server, type psadmin and press ENTER to access the PeopleSoft Server Process Scheduler Administration menu.
2. Select *2* for Create a Process Scheduler Server Configuration:

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------

  1) Administer a Process Scheduler Server
  2) Create a Process Scheduler Server Configuration
  3) Delete a Process Scheduler Server Configuration
  4) Import an existing Process Scheduler Configuration
  q) Quit

Command to execute (1-4, q) : 2
```

3. When prompted for the name of the database that your server will access, enter the name of the database and press ENTER:

```
Please enter name of Database that server will access :
HRDMO
```

You see screen messages like these:

```
Process Scheduler Configuration templates:
  1) os390
Selecting the only Process Scheduler Configuration template available...
Creating Process Scheduler Server for Database HRDMO...
Copying Process Scheduler Server configuration file(s)...
Copying Process Scheduler JCL template files...
Process Scheduler Shell JCL template files copied.
Process Scheduler Server configuration created.
```

At this point, you are returned to the PeopleSoft Process Scheduler Administration menu.

Task 10C-5-5: Configuring Process Scheduler Server

This section discusses:

- Configuring a Process Scheduler Server
- Using [Startup]
- Using [OS390]
- Using [Process Scheduler]
- Using [Application Engine]

Note. The section may not mention certain PSADMIN sections, if you do not need to change any of their defaults. For more in depth descriptions of the Process Scheduler options in the PSADMIN, consult the Process Scheduler PeopleBook.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook,* "Using the PSADMIN Utility."

Configuring a Process Scheduler Server

To configure a Process Scheduler Server:

1. The PeopleSoft Process Scheduler Server Administration interface should already be on your screen from the last step, but if it is not, go to *PS_HOME*/appserv and enter:

   ```
   psadmin
   ```

2. From the PeopleSoft Process Scheduler Administration menu, select option *1* to Administer a domain:

   ```
   -------------------------------------------
   PeopleSoft Process Scheduler Administration
    -------------------------------------------
     1) Administer a domain
     2) Create a domain
     3) Delete a domain
     4) Import domain configuration
     q) Quit

   Command to execute (1-4, q) : 1
   ```

3. Select the database for which the Process Scheduler needs to be configured.

   ```
   Database list:
     1)  HRDMO
   Select item number to configure: 1
   ```

4. At the prompt

   ```
   Do you want to change any config values (y/n):
   ```

   Specify y to start an interactive dialog to change or examine parameter values, as described in the next step. Specify n if you have already edited psprcs.cfg.

See *PeopleTools 8.52: PeopleSoft Process Scheduler PeopleBook.*

Using [Startup]

When using PSADMIN to configure a Process Scheduler Server Agent, you first encounter the Startup section:

```
Values for config section - Startup

    DBName=
    DBType=DB2ODBC
    UserId=
    UserPswd=
    ConnectId=
    ConnectPswd=
    ServerName
    StandbyDBName=
    StandbyDBType=
    StandbyUserId=
    StandbyUserPswd=

    Do you want to change any values (y/n)? [n]: y
```

The following table describes each value in the Startup section:

Value	Description
DBName	Specify the database name associated with a particular Process Scheduler Server Agent, such as HRDMO, FSDMO, SADMO, and so on.
DBType	Specify the database type. The default for DB2 for z/OS is DB2ODBC.
UserId	Enter the user ID.
UserPswd	Enter the user password.
ConnectId	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password. This value is required.
ServerName	For DB2 for z/OS, ignore this item.
StandbyDBName	For DB2 for z/OS, ignore this item.
StandbyDBType	For DB2 for z/OS, ignore this item.
StandbyUserId	For DB2 for z/OS, ignore this item.
StandbyUserPswd	For DB2 for z/OS, ignore this item.

When you change the UserPswd or ConnectPswd field, you are prompted for an option to encrypt the value entered for the password field:

```
Do you want to encrypt this password? [y]:y
```

Enter *y* if you want the password stored in encrypted form in the Process Scheduler configuration file. (The default is to encrypt the password.)

Using [OS390]

The OS390 section contains OS/390-specific values:

```
Values for config section - OS390
  ODBC Initialization File=%PS_HOME%/appserv/odbc.ini
  Shell JCL Library=%PS_SERVDIR%/shelljcl
  High Level Qualifier for System Datasets=
  High Level Qualifier for Log Datasets=
  Plan name for PTPSQLRT with CAF=
  Plan name for PTPSQLRT with TSO=
  DB2 Sub-System=
  VIO eligible unit group=SYSDA
  Enable Parallel Processing=0
DECIMAL=PERIOD
TSO Character Set=cp037

Do you want to change any values (y/n)? [n]:
```

The following table describes each parameter in the OS390 section.

Parameter	Description
ODBC Initialization File	File containing ODBC setting to connect to the DB2 subsystem where the PS database is created.
Shell JCL Library	The subdirectory containing all JCL templates used for submitting COBOL or SQR in native z/OS.
High Level Qualifier for System Datasets	Datasets to which PeopleSoft installations are copied during batch transfer. For example, PT.PT810TA.
High Level Qualifier for Log Datasets	Datasets that represent the high level qualifier for all logs and reports generated from processes submitted through Process Scheduler.
Plan name for PTPSQLRT with CAF	DB2 plan used to run COBOL called within an Application Engine program via Remote Call
Plan name for PTPSQLRT with TSO	DB2 plan used to run COBOL from TSO via JCL created from the COBOL shell JCL template (SHECBL.JCT)
DB2 Sub-System	DB2 subsystem name where your database resides—for example, DSND
VIO eligible unit group	DASD volume group used by Remote COBOL invoked by an Application Engine program
Enable Parallel Processing	A Y/N flag which sets the Parallel processing parameter in the COBOL shell JCL template (SHECBL.JCT)
DECIMAL	The value should reflect the setting for the DECIMAL parameter found in the ZPARM of the DB2 subsystem where the database resides. Valid values are DECIMAL or COMMA.
TSO Character Set	The codepage for the TSO environment. The default value is *CP037* (IBM037: Latin1 code page).

Using [Process Scheduler]

After you have set your Trace values, the Process Scheduler section allows you to set all of the environment variables associated with the Process Scheduler.

```
Values for config section - Process Scheduler

    Prcs Job Name=
    Prcs Job Account=
    PrcsServerName=PSOS390
    PS Configuration File=%PS_HOME%/psconfig.sh
    Max Reconnect Attempt=12
    Reconnection Interval=300
    Authentication Timeout=5
    TOOLBIN=%PS_HOME%/bin
    Log/Output Directory=%PS_SERVDIR%/log_output
    LogFence=5
    DEFAULTPRINTER=

Do you want to change any values (y/n)? [n]:
```

The following table describes the parameters you'll need to update in the Process Scheduler section:

Parameter	Description
Prcs Job Name	Job name assigned to the Process Scheduler program. This is set in USS using the __BPX_JOBNAME environment variable setting.
Prcs Job Account=	Job Account assigned to the Process Scheduler program. This is set in USS using the __BPX_ACCT_DATA environment variable setting.

Using [Application Engine]

This section contains Application Engine values:

```
Values for config section - Application Engine
AE Job Name=%JOBNAME%%SFX%
AE Job Account=%JOBACCT%

Do you want to change any values (y/n)? [n]:
```

The following table describes each parameter in the *Application Engine* section:

Parameter	Description
AE Job Name	Job name assigned to an Application Engine program. This is set in USS using the __BPX_JOBNAME environment variable setting.
AE Job Account	Account assigned to an Application Engine program. This is set in USS using the __BPX_ACCT_DATA environment variable setting.

Note. After you complete your changes in PSADMIN, you must shut down and restart the server to put the new settings into place.

Task 10C-5-6: Working with Shell JCL Templates

This section discusses:

- Understanding Shell JCL Templates
- Editing a Shell JCL Template
- Customizing the Process Scheduler's Shell JCL Template

Understanding Shell JCL Templates

When starting a Process Scheduler Server, shell JCL template files are read once and stored into memory as part of the initialization procedure. Process Scheduler will generate a JCL for COBOL and SQR based on the JCL stored in memory. If you have modified any of the shell JCL templates after the Process Scheduler Server was started, Process Scheduler will refresh the JCL stored in memory before submitting the next COBOL or SQR request.

The PeopleSoft Server Transfer program creates a directory *PS_HOME*/appserv/prcs/shelljcl in UNIX Services to store a master copy of the shell JCL templates. When you create a Process Scheduler Server Configuration, it copies this shell JCL templates into the <*PS_HOME*>/appserv/prcs/<*database_name*>/shelljcl directory. This includes all the JCLs used for running COBOL and SQR through Process Scheduler.

See "Creating a Database."

The following table lists the shell JCL templates used in Process Scheduler:

JCL	Description
SHELCBL.JCT	Invoked by Process Scheduler when user requests to run a COBOL program
SHELSQRF.JCT	Invoked by Process Scheduler when user requests to run an SQR program and specifies from the Process Scheduler page to route the output to a file, web or email.
SHELSQRP.JCT	Invoked by Process Scheduler when user requests to run an SQR program and specifies from the Process Scheduler panel to route the output to a printer.

JCL	Description
SHELSQROUTP.JCT	Used in conjunction with SHELSQRP.JCT or SHELSQRF.JCT. This template contains the file definition for creating a partitioned data set for SQR report files. Process Scheduler will use this template when the SQR output format is one of the following: • Acrobat Reader (PDF) • Post Script (PS) • Line Printer (HP) • HP format
SHELSQROUTS.JCT	Used in conjunction with SHELSQRP.JCT or SHELSQRF.JCT. This template contains the file definition for creating a sequential data set for SQR report files. Process Scheduler will use this template when the SQR output format is one of the following: HTM SPF

These shell JCL templates need to be modified to comply with your site standards.

Note. Process Scheduler does not use a JCL to submit an Application Engine program. Instead, Process Scheduler will fork another (child) process in UNIX System Services and run Application Engine in this new process. This schema is similar to Windows or UNIX operating system.

Editing a Shell JCL Template

To edit a shell JCL template:

1. Select option *1* for Administer a Process Scheduler Server the PeopleSoft Process Scheduler Administration menu:

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------

  1) Administer a Process Scheduler Server
  2) Create a Process Scheduler Server Configuration
  3) Delete a Process Scheduler Server Configuration
  4) Import an existing Process Scheduler Configuration
  q) Quit

Command to execute (1-4, q): 1
```

2. Select *7* for Edit a Shell JCL:

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
 -------------------------------------------
    Scheduler Name: HRDMO

   1) Start Process Scheduler Server
   2) Stop Process Scheduler Server
```



```
   3) Show Status
   4) Configure Process Scheduler Server
   5) Edit Process Scheduler Configuration File
   6) Kill a Process Scheduler Server
   7) Edit a Shell JCL
   q) Quit

Command to execute (1-7, q) : 7
```

3. Select the database for which the Process Scheduler needs to be configured.

```
Database list:
  1) HRDMO

Select item number to edit: 1
```

4. Select the JCL from the list you intend to modify. This will open the JCL in a vi editor screen.

```
JCL list:

  1)  shelcbl.jct
  2)  shelsqrf.jct
  3)  shelsqroutp.jct
  4)  shelsqrouts.jct
  5)  shelsqrp.jct

Select JCL file to edit: 1
```

5. Modify the JCL using vi commands
6. Save your changes by using the vi command *:wq*

If you are not familiar with the vi editor and would prefer to edit the JCLs using ISPF editor, you can use the TSO *oedit* command in the TSO session. IBM's TSO *oedit* command allows you to modify any files residing in UNIX System Services from a TSO session. You can edit any of the shell JCL templates found in <*PS_HOME*>/appserv/prcs/<*database_name*>/shelljcl directory as shown below. Consult your z/OS system administrator for using the *oedit* command at your site.


```
----------------------------  EDIT - ENTRY PANEL  ----------------------
Command ===>

Directory      ===> /u/data007/pt812rc7/appserv/prcs/HRDMO/shelljcl

Filename       ===> shelcbl.jct

Profile name   ===>

Initial macro  ===>
```

Editing a shell JCL template

Customizing the Process Scheduler's Shell JCL Template

All the Process Scheduler's shell JCLs use meta-strings to pass data stored in the database or Process Scheduler configuration files. Process Scheduler takes advantage of meta-strings to generate the JCL based on one of these sources:

- User's profile who initiated the request
- Parameters defined in the Process Scheduler Configuration file.
- Parameters defined in the Process Type Definition Page or Process Definition Page

A good example of data that can be passed includes job account and job name. To enter the values of some of these variables you need to identify the Process Profile being used. Choose PeopleTools, Security, User Profiles, User Profiles. Then search on the ID used to log on to the PeopleSoft Pure Internet Architecture. Make note of the Process Profile Name. Then choose PeopleTools, Security, Permissions & Roles, Permission Lists and select the Process Profile Name that was identified. Select Process tab, Process Profile Permissions.

The shell JCL templates are tunable and should be changed according to your site-specific standards. The table below identifies all the available meta-strings you can use in a shell JCL template.

If you create a new JCL template, you must be aware of the following:

- The Shell ID is restricted to three characters.
- The Shell ID is associated with the Process Type Definition.

Meta-Strings	Description
%JOBNAME%	Specifies the value entered in z/OS Job Controls Name field of the Process Profile Permission page for the Permission Lists specified as the User ID's Process Profile. The Process Profile for a User ID can be set using the User Profiles page in the Maintain Security component.
%JOBACCT%	Specifies the value entered in z/OS Job Controls Account field of the Process Profile Permission page.
%OUTDEST%	Specifies the output destination based on the value entered in the Server Destinations File or Printer fields of the Process Profile Permission page.
%SFX%	A one-character code issued by Process Scheduler. The system will randomly assign a value from *A* to *Z*.

Meta-Strings	Description
%OPRID%	The user ID used to submit the request from Process Scheduler.
%PRCSLOGFILE%	The name of the log file Process Scheduler used to redirect all data written to output for Application Engine or SYSOUT in COBOL or SQR
%PRCSLOGDIR%	The directory where all log files or reports are written to in UNIX System Services for a process.
%ACCESSID%	The access ID assigned for a user ID defined in PSOPRDEFN.
%INSTANCE%	The process instance number assigned to a process request.
%RUNID%	The run control ID used to submit the process request.
%OWNERID%	The owner ID for the PeopleSoft database.
%PRCSNAME%	The program name as defined in the Process Definition page.
%DB2SUB%	The name of the DB2 subsystem specified in the *DB2 Sub-System* parameter of the *OS390* section found in the Process Scheduler Configuration file.
%PERFSTAT%	The flag used to set the Performance Statistic option in the COBOL shell JCL. This is set to 'Y' when the bit value of 128 is assigned to the TraceSQL parameter of the *Trace* section found in the Process Scheduler Configuration file.
%DYNEXPLN%	The flag used to set the Dynamic Explain option in the COBOL shell JCL. This is set to 'Y' when the bit value of 256 is assigned to the TraceSQL parameter of the *Trace* section found in the Process Scheduler Configuration file.
%PARALLEL%	The flag used to set the Dynamic Explain option in the COBOL shell JCL. This is based on the flag set in the *Enable Parallel Processing* parameter of the *OS390* section found in the Process Scheduler Configuration file.
"%TSOPLAN%	The DB2 plan name subsystem specified in the *Plan name for PTPSQLRT with TSO* parameter of the *OS390* section found in the Process Scheduler Configuration file.
%PSHLQ%	The high level qualifier of the PeopleSoft dataset specified *in High Level Qualifier for Datasets* parameter of the *OS390* section found in the Process Scheduler Configuration file.

Here is a sample job control card in one of the shell JCLs:

```
//%JOBNAME%%SFX%  JOB %JOBACCT%,'PS-PRCS ',CLASS=E,MSGCLASS=X,
//            NOTIFY=%OPRID%
```

If you choose not to use meta-strings, you can also update the job cards to remove all these variables and replace them with actual values.

In the SHELL JCL for SQR, OUTNODE denotes either a z/OS partitioned data set (PDS) or sequential data set. The PDS is a requirement for SQR output. If the SQR report XRFPANEL were directed to file output, the following substitution would occur:

The following line in SHELSQRF.JCT

```
//      OUTNODE='%OUTDEST%'
```

would be changed to:

```
//      OUTNODE='HR.H800RAB',
```

If an SQR process were directed to print, the following substitutions would occur:

SQR*:*

```
//      OUTNODE='DEST=U3',   OPTIONAL:USER-DEF OUTPUT
 ..
 //*********************************************************************
 //* Main portion of JCL Shell
 *
 //*********************************************************************
 ..
 //SQROUTP  DD SYSOUT=*,DEST=U3
```

z/OS Job Controls:

z/OS job controls specify the z/OS job name you want assigned to each process submitted. This value can be up to seven characters. Do not use lowercase letters or any quotation marks. If you included the %SFX% meta-string as part of your job name, Process Scheduler will append a one-character alphabetical suffix to this name (A through Z, chosen randomly), before job submission.

For example, if you entered USRMVS1, the assigned job name would become USRMVS1A through USRMVS1Z. After you enter the z/OS job name, enter the job account number used in your installation. Specify an account code to be inserted as the JCL accounting code.

Task 10C-5-7: Starting a Process Scheduler Server

Once you have configured the Process Scheduler Server, you are ready to start it.

To start a Process Scheduler Server:

1. Select option *1* for *Administer a domain*.

```
-----------------------------------------
PeopleSoft Process Scheduler Administration
 -----------------------------------------
  1) Administer a domain
  2) Create a domain
  3) Delete a domain
  4) Import domain configuration
  q) Quit

Command to execute (1-4, q) : 1
```

2. Select the domain that you want to start.


```
Database list:
1)  HRDMO
Select item number to start: 1
```

3. On the PeopleSoft Process Scheduler Administration menu, choose *1* for *Start Process Scheduler Server*.

```
-----------------------------------------
PeopleSoft Process Scheduler Administration
 -----------------------------------------
    Scheduler Name: HRDMO

   1) Start Process Scheduler Server
   2) Stop Process Scheduler Server
   3) Show Status
   4) Configure Process Scheduler Server
   5) Edit Process Scheduler Configuration File
   6) Kill a Process Scheduler Server
   7) Edit a Shell JCL
   q) Quit

Command to execute (1-7, q) : 1
```

This will launch the Process Scheduler program.

```
Starting Process Scheduler Server PSOS390 for Database HRDMO ...
PeopleSoft Process Scheduler Started Normally
```

Task 10C-5-8: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose *3*, *Show Status*:

```
-----------------------------------------
PeopleSoft Process Scheduler Administration
 -----------------------------------------
    Scheduler Name: HRDMO

   1) Start Process Scheduler Server
   2) Stop Process Scheduler Server
   3) Show Status
   4) Configure Process Scheduler Server
   5) Edit Process Scheduler Configuration File
   6) Kill a Process Scheduler Server
   7) Edit a Shell JCL
   q) Quit

Command to execute (1-7, q) : 3
```

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

   For example:


```
Database list:

  1)  HRDMO

Select item number to start: 1
Process Scheduler Server PSOS390 for Database PT84x is currently running

   Process Agents          PID
   --------------          ----
  Process Scheduler        1144
  Distribution Agent       35163243
  Monitor                  50332247
```

Note. You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

Note. If you have not configured z/OS with a Distribution Node, the Distribution Agent will not be started. You must execute that task before the Distribution Agent will be booted with the Process Scheduler server. See Validating and Editing the ODBC Initialization File.

Task 10C-5-9: Stopping the Process Scheduler Server

To stop the Process Scheduler Server:

1. From the PeopleSoft Process Scheduler menu, choose option *2*, for *Stop Process Scheduler Server*.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
 -------------------------------------------
    Scheduler Name: HRDMO

   1) Start Process Scheduler Server
   2) Stop Process Scheduler Server
   3) Show Status
   4) Configure Process Scheduler Server
   5) Edit Process Scheduler Configuration File
   6) Kill a Process Scheduler Server
   7) Edit a Shell JCL
   q) Quit

Command to execute (1-7, q) : 2
```

2. To stop the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

   Example (to stop Process Scheduler Server for the database HRDMO):

```
Database list:
```



```
  1)  HRDMO

Select item number to stop: 1

Command sent to stop Process Scheduler Server PSOS390 for Database HRDMO. The⇒
 Server Will stop the next time that it wakes up.
```

PART 2

Discretionary Installation

The second part of the installation guide includes optional tasks, tasks that are only required by certain environments, and those that you may decide to defer until after the initial installation.

CHAPTER 11

Configuring Integration Between PeopleSoft PeopleTools and Oracle SES

This chapter discusses:

- Understanding PeopleSoft PeopleTools and SES Integration
- Setting Up the Search Framework Prerequisites
- Configuring SES for the Search Framework
- Setting Up the PeopleSoft Application Server for the Search Framework
- Setting Up Search Framework User IDs
- Setting Up Integration Broker for the Search Framework
- Defining a Search Instance in the PeopleSoft System
- Verifying PeopleSoft PeopleTools and SES Connectivity

Understanding PeopleSoft PeopleTools and SES Integration

The PeopleSoft Search Framework provides a standard, declarative method for creating, deploying, and maintaining search indexes for all of your PeopleSoft applications. Oracle Secure Enterprise Search (SES) is the search engine on which the PeopleSoft Search Framework relies.

Before you can set up integration between PeopleSoft PeopleTools and Oracle Secure Enterprise Search, you must first have SES installed and running successfully. Then you need to ensure that various elements on the PeopleSoft Application Server and PeopleSoft Integration Broker are set appropriately. Integration Broker is the vital link between PeopleSoft PeopleTools and SES. As such, it is essential to make sure that the gateway, domains, nodes, services, and WSDL elements are activated and configured properly.

See Also

PeopleTools 8.52: PeopleSoft Search Technology PeopleBook

Task 11-1: Setting Up the Search Framework Prerequisites

Prior to implementing the PeopleSoft Search Framework, the following items need to be installed, configured, and functional.

- Oracle Secure Enterprise Search (SES)

- PeopleSoft PeopleTools

  You need to have installed PeopleSoft PeopleTools and have at least the following items configured, as described in the previous chapters of this installation documentation:

  - PeopleSoft database
  - Application server
  - Process Scheduler server
  - Integration Broker

    See *PeopleTools 8.52: Integration Broker Administration PeopleBook.*

- PeopleSoft Application

  Because the searching feature is intended primarily for your end users, having your PeopleSoft application database installed and available is recommended. This will allow you to define realistic search objects for your testing and production environments.

  See your PeopleSoft application installation documentation.

When all of these items are in place, make sure to record the following information as it will be required when configuring integration between SES and PeopleSoft:

- SES server host name, and the port on which SES is listening.

  For example: orases12.urcompany.com:7779

- SES administrator user ID and password, as in the credentials you use to sign on to the SES administration console.
- PeopleSoft Pure Internet Architecture signon URL.

  For example: http://orapia08.urcompany.com:80/ps/signon.html

See Also

Oracle® Secure Enterprise Search Installation and Upgrade Guide 11g Release 1 (11.1.2.0.0) for <your operating system>

Task 11-2: Configuring SES for the Search Framework

This section discusses:

- Understanding SES Configuration
- Creating a Federated Trusted Entity
- Activating the Identity Plug-in
- Configuring SES Authentication Timeout Settings

Understanding SES Configuration

After you have SES installed and running, you need to carry out the post-installation procedures in this section to prepare the SES instance for integration with a PeopleSoft application system.

To complete these steps you will need access to the SES administration console, using the following URL syntax:

http:/<*host*>:<*port*>/search/admin/index.jsp

Task 11-2-1: Creating a Federated Trusted Entity

To create a federated trusted entity:

1. Sign on to the SES administration console.
2. Select the Global Settings tab.
3. In the Search list, select the Federation Trusted Entities link.
4. In the Entity Name edit box, enter the entity you want to create.
5. For Entity Password enter a password to associate with the trusted entity.

   Note. Make note of the entity name and password, as you will be required to submit these credentials when defining the SES instance in the PeopleSoft Search Framework administration interface.

   Note. The Identity Plug-in check box does not need to be selected, nor does the Authentication Attribute edit box have to be populated.

6. (Recommended) In the Description edit box, add text to distinguish this entity.
7. Click Add.

Task 11-2-2: Activating the Identity Plug-in

To activate the identity plug-in:

1. Sign on to the SES administration console.
2. Select the Global Settings tab.
3. Under System, select the Identity Management Setup link.
4. Select PeopleSoft source type from Available Identity Plug-ins list and click the Activate button.
5. On the Identity Management Setup page, select the radio button for Peoplesoft Search framework Identity plug-in in the Available Identity Plug-ins grid, and click Activate.
   - HTTP endpoint for authentication: Enter the URL to your PeopleSoft listening connector using the following syntax: http://<*host*>:<*port*>/PSIGW/PeopleSoftServiceListeningConnector.

     Note. If you need to specify an end point on a node other than the default node, then specify that node name in the URL. For example, for node name PS_HR: http://sesserver12:7779/PSIGW/PeopleSoftServiceListeningConnector/PS_HR

   - User ID: Enter the user ID that is the Search Framework administrator on the PeopleSoft side. That is, the user with Search Framework permission lists associated with it.
   - Password: Enter the password associated with your Search Framework administrator user ID.

See Also

PeopleTools 8.52: Security Administration PeopleBook, "Setting Up Permission Lists"

PeopleTools 8.52: Security Administration PeopleBook, "Administering User Profiles"

Task 11-2-3: Configuring SES Authentication Timeout Settings

The default SES timeout settings may not be suitable for contacting the PeopleSoft system and retrieving authentication and authorization data. To ensure that the two systems interact successfully, it is recommended that you modify these settings to avoid authentication or authorization timeout scenarios. In general, the timeout setting should be high enough to allow for the SES instance to contact the PeopleSoft web service operation endpoint to retrieve the authentication data.

To configure SES authentication timeout settings:

1. Sign on to the SES administration console.
2. Select the Global Settings tab, and click the Query Configuration link under Search.
3. Scroll down to the Query-time Authorization Configuration section and set the Timeout Threshold setting to at least 120000 milliseconds.
4. In the Secure Search Configuration section under the Security Filter Configuration subsection, set these similar to the following:
   - Security Filter Lifespan: 60
   - Authentication Timeout: 1200000
   - Authorization Timeout: 180000
5. Click Apply.

Task 11-3: Setting Up the PeopleSoft Application Server for the Search Framework

Your application server domain may be set up as per your site's typical specifications, however, make sure your domain meets these Search Framework requirements:

- At least two PSAPPSRV server processes are set to start in the domain.
- The Pub\Sub Servers (Publish\Subscribe) feature is enabled for the domain.

See *PeopleTools 8.52: System and Server Administration PeopleBook.*

Task 11-4: Setting Up Search Framework User IDs

Depending on the user, you will need to set up different permissions for Search Framework tasks. PeopleSoft PeopleTools provides the permission lists described in this table for each identified user type:

Permission List	User or Authentication Type	Description
PTPT3100	Search Framework Developer	Provides access to the Search Framework development pages used for managing searchable objects within the PeopleSoft database.
PTPT3200	Search Framework Administrator	Provides access to the Search Framework administrative pages used for managing searchable objects on the search engine. **Note.** In addition, set up security such that the Search Framework Administrator has access to the records on which the queries are built. For more information, see your PeopleSoft Application installation documentation.
PTPT3300	Search Server	Used by the search engine for accessing the Search Framework web services on the PeopleSoft system. This permission list would be passed as the "call-back ID" specified on the Search Instance administration page. **Note.** In addition, set up security such that the Search Server user has access to the records on which the queries are built. For more information, see your PeopleSoft Application installation documentation.

See Also

PeopleTools 8.52: Security Administration PeopleBook

Task 11-5: Setting Up Integration Broker for the Search Framework

This section discusses:

- Understanding the PeopleSoft Integration Broker Configuration for SES
- Specifying the Integration Gateway
- Setting Up the Node
- Verifying the Service Configuration

Task 11-5-1: Understanding the PeopleSoft Integration Broker Configuration for SES

In order for the Search Framework to interact with the SES server, various elements of the PeopleSoft Integration Broker architecture need to be configured for your search environment. This section assumes you have a working knowledge of the PeopleSoft Integration Broker architecture and the associated administrative tasks.

See *PeopleTools 8.52: PeopleSoft Integration Broker PeopleBook.*

Task 11-5-2: Specifying the Integration Gateway

To set up the PeopleSoft Integration Broker for the Search Framework:

1. Select PeopleTools, Integration Broker, Service Operations Monitor, Administration, Domain Status and make sure your domain is active in the Domains grid.
2. Select PeopleTools, Integration Broker, Configuration, Gateways, and specify the Integration Gateway URL using the following syntax:

   http://*<machine_name>:<port>*/PSIGW/PeopleSoftListeningConnector
3. Click Ping Gateway to make sure the gateway is active and available.

   See *PeopleTools 8.52: Integration Broker Administration PeopleBook,* "Setting Up Gateways."
4. Click Save.
5. If prompted to load connectors, click Yes.

Task 11-5-3: Setting Up the Node

To set up the node:

1. Select PeopleTools, Integration Broker, Integration Setup, Nodes. Open the local node, and click the Connectors tab.
2. On the Connectors tab make sure Gateway ID = Local and Connector ID = PSFTTARGET.
3. Click the Gateways Setup Properties link.
4. On the PeopleSoft Node Configuration page, set the Gateway Default App. Server values and the PeopleSoft Nodes values for your local node.
5. Click the Advanced Properties Page, and in the Gateway Properties box, make sure that the secureFileKeystorePasswd value is encrypted. For example:

   ```
   secureFileKeystorePasswd={V1.1}7m4OtVwXFNyLc1j6pZG69Q==
   ```
6. Click OK.
7. On the PeopleSoft Node Configuration dialog box, click Ping Node to confirm the node is accessible and active.
8. Click Save and OK.
9. Select the Portal tab, and make sure the following items are specified:
   - Default Portal
   - Tools Release

- Application Release
- Content URI Text
- Portal URI Text

10. Click Save.

See Also

PeopleTools 8.52: PeopleSoft Integration Broker Administration PeopleBook, "Adding and Configuring Nodes"

Task 11-5-4: Verifying the Service Configuration

Verify these key elements of the service configuration:

- The Service Operation should be set to the correct target location (end point URL).
- The Oracle SES search engine exposes administration and search APIs as web service operations. To make use of those web services you need to verify the appropriate counterpart PeopleSoft services exist on your system.

To verify the service configuration:

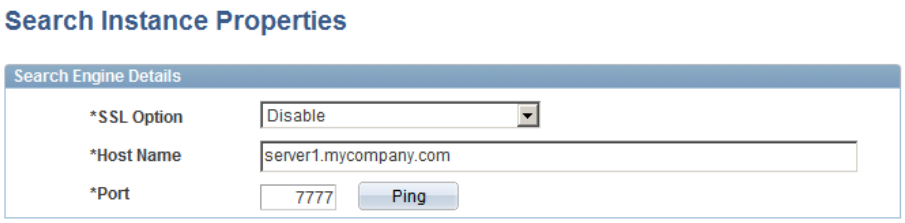
1. Select PeopleTools, Integration Broker, Configuration, Service Configuration.
2. On the Service Configuration tab, update the Target Location by clicking Setup Target Locations.
3. In the Web Services Target Location, update the Target Location setting to reflect your environment.
4. Click Save.
5. Select PeopleTools, Integration Broker, Integration Setup, Service Operations.
6. On the Service Operations - Search page, verify that the these Services exist:
   - ADMINSERVICE
   - ORACLESEARCHSERVICE

Task 11-6: Defining a Search Instance in the PeopleSoft System

To define a search instance:

1. On the Search Instance Properties page, provide search engine details.

   The search engine values enable connectivity between the PeopleSoft system and SES.



Search Engine Details area of Search Instance Properties page

- SSL Option

  Select one of these options for SES:

  DISABLE. Select if you do not have SSL configured between SES and your PeopleSoft system, as shown in the example.

  ENABLE. Select if you do have SSL configured between SES and your PeopleSoft system.

- Host Name

  Enter the server name of the host where SES is running, including the domain. For example, server1.mycompany.com. To specify the host, you may use the host name or an IP address.

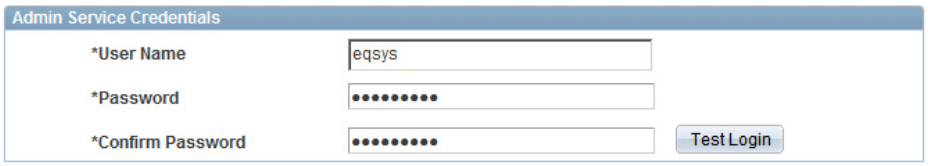
- Port

  Enter the port on which SES listens for request, for example, 7777.

- Ping

  Click the Ping button to verify access to the SES system. If the test is successful, you see a message displaying the current version of the SES administrative service.

2. Specify the following SES administrative credentials so that your PeopleSoft system has the appropriate access to connect to the SES server and perform various administrative tasks, such as deploying search objects, building indexes, scheduling crawling, and so on.



Admin Server Credentials area of Search Instance Properties page

- User Name

  Enter the user name for logging into the Secure Enterprise Search Administration GUI. The administrative user name is eqsys, as shown in the example.

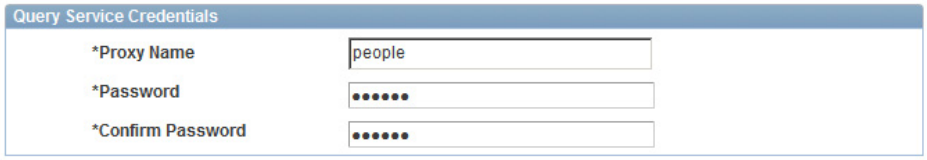
- Password/Confirm Password

  Enter and confirm the password associated with the administrative user name.

- Test Login

  Click this button to confirm that the PeopleSoft system can access the SES server. You should see a login success message.

3. Enter the following values in the Query Service Credentials area:



Query Service Credentials area of Search Instance Properties page

- Proxy Name

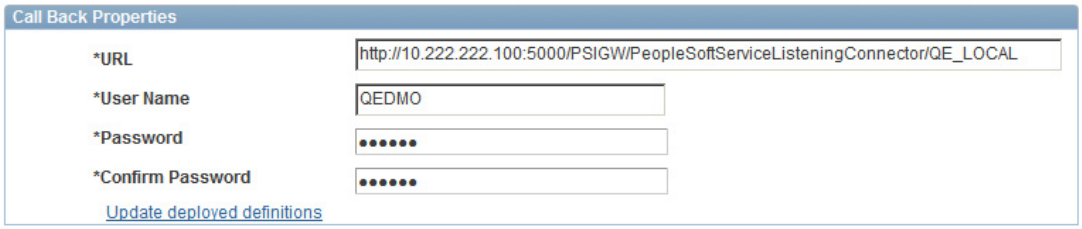
  Enter a trusted entity, people in this example, from the list on the Federation Trusted Entities page in the SES Administration interface. (Global Settings, Federation Trusted Entities)

- Password/Confirm Password

  Enter and confirm the password associated with the trusted entity.

4. Enter the following values in the Call Back Properties area.

   At times, SES will need to call back to the PeopleSoft system to access services, such as authentication services, so you need to provide the URL and password for access.



Call Back Properties area of Search Instance Properties page

- URL

  Enter the URL for the PeopleSoft system listening connector, using the following syntax: http://<*server*>:<*port*>/PSIGW/PeopleSoftServiceListeningConnector/<*node*>

- User Name

  Enter the PeopleSoft user name, QEDMO in this example.

- Password/Confirm Password

  Enter and confirm the password associated with the PeopleSoft user name.

- Update deployed definitions

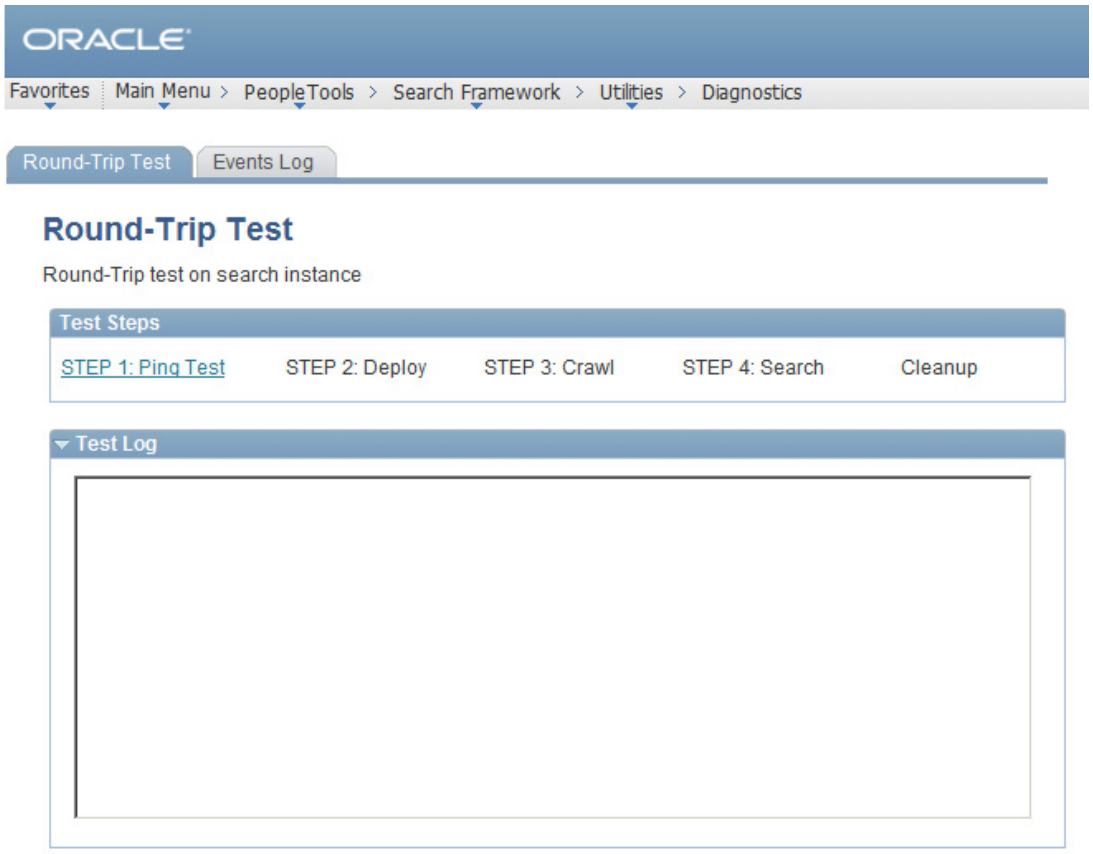
  Select this link to use the information entered on this page to update the deployed definitions.

Task 11-7: Verifying PeopleSoft PeopleTools and SES Connectivity

To verify that the required elements are set up correctly on the PeopleTools side and that the PeopleTools system can connect to the SES instance, run a ping test against the SES server.

To run a ping test:

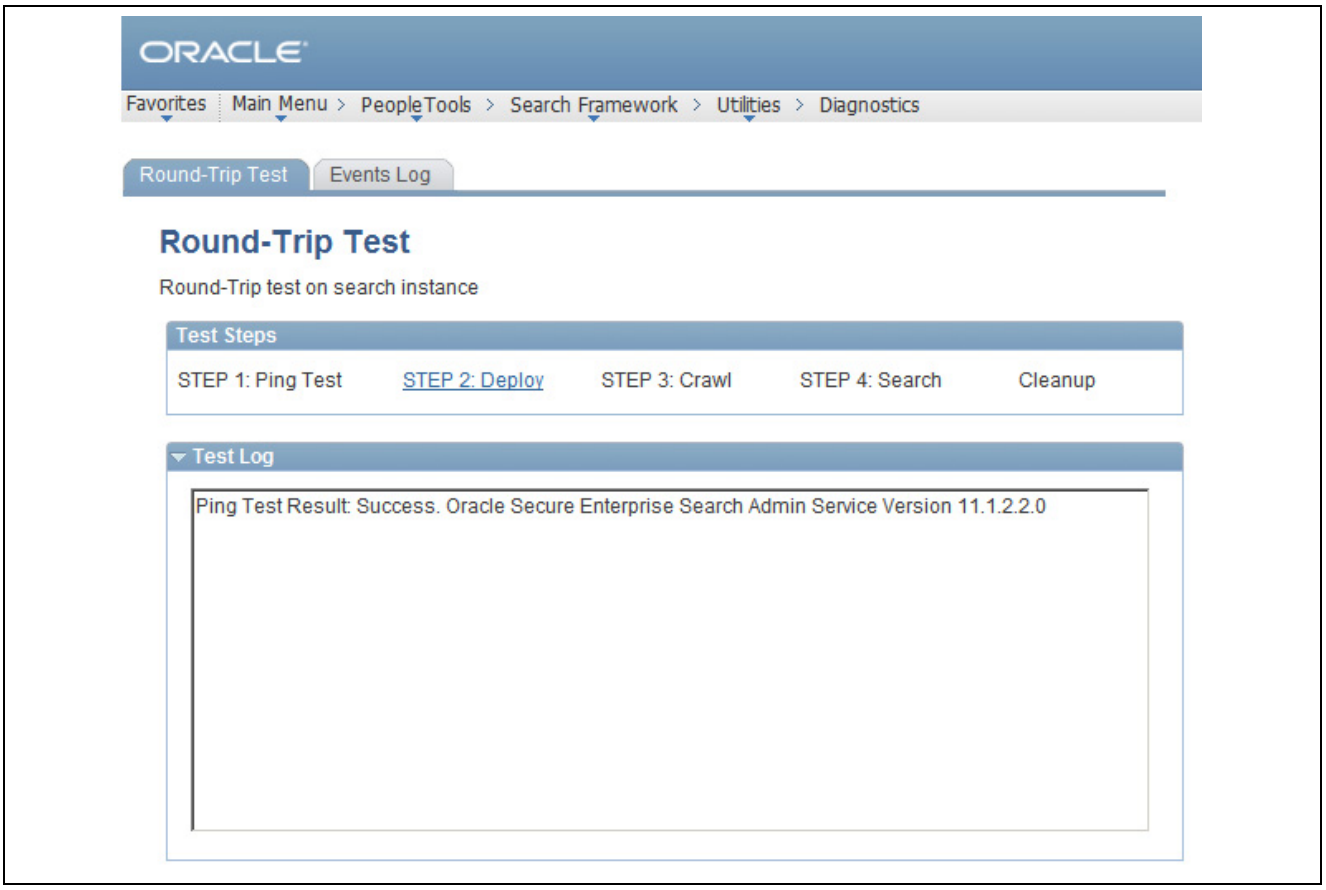
1. Select PeopleTools, Search Framework, Utilities, Diagnostics.



Round-Trip Test page

2. On the Round-Trip Test page, select STEP 1: Ping Test.
3. Ensure that the message received displays the current version of the SES admin service.

   In this example, the version is Oracle Secure Enterprise Search Admin Service Version 11.1.2.2.0.



Round-Trip Test page showing successful ping test result

CHAPTER 12A

Installing and Compiling COBOL on Windows

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Installing Micro Focus Net Express for Windows
- Using the Micro Focus COBOL Compiler on Microsoft Windows
- Installing IBM COBOL for Microsoft Windows
- Using the IBM COBOL Compiler on Microsoft Windows

Understanding COBOL

This chapter describes how to compile and link PeopleSoft COBOL batch programs, if necessary.

COBOL is not needed for PeopleSoft PeopleTools because the Process Scheduler is written in C++. In addition, COBOL is not required for applications that contain no COBOL programs. See My Oracle Support for the details on whether your application requires COBOL.

The chapter includes instructions for both Micro Focus Net Express COBOL compilers, referred to here as "Micro Focus COBOL", and IBM Rational Developer for System z, referred to here as "IBM COBOL".

Warning! If your database server is DB2 for z/OS and your CCSID is not 37, you must read the CCSID discussion under Defining DB2 for z/OS Subsystem Configuration in the chapter "Preparing for Installation."

See *PeopleTools 8.52: Global Technology PeopleBook*, "Sorting in PeopleTools" (look for %BINARYSORT).

See *PeopleTools 8.52: System and Server Administration PeopleBook*, "Using PeopleTools Utilities," (look for PeopleTools options and PSOPTIONS).

See Also

"Preparing for Installation," Installing Supporting Applications

"PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers," My Oracle Support, (search for the article name)

"PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the IBM COBOL Compiler," My Oracle Support, (search for the article name)

"COBOL: Installation, Versions, and Fixpacks" My Oracle Support, (search for the article name)

PeopleTools 8.52: Global Technology PeopleBook, "Running COBOL in a Unicode Environment"

PeopleTools 8.52: Global Technology PeopleBook, "Running COBOL in a z/OS Unicode Environment"

Prerequisites

Before you attempt to run COBOL from the command line you should do the following:

- Make sure the variable PS_SERVER_CFG points to a valid psprcs.cfg file.
- Make sure %PS_HOME%\bin\server\winx86 is in your path. It should appear before %PS_HOME%\bin\client\winx86 if that also appears in the path.

Task 12A-1: Installing Micro Focus Net Express for Windows

This section discusses:

- Prerequisites
- Obtaining Installation Files for Micro Focus Net Express from Oracle E-Delivery
- Installing Micro Focus Net Express
- Installing Micro Focus Net Express 5.1 Wrap Pack 4

Prerequisites

Micro Focus® Net Express™ 5.1 is the supported COBOL compiler on Microsoft Windows for PeopleSoft PeopleTools 8.52.

Check the certification information on My Oracle Support for the supported version for Microsoft Windows operating systems.

For PeopleSoft PeopleTools 8.52, Micro Focus Net Express 5.1 WrapPack 4 is supported on Microsoft Windows 2008 R2 and Microsoft Windows 7. On other supported Microsoft Windows operating systems, Micro Focus Net Express 5.1 is supported.

For Microsoft Windows 2008 R2 and Microsoft Windows 7: To install Micro Focus Net Express 5.1 WrapPack 4, you must first install Micro Focus Net Express 5.1 WrapPack 1 as the base, followed by Micro Focus Net Express 5.1 WrapPack 4.

For other supported Microsoft Windows operating systems: To install Micro Focus Net Express 5.1 WrapPack 4, you must first install Micro Focus Net Express 5.1 as the base, followed by Micro Focus Net Express 5.1 WrapPack 4.

To install and use Micro Focus Net Express you must have Microsoft Internet Explorer 6.0 or later installed.

See Also

Using the Micro Focus COBOL Compiler on Microsoft Windows

Task 12A-1-1: Obtaining Installation Files for Micro Focus Net Express from Oracle E-Delivery

The Micro Focus Net Express installation files are available on Oracle E-Delivery. At this point you may have already downloaded the necessary files. This section includes additional information on finding and using the files for Micro Focus Net Express if necessary.

See "Preparing for Installation," Using Oracle E-Delivery to Obtain Installation Files.

To obtain the files for the Micro Focus Net Express installation:

1. After logging in to Oracle E-Delivery, on the Media Search Pack page, select *PeopleSoft Enterprise* from the Select a Product Pack drop-down list.

   Select the operating system you are running on from the Platform drop-down list, and click Go.
2. Select the radio button for Third Party - Micro Focus 5.1 for PeopleSoft Enterprise Media Pack and click Continue.
3. Download the software and documentation files for your Micro Focus Net Express 5.1 version as specified in the Prerequisites section, and save the zip files to a temporary directory on your local system.

   The directory where you save the zip file is referred to in this documentation as *NE_INSTALL*. You must extract (unzip) the file on the platform for which it is intended. For example, if you download the zip file for Solaris, you must unzip it on Solaris to avoid problems. If you unzip the file to a staging directory on a Microsoft Windows computer and copy the staging directory to a Solaris, the stage area files may be corrupt.

Task 12A-1-2: Installing Micro Focus Net Express

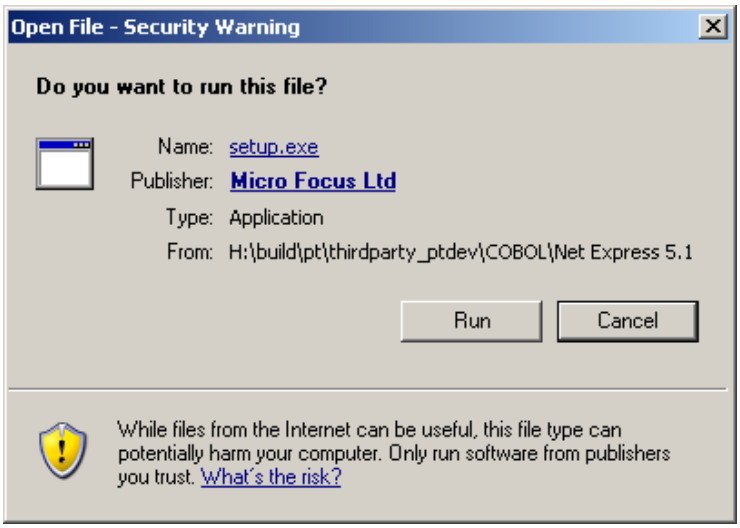
The following procedure assumes that you saved the installation files from Oracle E-Delivery in the directory *NE_INSTALL*.

Note. The installation of Micro Focus Net Express WrapPack 1 is similar to this procedure. The installation of Micro Focus Net Express WrapPack 4 is given in the next section.

To install Micro Focus Net Express:

1. Double-click *NE_INSTALL*/setup.exe.

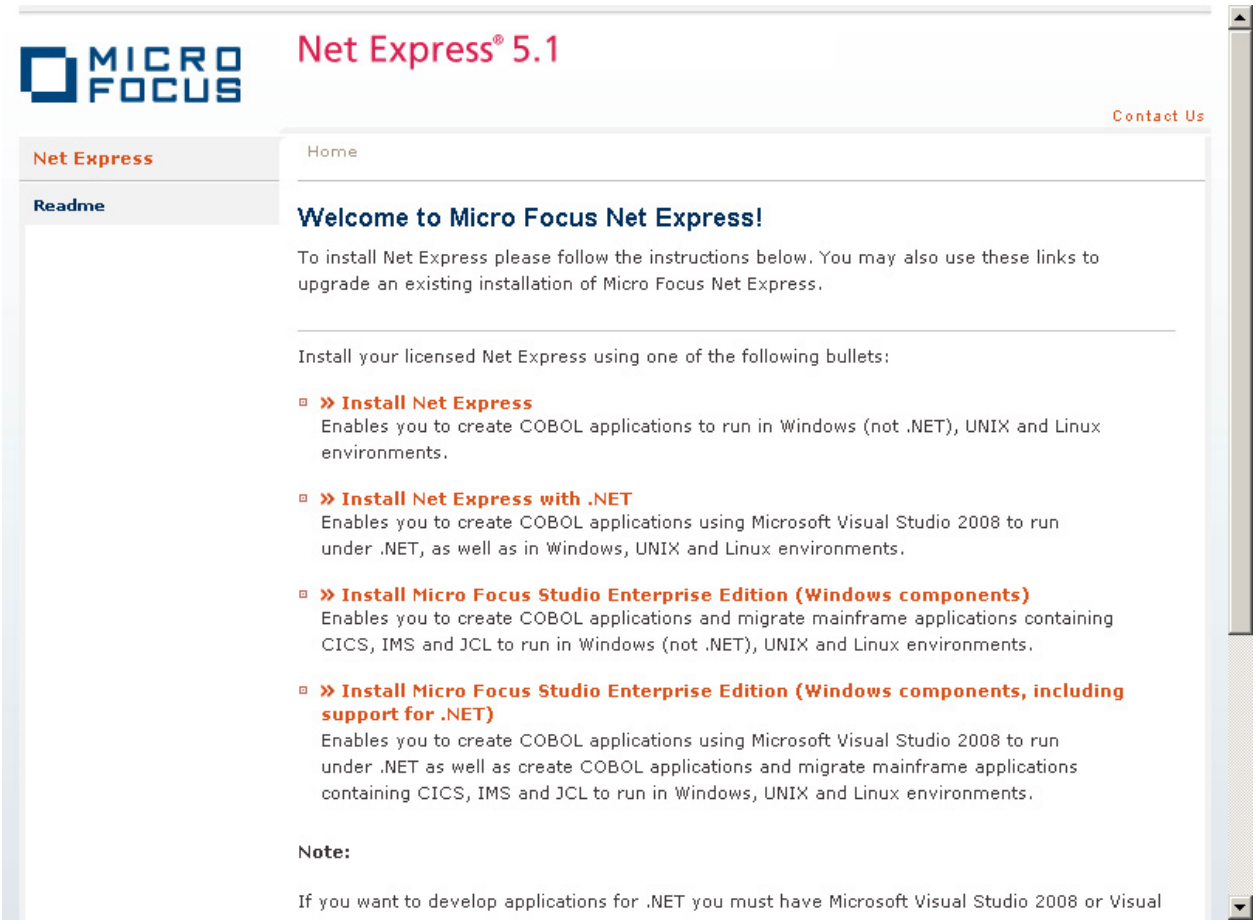
   If a security screen appears, click Run to launch the installer.



Open File - Security Warning window

The installation opens a browser window.

2. Select the Install Net Express link in the Net Express 5.1 window.

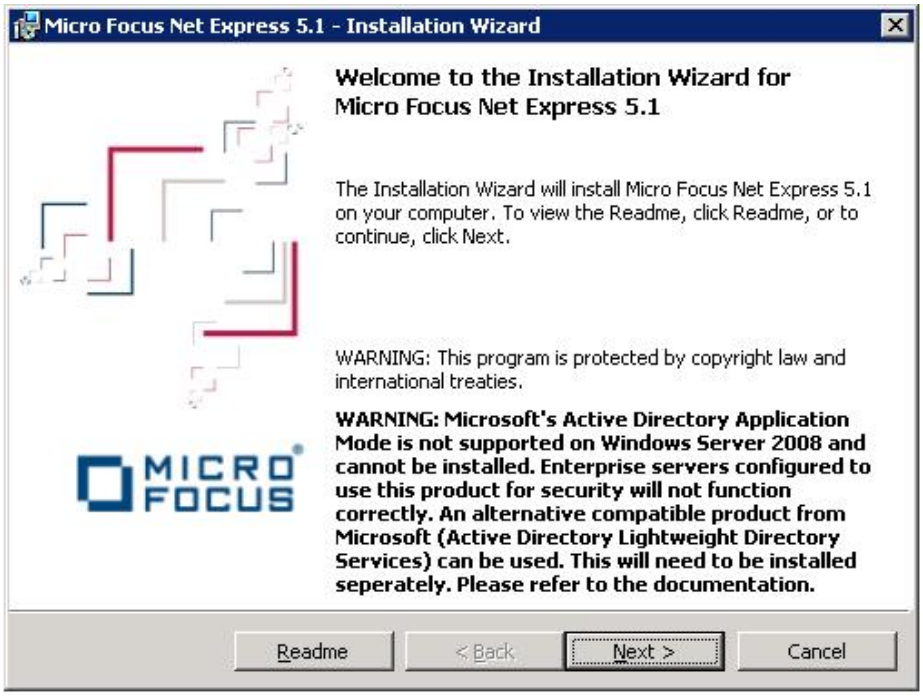


Micro Focus Net Express welcome window

The Install Shield Wizard starts extracting files. This may take a few minutes until the files are extracted, and then the Installation Wizard dialog box appears.

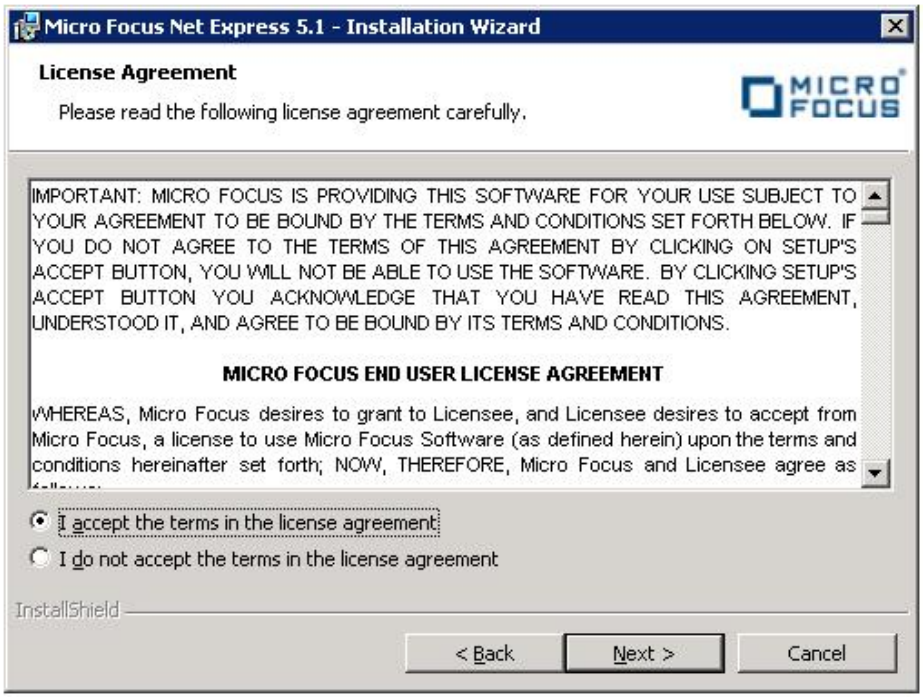
3. Click Next on the welcome screen.

   The screen includes the text “To view the Readme, click Readme, or to continue, click Next.”



Micro Focus Net Express Installation Wizard Welcome window

4. Read the terms of the License Agreement, select the option to accept the terms, and click Next.



License Agreement window

5. Complete the Customer Information window:

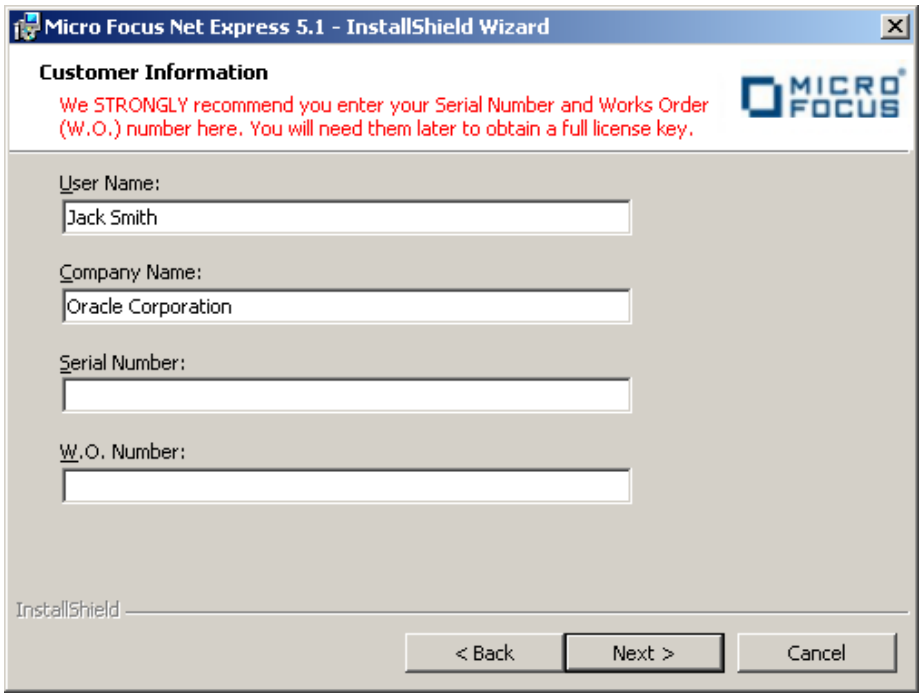
a. Enter your name in the User Name field, and enter your Company Name.

b. Leave the Serial Number and W.O. Number fields blank. Oracle does not provide these numbers to you and they are not required.

Note. The message at the top of the window reads "We STRONGLY recommend you enter your Serial Number and Works Order (W.O.) number here. You will need them later to obtain a full license key." The example below leaves these field blank.

---

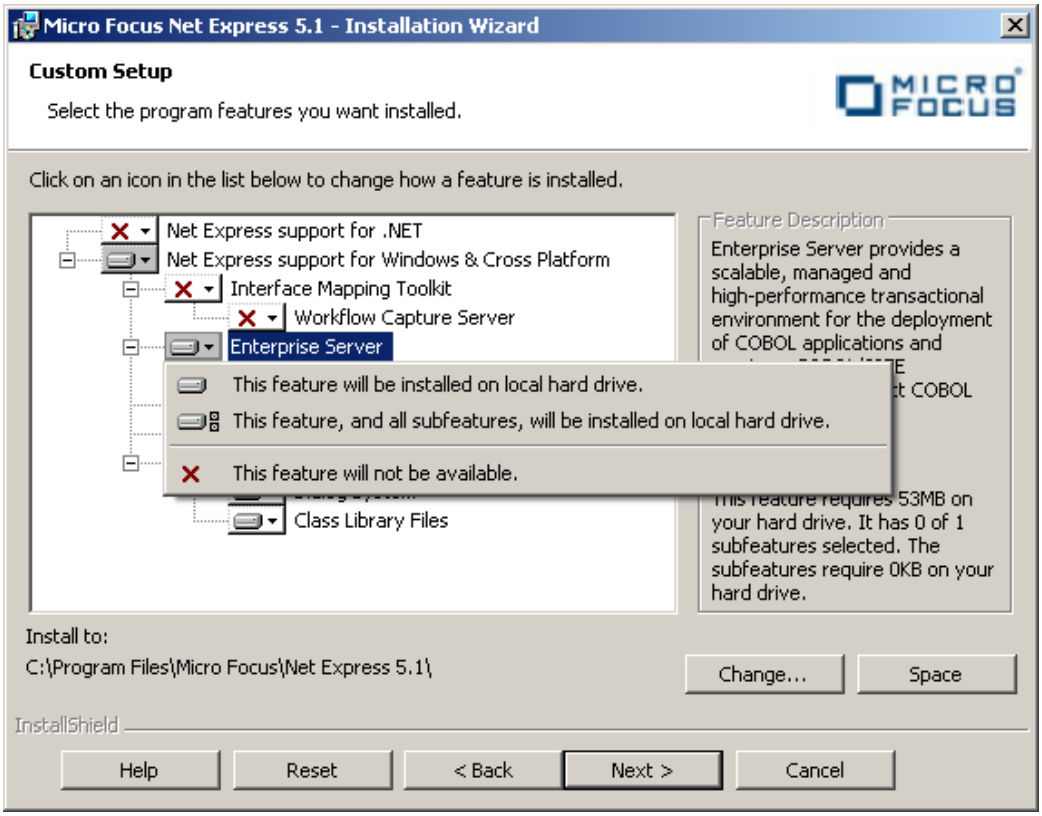
c. Click Next.



Customer Information window

6. You must clear several features on the Custom Setup window before proceeding.

   You can turn off a feature by clicking on the drop-down button beside the feature and selecting the option X This feature will not be available, as shown in this example:



Custom Setup window

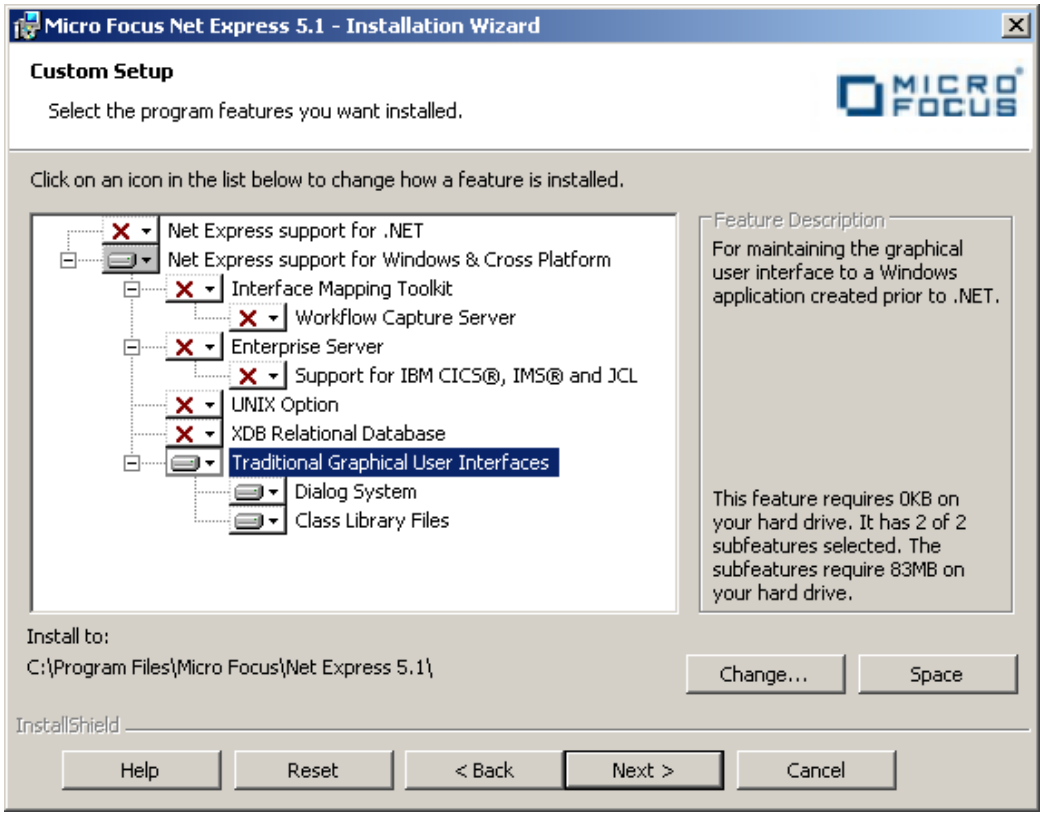
The Traditional Graphical User Interfaces feature is the only feature required for the PeopleSoft installation. Clear the following features:

Note. Microsoft .NET framework is not required for compiling and running COBOL applications in PeopleSoft architecture. Neither is .NET required for successful installation of MicroFocus Net Express 5.1.

- Net Express support for .NET
- Interface Mapping Toolkit

  When you clear this feature, the Workflow Capture Server option is automatically cleared also.
- Enterprise Server
- UNIX Option
- XDB Relational Database

7. Verify that your final selection matches this example:



Custom Setup window with options selected for PeopleSoft applications

8. Highlight Traditional Graphical User Interfaces.

   The default installation directory is displayed below the feature list. If you want to install to another location, click Change. If not, click Next.

   The Micro Focus Net Express 5.1 default installation directory is:

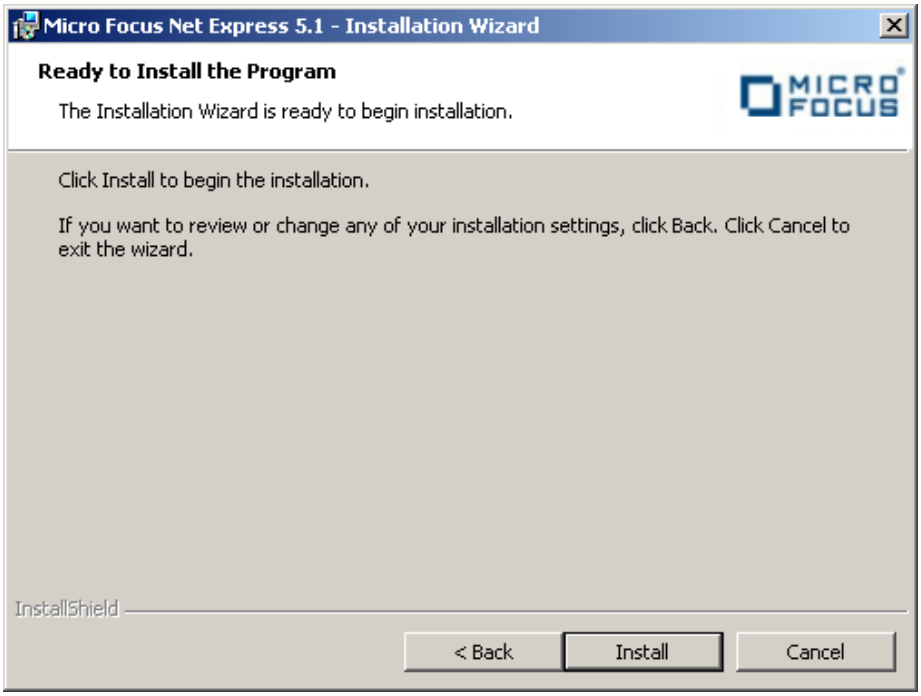
   - For 32-bit systems:

     C:\Program Files\Micro Focus\Net Express 5.1

   - For 64-bit systems:

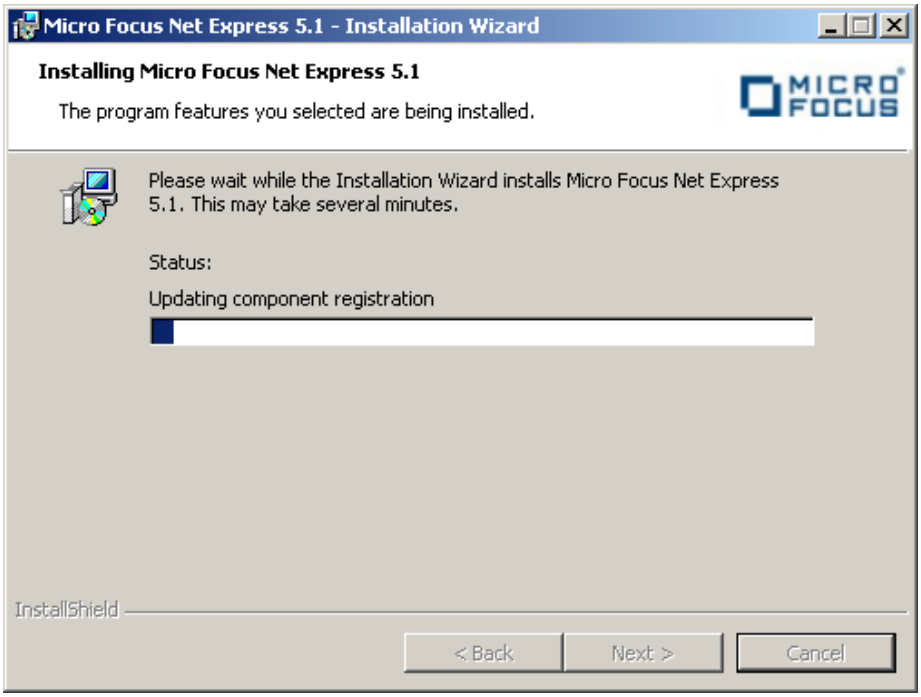
     C:\Program Files (x86)\Micro Focus\Net Express 5.1

9. Click Install.



Ready to Install window

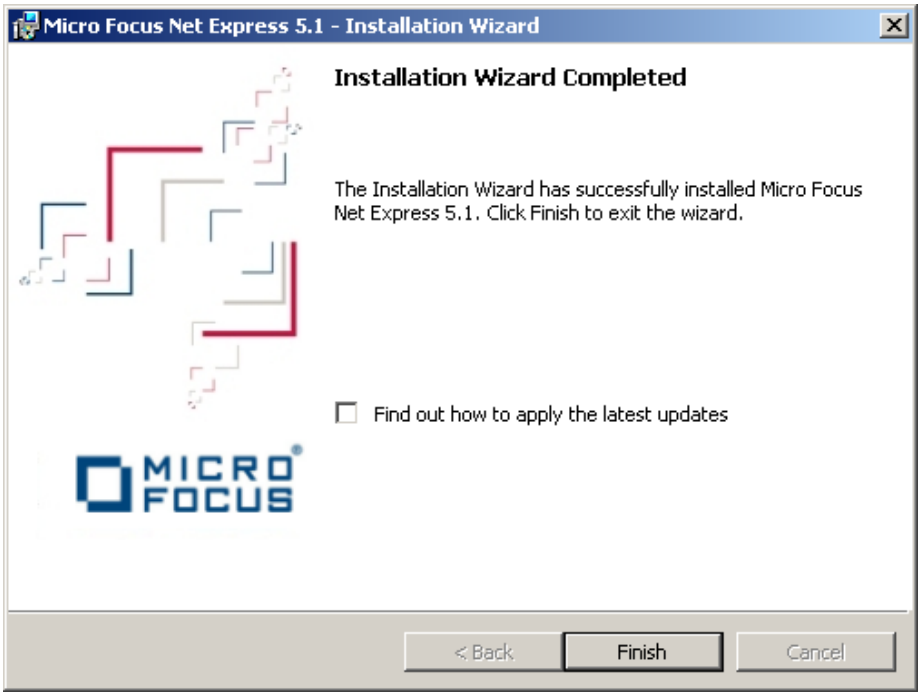
The installation status window appears tracking the installation progress.



Installation Status window

10. Click Finish.

    Now you are ready to use Micro Focus Net Express 5.1 COBOL Compiler.



Installation Wizard Completed window

Task 12A-1-3: Installing Micro Focus Net Express 5.1 Wrap Pack 4

Before installing this wrap pack, make sure you meet the following requirements:

- You have downloaded and extracted the necessary files to a convenient directory referred to here as *NE_INSTALL*.

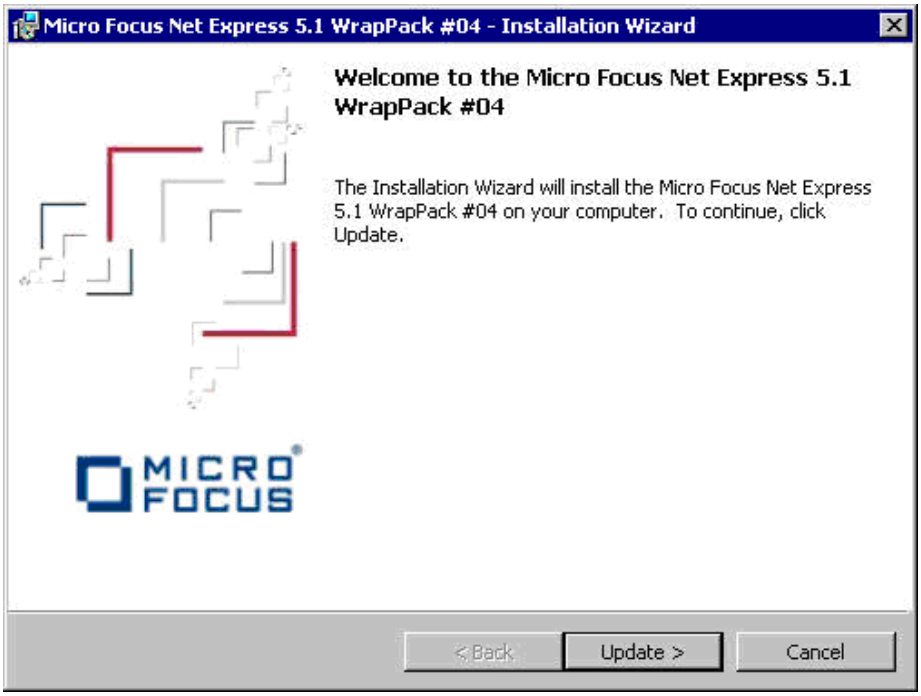
  See Obtaining Installation Files for Micro Focus Net Express from Oracle E-Delivery.
- You have installed Micro Focus Net Express 5.1.

  See Installing Micro Focus Net Express.
- You have verified that Micro Focus Security Pack is *not* installed on your system.
- You have verified that Net Express support for .NET Framework is *not* installed on your system.

Important! Micro Focus Security Pack and Net Express support for .NET supplied with Net Express 5.1 are *not* required by PeopleSoft installation of the Micro Focus Net Express COBOL compiler. If they have been installed on your system, be sure to remove the installation before proceeding with the Wrap Pack 4 installation.

To install Micro Focus Net Express 5.1 Wrap Pack 4:

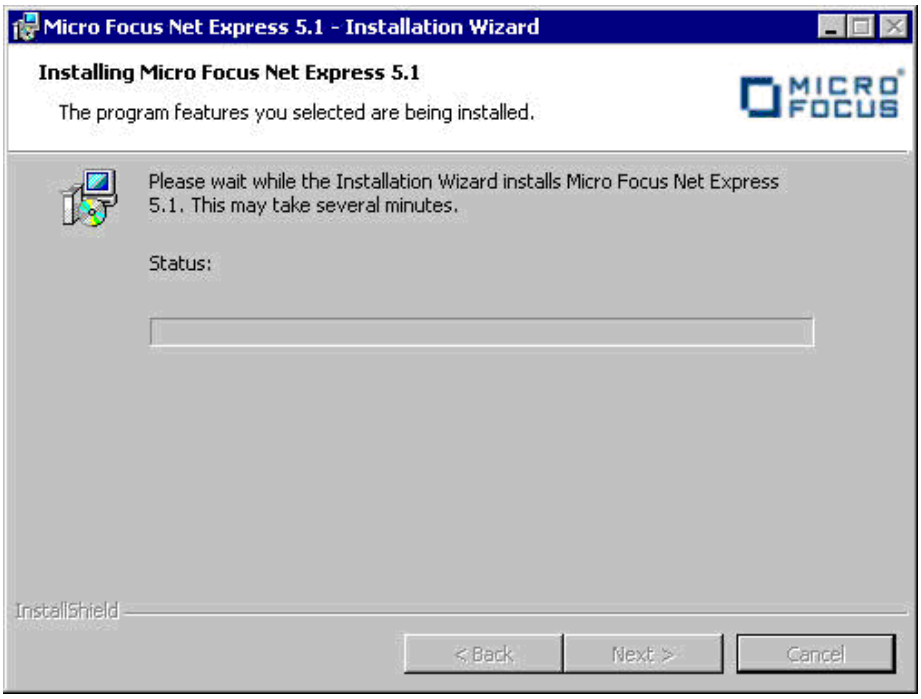
1. Go to *NE_INSTALL* and double-click the file nxp3251040083.msp.
2. If a security screen appears, click Open to launch the installer.
3. Click Update on the welcome window.



Micro Focus Net Express 5.1 WrapPack 4 Installation Wizard welcome window

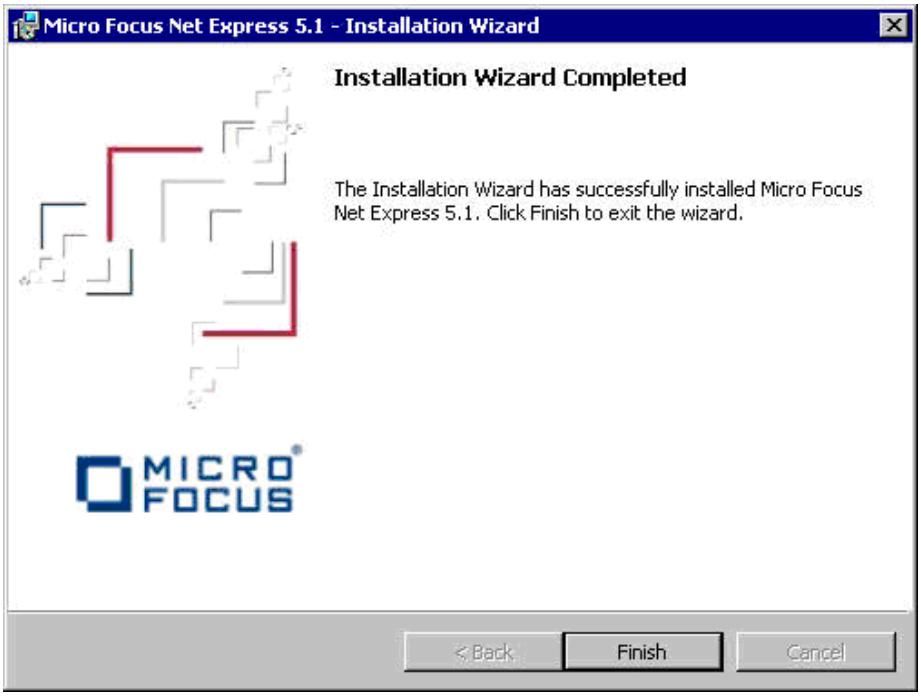
4. Wait while the installation proceeds.

Note. This may take several minutes.



Micro Focus Net Express 5.1 WrapPack 4 Installation status window

5. Click Finish on the installation complete window.

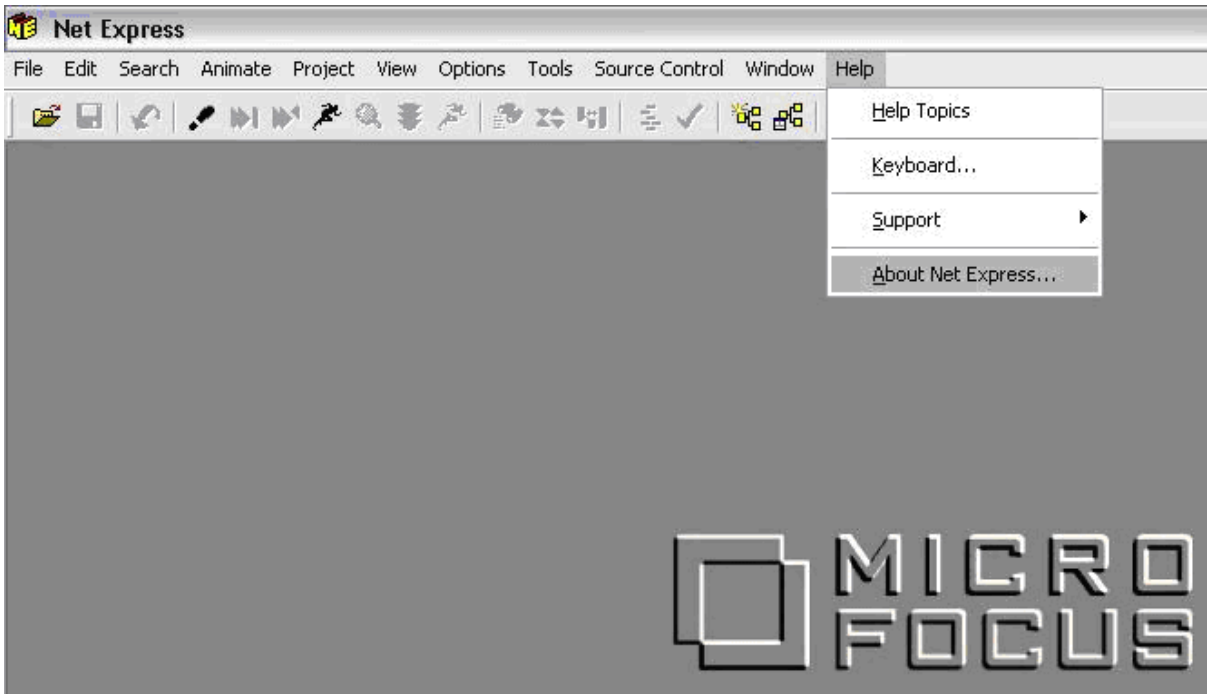


Micro Focus Net Express 5.1 WrapPack 4 Installation Complete window

6. To confirm the installation, select Start, Programs, Micro Focus Net Express 5.1, Net Express.

   The Net Express Integrated Development Environment appears.

7. Click Help, About Net Express.

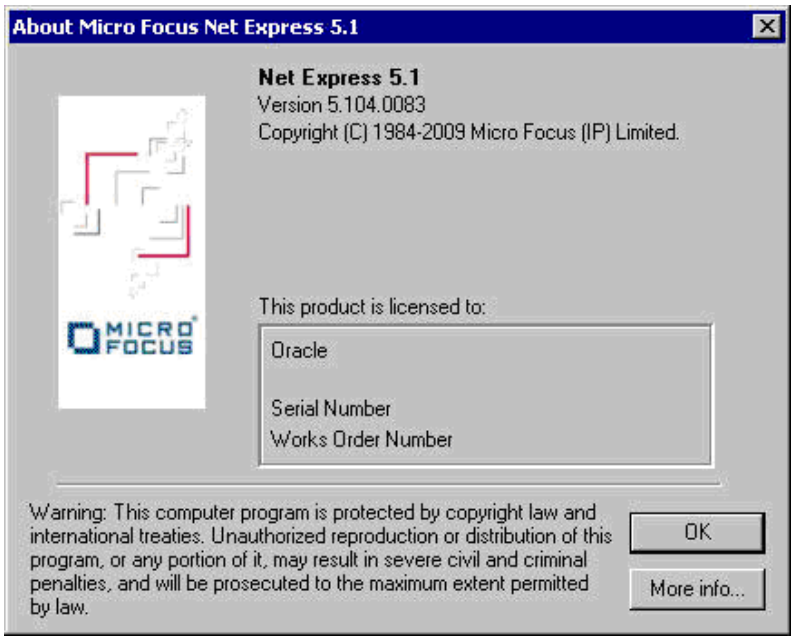


Micro Focus Net Express Integrated Development Environment

8. Verify that the following information is included on the window that appears:

   Net Express 5.1

Version: 5.104.0083



About Micro Focus Net Express 5.1 window

Task 12A-2: Using the Micro Focus COBOL Compiler on Microsoft Windows

This section discusses:

- Understanding COBOL Compilation
- Compiling with CBLBLD.BAT When PS_APP_HOME is the Same as PS_HOME
- Compiling with CBLMAKE.BAT When PS_APP_HOME is the Same as PS_HOME
- Compiling with CBLBLD.BAT When PS_APP_HOME is Different from PS_HOME
- Compiling with CBLMAKE.BAT When PS_APP_HOME is Different from PS_HOME
- Defining the GNT and INT Files
- Distributing COBOL Binaries

Understanding COBOL Compilation

With PeopleSoft PeopleTools 8.50 and higher, your COBOL always needs to be compiled on Microsoft Windows. (This is a change from previous versions of PeopleSoft PeopleTools, which delivered compiled COBOL for Microsoft Windows.) This chapter assumes that you are carrying out the compile process from your file server. (The COBOL compiler itself doesn't need to be on the file server, as long as the user can write to the file server and can link to the src and bin directories.) The recommended approach for the PeopleSoft installation is to use CBLBLD.BAT to compile all your COBOL source files at once. Another alternative is CBLMAKE.BAT, which you can use to compile selected COBOL files.

This section includes different procedures depending upon how you set up your installation environment.

See "Preparing for Installation," Defining Installation Locations.

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is the same as the *PS_HOME* location where you installed PeopleSoft PeopleTools 8.52, follow the instructions in these sections:

- Compiling with CBLBLD.BAT When PS_APP_HOME is the Same as PS_HOME
- Compiling with CBLMAKE.BAT When PS_APP_HOME is the Same as PS_HOME
- Defining the GNT and INT Files

Note. The same task is used for both installation configurations.

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is different from the *PS_HOME* location where you installed PeopleSoft PeopleTools 8.52, follow the instructions in these sections:

- Compiling with CBLBLD.BAT When PS_APP_HOME is Different from PS_HOME
- Compiling with CBLMAKE.BAT When PS_APP_HOME is Different from PS_HOME
- Defining the GNT and INT Files

Note. The same task is used for both installation configurations.

Make certain to check whether you need to apply any late-breaking patches.

See My Oracle Support, Patches & Updates.

Task 12A-2-1: Compiling with CBLBLD.BAT When PS_APP_HOME is the Same as PS_HOME

To compile COBOL with CBLBLD.BAT:

1. Set up two environment variables, %PS_HOME% and %COBROOT%, on the machine from which you'll compile COBOL. (This should be either your file server or a machine that has access to your file server.)

   You can do this from a command prompt window. This table gives the environment variables and their purposes.

Environment Variable	Purpose
PS_HOME	PeopleSoft home directory—that is, the drive letter and high-level PeopleSoft directory where you installed PeopleTools and the application.
COBROOT	Drive letter and root directory of the COBOL compiler.

   For example, you could enter the following at the DOS command prompt:

```
set PS_HOME=C:\hr840
set COBROOT="C:\Program Files\Micro Focus\Net Express 5.1\base"
```

2. Open a command prompt window if you do not have one open already, and change directories to *PS_HOME*\setup.
3. Execute CBLBLD.BAT as follows:


```
cblbld <compile drive> <compile directory> EBCDIC
```

In this command, <*compile drive*> is the drive where the compile takes place, <*compile directory*> is the temp directory where the compile takes place

EBCDIC is a parameter for collating sequence comparisons on DB2 z/OS (by default it compiles with ASCII mode)

The CBLBLD.BAT file will create the compile directory for you if it does not already exist.

Note. If the database server is DB2 for z/OS, the EBCDIC parameter is required; it is not needed for other platforms.

Note. *Make sure* to include a space between the <*compile drive*> and <*compile directory*> parameters; they are treated as two different parameters within the CBLBLD.BAT batch program. Also ensure that you have write permission to <*compile drive*> and <*compile directory*> as the compile process will take place there.

For example, the following command will take the COBOL source from *PS_HOME*\src\cbl and do the compile process under c:\temp\compile:

```
cblbld c: \temp\compile
```

Make note of the information that is displayed on the screen while the process is running; it provides the locations of important files that you will need to examine.

4. After you have successfully compiled your source code, all of the executables should have been placed in your <*PS_HOME*>\CBLBIN<*X*> directory (this directory will be named CBLBINA, CBLBINU, or CBLBINE, depending on whether you are using ANSI, Unicode or EBCDIC). Make sure that all of the files were copied correctly to this directory.
5. If the files were copied correctly, you can delete the entire temporary compile directory to free space on your disk drive.

Note. You may want to keep the files in the compile directory for testing purposes. Make sure that you have enough space on the drive where <*compile directory*> is located. Estimate about three times the amount in the <*PS_HOME*>\CBLBIN<*X*> directory.

Note. If you chose the Unicode option while running the PeopleSoft Installer, the file UNICODE.CFG was created in the setup directory. UNICODE.CFG automatically triggers the batch file CBL2UNI.BAT when you run CBLBLD.BAT. Another batch file, CBLRTCPY.BAT, copies four DLLs (CBLINTS.DLL, CBLRTSS.DLL, CBLVIOS.DLL, COB32API.DLL) from the Microfocus compiler directory (identified by %COBROOT% setting) into the appropriate CBLBIN directory (CBLBINA, CBLBINU, or CBLBINE) when you run CBLBLD. These files are needed for COBOL to run; they can reside anywhere as long as they are in the path. You can run either of these BAT files independently from the command line (they reside in *PS_HOME*\setup). For CBLRTCPY.BAT you need to specify a target directory.

Task 12A-2-2: Compiling with CBLMAKE.BAT When PS_APP_HOME is the Same as PS_HOME

CBLBLD.BAT compiles all your COBOL source files at once, which can take a lot of time. CBLMAKE.BAT, in contrast, lets you employ one or more parameters to compile a specific COBOL file or a selected group of COBOL files. Unlike CBLBLD.BAT, however, CBLMAKE.BAT does not automatically trigger the batch file CBL2UNI.BAT or CBLRTCPY.BAT.

Here is the basic syntax for CBLMAKE.BAT:

```
CBLMAKE.BAT [] [ALL] [wildcard filename[ALL]] [wildcard filename | wildcard⇒
 filename without extension[INT | GNT | EXE]] [EBCDIC] [LIST]
```

Note. The switches are well documented in the CBLMAKE.BAT file in the form of comments.

Note. If you are running DB2 z/OS, you must use the EBCDIC parameter.

Note. If the change in the COBOL source is a copy member, you must compile all of the COBOL programs using CBLBLD.BAT. You know it is a copy member when the third letter in the file name is a *C*, as in PT*C*SQLRT.CBL.

The following table describes the various options for CBLMAKE.BAT.

Option	Purpose
Cblmake	Compiles all source
Cblmake all	Compiles all source
Cblmake EBCDIC	Compiles all source files for DB2 for z/OS
Cblmake PT*	Compiles all source files that start with PT
Cblmake PT* ALL	Compiles all source files that start with PT
Cblmake PT* INT	Generates INT files for all source files that start with PT
Cblmake PT* GNT	Generates GNT files for all source files that start with PT
Cblmake PT* EXE	Generates EXE files for all source files that start with PT
Cblmake PTPDBTST INT	Generates PTPDBTST.INT file
Cblmake PTPDBTST INT LIST	Generates PTPDBTST.INT and source listing file
Cblmake PTPDBTST GNT	Generates PTPDBTST.GNT file
Cblmake PTPDBTST EXE	Generates PTPDBTST.EXE file

The LIST option creates a source listing file under <*compile directory*>\<*filename*>.lis. The LIST option is useful when the compile fails during the debugging phase. The source listing files show exactly where an error occurred. This option is not recommended when the program compiles successfully because the .LIS files can grow to be quite large.

Note. By default, when the program fails to compile, the system will generate a .LIS file.

To compile with CBLMAKE.BAT:

1. Verify that the %PS_HOME% and %COBROOT% environment variables are set up correctly.
2. Open a command prompt window.
3. Make sure the compile directory exists; it may already if you've run CBLBLD.BAT. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.

Note. Make sure you have write permission to <*compile directory*> as the compile process will take place there.

4. Change to the *PS_HOME*\setup directory.
5. If the installation is Unicode, run CBL2UNI (with no parameters).
6. Execute the following command to copy all the COBOL source files from the *PS_HOME* directory to the compile directory:

   ```
   cblsrc <source directory>  <compile directory>
   ```

   where <*source directory*> is the drive and directory where the source resides (it should be the same as *PS_HOME*), and <*compile directory*> is the drive and directory to which the source files will be copied.

   For example, the following command will take the COBOL source from *PS_HOME* and copy all the necessary files to the location where the compile process will take place.

   ```
   cblsrc  PS_HOME  c:\temp\compile
   ```

   If the COBOL source that will be compiled is different from the one under *PS_HOME*, copy that COBOL source to <*compile directory*>.

   Note. The compile in the next step will generate a GNT file unless the exception file, CBLINT.*XX* already exists (the *XX* represents the Product ID). CBLINT.*XX* contains the list of files that need to be compiled to the INT file. Make sure the intended CBLINT.*XX* is located under <*compile directory*> before executing CBLMAKE.

7. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.
8. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate *PS_HOME*\CBLBIN*X* directory (CBLBINA, CBLBINU, or CBLBINE).

   ```
   copy *.exe PS_HOME\cblbina
   copy *.gnt PS_HOME\cblbina
   copy *.int PS_HOME\cblbina
   ```

   Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

Task 12A-2-3: Compiling with CBLBLD.BAT When PS_APP_HOME is Different from PS_HOME

The usage for running CBLBLD.BAT is:

```
cblbld <compile drive> <compile directory> [BUILD_option] [BUILD_home]
```

Substitute the appropriate values as follows:

- <compile drive>

  Enter the drive letter for the drive containing the directory where the compile takes place.

- <compile directory>

Enter the directory where the compile takes place. Be sure to include a space between <compile drive> and <compile directory>.

- BUILD_option

  The allowed values are nothing (blank), ASCII, EBCDIC, or Unicode.

  BUILD_option refers to the encoding scheme of your PeopleSoft installation. This parameter is optional.

- BUILD_home

  The allowed values are nothing (blank), ps_home or ps_app_home. The values ps_home and ps_app_home are case-sensitive.

  BUILD_home refers to the directory from which the COBOL source files will be compiled. If the option is ps_home, the COBOL source files placed under %PS_HOME%\src\cbl will be compiled. If the option is ps_app_home, the COBOL source files placed under %PS_APP_HOME%\src\cbl will be compiled. If the option is blank, the COBOL source files under %PS_HOME%\src\cbl and COBOL source files under %PS_APP_HOME%\src\cbl will be compiled one after the other.

  This parameter is optional.

To compile COBOL sources on Microsoft Windows:

1. In a command prompt, set the environment variables described in this table:

Environment Variable	Purpose
PS_HOME	PeopleSoft PeopleTools home directory—that is, the drive letter and high-level directory where you installed PeopleSoft PeopleTools.
COBROOT	Drive letter and root directory of the COBOL compiler.
PS_APP_HOME	PeopleSoft Application home directory—that is, the drive letter and high-level directory where you installed the PeopleSoft Application.

   For example:

```
set PS_HOME=C:\PTcompile
set COBROOT="C:\Program Files\Micro Focus\Net Express 5.1\base"
set PS_APP_HOME=C:\HRcompile
```

2. Change directory to *PS_HOME*\setup:

```
cd %PS_HOME%\setup
```

3. Run CBLBLD.BAT, using one of these methods:

   - To compile all the COBOL source files under your PeopleSoft application, that is, all PeopleSoft PeopleTools source files and all PeopleSoft Application source files, run this command:

```
cblbld <compile drive> <compile directory>
```

     For example:

```
cblbld c: \temp\PTcompile
```


- To compile only PeopleSoft PeopleTools COBOL source files, run this command:

  ```
  cblbld <compile drive> <compile directory> ps_home
  ```

  For example:

  ```
  cblbld c: \temp\PTcompile ps_home
  ```

- To compile only PeopleSoft Application COBOL source files, run this command:

  ```
  cblbld <compile drive> <compile directory> ps_app_home
  ```

  For example:

  ```
  cblbld c: \temp\HRcompile ps_app_home
  ```

PeopleSoft PeopleTools COBOL compiled executables will be placed under the <*PS_HOME*>\CBLBIN<*X*> directory. PeopleSoft Application COBOL compiled executables will be placed under the <*PS_APP_HOME*>\CBLBIN<*X*> directory. CBLBIN<X> will be one of the following:

- CBLBINA if you are using ANSI encoding scheme
- CBLBINU if you are using Unicode encoding scheme
- CBLBINE if you are using EBCDIC encoding scheme

Task 12A-2-4: Compiling with CBLMAKE.BAT When PS_APP_HOME is Different from PS_HOME

CBLBLD.BAT compiles all your COBOL at once, which can take a lot of time. CBLMAKE.BAT, in contrast, lets you employ one or more parameters to compile a specific COBOL file or a selected group of COBOL files. The procedure is slightly different depending upon whether the file that you want to compile is a PeopleSoft Application or PeopleSoft PeopleTools COBOL file. Both procedures are covered in this section.

Note. The options for CBLMAKE.BAT are defined in a table in the previous section Compiling with CBLMAKE.BAT When PS_APP_HOME is Different from PS_HOME.

To compile a PeopleSoft Application COBOL file with CBLMAKE.BAT:

1. Open a command prompt window.
2. Verify that the PS_HOME, COBROOT, and PS_APP_HOME environment variables are set, as previously defined.

   See Compiling with CBLBLD.BAT When PS_APP_HOME is Different from PS_HOME.
3. Verify that the environment variable PS_compile_apps is set, as follows:

   ```
   set PS_compile_apps=Y
   ```

   Important! This variable setting is required for individual file compilation with CBLMAKE.BAT.

   ---

4. Make sure the compile directory, <*compile directory*>, exists, and that you have write permission to it.

   This directory may already exist if you have run CBLBLD.BAT before. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.
5. Change to the *PS_HOME*\setup directory.
6. If the installation is Unicode, run CBL2UNI (with no parameters).

7. Execute the following command to copy all the COBOL source files from the *PS_APP_HOME* directory to the compile directory:

   ```
   cblsrc <source directory>  <compile directory>
   ```

   where <*source directory*> is the drive and directory where the source resides (it should be the same as *PS_APP_HOME*), and <*compile directory*> is the drive and directory to which the source files will be copied.

   For example, the following command will take the COBOL source from *PS_APP_HOME* and copy all the necessary files to the location where the compile process will take place, c:\temp\HRcompile in this example:

   ```
   cblsrc %PS_APP_HOME% c:\temp\HRcompile
   ```

   Note. The compile in the next step will generate a GNT file unless the exception file, CBLINT.*XX* already exists (the *XX* represents the Product ID). CBLINT.*XX* contains the list of files that need to be compiled to the INT file. Make sure the intended CBLINT.*XX* is located under <*compile directory*> before executing CBLMAKE.

8. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

   For example, to compile a file named GPPDPRUN, run this command:

   ```
   cblmake GPPDPRUN
   ```

9. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate <*PS_APP_HOME*>\CBLBIN<*X*> directory (CBLBINA for ANSI, CBLBINU for Unicode, or CBLBINE for EBCDIC).

   These examples use the ANSI encoding:

   ```
   copy *.exe %PS_APP_HOME%\cblbina
   copy *.gnt %PS_APP_HOME%\cblbina
   copy *.int %PS_APP_HOME%\cblbina
   ```

   Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

10. Verify that the compiler runtime files (CBLINTS.DLL, CBLRTSM.DLL, CBLRTSS.DLL, CBLVIOM.DLL, CBLVIOS.DLL, COB32API.dll, MFLANGDF.lbr) are present in the <*PS_APP_HOME*>\CBLBIN<*X*> directory.

    If they are not present, then you will have to run %PS_HOME%\setup\cblrtcpy.bat as follows:

    ```
    cblrtcpy %PS_APP_HOME%\cblbina
    ```

The procedure to compile a PeopleSoft PeopleTools COBOL file with CBLMAKE.BAT is similar, but the environment variable PS_compile_apps must *not* be set.

1. Open a command prompt window.
2. Verify that the PS_HOME, COBROOT, and PS_APP_HOME environment variables are set, as previously defined.

   See Compiling with CBLBLD.BAT When PS_APP_HOME is Different from PS_HOME.

3. Verify that the environment variable PS_compile_apps is *not* set, as follows:


```
set PS_compile_apps=
```

Important! Unsetting this environment variable is required for individual file compilation with CBLMAKE.BAT for PeopleSoft PeopleTools files.

4. Make sure the compile directory, <*compile directory*>, exists, and that you have write permission to it.

   This directory may already exist if you have run CBLBLD.BAT before. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.

5. Change to the *PS_HOME*\setup directory.

6. If the installation is Unicode, run CBL2UNI (with no parameters).

7. Execute the following command to copy all the COBOL source files from the *PS_HOME* directory to the compile directory:

   ```
   cblsrc <source directory>  <compile directory>
   ```

   where <*source directory*> is the drive and directory where the source resides (it should be the same as *PS_HOME*), and <*compile directory*> is the drive and directory to which the source files will be copied.

   For example, the following command will take the COBOL source from *PS_HOME* and copy all the necessary files to the location where the compile process will take place, c:\temp\PTcompile in this example:

   ```
   cblsrc %PS_HOME% c:\temp\PTcompile
   ```

8. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

   For example, to compile a file named PTPDBTST, run this command:

   ```
   cblmake PTPDBTST
   ```

9. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate <*PS_HOME*>\CBLBIN<*X*> directory (CBLBINA for ANSI, CBLBINU for Unicode, or CBLBINE for EBCDIC).

   These examples use the ANSI encoding:

   ```
   copy *.exe %PS_HOME%\cblbina
   copy *.gnt %PS_HOME%\cblbina
   copy *.int %PS_HOME%\cblbina
   ```

   Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

10. Verify that the compiler runtime files (CBLINTS.DLL, CBLRTSM.DLL, CBLRTSS.DLL, CBLVIOM.DLL, CBLVIOS.DLL, COB32API.dll, MFLANGDF.lbr) are present in the <*PS_HOME*>\CBLBIN<*X*> directory.

    If they are not present, then you will have to run %PS_HOME%\setup\cblrtcpy.bat as follows:

    ```
    cblrtcpy %PS_HOME%\cblbina
    ```

Note. If you plan to use cblmake.bat to compile a single (or a set) of PeopleSoft PeopleTools or PeopleSoft Application COBOL program at the same time, it would be a good idea to use two different command prompts and two different compile directories—one for PeopleSoft PeopleTools COBOL programs and the other for the PeopleSoft Application COBOL programs. This avoids setting and unsetting the PS_compile_apps environment variable.

Task 12A-2-5: Defining the GNT and INT Files

By default, the compile generates a GNT file unless the exception file, CBLINT.*XX* already exists. CBLINT.*XX* contains the list of files that need to be compiled to the INT file.

Note. The INT exception file is sometimes needed to overcome Micro Focus execution error with GNT files.

For example, the exception file, CBLINT.PT, where *PT* represents PeopleTools, would contain the following information:

```
Call cblcrint <file name without file extension>
```

or:

```
Call cblcprint PTPDBTST
```

Task 12A-2-6: Distributing COBOL Binaries

After you have compiled your COBOL, you must transfer it to the needed locations. The required action depends upon how you set up *PS_HOME* and *PS_APP_HOME*.

- If the *PS_APP_HOME* location is the same as the *PS_HOME* location:

  Copy the contents of <*PS_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) directory into <*PS_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) on your batch and application server machines.

- If the *PS_APP_HOME* location is different than the *PS_HOME* location:

  a. Copy the contents of <*PS_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) directory into <*PS_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) on your batch and application server machines.

  b. Copy the contents of <*PS_APP_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) directory into <*PS_APP_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) on your batch and application server machines.

Copy the contents of <*PS_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) directory into <*PS_HOME*>\CBLBIN<*X*> (CBLBINA, CBLBINU, or CBLBINE) on your batch and application server machines.

If it is a decoupled environment, both tools and application cobol binaries are required to be copied.

Task 12A-3: Installing IBM COBOL for Microsoft Windows

This section discusses:

- Understanding the IBM Rational Developer for System Z Installation

- Prerequisites
- Installing IBM Rational Developer for System z on Microsoft Windows

Understanding the IBM Rational Developer for System Z Installation

For PeopleSoft PeopleTools 8.52, you can use IBM® Rational® Developer for System z, in addition to Micro Focus Net Express, as a COBOL compiler on Microsoft Windows for PeopleSoft PeopleTools. The Prerequisites section includes information on obtaining IBM Rational Developer for System z.

Note. This section sometimes refers to IBM Rational Developer for System z simply as the "IBM compiler."

The PeopleSoft COBOL sources have had minor changes to accommodate compiler requirements but are largely the same whether you are using the compiler from Micro Focus or IBM. The current Micro Focus processes have not been altered. If you have modified your COBOL sources, you can use a simple "diff" process to compare the Micro Focus version from previous releases with the new version. You will find that the changes are very slight, and do not affect functionality, but are more along the lines of compliance with initialization of variables and other minor details. Updating modified COBOL sources should be relatively straightforward.

The key area where the Micro Focus and IBM compilers differ is in how they manage the source objects. The IBM compiler behaves much more like a C compiler, and the use of the nmake system that comes with the IBM compiler is utilized. IBM Rational Developer for System z does require the linking of referenced objects, so objects are accounted for in the software development kit (SDK) make system Oracle provides for your PeopleSoft installation. The first thing that you will notice is that you will not be executing scripts in the compilation of the product. Instead, you will be using the SDK that we have provided. However, the sources being used will still be located in *PS_HOME*\src\cbl as before. The sources are common to both the Micro Focus and IBM compilers. Where there are differences, the alternative version is located in *PS_HOME*\src\cbl\ibm, and our SDK make process will copy in the required alternate objects at compile time.

The runtime behavior is the same between the two COBOL products. However, the IBM product runtime does not require licensing. The runtime component for the IBM product can also be obtained from the compiler. The SDK make system will copy the IBM runtime components in COBSHIP.zip from the compiler to your compiled output directory, to ensure that you are using the latest version of the runtime. The compiler does not need to be present on the target runtime server; it is only used to compile the COBOL programs.

See Using the IBM COBOL Compiler on Microsoft Windows, Distributing the Compiled Files.

You can compile with both IBM Rational Developer for System z and Micro Focus Net Express compilers within the same installation, and they can co-exist and be used against the same database instance. To do this you would need to set up different application server domains, setting up discrete environment variables and configuration files, as the two compilers cannot be invoked within the same domain.

See Using the IBM COBOL Compiler on Microsoft Windows, Setting Up the Environment for COBOL Runtime.

Prerequisites

To install and use IBM Rational Developer for System z, you must have the following:

- PeopleSoft PeopleTools 8.51 or higher

We recommend that you take the latest available PeopleSoft PeopleTools patch level. You should install PeopleSoft PeopleTools and your PeopleSoft application software before you compile the IBM Rational Developer for System z COBOL source files.

- The runtime configuration assumes that your Oracle Tuxedo inter process communication (IPC) service was set up to run with a System account.
- IBM Rational Developer for System z version 7.6.0 or later.

  You must obtain IBM Rational Developer for System z compiler from your IBM vendor. Obtain the installation documentation and review the information on installation methods. The following installation instructions assume that you have the IBM installation files and installation documentation. Review the information on planning your installation, but use the instructions in this document to carry out the installation. Contact your IBM representative to obtain the software.

  See http://www-01.ibm.com/software/rational/products/developer/systemz/#

  See http://www.elink.ibmlink.ibm.com/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=GI11-8297-02
- Perl

  Perl is used to perform conversions required on source files for the IBM COBOL compiler. For Microsoft Windows either Strawberry Perl or ActiveState's Active Perl can be used:

  - Strawberry Perl can be downloaded from the following web site: http://strawberryperl.com.
  - Active Perl can be downloaded from the following web site: http://www.activestate.com/activeperl/downloads/
- Zip utility

  A zip utility is required to extract IBM Runtime Library components. You can use one of the following utilities:

  - Corel Corporation's WinZip® can be downloaded from the following web site: http://www.winzip.com/index.htm
  - PKWARE®'s PKZip can be downloaded from the following web site: http://www.pkware.com
  - 7-Zip can be downloaded from the following web site: http://www.7-zip.org

Task 12A-3-1: Installing IBM Rational Developer for System z on Microsoft Windows

This procedure explains how to install IBM Rational Developer for System z in order to use it with your PeopleSoft PeopleTools installation. This procedure assumes that the installation media is available in a local drive called *RD_INSTALL*.

Note. There are two parts to this procedure. Be sure to continue after you see the first installation successful message.

To install IBM Rational Developer for System z:

1. Double-click *RD_INSTALL*/launchpad.exe
2. Select Install Rational Developer for System Z on the left.
3. Select the Service Developer link as the type of installation.

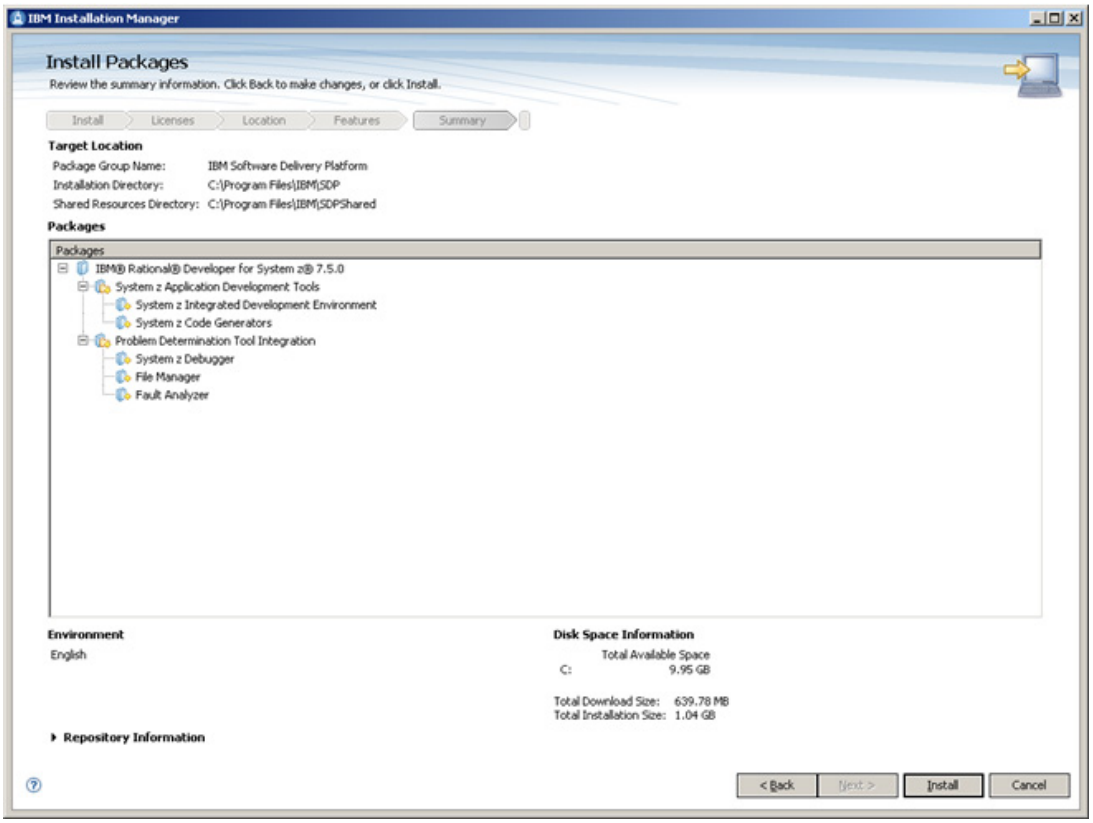
Note. Do not select System z Traditional Developer.

The IBM Installation Manager opens.

4. Click Next on the Install Packages window.
5. Select the option I accept the terms in the license agreements on the Licenses window, and then click Next.
6. Accept the default value for the Installation Manager Directory and click the Next button.
7. Review the summary information on the next window, and then click Install.
8. Click Restart Installation Manager on the window with the message "Success! The installation was successful".
9. On the Install Packages window, verify that the check boxes for IBM® Rational® Developer for System z® and Version 7.X.0 are selected (X represents the point release you are installing) and click Next.
10. Accept the license agreement and click Next.
11. Accept the default value for the Shared Resource Directory and click Next.
12. Accept the option to Create a new package group, accept the default installation directory, and then click Next.
13. On the "...extend an existing version of Eclipse" window, do not select the Extend an existing Eclipse check box.

    Click Next.
14. On the languages selection window, accept the default of English and click Next.
15. On the features selection window, all the check boxes are initially selected. Clear all of the options *except* for the following:
    - System z Application Development Tools
    - System z Integrated Development Environment
    - System z Code Generators
    - Problem Determination Tool Integration
    - System z Debugger
    - File Manager
    - Fault Analyzer
16. Click Next.
17. Verify your selections on the Review the summary information window and click Install.

    In this example, the summary includes such information as the components to be installed, the installation directory, and the shared resources directory.



Summary information on the IBM Installation Manager window

18. Click Finish on the window with the message "Success! The installation was successful".

Task 12A-4: Using the IBM COBOL Compiler on Microsoft Windows

This section discusses:

- Using the Make System to Compile the COBOL Sources
- Compiling COBOL When PS_APP_HOME is the Same as PS_HOME
- Compiling COBOL When PS_APP_HOME is Different from PS_HOME
- Cleaning the Build System and Troubleshooting
- Distributing the Compiled Files
- Setting Up the Environment for COBOL Runtimes

Using the Make System to Compile the COBOL Sources

As mentioned, the PeopleSoft installation includes an SDK that you use to compile the IBM Rational Developer for System z COBOL sources. This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL.

This section includes different procedures depending upon how you set up your installation environment.

See "Preparing for Installation," Defining Installation Locations.

To compile the IBM Rational Developer for System z COBOL sources, you invoke the nmake utility on the command line. The general syntax for nmake command line invocation is:

```
nmake [options] [macros] [targets]
```

The nmake command line arguments are as follows:

- Options

  Currently the only option you can use with the PeopleSoft installation is the /E (slash E). The /E option instructs the nmake utility to override make file variables with environment variables.

- Macros

  Macro definitions or Macros (as they are commonly referred to) are a mechanism for passing variables and their values into a make file. Macros are simply specified as name/value pairs on the command line.

  For example, to pass the variable DATA_BASE_TYPE with a value of “Oracle” into a make file the following macro would be specified:

  ```
  nmake DATA_BASE_TYPE=Oracle
  ```

  Use the following macros to compile IBM Rational Developer for System z COBOL for the PeopleSoft installation:

  - PS_HOME: The location where you have installed the PeopleSoft installation. You can either enter the *PS_HOME* location in full, or you can use the switch “/E”, which will obtain the variable from the environment setting that you specify before beginning the compilation. This is step 2 in the procedure at the end of this section.
  - ENCODING: Select the character encoding type that your installation uses, ANSI or Unicode. If no encoding type is specified on the nmake command line, the default is Unicode. For ANSI you will need to override the encoding setting by using the argument encoding=_ansi. This table lists the available encoding macro definitions:

Encoding macro specifications	Description
encoding=	Unicode encoding (default)
encoding=_ansi	ANSI encoding. Note the initial “_” (underscore).

  - DBTYPE: Select the RDBMS platform that you are installing on. If you do not supply a database macro specification, the make utility by defaults sets “db=ora”. But you can also set it explicitly. The supported RDMBS platforms are listed in this table:

RDBMS Platform	DBTYPE Parameter
DB2 for Linux, UNIX, and Windows	dbx
DB2 for z/OS	db2
Informix	inf
Microsoft SQL Server	mss
Oracle	ora (default)
Sybase	syb

- Targets

  A target name (or target) is associated with a makefile rule and instructs the nmake utility to compile and link COBOL programs specified by the target and its sub-targets.

  There are nine targets defined for the make system, corresponding to PeopleSoft product families, as shown in this table. The fscm target compiles both the fin and scm targets. The hcm target compiles gp, hr, and py targets.

  If *PS_APP_HOME* location is the same as *PS_HOME* location, the PeopleSoft PeopleTools (target pt) COBOL programs are compiled automatically when a product family target is specified for compilation (that is, campus, fin, fscm, and so on). So there is no need to invoke nmake separately to compile PeopleSoft PeopleTools COBOL programs.

  If *PS_APP_HOME* location is different than *PS_HOME* location, compiling a PeopleSoft product family does *not* compile PeopleSoft PeopleTools (target pt) COBOL programs automatically. You will need to invoke nmake separately to compile PeopleSoft Application COBOL programs and PeopleSoft PeopleTools COBOL programs.

Target	Product Family
campus	Campus Solutions
fin	Financials
fscm	Financials and Supply Chain Management
gp	Global Payroll
hcm	Human Capital Management
hr	Human Resources
py	Payroll
scm	Supply Chain Management
pt	PeopleSoft PeopleTools

Here are examples of nmake invocations:

- nmake /E hcm
  - The /E switch indicates that PS_HOME will come from the environment variable.
  - The encoding option is the default value (Unicode).
  - The database option is the default value (Oracle).
  - Human Capital Management COBOL programs will be compiled.
- nmake PS_HOME=%PS_HOME% encoding= hcm
  - The PS_HOME macro is used to specify the *PS_HOME* value. Note that this specification means that the make file variable PS_HOME is being assigned the value of the PS_HOME environment variable.
  - The encoding is specified as Unicode, and the option is declared explicitly.
  - The database option is the default value (Oracle).
  - Human Capital Management COBOL programs will be compiled.
- nmake PS_HOME=C:\PTcompile encoding=_ansi db=ora hcm
  - The PS_HOME macro is used to specify the *PS_HOME* value directly.
  - The encoding is specified as ANSI, and the option is declared explicitly.

- The database is specified as Oracle, and the option is declared explicitly.
- Human Capital Management COBOL programs will be compiled.

Task 12A-4-1: Compiling COBOL When PS_APP_HOME is the Same as PS_HOME

If you have installed the PeopleSoft Application software in the same directory (*PS_APP_HOME*) where you installed your PeopleSoft PeopleTools software installation directory (*PS_HOME*), then you can follow these steps to do the COBOL compilation.

To compile the COBOL sources:

1. Select Start, Programs, IBM Software Delivery Platform, IBM Rational Developer for System z, Command Environment for Local Compilers.

   A command prompt opens.

2. Set the environment variable for *PS_HOME*, the directory where you installed the PeopleSoft software; for example:

   ```
   set PS_HOME = C:\PTcompile
   ```

3. Change the directory to *PS_HOME*\sdk\cobol; for example:

   ```
   cd %PS_HOME%\sdk\cobol
   ```

4. Run the nmake command; for example:

   ```
   nmake /E hcm
   ```

   or

   ```
   nmake PS_HOME=%PS_HOME% hcm encoding=_ansi db=ora
   ```

If you encounter any problems with the compilation, see the section Cleaning the Build System and Troubleshooting.

Task 12A-4-2: Compiling COBOL When PS_APP_HOME is Different from PS_HOME

If you have installed the PeopleSoft Application software in a directory (*PS_APP_HOME*) which is different than the PeopleSoft PeopleTools software installation directory (*PS_HOME*), then you can follow these steps to do the COBOL compilation.

To compile the COBOL sources:

1. Ensure that sdk\cobol\pscbl<*apps*> is present under *PS_APP_HOME* for the application you are trying to compile.

   For example if the PeopleSoft Application is Human Capital Management (that is, <apps> = hcm), then the following directory structure should be present and the user must have write access to it:

   sdk\cobol\pscblhcm

2. Select Start, Programs, IBM Software Delivery Platform, IBM Rational Developer for System z, Command Environment for Local Compilers.

   A command prompt opens.

3. Set the environment variable for *PS_HOME*, the directory where you installed the PeopleSoft software; for example:

   ```
   set PS_HOME = C:\PTcompile
   ```

4. Set the environment variable for *PS_APP_HOME*, the directory where you installed the PeopleSoft Application software, such as Human Capital Management or Financials/Supply Chain Management; for example:

   ```
   set PS_APP_HOME = C:\HRcompile
   ```

5. Change the directory to *PS_HOME*\sdk\cobol; for example:

   ```
   cd %PS_HOME%\sdk\cobol
   ```

6. Run the nmake command; for example:

   ```
   nmake /E hcm
   ```

   or

   ```
   nmake PS_HOME=%PS_HOME% PS_APP_HOME=%PS_APP_HOME% hcm encoding=_ansi db=ora
   ```

If you encounter any problems with the compilation, see the section Cleaning the Build System and Troubleshooting.

Task 12A-4-3: Cleaning the Build System and Troubleshooting

Cleaning the Build System When PS_APP_HOME is the Same as PS_HOME

If you encounter a failure when compiling, the first recommendation is to clean the directories and files, and rerun the build.

The first time a COBOL compilation build is run, for example with a product family target HCM, the following directories are created and populated:

- *PS_HOME*\sdk\cobol\pscblhcm\bin
- *PS_HOME*\sdk\cobol\pscblhcm\lib
- *PS_HOME*\sdk\cobol\pscblhcm\src
- *PS_HOME*\sdk\cobol\pscblhcm\psgp.win
- *PS_HOME*\sdk\cobol\pscblhcm\pshr.win
- *PS_HOME*\sdk\cobol\pscblhcm\pspy.win
- <*PS_HOME*>\CBLBIN_IBM<*X*>, where X is U for Unicode, A for ANSI, and E for EBCDIC character encoding types.

Similarly the target fscm compiles both fin and scm targets. The *PS_HOME*\sdk\cobol\pscblfscm\bin, *PS_HOME*\sdk\cobol\pscblfscm\lib, and *PS_HOME*\sdk\cobol\pscblfscm\src directories are shared for fin and scm. So if you initially compiled the fin target (nmake /E fin) and then compiled the scm target (nmake /E scm), the source COBOL programs for both targets would reside in the *PS_HOME*\sdk\cobol\pscblfscm\src directory and the resulting executables would reside in *PS_HOME*\sdk\cobol\pscblfscm\bin and in the <*PS_HOME*>\CBLBIN_IBM<*X*> directories. There are two versions of the .win directories—*PS_HOME*\sdk\cobol\pscblfscm\psfin.win and *PS_HOME*\sdk\cobol\psdblfscm\psscm.win.

Cleaning the directories simply deletes all the files from the directories. And subsequently, when the build is rerun, fresh copies of the files are copied from *PS_HOME*\src\cbl\base and *PS_HOME*\src\cbl\ibm to the *PS_HOME*\sdk\cobol\pscblfscm\src directory.

To use the nmake utility to clean the build directories, use the options listed in this table:

Option	Compilation Directories Cleaned
cleanpt	PeopleSoft PeopleTools
cleanhcm	Human Capital Management
cleanfscm	Financials and Supply Chain Management
cleancblbin_ibmu	*PS_HOME*\CBLBIN_IBMU
cleancblbin_ibma	*PS_HOME*\CBLBIN_IBMA

Note. Since these directories are shared across all product families, cleaning them will require recompiling for all of the product families that are installed on your system. You should clean the <*PS_HOME*>\CBLBIN_IBM<*X*> directories only in cases where COBOL programs are failing and it is suspected that an incorrect or outdated version of the executable is the cause. Or, in the case where you want to recompile the COBOL for all of your product families and ensure all the old versions of the programs are deleted prior to recompiling.

For example, if you want to clean FSCM directories, assuming the PS_HOME environment variable is set in your environment, use this command:

```
nmake /E cleanfscm
```

If you want to clean the CBLBIN_IBMU directory, use this command:

```
nmake /E cleancblbin_ibmu
```

Cleaning the Build System When PS_APP_HOME is Different from PS_HOME

If you encounter a failure when compiling, the first recommendation is to clean the directories and rerun the build. The previous section lists the directories that are created when a COBOL build is compiled.

To use the nmake utility to clean the build directories, use the options listed in this table:

Option	Compilation Directories Cleaned
cleanpt	PeopleSoft PeopleTools
cleanhcm	Human Capital Management
cleanfscm	Financials and Supply Chain Management
cleancblbin_ibmu	*PS_HOME*\CBLBIN_IBMU
cleancblbin_ibma	*PS_HOME*\CBLBIN_IBMA
cleanappcblbin_ibmu	*PS_APP_HOME*\CBLBIN_IBMU
cleanappcblbin_ibma	*PS_APP_HOME*\CBLBIN_IBMA

For example, if you want to clean FSCM directories, assuming the PS_APP_HOME environment variable is set in your environment, use this command:

```
nmake /E cleanfscm
```

If you want to clean the PeopleSoft PeopleTools CBLBIN_IBMU directory, use this command:

```
nmake /E cleancblbin_ibmu
```

If you want to clean the PeopleSoft Application CBLBIN_IBMU directory, use this command:

```
nmake /E cleanappcblbin_ibmu
```

Troubleshooting COBOL Compiler Issues

After running the compilation of the COBOL sources, examine the build targets for the presence of any issues during compilation or linking steps.

You can find the error and list files discussed in this section in the following locations, depending upon your compilation setup:

- If *PS_APP_HOME* is the same as *PS_HOME*, all error and list files mentioned here are placed in directories under *PS_HOME*.
- If *PS_APP_HOME* is different from *PS_HOME*, and you compile PeopleSoft PeopleTools COBOL source files, the error and list files mentioned here are placed in directories under *PS_HOME*
- If *PS_APP_HOME* is different from *PS_HOME*, and you compile PeopleSoft Application COBOL source files, the error and list files mentioned here are placed in directories under *PS_APP_HOME*.

In the event of an error, the <*PS_HOME*>\CBLBIN_IBM<*X*> directory will not be populated with the binary files (*.exe, *.dll). If you decide that the failing compiled modules are *not* relevant to your project mission, you must manually copy the compiled binaries to your runtime target location. For example:

```
Copy <PS_HOME>\sdk\cobol\pscblhcm\bin\*.* <PS_HOME>\CBLBIN_IBM<X>
```

To review the cause of the errors, and perhaps fix the compile or linker issues, look in the *PS_HOME*\sdk\cobol\pscblhcm\src folder for the file LISTOUT.LIS. This file contains the report of the compiled objects and the status of the linker steps.

This table includes some common errors that you may see, and the action you should take to correct the error:

Error Location	Error Description	Corrective Action
LISTOUT.LIS report	Compiled sources with “Return code” > 4	Use the LineID and IGYxxxxxx-E to correct the error in the code and recompile the module.
LISTOUT.LIS report	Linker issues such as `error LNK2029: " _PTPNETRT" : unresolved external`	Add to the link statement for the module the missing external reference, such as PTPNETRT.lib.
Command prompt	An error condition such as `NMAKE : fatal error U1077: 'perl' : return code '1' Stop." 'perl' is not recognized as an internal or external command, operable program or batch file.`	Read the requirement for Perl in the Prerequisites section of this chapter. Install the Perl to your machine, and recompile the COBOL sources.
<*PS_HOME*>\sdk\cobol \pscbl<*apps*>\src*.lst (<*app*> is the designation for the PeopleSoft Application product family, such as hcm for Human Capital Management.)	<COBOL_PROGRAM>.lst	Use the *.lst files to examine individual program errors and Line number diagnostic information, and use the information to correct the errors listed.

Task 12A-4-4: Distributing the Compiled Files

For the IBM Rational Developer for System z compiler, the default location for the compiled files is <*PS_HOME*>\CBLBIN_IBM<*X*>.

Note. The location for files compiled with Micro Focus COBOL is different.

This directory includes the following types of files:

- *.dll
- *.exe
- cobship_redistribution.readme
- COBSHIP.zip

  We recommend that you replace the COBSHIP.zip file with the one that came with your compiler to ensure you are using the latest runtime executables.

  You will need to unzip the COBSHIP.zip file directly into the directory where your COBOL binaries reside (<*PS_HOME*>\CBLBIN_IBM<*X*>).

  If your installation setup is such that *PS_APP_HOME* is not the same as *PS_HOME*, you will also need to unzip the COBSHIP.zip file directly into the directory where your Application COBOL binaries reside (<*PS_APP_HOME*>\CBLBIN_IBM<*X*>).

This directory is a complete package that can either be executed directly or rebundled (zipped) and distributed for execution on another system. You can either point to the output directly, or you can copy this directory and send it to other systems to use. You do not need IBM COBOL runtime licensing to run COBOL after compiling.

Task 12A-4-5: Setting Up the Environment for COBOL Runtimes

This section discusses:

- Understanding the Runtime Setup for IBM COBOL
- Setting the Runtime Environment Variables
- Configuring the Application Server
- Configuring the Process Scheduler
- Running the Compiled COBOL from the Command Line

Understanding the Runtime Setup for IBM COBOL

To configure the COBOL runtime environment you must set several system environment variables and configure the PeopleSoft application server and Process Scheduler to use COBOL. You can set these environment variables from the command line, as System variables in the Microsoft Windows System Properties dialog box, or in a .cmd file.

Configure these environment variables after compiling the IBM Rational Developer for System z COBOL source files. If you distribute the compiled files for use on other systems as mentioned above, you must complete this environment setup on those systems before configuring the PeopleSoft application server and Process Scheduler.

Setting the Runtime Environment Variables

After you complete the IBM Rational Developer for System z installation, set the following system environment variables. You can set the environment variables in an MS-DOS command window, or using the Microsoft Windows System Properties dialog box. The steps for using the Microsoft Windows System Properties dialog box are given below the list of environment variables.

Note. These instructions assume that the directory CBLBIN_IBMU or CBLBIN_IBMA is installed in *PS_HOME*.

- PS_HOME

  ```
  set PS_HOME=<drive><PeopleSoft install location>
  ```

  For example:

  ```
  set PS_HOME=C:\PTcompile
  ```

  - If your <PeopleSoft install location> is on a network drive, ensure that TM_TUXIPC_MAPDRIVER is set appropriately.

    See *PeopleTools 8.52 PeopleBook: System and Server Administration,* "Using the PSADMIN Utility"

  - Even though psadmin sets PS_HOME for you, you must set it explicitly before running psadmin in order for the variables to resolve correctly and for the IBM Rational Developer for System z COBOLs to run properly.

- NLSPATH

  ```
  set NLSPATH=%TUXDIR%\locale\C;%PS_HOME%\CBLBIN_IBMX\messages\%L\%N;%PS_HOME%⇒
  \CBLBIN_IBMX\messages\en_US\%N
  ```

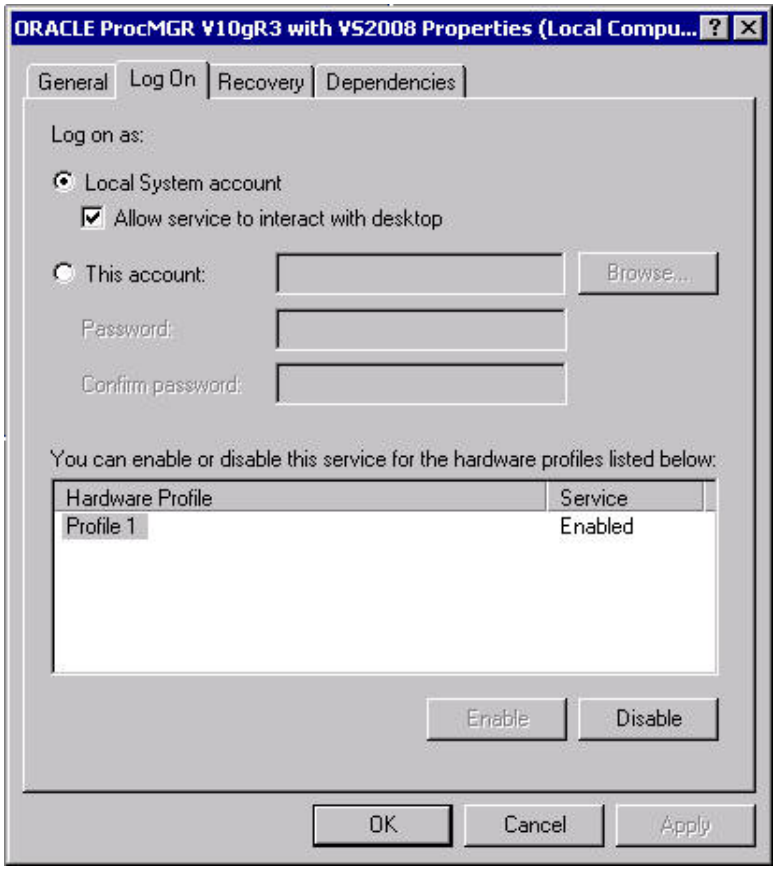
  Note. The symbols %L and %N are IBM invocation constructs for Locale and National depictions. If you are setting these variables in a .cmd file and using the .cmd file to set these variables in your environment, you must use %%L and %%N in the NLSPATH definition rather than %L and %N. See the Oracle Tuxedo documentation for more information.

To set a new environment variable from the Microsoft Windows control panel:

1. Select Start, Control Panel, System.
2. Select the Advanced tab, and click Environment Variables.
3. In the System variables area of the Environment Variables dialog box, click New.
4. Enter the new variable name and variable value.
5. Click New and OK.

To set up the Tuxedo account:

1. Select Start, Settings, Control Panel, Administrative Tools.
2. Select Services.
3. Select Oracle ProcMGR V10gR3 VS2008from the services list.
4. Select the Log On tab.
5. Confirm that the option for Local System account and the check box for Allow service to interact with desktop are selected, as shown in this example:



Oracle ProcMGR V10gR3 with VS2008 Properties (Local Computer) dialog box

Note. To set up ORACLE ProcMGR V10gR3 with VS2008 for an installation environment where PS_HOME and PS_CFG_HOME are different, see *PeopleTools 8.52: System and Server Administration PeopleBook*: "Securing PS_HOME and PS_CFG_HOME."

Configuring the Application Server

After setting the system environment variables as described above, use this section to set up the compiled IBM Rational Developer for System z COBOL to use with your PeopleSoft application server.

See "Configuring the Application Server on Windows."

Before running psadmin, check your psadmin environment with the following command:

```
psadmin -env
```

Make sure all your variables are resolved. If not, go back and recheck your work and make any necessary changes. You do not want to see *%VARIABLE%* at this point as it will not be resolved by psadmin. If your NLSPATH is corrupted, you may need to ensure that you are running at a minimum release PeopleSoft PeopleTools 8.52.

You may either make these changes directly to the psappsrv.cfg file or make the changes while configuring the domain using psadmin. If you make the changes directly to psappsrv.cfg, you must still configure the domain using psadmin and make sure your variables are set appropriately as specified above. This is so that your changes to psappsrv.cfg are recognized by Oracle Tuxedo.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Using the PSADMIN Utility."

To configure psappsrv.cfg:

1. Go to the *PS_HOME*/appserv directory and run psadmin.
2. When the menu appears, specify *1* for Application Server and press ENTER.
3. Enter *1* for Administer Domain, and select the appropriate domain.
4. Enter *4* for Configure this domain.
5. On the Quick-configure menu, select *21* to change AddToPATH value.
6. Modify the AddToPATH setting by appending this to the end of the current setting:

   ```
   %PS_APP_HOME%\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX\bin
   ```

   For example, change from:
   ```
   AddToPATH=c:\apps\db\oracle11\bin
   ```
   To:
   ```
   AddToPATH=c:\apps\db\oracle11\bin;%PS_APP_HOME%\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBM⇒
   X;%PS_HOME%\CBLBIN_IBMX\bin
   ```
7. On the Quick-configure menu, select 15, Edit environment settings.
8. If your *PS_APP_HOME* is different from *PS_HOME*, carry out the following two steps:

   Note. If *PS_APP_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 9.

   a. On the PeopleSoft Domain Environment Settings, select *2* to add environment variable.
   b. Enter PS_APP_HOME as the name of the environment variable, and the installation directory where you installed the PeopleSoft Application software as the value of the environment variable.

      For example:

      ```
      Enter name of environment variable: PS_APP_HOME
      Enter value: C:\HRMS92
      ```
9. Enter *1* for Edit environment variable.
10. Enter the number of the environment variable corresponding to COBPATH.
11. Modify the value as shown:

    From:

    ```
    {$PS_APP_HOME}\CBLBIN%PS_COBOLTYPE%;{$PS_HOME}\CBLBIN%PS_COBOLTYPE%
    ```
    To:
    ```
    {$PS_APP_HOME}\CBLBIN_IBM%PS_COBOLTYPE%;{$PS_HOME}\CBLBIN_IBM%PS_COBOLTYPE%
    ```

    You will see an asterisk in front of PS_APP_HOME and COBPATH environment variables, indicating that these variables have not been saved.
12. Select *6* to save the environment variables.
13. Press ENTER to continue at the following message:

    ```
    Your changes have been saved.
    Please be aware these changes will not take effect until you complete the⇒
     domain configuration process.
    ```



```
Press Enter to continue...
```

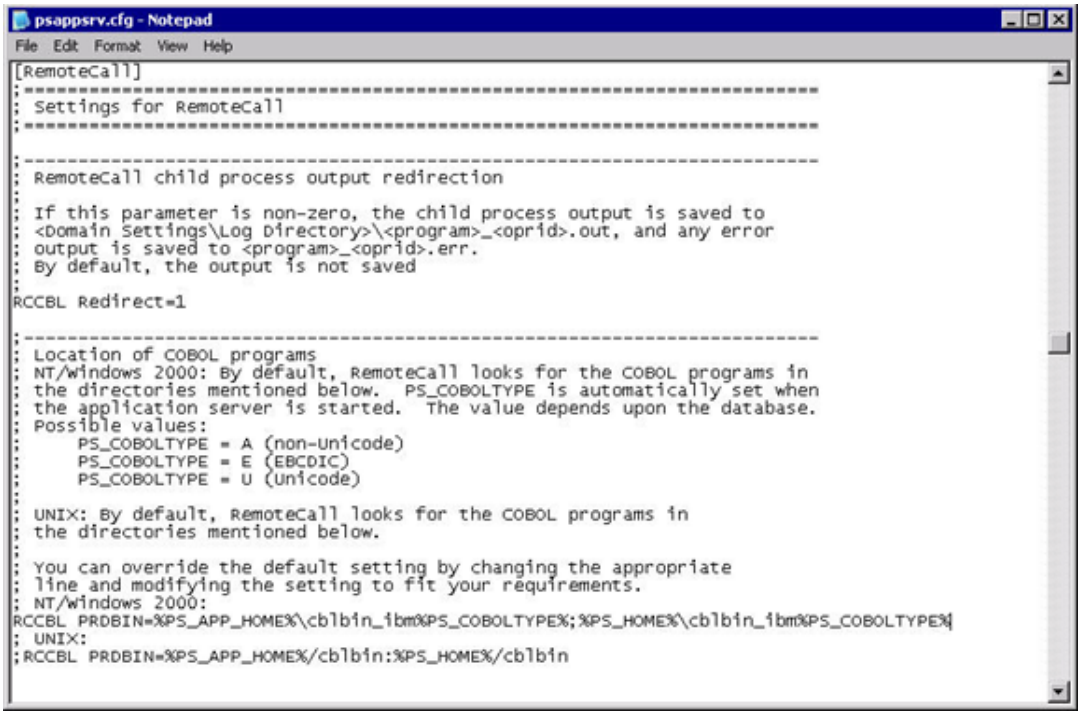
14. Enter *q* for Return to previous menu.
15. On the Quick-configure menu, enter *13*, to load the domain configuration.
16. Enter *6* for Edit configuration/log files menu.
17. Enter *1* for Edit domain configuration file.
18. In the domain configuration file, search for RCCBL PRDBIN.
19. Update the RCCBL PRDBIN as shown below, and remove the semicolon from the beginning of the line, as shown:

    Change from:

    ```
    ; RCCBL PRDBIN=%PS_APP_HOME%\cblbin%PS_COBOLTYPE%;%PS_HOME%\cblbin%PS_COBOLTYPE%
    ```

    To:

    ```
    RCCBL PRDBIN=%PS_APP_HOME%\cblbin_ibm%PS_COBOLTYPE%;%PS_HOME%\cblbin_ibm%PS_⇒
    COBOLTYPE%
    ```



Updating the RCCBL PRDBIN setting in the psappsrv.cfg file

20. Save the file, and close it.
21. Enter *q* to quit the PeopleSoft Edit/View Configuration/Log Files Menu.
22. Enter *4* for Configure this domain.
23. Enter *y* to continue at this prompt:

    ```
    This option will shutdown the domain.
    Do you want to continue? (y/n) [n]: y
    ```

24. On the Quick-configure menu, select *13* to load the configuration.

25. Enter *1* to boot the domain.
26. Enter *1* for Boot (Serial Boot), 2 for Parallel Boot.

Configuring the Process Scheduler

After setting the system environment variables as described above, use this section to set up the compiled IBM Rational Developer for System z COBOL to use with your PeopleSoft Process Scheduler.

See "Setting Up Process Scheduler on Windows."

Before running psadmin, check your psadmin environment as with the following command:

```
psadmin -env
```

Make sure all your variables are resolved. If not, go back and recheck your work and make any necessary changes. You do not want to see *%VARIABLE%* at this point as it will not be resolved by psadmin. If your NLSPATH is corrupted, you may need to ensure that you are running at a minimum release PeopleSoft PeopleTools 8.52.

You may either make these changes directly to the psprcs.cfg file or make the changes while configuring the domain using psadmin. If you make the changes directly to psprcs.cfg, you must still configure the domain using psadmin and make sure your variables are set appropriately as specified above. This is so that your changes to psprcs.cfg are recognized by Oracle Tuxedo.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Using the PSADMIN Utility."

To configure psprcs.cfg:

1. Go to the *PS_HOME*/appserv directory and run psadmin.
2. When the menu appears, specify *2* for Process Scheduler and press ENTER.
3. Enter *1* for Administer Domain, and select the appropriate domain.
4. Enter *4* for Configure this domain.
5. On the Quick-configure menu, select *16* to change AddToPATH value.
6. Modify the AddToPATH setting by appending this to the end of the current setting:

   ```
   %PS_APP_HOME%\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX\bin
   ```

   For example, change from:

   ```
   AddToPATH=C:\WINDOWS;C:\WINDOWS\SYSTEM32
   ```

   To:

   ```
   AddToPATH=C:\WINDOWS;C:\WINDOWS\SYSTEM32;%PS_APP_HOME%\CBLBIN_IBMX;%PS_HOME%⇒
   \CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX\bin
   ```

7. On the Quick-configure menu, select *5*, Edit environment settings.
8. If your *PS_APP_HOME* is different from *PS_HOME*, carry out the following two steps:

   Note. If *PS_APP_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 9.

   a. On the PeopleSoft Domain Environment Settings, select *2* to add an environment variable.
   b. Enter PS_APP_HOME as the name of the environment variable, and the installation directory where you installed your PeopleSoft Application software as the value of the environment variable.

For example:

```
Enter name of environment variable: PS_APP_HOME
Enter value: C:\HRMS92
```

9. Enter *1* for Edit environment variable.
10. Enter the number of the environment variable corresponding to COBPATH.
11. Modify the value.

    Change from:

    ```
    {$PS_APP_HOME}\CBLBIN%PS_COBOLTYPE%;{$PS_HOME}\CBLBIN%PS_COBOLTYPE%
    ```

    To:

    ```
    {$PS_APP_HOME}\CBLBIN_IBM%PS_COBOLTYPE%;{$PS_HOME}\CBLBIN_IBM%PS_COBOLTYPE%
    ```

    You will see an asterisk in front of the PS_APP_HOME and COBPATH environment variables, because these variables have not been saved.
12. Enter *6* to save the environment variables.
13. Press ENTER to continue at the following message:

    ```
    Your changes have been saved.
    Please be aware these changes will not take effect until you complete the⇒
     domain configuration process.
    Press Enter to continue...
    ```

14. Enter *q* for Return to previous menu.
15. On the Quick-configure menu, enter 3, to load the domain configuration.
16. Enter *6* for Edit configuration/log files menu.
17. Enter *1* for Edit domain configuration file.
18. In the domain configuration file, search for CBLBIN.

    Modify the CBLBIN setting to point to the location of compiled COBOL files; for example:

    ```
    CBLBIN=%PS_APP_HOME%\CBLBIN_IBM%PS_COBOLTYPE%;%PS_HOME%\CBLBIN_IBM%PS_COBOLTYPE%
    ```

    PS_COBOLTYPE is automatically set when the process scheduler is started. The value depends upon the database. Possible values are A (non-Unicode), E (EBCDIC) or U (Unicode).

    Note. If using psadmin to configure this setting for your domain, it is in the Process Scheduler configuration section.

19. Enter *1* to boot the domain.

Running the Compiled COBOL from the Command Line

To run the compiled COBOL from the command line, you must first set the following environment variables. In this example, *PS_APP_HOME* is different from *PS_HOME*:

1. Set the environment variables for PS_HOME and PS_APP_HOME:

   ```
   set PS_HOME=C:\PTcompile
   set PS_APP_HOME=C:\HRcompile
   ```

2. Set the following path environment variables:

```
set PATH=%PATH%;%PS_HOME%\bin\server\winx86;%PS_APP_HOME%\CBLBIN_IBMX;%PS_HOME%⇒
\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX\bin
set COBPATH=%PS_APP_HOME%\CBLBIN_IBMX;%PS_HOME%\CBLBIN_IBMX
set NLSPATH=%TUXDIR%\locale\C;%PS_HOME%\CBLBIN_IBMX\messages\%L\%N;%PS_HOME%⇒
\CBLBIN_IBMX\messages\en_US\%N
```

3. Set PS_SERVER_CFG.

   PS_CFG_HOME is the configuration home. By default on Microsoft Windows it points to %USERPROFILE%\psft\pt\<*tools version*>)

   See "Preparing for Installation," Planning Your Initial Configuration.

```
set PS_SERVER_CFG=%PS_CFG_HOME%\appserv\prcs\<domain>\psprcs.cfg
```

4. Change to the directory with the compiled files; for example:

```
cd %PS_APP_HOME%\CBLBIN_IBMX
```

5. Use this command to run the program:

```
<COBOL_PROG>.exe <dbtype>/<dbname>/<userid>/<userpasswd>/<runcontrol>/<process_⇒
instance>/<sqltrace>/<dbflags>
```

   For example:

```
GPPDPRUN.exe ORACLE/Q8529033/QEDMO/QEDMO/1/1/191/0
```


CHAPTER 12B

Installing and Compiling COBOL on UNIX

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Installing Micro Focus Server Express for UNIX and Linux
- Using the Micro Focus COBOL Compiler on UNIX
- Installing IBM COBOL on IBM AIX
- Using the IBM COBOL Compiler on IBM AIX

Understanding COBOL

This chapter describes how to compile and link PeopleSoft COBOL batch programs, if necessary.

COBOL is not needed for PeopleSoft PeopleTools because the Process Scheduler is written in C++. In addition, COBOL is not required for applications that contain no COBOL programs. See My Oracle Support for the details on whether your application requires COBOL.

The chapter includes instructions for both Micro Focus Net Express COBOL compilers, referred to here as "Micro Focus COBOL", and IBM Rational Developer for System z, referred to here as "IBM COBOL".

Warning! If your database server is DB2 for z/OS and your CCSID is not 37, you must read the CCSID discussion under Defining DB2 for z/OS Subsystem Configuration in the chapter "Preparing for Installation."

See *PeopleTools 8.52: Global Technology PeopleBook*, "Sorting in PeopleTools" (look for %BINARYSORT).

See *PeopleTools 8.52: System and Server Administration PeopleBook*, "Using PeopleTools Utilities," (look for PeopleTools options and PSOPTIONS).

See Also

"Preparing for Installation," Installing Supporting Applications

"PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers," My Oracle Support, (search for the article name)

"PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the IBM COBOL Compiler," My Oracle Support, (search for the article name)

"COBOL: Installation, Versions, and Fixpacks" My Oracle Support, (search for the article name)

PeopleTools 8.52: Global Technology PeopleBook, "Running COBOL in a Unicode Environment"

PeopleTools 8.52: Global Technology PeopleBook, "Running COBOL in a z/OS Unicode Environment"

Prerequisites

Before you attempt to run COBOL from the command line you should make sure the variable PS_SERVER_CFG points to a valid psprcs.cfg file.

Task 12B-1: Installing Micro Focus Server Express for UNIX and Linux

This section discusses:

- Understanding Micro Focus Server Express
- Prerequisites
- Obtaining the Installation Files for Micro Focus Server Express from Oracle E-Delivery
- Installing Micro Focus Server Express

Understanding Micro Focus Server Express

Micro Focus® Server Express™ 5.1 Wrap Pack 4 is the supported COBOL compiler on UNIX and Linux for PeopleSoft PeopleTools 8.52. This section provides installation instructions for Micro Focus® Server Express™ 5.1 Wrap Pack 4 COBOL compiler and the License Management Facility used to manage product licenses. These instructions are specifically for installing the Server Express COBOL compiler to use with PeopleSoft software. For more general installation instructions or other supporting documentation concerning Server Express, consult the documentation that comes with the installation software.

See Also

Micro Focus web site: http://supportline.microfocus.com/

Server Express Documentation

Using the Micro Focus COBOL Compiler on UNIX

Prerequisites

Each application created using a Server Express product that will be deployed in a UNIX environment must include a Micro Focus Application Server for Server Express license from Micro Focus or from your Micro Focus licensed supplier. Application Server must be installed on the machine on which the application is to run. Contact your Micro Focus Account Representative or your Micro Focus licensed supplier for details on purchasing Application Server licenses.

Note. Consult the Server Express Extras CD, included with the software on Oracle E-Delivery, for documentation on how to add licenses (development and ULP runtime).

If you have a previous Micro Focus COBOL product installed we recommend that you make a backup of any COBOL systems files that you have changed. Examples include cobkeymp, ADISCTRL, cobopt and cobconfig. After you have installed Server Express you might want to apply to the new COBOL product the changes previously applied to these files.

If you are installing a COBOL system over an existing COBOL system, you must first delete the existing system. Alternatively, you might prefer to move your existing COBOL system to another directory until you have verified the new installation.

If you have installed, or plan to install, Application Server or any other Micro Focus product on the same machine as this product, you must install them in different directories.

This Micro Focus product is managed by a License Management Facility (LMF). This facility helps you keep track of the number of licenses you have for the product. In order to use this product it is necessary for you to install the License Management Facility (which is provided with the Server Express software). This software should not be installed in the same directory as Server Express. The default directory depends upon the operating system; for example:

- /opt/lib/mflmf for HP-UX
- /usr/lib/mflmf for RS/6000 and PowerPC systems running AIX
- /opt/lib/mflmf on other systems

If /opt/lib does not exist, use /usr/lib/mflmf instead.

Task 12B-1-1: Obtaining the Installation Files for Micro Focus Server Express from Oracle E-Delivery

The Micro Focus Server Express installation files are available on Oracle E-Delivery. At this point you should have already downloaded the necessary files. This section includes additional information on finding and using the files for Micro Focus Server Express if necessary.

See "Preparing for Installation," Using Oracle E-Delivery to Obtain Installation Files.

To obtain the files for the Micro Focus Server Express installation:

1. After logging in to Oracle E-Delivery, on the Media Search Pack page, select *PeopleSoft Enterprise* from the Select a Product Pack drop-down list.

   Select the operating system you are running on from the Platform drop-down list, and click Go.
2. Select the radio button for Third Party - Micro Focus 5.1 for PeopleSoft Enterprise Media Pack and click Continue.
3. Download the software and documentation files for Micro Focus Server Express 5.1 Wrap Pack 4, and save the zip files to a temporary directory on your local system.

You must extract (unzip) the file on the platform for which it is intended. For example, if you download the zip file for Solaris, you must unzip it on Solaris to avoid problems. If you unzip the file to a staging directory on a Microsoft Windows computer and copy the staging directory to a Solaris, the stage area files may be corrupt.

Task 12B-1-2: Installing Micro Focus Server Express

The following section is provided as an example installation and illustrates a typical Micro Focus Server Express 5.1 Wrap Pack 4 (WP4) installation for PeopleSoft application, as outlined in the overview section above.

The answers to the prompts provided in the following example are recommended by Oracle for PeopleSoft installations, with the exception of the installation directory named in step 12 below. For step 12, you can use the default directory names or choose directory names based on your site's naming conventions.

It is recommended by Micro Focus and Oracle to install LMF in its own directory, instead of in a sub-directory of the Server Express install.

Important! Make sure to select the *correct* bit mode for your UNIX platform:

With PeopleSoft PeopleTools 8.52, enter *64* for all UNIX platforms.

The following example was done on a RedHat Linux x86-64 operating system platform. Installation prompts will vary slightly with respect to specifics of the different UNIX platforms.

1. Log in as root.
2. Create a directory (if it does not exist) where you want to install the Micro Focus Server Express 5.1 WP4. For example:

   ```
   $ mkdir /products/mf/svrexp-51_wp4-64bit
   ```

3. Change directory to the newly-created directory.

   ```
   $ cd /products/mf/svrexp-51_wp4-64bit
   ```

4. Copy or ftp the Micro Focus Server Express 5.1 WP4 tar file that you obtained from Oracle E-Delivery to this directory.

   In this example, the file name is sx51_wp4_redhat_x86_64_dev.tar.

   Note. This tar file can be obtained from http://edelivery.oracle.com

   ---

5. List the items in the directory with the following commands:

   ```
   $ ls -l /products/mf/svrexp-51_wp4-64bit
   total 409600
   -rwxr-xr-x   1 root   root      209295360 Feb 03 19:23 sx51_wp4_redhat_x86_64_⇒
   dev.tar
   ```

6. Extract the tar file:

   ```
   $ tar -xvf sx51_wp4_redhat_x86_64_dev.tar
   ```

7. List the items in the directory with the following commands:

   ```
   $ ls
   ```



```
ADISCTRL  cpylib  dialog   dynload64   etc      lang  snmp                    ⇒
       terminfo
aslmf     demo    docs     es          include  lib   src                     ⇒
       xdb
bin       deploy  dynload  eslmf-mess  install  lmf   sx51_wp4_redhat_x86_64_⇒
dev.tar
```

8. To begin the installation, type:

```
$ ./install
```

9. Read the text and follow the instructions to review the readme.txt file:

```
This script will install Micro Focus Server Express 5.1 on this computer.

The readme.txt file included in this delivery contains details of new features,⇒
 enhancements and any restrictions of which you should be aware. This file is⇒
 located in :

 /products/mf/svrexp-5.1_wp4-64bit/docs

We strongly recommend you read this file once the installation is complete.

Do you wish to continue (y/n): y
```

10. Read and type *y* to accept the license agreement:

```
Before installing and using this software product you must
agree to be bound by the terms and conditions of the end user
license agreement ("License Agreement") which accompanies this product.
Please take this time to read the License Agreement. If you are not in
agreement with the terms and conditions of the License Agreement, please
return the product to your Account Representative and your money will
be refunded.  If you require a replacement copy of the License
Agreement, please contact your Account Representative before proceeding
with the install process.

Do you agree to the terms of the License Agreement? (y/n): y
```

11. If you are installing on an operating system platform that Micro Focus has not built the product on, you see the following message. Type *y* at the prompt:

```
                Micro Focus Install

This product was not built or tested on this version
of the Operating System.

This product was built on Operating System:
Linux 2.6.9-11.ELsmp x86_64
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)
and you are installing it on Operating System:
Linux 2.6.18-53.1.14.el5
```



```
Any product issues you report will only be corrected if
they can be reproduced on one of our systems running:
Linux 2.6.9-11.ELsmp x86_64
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)
Linux 2.6.9-67.ELsmp i686
Red Hat Enterprise Linux ES release 4 (Nahant Update 6)
Linux 2.6.18-164.el5 x86_64
Red Hat Enterprise Linux Server release 5.4 (Tikanga)
Linux 2.6.18-164.el5 i686
Red Hat Enterprise Linux Server release 5.4 (Tikanga)

Please confirm that you want to continue with this installation (y/n): y
```

12. After reading the information below type *y* to continue:

```
This product is certified on the following reference environment. The command⇒
(s) used to gather the information is given following each entry:
Operating System
----------------
Linux 2.6.9-11.ELsmp x86_64
Red Hat Enterprise Linux AS release 4 (Nahant Update 1)

uname -s
uname -r
uname -m
cat /etc/redhat-release

C Compiler
----------
cc gcc version 3.4.6 20060404 (Red Hat 3.4.6-9)

gcc -v 2>&1 | tail -1

C++ Compiler
------------
/usr/bin/g++ gcc version 3.4.6 20060404 (Red Hat 3.4.6-9)

g++ -v 2>&1 | tail -1

Assembler
---------
as GNU assembler version 2.15.92.0.2 (x86_64-redhat-linux) using BFD version⇒
 2.15.92.0.2 20040927

as -v 2>&1 < /dev/null

Linker
------
ld GNU ld version 2.15.92.0.2 20040927
```



```
ld -V 2>&1 | head -1

.......
.......

Please confirm your understanding of the above reference environment details (y⇒
/n): y
```

13. Answer *n* (no) to the following prompt:

```
Do you want to make use of COBOL and Java working together? (y/n): n
Skipping Java setup
Should you want to use Java with COBOL later on as super user, run the command ⇒
/products/mf/svrexp-5.1_wp4-64bit/bin/java_setup to select the version of Java⇒
 you want to use.
Peoplesoft COBOL implementations do not require COBOL and Java to work together.
```

14. Answer *y* (yes) to the following prompt concerning the License Management Facility:

```
This product is protected using the Micro Focus License Management Facility ⇒
(LMF). Please refer to the Development System Licensing Guide for information⇒
 relating to the installation of the licensing system and licenses.
If you do not have LMF installed or want to upgrade to the latest version, we⇒
 recommend that you install it now.

Would you like to install LMF now? (y/n): y
```

15. At the following prompt, enter the directory name where you wish to install License Manager.

Note. Micro Focus and Oracle recommend that you install LMF in its own directory, instead of a sub-directory of the Server Express install.

```
Enter the directory name where you wish to install License Manager.
(Press Enter for default directory /opt/microfocus/mflmf)

/products/mf/mflmf-svrexp-51_wp4-64bit

/products/mf/mflmf-svrexp-51_wp4-64bit does not exist
do you wish to create it ? (y/n) y
```

16. Enter *y* (yes) to restrict access to the License Admin System to the superuser account:

```
Empty database created ok. Do you want only superuser to be able to access the⇒
 License Admin System? (y/n) y
```

17. Enter y (yes) to start license manager automatically at boot time:

```
It is recommended that you let license manager autostart at boot time.  Do you⇒
 want license manager to be automatically started at boot time? (y/n) y
LMF installation complete.
```

18. If you want to consult the documentation on how to install licenses, follow the instructions in this prompt:

```
Please consult the Development Licensing Guide for detailed information on how⇒
 to install licenses.

This may be done by changing directory to where the LMF was installed, and⇒
 typing:
./mflicense
-------------------------------------------------------
To run your applications, you need a deployment license installed using⇒
 Apptrack. See your Deployment Licensing Guide for details. Installing⇒
 Apptrack...
Access permissions on directory /var/mfaslmf have changed on this release.⇒
 Write access permission has been removed except for superuser use.
Apptrack installation complete.
```

19. Enter *64* for the system default mode:

```
This product can be used in either 32-bit or 64-bit modes.
Please enter either 32 or 64 to set the system default mode: 64
System default COBMODE has been set to 64.
```

Important! Specify 64 for AIX, HP-UX PA-RISC, HP-UX Itanium, Sun Solaris and SuSE on z/Linux.

Specify 64 for RedHat or SuSE Linux running in x86-64bit Intel Platforms

Important! For PeopleTools 8.52, enter *64*: for all UNIX platforms.

20. Enter *n* (no) to configure the Enterprise Server later:

```
Installing documentation. Please wait
Enterprise Server provides a scalable, managed, and high-performance⇒
 transactional environment for the deployment of COBOL applications and⇒
 services, COBOL/J2EE applications and direct COBOL Web Services.

Your Enterprise Server requires configuration. You can either do it now or⇒
 later. To do it now, you need to know the alphanumeric user ID of the⇒
 Enterprise Server System Administrator.
To do it later, enter the following commands while logged in as root:

/products/mf/svrexp-5.1_wp4-64bit/bin/eslminstall
/products/mf/svrexp-5.1_wp4-64bit/bin/casperm

Do you wish to configure Enterprise Server now? (y/n): n
```

21. Enter n (no) to the following prompt:

```
XDB is a fully-functional ANSI-compliant relational database management system,⇒
 providing support for SQL data access for  development purposes.
Do you want to install XDB? (y/n): n
Skipping XDB install. Should you want to install XDB later on, run the⇒
 following command as the root user:
  sh /products/mf/svrexp-5.1_wp4-64bit/xdb/xdb_install
```


22. Review the information concerning setting the COBDIR, LD_LIBRARY_PATH, and PATH environment variables in the concluding prompt:

```
Remember to set COBDIR to /products/mf/svrexp-5.1_wp4-64bit, include /products⇒
/mf/svrexp-5.1_wp4-64bit/lib in LD_LIBRARY_PATH, and include /products/mf⇒
/svrexp-5.1_wp4-64bit/bin on your PATH.

WARNING: Any executables (whether a Run-Time System or an application) must be⇒
 relinked using this new release. Otherwise, the results of running the older⇒
 executables with this new release are undefined.
Installation completed successfully.
The COBOL system is ready to use.
```

Task 12B-2: Using the Micro Focus COBOL Compiler on UNIX

This section discusses:

- Understanding COBOL Compilation
- Modifying the Liblist (IBM AIX 5.3 and HP-UX Only)
- Modifying the Cobopt File (SuSE Linux Enterprise Server Only)
- Compiling COBOL on UNIX When PS_APP_HOME is the Same as PS_HOME
- Compiling COBOL on UNIX When PS_APP_HOME is Different from PS_HOME
- Linking COBOL
- Recompiling COBOL on UNIX

Understanding COBOL Compilation

On UNIX and Linux operating systems, you always need to compile your COBOL programs at installation time. After you run the PeopleSoft Installer to set up your application or batch server, carry out the following steps.

You have two options for compiling:

- You can treat one application or batch server as your compile server, compile all your COBOL programs there, and then distribute cblbin from there to all other relevant servers. In this case, only that one server would require a COBOL compiler, and you would copy any patches and customizations from your file server to this designated server before carrying out the compile.
- The second option is to compile on all servers. In this situation, all servers would need a COBOL compiler, and you would need to copy any patches and customizations from the file server to all of these servers before carrying out the compile.

Note. You should have read/write access to the directory *PS_HOME*/cblbin to be able to compile the COBOL programs.

Note. To copy a compiled COBOL program from one UNIX server to another, they must be on the same operating system that the compile took place on. For example, if you compile on Oracle Solaris for the Application Server, and the Process Scheduler is on AIX, you cannot copy the compiled program (you will also need to compile on the AIX machine).

This section includes different procedures depending upon how you set up your installation environment.

See "Preparing for Installation," Defining Installation Locations.

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is the same as the *PS_HOME* location where you installed PeopleSoft PeopleTools 8.52, follow the instructions in the section Compiling COBOL on UNIX When PS_APP_HOME is the Same as PS_HOME.

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is different from the *PS_HOME* location where you installed PeopleSoft PeopleTools 8.52, follow the instructions in the section Compiling COBOL on UNIX When PS_APP_HOME is Different from PS_HOME.

Task 12B-2-1: Modifying the Liblist (IBM AIX 5.3 and HP-UX Only)

Understanding Liblist Modifications

If you are compiling COBOL on AIX 5.3 or HP-UX, modify the liblist or liblist64 file as described here. See the COBOL documentation on My Oracle Support for additional information about modifications that need to be made in the liblist or liblist64 file.

See "COBOL: Installation, versions, fixpacks, etc. PT 8.52," My Oracle Support (search for the article name).

Modifying the Liblist64 File for AIX

To modify the liblist file for AIX 5.3:

1. cd to $COBDIR/lib.
2. Add the following line to the liblist file:

```
x:*:s!t:-lC
```

The following listing shows where to make the changes:

```
# More emulation of cc (MUST be after MF/user libraries):
x:*:sg:-lg
x:*:sg:-bE:/usr/lib/libg.exp
x:*:st:-L/usr/lib/threads
x:*:st:-lpthreads
x:*:s!t:-lC                    <=== Add this line
x:*:s:-lc
```

Modifying the Liblist64 File for HP-UX

You must modify $COBDIR/lib/liblist64 if *both* of the following conditions exist:

Note. This modification is for the liblist64 (sixty-four) file, not the liblist file.

- You get this error message when running psrun.mak:

```
$ ./psrun.mak
```



```
./psrun.mak - linking PSRUN ...
./psrun.mak - Error(s) encountered creating PSRUN!
./psrun.mak - See psrun.err for messages
```

- The psrun.err error file contains the following error:

```
ld: Can't open /opt/langtools/lib/pa20_64/crt0.o
ld: No such file or directory
```

To modify the liblist64 file for HP-UX PA RISC:

1. Login into the system as user root.
2. cd to $COBDIR/lib and find the liblist64 file.
3. Edit $COBDIR/lib/liblist64 with vi, emacs or your favorite editor, and change the crt0.o specification as depicted below.

   From this:

   ```
   x:*:s:/opt/langtools/lib/pa20_64/crt0.o
   ```

   To this:

   ```
   x:*:s:/usr/ccs/lib/pa20_64/crt0.o
   ```

Task 12B-2-2: Modifying the Cobopt File (SuSE Linux Enterprise Server Only)

If you are compiling COBOL on a SuSE Linux Enterprise Server operating system, you must update the $COBDIR/etc/cobopt or $COBDIR/etc/cobopt64 file to point to the correct GCC compiler object files. Without these changes the Server Express product cannot compile correctly.

Note. If you are installing Server Express 5.1 Wrap Pack 4, these changes may have already been incorporated in the files.

Change the following line in the $COBDIR/etc/cobopt file:

From	To
-C nolist set GCC_LIB=/usr/lib64/gcc-lib/s390x-suse-linux/3.3.3 /32	-C nolist set GCC_LIB=/usr/lib64/gcc/s390x-suse-linux/4.1.0/32

Change the following line in the $COBDIR/etc/cobopt64 file:

From	To
-C nolist set GCC_LIB=/usr/lib64/gcc-lib/s390x-suse-linux/3.3.3 /32	-C nolist set GCC_LIB=/usr/lib64/gcc/s390x-suse-linux/4.1.0

Task 12B-2-3: Compiling COBOL on UNIX When PS_APP_HOME is the Same as PS_HOME

To compile COBOL on UNIX:

1. If you haven't already done so, download all required patches to your file server, and from there to FTP the contents of src\cbl\base and src\cbl\unix over to src/cbl on the relevant application or batch server.

   Note. When you bring patches up from the file server, the files need to have a lowercase cbl extension and an uppercase program name, as in PATCH.cbl.

2. Source the script psconfig.sh from *PS_HOME* to set up environment variables correctly on your application or batch server.

   ```
   . ./psconfig.sh
   ```

3. Change to the *PS_HOME*/setup directory:

   ```
   cd $PS_HOME/setup
   ```

4. To compile all the COBOL source dynamically, issue the command:

   ```
   ./pscbl.mak
   ```

   The dynamic compile creates INT, LST, and GNT files, which are copied to these locations:

File	Location
INT	*PS_HOME*/src/cbl/int
LST	*PS_HOME*/src/cbl/lst
GNT	*PS_HOME*/cblbin

Warning! Proposed ISO 2000 COBOL features are enabled. Please refer to documentation for details, and do not rely on these features being supported in future products from Micro Focus due to changes in the proposed COBOL standard.

Note. For Server Express, PeopleSoft sets the COBOL directive INTLEVEL to 4. Setting this directive to this value enables you to raise the significant digits of numeric fields from 18 to 31. This is in accordance with the ISO 2000 COBOL standard. During the compilation of each program, the vendor of Server Express will display a warning. This should not be considered a compilation error.

Task 12B-2-4: Compiling COBOL on UNIX When PS_APP_HOME is Different from PS_HOME

Use the shell script pscbl.mak, found in *PS_HOME*/setup, to do the PeopleSoft COBOL compilation. This table describes the allowed arguments for pscbl.mak:

Command	Description
pscbl.mak	Use this command, with no argument, to compile all the COBOL programs.
pscbl.mak ps_home	Use this argument to compile only the PeopleSoft PeopleTools COBOL programs.

Command	Description
pscbl.mak ps_app_home	Use this argument to compile only the PeopleSoft Application COBOL programs.
pscbl.mak <*COBOL_PROGRAM*>	Enter the name for a valid Peoplesoft PeopleTools or PeopleSoft Application COBOL program to compile a specific program.

If you specify any argument other than the ones mentioned above, you will get the following usage display message:

```
echo Correct usage of the program is:
    echo 1. pscbl.mak
    echo 2. pscbl.mak ps_home
    echo 3. pscbl.mak ps_app_home
    echo 4. pscbl.mak PTPDBTST (or any tools/apps program, Note Peoplesoft COBOL⇒
 programs are 6, 7 or 8 characters long)
```

To compile COBOL programs on UNIX:

1. Set PS_HOME environment variable in the UNIX shell prompt from which you want to run the COBOL compile.

   You can run *PS_HOME*/psconfig.sh with the following command to set the PS_HOME environment variable in the shell.

   ```
   cd <PS_HOME>
   . ./psconfig.sh
   ```

   Verify if PS_HOME is set with this command:

   ```
   $ echo $PS_HOME
   $ /home/<user>/PTcompile
   ```

2. Set the PS_APP_HOME environment variable (PS_APP_HOME refers to the location where you have installed the PeopleSoft Application software) with this command:

   ```
   PS_APP_HOME=/home/<user>/HRcompile; export PS_APP_HOME
   ```

3. Run pscbl.mak, using one of these methods:

   - To compile all PeopleSoft COBOL programs, that is, those for PeopleSoft PeopleTools and PeopleSoft Application, run this command:

     ```
     pscbl.mak
     ```

     This will compile the programs that are under *PS_HOME*/src/cbl and *PS_APP_HOME*/src/cbl.

   - To compile only PeopleSoft PeopleTools COBOL programs, run this command:

     ```
     pscbl.mak ps_home
     ```

   - To compile only PeopleSoft Application COBOL programs, run this command:

     ```
     pscbl.mak ps_app_home
     ```

- To compile a single COBOL program, run the command with the COBOL program name excluding the .cbl extension.

  For example, for a PeopleSoft PeopleTools COBOL program PTPDBTST.CBL, or a PeopleSoft Application COBOL program GPPDPRUN.CBL, run:

```
pscbl.mak PTPDBTST
pscbl.mak GPPDPRUN
```

PeopleSoft PeopleTools compiled COBOL programs will be placed under the *PS_HOME*\cblbin directory. PeopleSoft Application compiled COBOL programs will be placed under the *PS_APP_HOME*\cblbin directory.

Task 12B-2-5: Linking COBOL

This section discusses:

- Understanding COBOL Linking
- Linking COBOL Components on UNIX

Understanding COBOL Linking

PSRUN is the PeopleSoft procedure that connects the COBOL batch programs with the RDBMS API. PSRUNRMT is the PeopleSoft procedure that connects the remote COBOL programs with the RDBMS API.

Both PSRUN and PSRUNRMT are compiled uniquely for each platform and consist of modules provided with PeopleSoft software, the RDBMS platform, and the operating system.

You need to create the PSRUN and PSRUNRMT programs in the following situations:

- You are installing PeopleSoft software for the first time.
- Any COBOL programs have changed.
- The version of the RDBMS running the PeopleSoft system has changed.
- The COBOL compiler has changed.
- One of the C programs supplied with the PeopleSoft system has changed.

Note. The PeopleSoft system only supports dynamic linking of COBOL. Static linking is not an option.

Linking COBOL Components on UNIX

To link COBOL components on UNIX:

1. Change to the *PS_HOME*/setup directory:

   ```
   cd $PS_HOME/setup
   ```

2. For dynamic linking, run:

   ```
   ./psrun.mak
   ```

   The PSRUN.MAK script should return the UNIX prompt when done. If the compile completes without errors, the file PSRUN nd PSRUNRMT will now exist in the *PS_HOME*/bin directory. If you encounter errors, check *PS_HOME*/setup/psrun.err and *PS_HOME*/setup/psrunrmt.err

Task 12B-2-6: Recompiling COBOL on UNIX

You always need to compile at installation, so you will only need to recompile COBOL in the following situations:

- Any COBOL programs change
- The supported COBOL compiler changes
- You change the version of your RDBMS
- You change your version of your operating system
- You apply a patch or a fix

Note. Remember, you must always use your file server as the source repository for your COBOL. You should download any patches and apply any customizations to the file server, and disseminate them from there.

You can compile a *single* COBOL program dynamically by using this command syntax:

```
./pscbl.mak <PROGRAM NAME WITHOUT "cbl" EXTENSION>
```

For example, the following command compiles the lone file PTPDBTST.

```
./pscbl.mak PTPDBTST
```

Note. If you want to recompile all your COBOL, you can follow the procedure described earlier.

See Compiling COBOL on UNIX When PS_APP_HOME is the Same as PS_HOME or Compiling COBOL on UNIX When PS_APP_HOME is Different from PS_HOME.

The compile should run without errors until it completes. After the script is complete, check the destination directories for the newly created files in *PS_HOME*/src/cbl/int, *PS_HOME*/src/cbl/lst, and *PS_HOME*/cblbin. They should have a length greater than zero as well as a current date and time stamp.

Note. You can also use pscbl.mak PTP or pscbl.mak PTP* to compile all source files that start with PTP.

Task 12B-3: Installing IBM COBOL on IBM AIX

This section discusses:

- Understanding the IBM COBOL for AIX Installation
- Prerequisites
- Installing IBM COBOL for AIX v3.1

Understanding the IBM COBOL for AIX Installation

The IBM COBOL for AIX compiler version 3.1 is supported for PeopleSoft PeopleTools 8.52. This section includes the installation of the IBM COBOL Compiler on IBM AIX.

Prerequisites

To install and use IBM COBOL for AIX V3.1, you must have the following:

- PeopleSoft PeopleTools

  We recommend that you take the latest available PeopleSoft PeopleTools patch level. You should install PeopleSoft PeopleTools and your PeopleSoft application software before you compile the IBM COBOL for AIX source files.

- IBM COBOL for AIX version 3.1 or later.

  You must obtain IBM COBOL for AIX compiler from your IBM vendor. Obtain the installation documentation and review the information on system prerequisites and installation methods. The following installation instructions assume that you have the IBM installation files and installation documentation. Review the information on planning your installation, but use the instructions in this document to carry out the installation. Contact your IBM representative to obtain the software.

  See http://www-01.ibm.com/software/awdtools/cobol/aix/

  See http://www-01.ibm.com/software/awdtools/cobol/aix/library/

- The IBM COBOL compiler uses the system temporary space for some steps. Be sure the space is not full before beginning the compilation.

  See Using the IBM COBOL Compiler on IBM AIX, Troubleshooting the IBM COBOL Compiler.

- Documentation for IBM System Prerequisites

  Refer to the "System Prerequisites" section in the IBM Installation guide for COBOL for AIX 3.1, before installing and running the software.

Task 12B-3-1: Installing IBM COBOL for AIX v3.1

This procedure assumes that you obtained the installation file from your IBM vendor and saved the compressed installation file in a local directory, referred to here as *CBL_INSTALL*. The compressed installation file includes several filesets. All of the filesets listed must be installed. This table lists the filesets for IBM COBOL for AIX compiler v3.1, and the locations where they will be installed:

Fileset Name	Fileset Description	Installation Locations*	Required Fileset Level
cobol.cmp	IBM COBOL for AIX compiler	/usr/lpp/cobol/ /usr/lpp/cobol/bin/ /usr/lpp/cobol/samples/ /usr/lpp/cobol/include/ /usr/bin/	3.1.0.4
cobol.dbg	IBM COBOL for AIX debugger	/usr/lpp/cobol/lib /usr/lib/	3.1.0.4
cobol.license	IBM COBOL for AIX electronic license	/usr/swlag/cobol/31/*LANG* /cobol.la *LANG* = [en_US, ja_JP, Ja_JP}	3.1.0.0
cobol.lic	IBM COBOL for AIX license files	/usr/lpp/cobol/lib/	3.1.0.0
cobol.man	IBM COBOL for AIX compiler manual pages	/usr/man/cat1/	3.1.0.4

Fileset Name	Fileset Description	Installation Locations*	Required Fileset Level
cobol.msg.*LANG*	IBM COBOL for AIX compiler messages	/usr/lib/nls/msg/*LANG*/ *LANG* = [en_US, ja_JP, Ja_JP]	3.1.0.4
cobol.rte	IBM COBOL for AIX Runtime	/usr/lpp/cobol/ /usr/lpp/cobol/lib/ /usr/lib/ /etc/	3.1.0.4

*If more than one location is listed, the fileset is copied into all the locations.

To extract and install:

1. Go to the location where you saved the compressed installation file:

   ```
   cd CBL_INSTALL
   ```

2. Uncompress the downloaded file with this command:

   ```
   uncompress cobol.310_eval.tar.Z
   ```

3. Unpack the resulting tar file with this command:

   ```
   tar -xvf cobol.310_eval.tar
   ```

4. Change directory to *CBL_INSTALL*/usr/sys/inst.images, and use the inutoc command to generate a list of the files in this directory:

   ```
   cd usr/sys/inst.images
   inutoc .
   ```

5. Use the AIX command `installp` to install.

   For information on using the options for `installp`, see the IBM COBOL for AIX documentation. For example:

   - To install all available filesets to the locations specified in the table at the beginning of this procedure, and write an installation log, use this command:

     ```
     installp -aXYgd <CBL_INSTALL>/usr/sys/inst.images -e <LOG_DIR/logfile_name>⇒
      all
     ```

   - To install a specific fileset, and write an installation log, use this command:

     ```
     installp -aXYgd <CBL_INSTALL>/usr/sys/inst.images -e <LOG_DIR/logfile_name> ⇒
     <fileset_name>
     ```

6. Download the required maintenance packs for IBM COBOL 3.1.0.4 from the IBM web site:

   http://www-933.ibm.com/support/fixcentral/

7. Install the filesets included in the fix pack using the `installp` command as described above.

   - You must install all the available filesets for 3.1.0.4.

- For the fileset cobol.msg.*LANG* (where *LANG* = [en_US, ja_JP, Ja_JP]), choose to install only the filesets relevant to your desired language and location.

Note. The LANG environment variable determines which message catalogs are used. The en_US (English) message catalogs are installed by default. If LANG is not defined or is assigned an unsupported locale, en_US message catalogs are used.

8. Use the lslpp command to check the status of the installed COBOL filesets:

```
lslpp -L cobol*
```

Task 12B-4: Using the IBM COBOL Compiler on IBM AIX

This section discusses:

- Setting Environment Variables for IBM COBOL
- Compiling COBOL on AIX When PS_APP_HOME is the Same as PS_HOME
- Compiling COBOL on AIX When PS_APP_HOME is Different from PS_HOME
- Troubleshooting the IBM COBOL Compiler
- Setting Up the IBM COBOL Runtime
- Removing the IBM COBOL Installation

Setting Environment Variables for IBM COBOL

Before compiling the IBM COBOL for AIX, or before installing the files on machines where the COBOL will be run, you must specify environment variables as described in this section. This procedure assumes that the installation directory for PeopleSoft PeopleTools 8.52 is *PS_HOME*.

To set the environment variables for IBM COBOL for AIX, go to the PeopleSoft PeopleTools installation directory and source the psconfig.sh script:

```
cd <PS_HOME>
. ./psconfig.sh
```

This section includes different procedures depending upon how you set up your installation environment.

See "Preparing for Installation," Defining Installation Locations.

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is the same as the *PS_HOME* location where you installed PeopleSoft PeopleTools 8.52, follow the instructions in the section Compiling COBOL on AIX When PS_APP_HOME is the Same as PS_HOME.

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is different from the *PS_HOME* location where you installed PeopleSoft PeopleTools 8.52, follow the instructions in the section Compiling COBOL on AIX When PS_APP_HOME is Different from PS_HOME.

Task 12B-4-1: Compiling COBOL on AIX When PS_APP_HOME is the Same as PS_HOME

If you have installed the PeopleSoft Application software in the same directory (*PS_APP_HOME*) where you installed your PeopleSoft PeopleTools software installation directory (*PS_HOME*), follow these steps to do the COBOL compilation.

This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL. This procedure assumes that you have set the environment variables as described in the previous section.

To compile the COBOL source files:

1. Change the directory to *PS_HOME*/setup; for example:

   ```
   cd $PS_HOME/setup
   ```

2. Depending on the character encoding type that your installation uses, set the environment variable PS_ENCODING, as specified in this table:

Encoding	Command
ANSI	`export PS_ENCODING=ansi`
EBCDIC	`export PS_ENCODING=ebcdic`
Unicode	`export PS_ENCODING=unicode`

   Make sure that you are giving the correct value of this environment variable. You will receive the errors if the wrong value of this environment variable is specified.

   - If your setup includes the file $PS_HOME/setup/unicode.cfg, indicating that the character encoding for your installation is Unicode, but you set the value of PS_ENCODING to ansi or ebcdic with the commands above, you will get the following error

     ```
     pscblibm.mak : ERROR : <PS_HOME>/unicode.cfg EXISTs, but INCOMPATIBLE⇒
      encoding of $PS_ENCODING was specified, EXITING!!!
     ```

   - If your setup does not have the file $PS_HOME/setup/unicode.cfg, indicating that the character encoding for your installation is non-Unicode, but you set the value of PS_ENCODING to unicode, you will get the following error

     ```
     pscblibm.mak : ERROR : <PS_HOME>/setup/unicode.cfg does not EXIST, but⇒
      INCOMPATIBLE encoding of $PS_ENCODING was specified, EXITING!!!
     ```

3. Use this command to compile:

   ```
   ./pscblibm.mak apps
   ```

   The optional parameter *apps* determines the location of the work area where the compilation takes place. The allowed values and compilation locations are listed in this table:

Product Line	Apps Parameter	Location
PeopleSoft PeopleTools	pt (default)	*PS_HOME*/sdk/cobol/pscblpt/src

Product Line	Apps Parameter	Location
Human Capital Management	hcm	*PS_HOME*/sdk/cobol/pscblhrms/src
Financials/Supply Chain Management	fscm	*PS_HOME*/sdk/cobol/pscblfscm/src

The compiled COBOL programs will be placed under <*PS_HOME*>/CBLBIN<*X*>.

<X> is A for ANSI, E for EBCDIC, or U for Unicode.

Note. If you see the following output during the compilation, you can ignore it:

```
Preprocessing COBOL files
ls: 0653-341 The file *.cfg does not exist.
Preprocessing the file PSPBASCH.cbl
Can't open input file
```

Task 12B-4-2: Compiling COBOL on AIX When PS_APP_HOME is Different from PS_HOME

If you have installed the PeopleSoft Application software in a directory (*PS_APP_HOME*) which is different than the PeopleSoft PeopleTools software installation directory (*PS_HOME*), follow these steps to do the COBOL compilation.

This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL.

This procedure assumes that you have set the environment variables as described earlier.

To compile the COBOL source files:

1. Ensure that the directory sdk/cobol/pscbl*apps* is present under *PS_APP_HOME* directory for the application you are trying to compile.

   For example if the installed PeopleSoft Application is Human Capital Management (*apps* = hcm), then the following directory structure should be present and the user must have write access to it:

   sdk/cobol/pscblhcm

2. Set the environment variable for *PS_HOME*, the directory where you installed the PeopleSoft software; for example:

   ```
   PS_HOME = ~/PTcompile; export PS_HOME
   ```

3. Set the environment variable for *PS_APP_HOME*, the directory where you installed the PeopleSoft Application software; for example:

   ```
   PS_APP_HOME = ~/HRcompile; export PS_APP_HOME
   ```

4. Change the directory to *PS_HOME*/setup; for example:

   ```
   cd $PS_HOME/setup.
   ```

5. Depending on the character encoding type that your installation uses, set the environment variable PS_ENCODING, as specified in this table:

Encoding	Command
ANSI	`export PS_ENCODING=ansi`
EBCDIC	`export PS_ENCODING=ebcdic`
Unicode	`export PS_ENCODING=unicode`

Make sure that you are giving the correct value of this environment variable. You will receive the errors if the wrong value of this environment variable is specified.

- If your setup includes the file $PS_HOME/setup/unicode.cfg, indicating that the character encoding for your installation is Unicode, but you set the value of PS_ENCODING to ansi or ebcdic with the commands above, you will get the following error:

```
pscblibm.mak : ERROR : <PS_HOME>/unicode.cfg EXISTs, but INCOMPATIBLE⇒
 encoding of $PS_ENCODING was specified, EXITING!!!
```

- If your setup does not have the file $PS_HOME/setup/unicode.cfg, indicating that the character encoding for your installation is non-Unicode, but you set the value of PS_ENCODING to unicode, you will get the following error:

```
pscblibm.mak : ERROR : <PS_HOME>/setup/unicode.cfg does not EXIST, but⇒
 INCOMPATIBLE encoding of $PS_ENCODING was specified, EXITING!!!
```

6. Use this command to compile:

```
./pscblibm.mak apps
```

The optional parameter *apps* determines the location of the work area where the compilation takes place. The allowed values and compilation locations are listed in this table:

Product Line	Apps Parameter	Location
PeopleSoft PeopleTools	pt (default)	*PS_HOME*/sdk/cobol/pscblpt/src
Human Capital Management	hcm	*PS_APP_HOME*/sdk/cobol /pscblhrms/src
Financials/Supply Chain Management	fscm	*PS_APP_HOME*/sdk/cobol /pscblfscm/src

The PeopleSoft PeopleTools compiled COBOL programs will be placed under <*PS_HOME*>/CBLBIN<*X*> and the PeopleSoft Application compiled COBOL programs will be placed under <*PS_APP_HOME*> /CBLBIN<*X*>.

<X> is A for ANSI, E for EBCDIC, or U for Unicode.

Task 12B-4-3: Troubleshooting the IBM COBOL Compiler

This section discusses:

- Understanding Troubleshooting for the IBM COBOL Compiler
- Reviewing Screen Output from pscblibm.mak
- Reviewing erroribm.lst
- Reviewing the LISTOUT.LST file
- Reviewing COBOL_PROGRAM.LST files

- Reviewing temporary space errors

Understanding Troubleshooting for the IBM COBOL Compiler

You can find the error and list files discussed in this section in the following locations, depending upon your installation setup:

- If *PS_APP_HOME* is the same as *PS_HOME*, all error and list files mentioned here are placed in directories under *PS_HOME*.
- If *PS_APP_HOME* is different from *PS_HOME*, and you compile PeopleSoft PeopleTools COBOL source files, the error and list files mentioned here are placed in directories under *PS_HOME*
- If *PS_APP_HOME* is different from *PS_HOME*, and you compile PeopleSoft Application COBOL source files, the error and list files mentioned here are placed in directories under *PS_APP_HOME*.

When compiling COBOL programs on AIX using the IBM COBOL compiler, compiler and linker informational messages are reported in the following locations:

- screen output from pscblibm.mak
- erroribm.lst

  <*PS_HOME*>/setup/erroribm.lst
- LISTOUT.lst file

  <*PS_HOME*>/sdk/cobol/pscbl<*APPS*>/src/LISTOUT.lst

  <*APPS*> is the PeopleSoft product family, such as hcm.

  See Compiling COBOL on AIX When PS_APP_HOME is the Same as PS_HOME
- COBOL_PROGRAM.lst

  <*PS_HOME*>/sdk/cobol/pscbl<*APPS*>/lst/<*COBOL_PROGRAM*>.lst

Initially, either review the screen output or the erroribm.lst file in *PS_HOME*/setup. The erroribm.lst file will contain the names of the programs that failed to compile. You can examine the file LISTOUT.lst to find the COBOL program names listed in erroribm.lst to review the cause of the failures. Then review the *COBOL_PROGRAM*.lst file to analyze the COBOL error in context of the COBOL source code. After you have corrected the compile or linker errors, you can simply start a complete re-compile.

Depending on the relevancy of the failing compiled modules to your project mission, you can decide to resolve all compile and linker errors or continue without the failed modules.

The programs PTPPSRUN and PTPPSRMT must be compiled correctly. If these programs do not compile correctly, none of the COBOL programs will run. These programs are located at *PS_HOME*/src/cbl/ibm/unix.

If these programs fail to compile, you will get the following errors:

```
./pscblibm.mak : Error : Critical program PTPPSRUN did not compile
./pscblibm.mak : Error : This error must be fixed prior to running any cobol⇒
 programs...

./pscblibm.mak : Error : Critical program PTPPSRMT did not compile
./pscblibm.mak : Error : This error must be fixed prior to running any cobol⇒
 programs via RemoteCall
```

Be sure to resolve the errors for these programs before proceeding.

Reviewing Screen Output from pscblibm.mak

The screen output is the first place you should look to determine if there is a compilation or linking error. Compilation/Linking errors will be displayed at the end of the screen output. For example:

```
./pscblibm.mak: Error : The list of file(s) failed to compile/link.
CEPCROLL fail to compile/link
ENPBTRNS fail to compile/link
ENPMMAIN fail to compile/link
GLPJEDT2 fail to compile/link
SFPCRELS fail to compile/link
SFPREVAL fail to compile/link
./pscblibm.mak : The list of file(s) that failed to compile/link can be found at ⇒
/data1/home/easa/pt852/setup/erroribm.lst
./pscblibm.mak : The compilation log is generated at /data1/home/easa/pt852/sdk⇒
/cobol/pscblpt/src/LISTOUT.lst
./pscblibm.mak : The compile listing of the COBOL programs can be seen at /data1⇒
/home/easa/pt852/sdk/cobol/pscblpt/lst
```

Reviewing erroribm.lst

The erroribm.lst file is located in the *PS_HOME*/setup directory, and contains a list of the programs that failed to compile. For example:

```
CEPCROLL fail to compile/link
ENPBTRNS fail to compile/link
ENPMMAIN fail to compile/link
GLPJEDT2 fail to compile/link
SFPCRELS fail to compile/link
SFPREVAL fail to compile/link
```

Reviewing the LISTOUT.LST file

The LISTOUT.lst file is located in the <*PS_HOME*>/sdk/cobol/pscbl<*APPS*>/src directory and contains compiler and linker informational, warning and error messages.

For example, the following error is related to program PTPDBTST:

```
exec: /usr/bin/ld -b64 -bpT:0x100000000 -bpD:0x110000000 -bhalt:5 /lib/crt0_64.o -⇒
lg -bexport:/usr/lib/libg.exp -o PTPCURND PTPCURND.o -brtl -bE:symlist.
exp -lpthreads -ldl -lnsl -L/home/sphilli2/852-803-I1-AIX-ORAU-DEBUG/bin -⇒
lpscompat_ansi -lpssqlapi_ansi -lpsuser_ansi -lpspetssl -lpsora_ansi -lpscobnet_⇒
ansi -L/usr/lpp/cobol/lib -L/usr/lpp/SdU/vsam/lib -L/usr/lpp/SdU/sfs/lib -lcob2s -⇒
lsmrtlite -lC128 -lC -lc
unlink: PTPCURND.o
exec: /usr/lpp/cobol/bin/IGYCCOB2 -qtest -qdynam -qaddr(64),flag(w),trunc⇒
(bin),arith(extend) -qADDR(64) PTPDBTST.cbl
PP 5724-V62 IBM COBOL for AIX  3.1.0 in progress ...
LineID  Message code  Library phase message text
        IGYLI0090-W   4 sequence errors were found in this program.
Messages    Total    Informational    Warning    Error    Severe    Terminating
Printed:       1                          1
LineID  Message code  Message text
```



```
        IGYSC0205-W   Warning message(s) were issued during library phase⇒
 processing.  Refer to the beginning of the listing.
   588  IGYPA3007-S   "ZZ000-SQL-ERROR-ROUTINE" was not defined as a
                      procedure-name.  The statement was discarded.
Messages    Total    Informational    Warning    Error    Severe    Terminating
Printed:       2                          1                  1
Suppressed:    6           6
End of compilation 1,  program PTPDBTST,  highest severity: Severe.
Return code 12
PTPDBTST fail to compile/link
```

Reviewing COBOL_PROGRAM.LST files

The COBOL_PROGRAM.lst files are located in <*PS_HOME*>/sdk/cobol/pscbl<*APPS*>/lst directory and contain the compiler output for a specific program.

For example, a portion of the PTPDBTST.lst file contains this compilation error found for program PTPDBTST, where the ZZ000-SQL-ERROR-ROUTINE was not defined:

```
       588  IGYPA3007-S   "ZZ000-SQL-ERROR-ROUTINE" was not defined as a procedure-⇒
name.  The statement was discarded.
-Messages    Total    Informational    Warning    Error    Severe    Terminating
0Printed:       2                          1                  1
0Suppressed:    6           6
-* Statistics for COBOL program PTPDBTST:
 *    Source records = 805
 *    Data Division statements = 213
 *    Procedure Division statements = 52
```

Reviewing temporary space errors

IBM COBOL compiler uses the system temporary space to do some steps of the compilation. Like other UNIX processes, the compiler may give errors when the system temporary space is full.

To avoid or correct this problem, clean up the system temporary space on your machine.

Here is a sample of errors seen during compilation, when the system temporary space (/tmp) was full in a development AIX machine:

```
pscblibm.mak : Compiling EGPPRCTL.cbl ...
IGYDS5247-U   An error occurred while attempting to write a compiler work file,⇒
 "SYSUT7".
Compiler aborted with code 1247
IGYSI5258-U   Error removing WCode file.: A file or directory in the path name⇒
 does not exist.
IGYSI5258-U   Error removing WCode file.: A file or directory in the path name⇒
 does not exist.
IGYSI5259-U   Error closing WCode file.: A file descriptor does not refer to an⇒
 open file.
IGYSI5258-U   Error removing WCode file.: A file or directory in the path name⇒
 does not exist.
IGYSI5259-U   Error closing WCode file.: A file descriptor does not refer to an⇒
 open file.
```



```
IGYSI5258-U   Error removing WCode file.: A file or directory in the path name⇒
 does not exist.
IGYSI5259-U   Error closing WCode file.: A file descriptor does not refer to an⇒
 open file.
IGYSI5258-U   Error removing WCode file.: A file or directory in the path name⇒
 does not exist.
IGYSI5259-U   Error closing WCode file.: A file descriptor does not refer to an⇒
 open file.
```

Task 12B-4-4: Setting Up the IBM COBOL Runtime

This section discusses:

- Installing the IBM COBOL for AIX Runtime Files
- Configuring the Application Server Domain
- Configuring the Process Scheduler Domain
- Setting Environment Variables When PS_APP_HOME is Different from PS_HOME

Installing the IBM COBOL for AIX Runtime Files

For those machines that only need to run the compiled COBOL files, you must install the runtime filesets for IBM COBOL for AIX. You do not need to install the compiler. You must also configure the PeopleSoft Application Server and Process Scheduler domains.

This procedure assumes that you have downloaded the runtime filesets to CBL_INSTALL, and have set the environment variables as described earlier.

See Setting Environment Variables.

The runtime filesets will be installed into the locations as specified in this table:

Fileset Name	Fileset Description	Installation Locations	Fileset Level Required
cobol.rte	IBM COBOL for AIX runtime libraries	/usr/lpp/cobol/ /usr/lpp/cobol/lib/ /usr/lib/ /etc/	3.1.0.4
cobol.msg.*LANG*	IBM COBOL for AIX runtime messages *LANG* = [en_US, ja_JP, Ja_JP]	/usr/lib/nls/msg/*LANG*	3.1.0.4

To install the runtime filesets:

1. Use the AIX command `installp` to install these filesets. For example:

   ```
   installp -aYg -d CBL_INSTALL/usr/sys/inst.images cobol.rte cobol.msg.en_US
   ```

2. Download the required maintenance packs for IBM COBOL 3.1.0.4 from the IBM support web site.

   http://www-933.ibm.com/support/fixcentral/

3. Install the filesets included in the maintenance packs using the `installp` command as described above.

Configuring the Application Server Domain

This section assumes that you have created an Application Server domain, as described in the chapter "Configuring the Application Server on UNIX." In PeopleSoft PeopleTools 8.51 and later, the configuration and log files for application server domains reside in a directory referred to as *PS_CFG_HOME*.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Server Domain Configurations."

To configure the Application Server domain:

1. Go to the *PS_HOME*/appserv directory and run psadmin.
2. When the menu appears, specify *1* for Application Server and press ENTER.
3. Enter *1* for Administer Domain, and select the appropriate domain.
4. Enter *4* for Configure this domain.
5. On the Quick-configure menu, select *15*, Edit environment settings.
6. If *PS_APP_HOME* is different from *PS_HOME*, carry out steps a and b below.

   Note. If *PS_APP_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 7.

   a. On the PeopleSoft Domain Environment Settings, select *2* to add environment variable.
   b. Enter PS_APP_HOME as the name of the environment variable, and installation directory where you installed your PeopleSoft Application software as the value of the environment variable. For example:

   ```
   Enter name of environment variable: PS_APP_HOME
   Enter value: /home/psft/HRcompile
   ```

7. Enter 1 to Edit environment variable.
8. Enter the number of the environment variable corresponding to COBPATH.
9. Modify the value as shown.

   Change from:

   ```
   {$PS_APP_HOME}/cblbin:{$PS_HOME}/cblbin
   ```

   To:

   ```
   {$PS_APP_HOME}/CBLBIN_IBMX:{$PS_HOME}/CBLBIN_IBMX
   ```

   X in CBLBIN_IBMX can be A for ANSI, E for EBCDIC or U for Unicode.

   You will see an asterisk in front of the PS_APP_HOME and COBPATH environment variables, because these variables have not been saved.

10. Specify 6 to save the environment variables.
11. Press ENTER to continue at the following message:

    ```
    Your changes have been saved.
    Please be aware these changes will not take effect until you complete the⇒
     domain configuration process.
    Press Enter to continue...
    ```

12. Enter *q* for return to the previous menu.
13. On the Quick-configure menu, enter *13*, to load the domain configuration.

14. Enter *q* to return to the PeopleSoft Server Administration menu.
15. Enter *1* for Administer Domain.
16. Select the appropriate domain.
17. Enter *6* for Edit configuration/log files menu.
18. Enter *1* for Edit domain configuration file.
19. In the domain configuration file, search for RCCBL PRDBIN.
20. Update the RCCBL PRDBIN as shown below, and remove the semicolon from the beginning of the line.

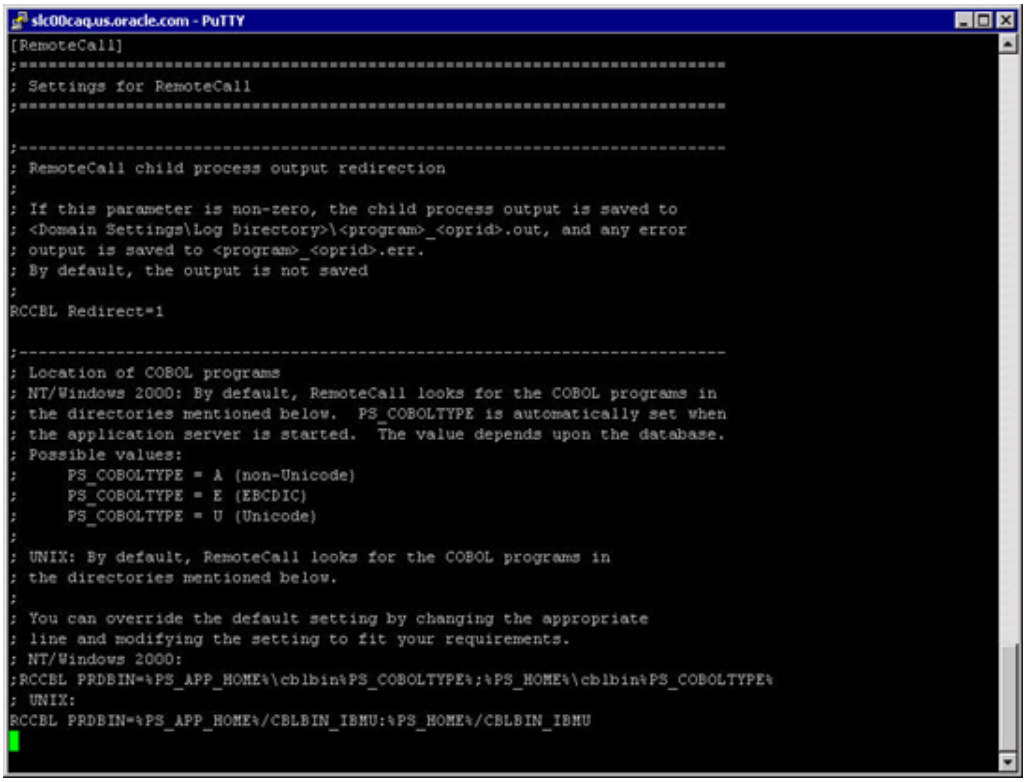
    Change from:

    ```
    ;RCCBL PRDBIN=%PS_APP_HOME%/cblbin:%PS_HOME%/cblbin
    ```

    To:

    ```
    RCCBL PRDBIN=%PS_APP_HOME%/CBLBIN_IBMX:%PS_HOME%/CBLBIN_IBMX
    ```

    X in CBLBIN_IBMX can be A for ANSI, E for EBCDIC or U for Unicode.



Editing RCCBL PRDBIN in the domain configuration file

21. Enter *:w* to save the file, and enter *:q* to quit.
22. Enter *q* to quit the PeopleSoft Edit/View Configuration/Log Files Menu.
23. Enter *4* for Configure this domain.
24. Enter y to continue at this prompt:

    ```
    This option will shutdown the domain.
    Do you want to continue? (y/n) [n]: y
    ```


25. On the Quick-configure menu, select *13* to load the configuration.
26. Enter *1* to boot the domain.
27. Enter *1* for Boot (Serial Boot), or *2* for Parallel Boot.

Configuring the Process Scheduler Domain

To configure the Process Scheduler domain:

1. Go to the *PS_HOME*/appserv directory and run psadmin.
2. When the menu appears, specify 2 for Process Scheduler and press ENTER.
3. Enter *1* for Administer Domain, and select the appropriate domain.
4. Enter *4* for Configure this domain.
5. On the Quick-configure menu, select *5*, Edit environment settings.
6. If *PS_APP_HOME* is different from *PS_HOME*, carry out steps a and b below.

   Note. If *PS_APP_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 7.

   a. On the PeopleSoft Domain Environment Settings, select *2* to add environment variable.
   b. Enter PS_APP_HOME as the name of the environment variable, and the installation directory where you installed your PeopleSoft Application software as the value of the environment variable.

      For example:

      ```
      Enter name of environment variable: PS_APP_HOME
      Enter value: /home/psft/HRMS92
      ```

7. Enter *1* for Edit environment variable.
8. Enter the number of the environment variable corresponding to COBPATH.
9. Modify the value as shown.

   Change from:

   ```
   {$PS_APP_HOME}/cblbin:{$PS_HOME}/cblbin
   ```

   To:

   ```
   {$PS_APP_HOME}/CBLBIN_IBMX:{$PS_HOME}/CBLBIN_IBMX
   ```

   X in CBLBIN_IBMX can be A for ANSI, E for EBCDIC or U for Unicode.

   You will see an asterisk in front of the PS_APP_HOME and COBPATH environment variables, because these variables have not been saved.

10. Enter *6* to save the environment variables.
11. Press ENTER to continue at the following message:

    ```
    Your changes have been saved.
    Please be aware these changes will not take effect until you complete the⇒
     domain configuration process.
    Press Enter to continue...
    ```

12. Enter *q* to return to the previous menu.
13. On the Quick-configure menu, enter *3*, to load the domain configuration.

14. Enter *1* to boot the domain.

Setting Environment Variables When PS_APP_HOME is Different from PS_HOME

This section applies to those installations in which:

- *PS_APP_HOME* is different from *PS_HOME*.
- You have several Application Server or Process Scheduler domains.
- All of those domains are going to be associated with a particular *PS_APP_HOME* installation directory.

In this case it is a good idea to define *PS_APP_HOME* in *PS_HOME*/psconfig.sh. For example, edit psconfig.sh to add this line:

```
PS_APP_HOME="/home/psft/hrms92"; export PS_APP_HOME
```

After making this change, you must source the *PS_HOME*/psconfig.sh file again.

This way you would not need to add the PS_APP_HOME environment variable through the "Edit environment variable" psadmin Application Server and Process Scheduler administration menus each time you create a new domain.

Task 12B-4-5: Removing the IBM COBOL Installation

Keep the following information in mind before removing the IBM COBOL compiler on IBM AIX:

- You must have root user access to uninstall this product.
- Some filesets may not be uninstalled if they are required by other installed products.
- As uninstalling dependent packages automatically may introduce problems, it is recommended that you preview uninstallation to ensure that all dependent filesets are no longer required.

  See the IBM COBOL compiler documentation for more information.

To remove the IBM COBOL compiler:

1. Run the following command:

   ```
   installp -u cobol*
   ```

   Here are typical responses:

   ```
   $ installp -u cobol*
   +-----------------------------------------------------------------------------+
                       Pre-deinstall Verification...
   +-----------------------------------------------------------------------------+
   Verifying selections...done
   Verifying requisites...done
   Results...
   WARNINGS
   --------
     Problems described in this section are not likely to be the source of any
     immediate or serious failures, but further actions may be necessary or
     desired.
     Not Installed
     -------------
     No software could be found on the system that could be deinstalled for the
   ```



```
  following requests:
    cobol.msg.Ja_JP
    cobol.msg.ja_JP
  (The fileset may not be currently installed, or you may have made a
   typographical error.)
  << End of Warning Section >>
SUCCESSES
---------
  Filesets listed in this section passed pre-deinstall verification
  and will be removed.
  Selected Filesets
  -----------------
  cobol.cmp 3.1.0.0                          # IBM COBOL for AIX Compiler
  cobol.dbg 3.1.0.0                          # IBM COBOL for AIX Debugger
  cobol.lic 3.1.0.0                          # COBOL for AIX Licence Files
  cobol.license 3.1.0.0                      # COBOL for AIX License Agreem...
  cobol.man 3.1.0.0                          # IBM COBOL Set for AIX Man Pages
  cobol.msg.en_US 3.1.0.0                    # IBM COBOL for AIX Runtime Me...
  cobol.rte 3.1.0.0                          # IBM COBOL for AIX Runtime
  << End of Success Section >>
FILESET STATISTICS
------------------
    9  Selected to be deinstalled, of which:
        7  Passed pre-deinstall verification
        2  FAILED pre-deinstall verification
  ----
    7  Total to be deinstalled
+-----------------------------------------------------------------------------+
                           Deinstalling Software...
+-----------------------------------------------------------------------------+
installp:  DEINSTALLING software for:
        cobol.lic 3.1.0.0
Filesets processed:  1 of 7  (Total time:  0 secs).
installp:  DEINSTALLING software for:
        cobol.license 3.1.0.0
Filesets processed:  2 of 7  (Total time:  0 secs).
installp:  DEINSTALLING software for:
        cobol.dbg 3.1.0.0
Filesets processed:  3 of 7  (Total time:  1 secs).
installp:  DEINSTALLING software for:
        cobol.man 3.1.0.0
Filesets processed:
  4 of 7  (Total time:  1 secs).
installp:  DEINSTALLING software for:
        cobol.msg.en_US 3.1.0.0
Filesets processed:  5 of 7  (Total time:  2 secs).
installp:  DEINSTALLING software for:
        cobol.cmp 3.1.0.0
Filesets processed:  6 of 7  (Total time:  3 secs).
installp:  DEINSTALLING software for:
```



```
        cobol.rte 3.1.0.0
Finished processing all filesets.  (Total time:  5 secs).
+-----------------------------------------------------------------------------+
                                Summaries:
+-----------------------------------------------------------------------------+
Pre-installation Failure/Warning Summary
----------------------------------------
Name                      Level           Pre-installation Failure/Warning
-------------------------------------------------------------------------------
cobol.msg.Ja_JP                           Nothing by this name to deinstall
cobol.msg.ja_JP                           Nothing by this name to deinstall
Installation Summary
--------------------
Name                        Level           Part        Event       Result
-------------------------------------------------------------------------------
cobol.lic                   3.1.0.0         USR         DEINSTALL   SUCCESS
cobol.license               3.1.0.0         USR         DEINSTALL   SUCCESS
cobol.dbg                   3.1.0.0         USR         DEINSTALL   SUCCESS
cobol.man                   3.1.0.0         USR         DEINSTALL   SUCCESS
cobol.msg.en_US             3.1.0.0         USR         DEINSTALL   SUCCESS
cobol.cmp                   3.1.0.0         ROOT        DEINSTALL   SUCCESS
cobol.cmp                   3.1.0.0         USR         DEINSTALL   SUCCESS
cobol.rte                   3.1.0.0         USR         DEINSTALL   SUCCESS
```

2. To remove any currently unused modules in kernel and library memory, enter the following on the command line:

```
slibclean
```

CHAPTER 13

Installing PeopleSoft Change Assistant

This chapter discusses:

- Understanding PeopleSoft Change Assistant
- Installing and Configuring PeopleSoft Change Assistant
- Specifying Options
- Exporting Jobs to XML, HTML, or Microsoft Excel Format
- Validating Change Assistant Settings

Understanding PeopleSoft Change Assistant

Oracle's PeopleSoft Change Assistant is a standalone application that enables you to assemble and organize the steps necessary to apply patches and fixes for maintenance updates. You also use PeopleSoft Change Assistant for software upgrades, that is, the process of moving from one PeopleSoft application release to another PeopleSoft application release. PeopleSoft Change Assistant runs only on Microsoft Windows platforms.

In order to perform reliable and accurate updates, PeopleSoft Change Assistant gathers all the necessary information including the change log from the Environment Management hub and uploads it to My Oracle Support. With the environment data available, My Oracle Support can determine what updates apply to your environment.

When you access My Oracle Support, you can obtain a list of all unapplied updates for a given application environment including all prerequisites. You can then download a set of change packages associated with the update IDs and install the patches and fixes with minimal effort.

See Also

"Using the PeopleSoft Installer," Verifying Necessary Files for Installation on Windows

PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook

PeopleTools 8.52: Life Cycle Management Guide PeopleBook

Task 13-1: Installing and Configuring PeopleSoft Change Assistant

This section discusses:

- Installing PeopleSoft Change Assistant
- Setting Up Security for PeopleSoft Change Assistant
- Verifying the Path Variable
- Scanning the Workstation

Task 13-1-1: Installing PeopleSoft Change Assistant

At the end of the installation, you have the option of installing PeopleSoft Change Impact Analyzer. For more information on that installation, see the following chapter.

See "Installing PeopleSoft Change Impact Analyzer."

To install PeopleSoft Change Assistant:

Note. A Microsoft Windows-based operating system is required to use PeopleSoft Change Assistant.

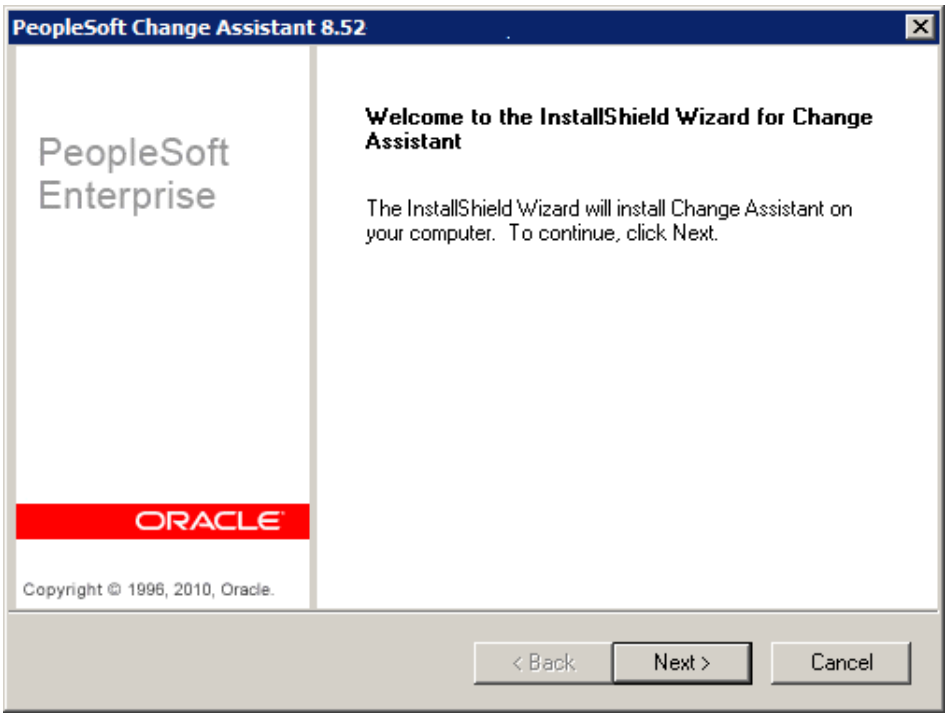
---

1. If there is a pre-8.52 version of PeopleSoft Change Assistant installed on your computer, remove it before beginning the installation. Otherwise, the installation process will terminate.

   You can remove the previous version of PeopleSoft Change Assistant by using the Microsoft Windows Add or Remove Programs feature. Alternatively, launch the setup.exe of the previous version and select the option to remove the software.

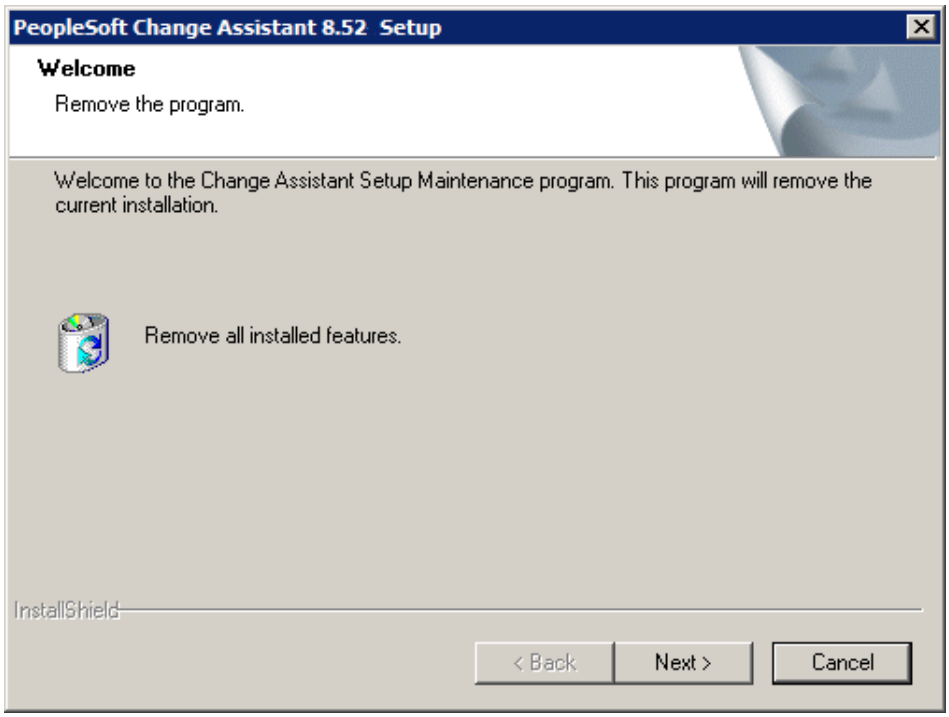
2. From the *PS_HOME*\setup\PsCA directory, run `setup.exe`.

   Click Next on the Welcome to the InstallShield Wizard for Change Assistant window.



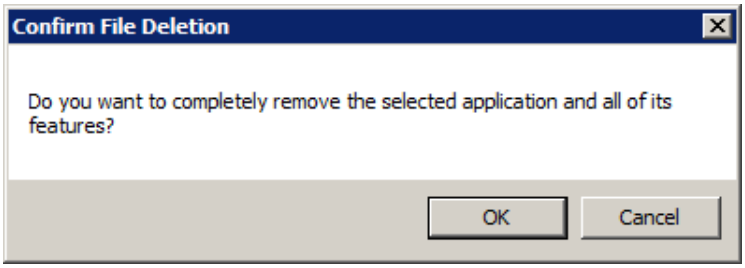
PeopleSoft Change Assistant Setup Welcome window

3. If there is an existing installation of PeopleSoft Change Assistant 8.52 a window appears that enables you to remove the existing installation.



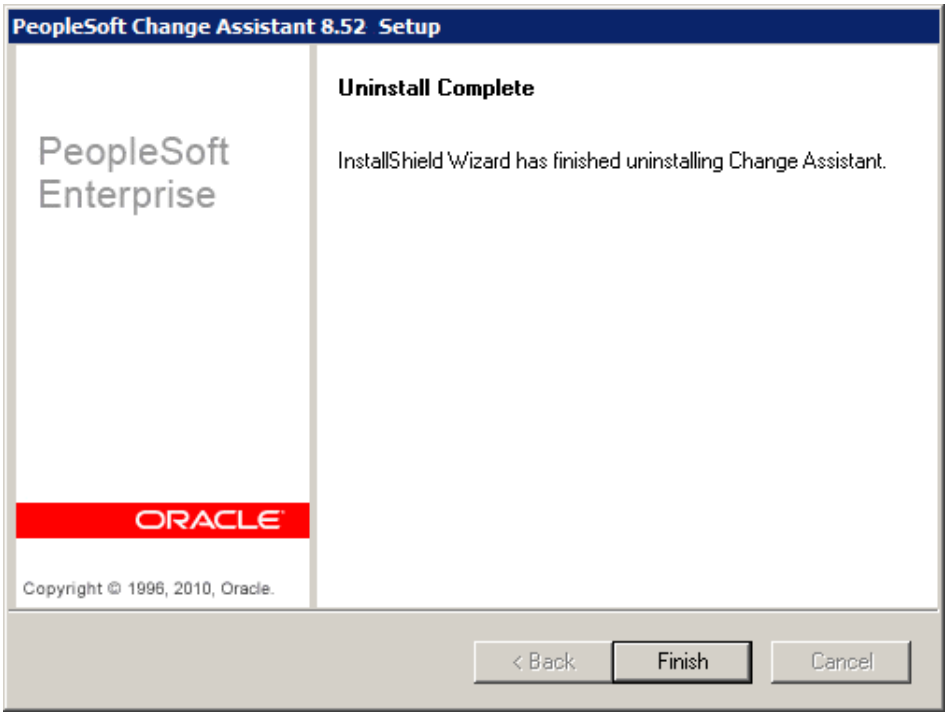
Window to remove the previous PeopleSoft Change Assistant installation

Click Next, and then click OK on the Confirm File Deletion dialog box. The question on the dialog box is "Do you want to completely remove the selected application and all of its features," as seen in this example:



Confirm File Deletion dialog box

4. After the previous installation has been removed, click Finish on the window with the text "Uninstall Complete".



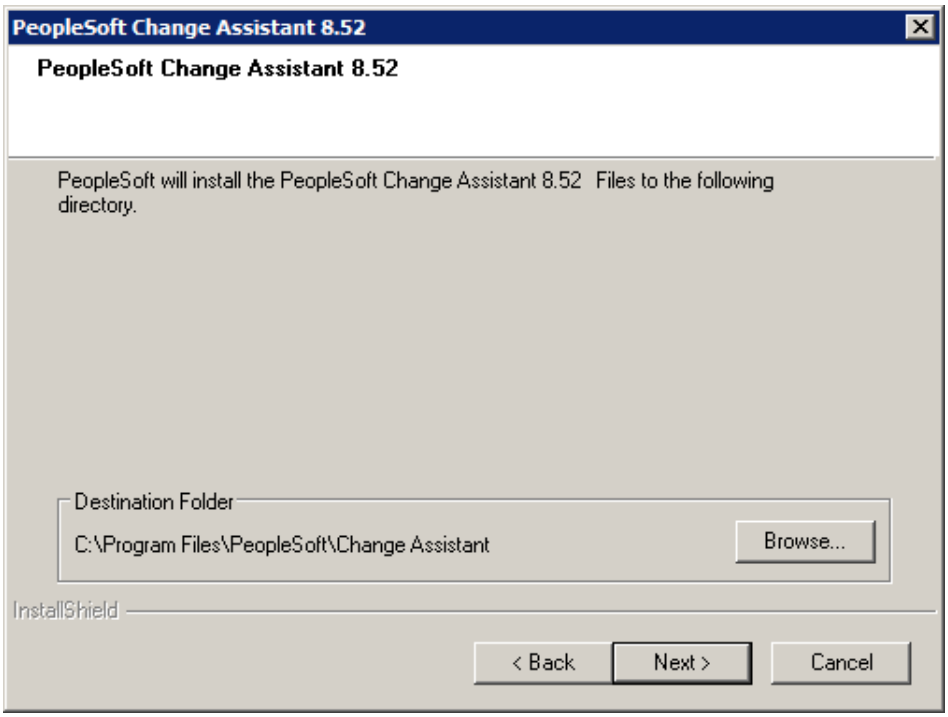
PeopleSoft Change Assistant Uninstall Complete window

5. Go to *PS_HOME*\setup\PsCA directory again and run `setup.exe`.

   The Welcome window seen in the first step appears. Click Next.

6. Accept the default Destination Folder or click the Browse button to specify another Destination Folder.

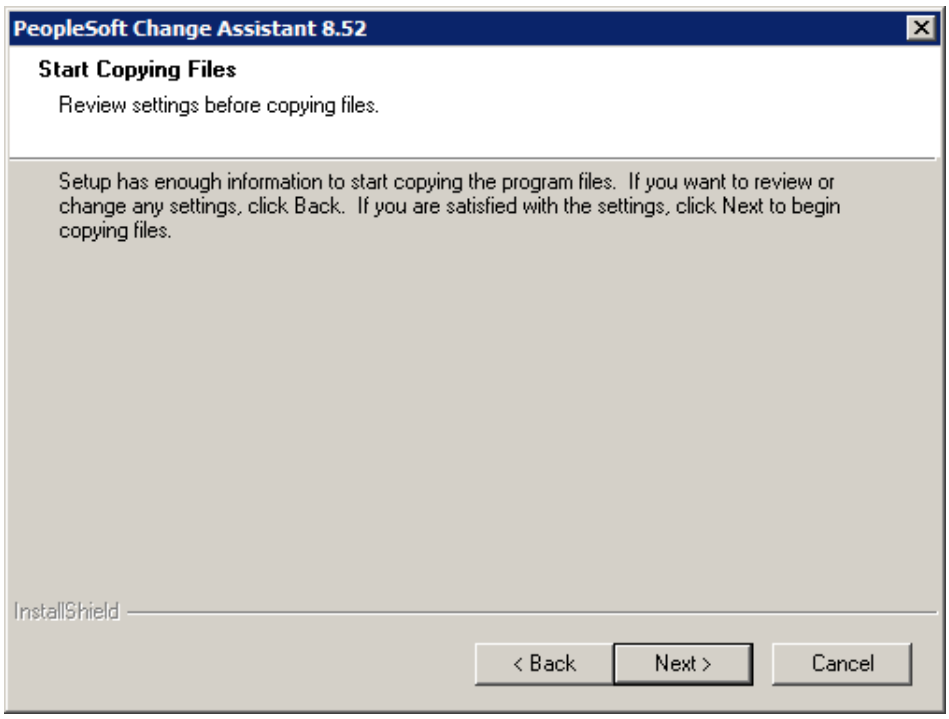
   The default destination folder in this example is C:\Program Files\PeopleSoft\Change Assistant.



PeopleSoft Change Assistant Destination Folder window

7. Select Next.

   The Start Copying Files screen appears.



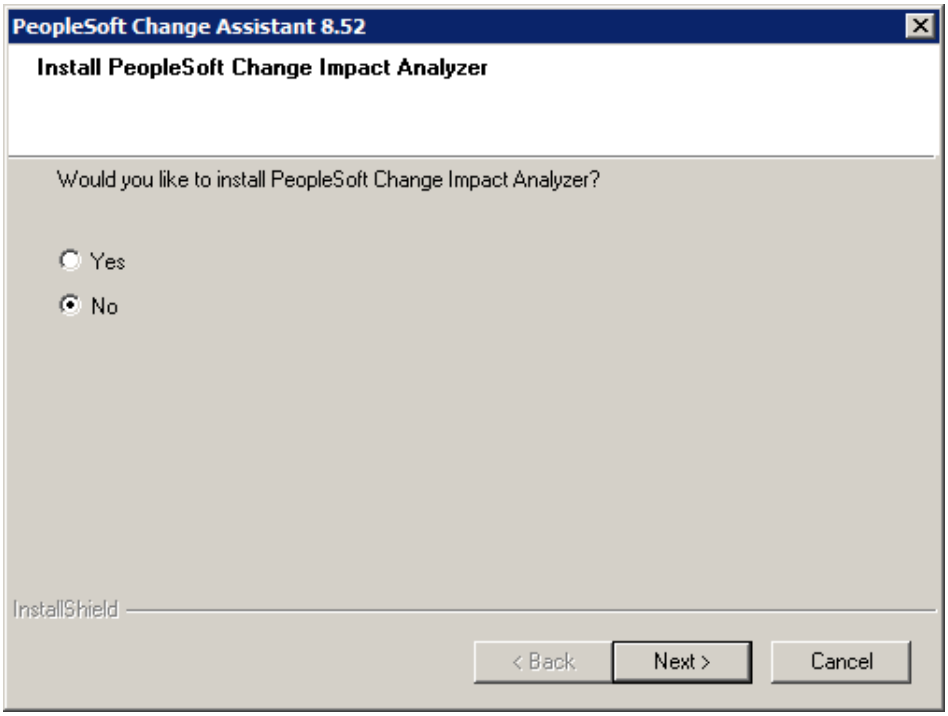
PeopleSoft Change Assistant Start Copying Files window

8. Click Back to review or change any settings.

   If you are satisfied with your settings, click Next to begin copying files. PeopleSoft Change Assistant copies files to the designated directory.

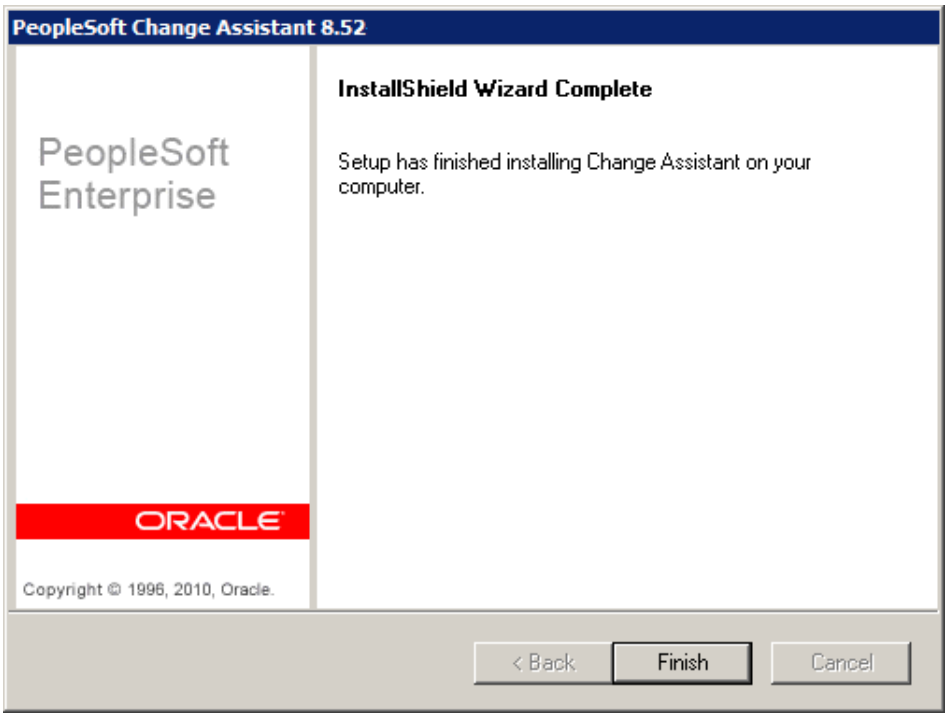
9. On the screen asking whether you want to install Change Impact Analyzer, select No, and click Next.

   If you select Yes, the PeopleSoft Change Impact Analyzer installation begins. You will do this installation in the next chapter. Instead, continue with the tasks in this chapter to finish setting up PeopleSoft Change Assistant.



Choosing not to install PeopleSoft Change Impact Analyzer

10. Click Finish to complete the installation process at the window with the text "Setup has finished installing Change Assistant on your computer."



PeopleSoft Change Assistant installation complete window

11. Reboot your machine after the installation process is complete.

12. To start PeopleSoft Change Assistant, select Start, Programs, PeopleSoft Change Assistant 8.52, Change Assistant.

Note. If you are running on a Microsoft Windows operating system with User Account Control (UAC), such as Windows Server 2008, you must have administrative privileges to run Change Assistant. Right-click changeassistant.exe and select Run as administrator.

Task 13-1-2: Setting Up Security for PeopleSoft Change Assistant

To use PeopleSoft Change Assistant, you must configure your firewall settings so that the firewall does not filter PeopleSoft domain and IP names.

Note. When setting trust rules or bypass rules on your proxy server, or in browser security, it is easier to maintain rules by domain or IP subnet.

The following features must be set to allow access for PeopleSoft Change Assistant:

- *Domains*

  We recommend that you set domain rules to allow access to **.oracle.com*. In addition, allow access for the following domains:

  - www.peoplesoft.com
  - update.peoplesoft.com
  - psft-updates.oracle.com
  - www.oracle.com
  - metalink3.oracle.com
  - login.oracle.com
- *IP addresses*

  Allow access for the IP address 141.146.8.119.

  We recommend that you set IP rules at the subnet 141.146.54.0.

PeopleSoft Change Assistant uses SSL to connect at all times, but when you log in to My Oracle Support or Update Gateway through a browser only the login page is SSL.

Task 13-1-3: Verifying the Path Variable

After installing PeopleSoft Change Assistant, verify that the following values are the first entries in the PATH environment variable:

- *PS_HOME*\bin\client\winx86
- *PS_HOME*\jre\bin

See *PeopleTools 8.52: PeopleSoft Change Assistant PeopleBook,* "Configuring Change Assistant."

Task 13-1-4: Scanning the Workstation

The first time you use PeopleSoft Change Assistant, it automatically scans your workstation for applications that it will use in order to automate the steps. For example, it automatically finds the SQL Query tool and uses it to run SQL commands or scripts.

If you add a new application or update an existing application, PeopleSoft Change Assistant must perform a scan of the system in order to discover the changes. To perform this scan, select Tools, Scan Configuration.

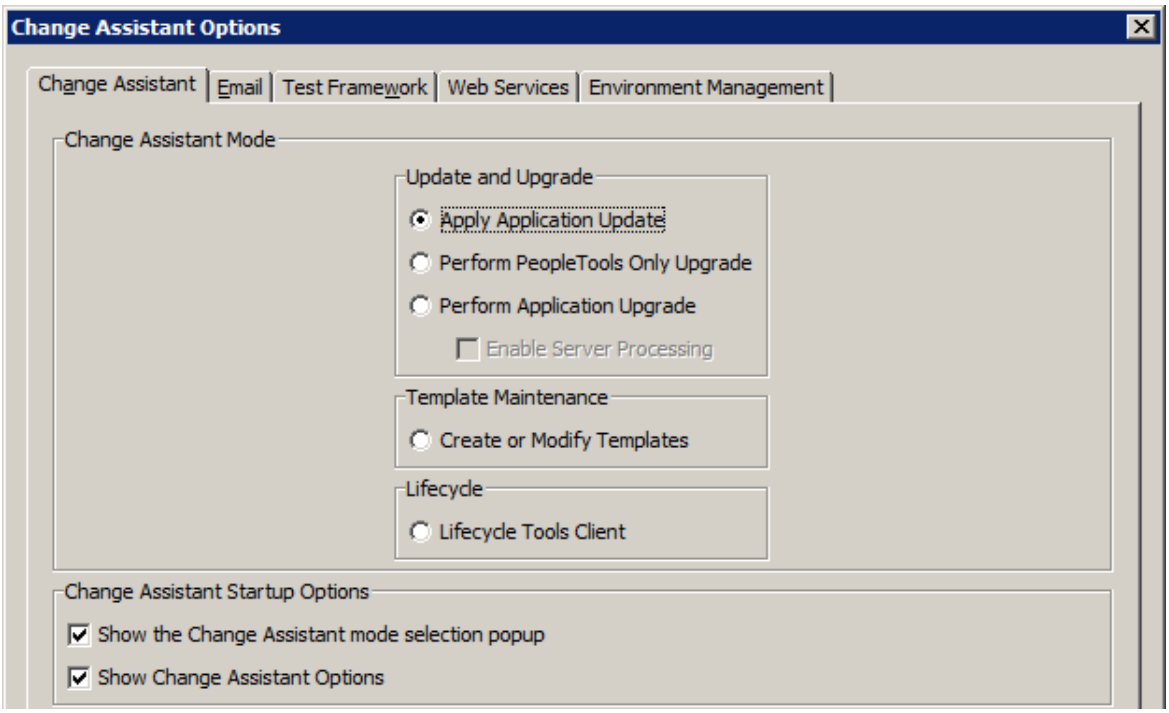
Task 13-2: Specifying Options

This section discusses:

- Specifying Change Assistant Options
- Setting Test Framework Options
- Setting Email Options
- Setting Web Services Options
- Setting Environment Management Options

Task 13-2-1: Specifying Change Assistant Options

This section describes options to set in Change Assistant. Select Tools, Options, Change Assistant.



Change Assistant page on the Change Assistant Options dialog box - Part 1

Update and Upgrade Select one of the following modes; the window changes depending upon the mode you choose:

- Apply Application Update
- Perform PeopleTools Only Upgrade
- Perform Application Upgrade

- Enable Server Processing

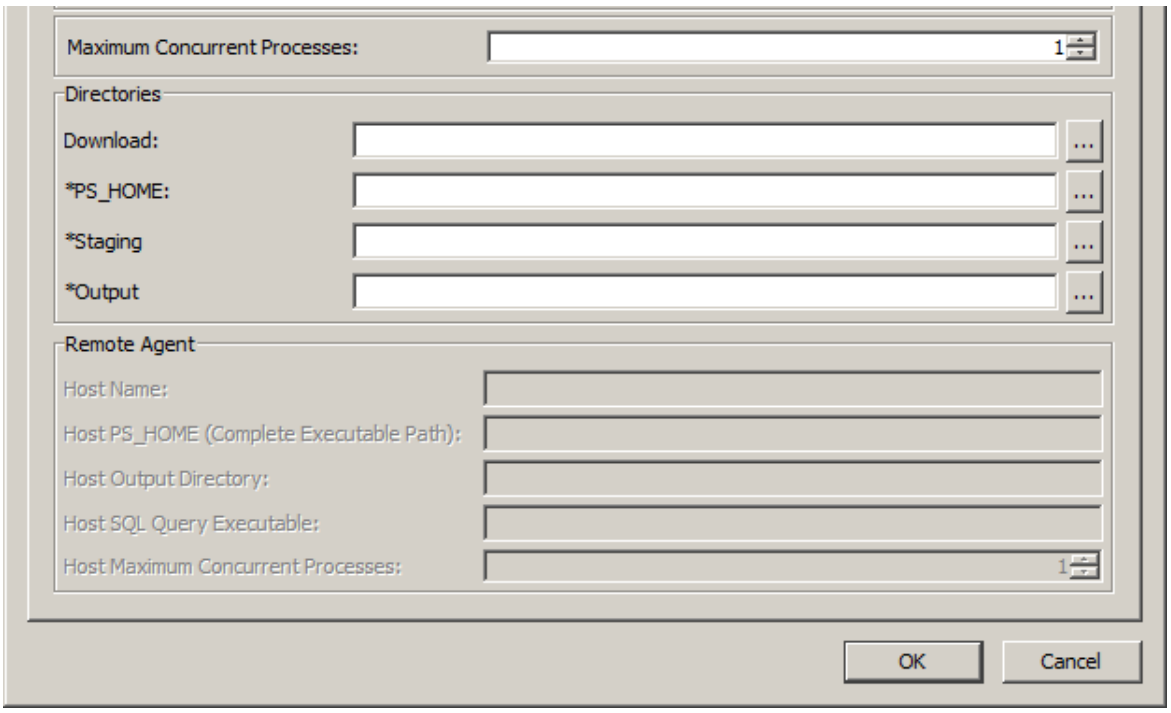
  Select this check box to enable Change Assistant to run Application Engine, Data Mover User, Data Mover Bootstrap, and SQL Scripts on Remote Agents as configured through Environment Management Framework as part of the Application upgrade.

Create or Modify Templates Select this option to work with Change Assistant templates.

Lifecycle Tools Client Select this option to enable the menus for the Universal Visual Compare and Three-Way Merge tools.

Change Assistant Startup Options Use these options to control how Change Assistant opens:

- Show the Change Assistant mode selection popup
- Show the Change Assistant options



Change Assistant page on the Change Assistant Options dialog box - Part 2

Maximum Concurrent Processes Specify the maximum number of processes that can be executed concurrently on the local machine. The default at installation time is one.

Download Enter the full path of the directory to which you want to download your change packages.

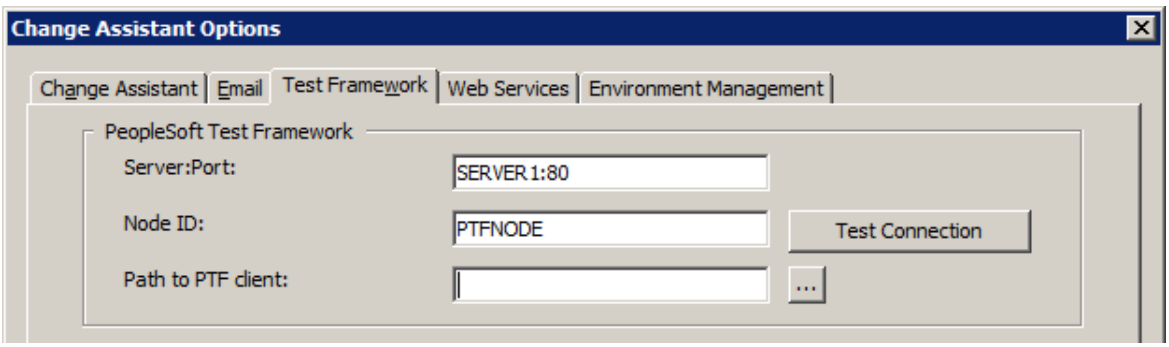
***PS_HOME** Enter the full path of the directory in which you installed PeopleSoft PeopleTools.

***Staging** Enter the directory in which you would like to stage all the Change Assistant update files. This is the location that Change Assistant will store files to be used during the apply update process.

***Output** Enter the directory in which you want the log files generated by the update process to reside.

Task 13-2-2: Setting Test Framework Options

Select Tools Options, Test Framework. Use these options to enable Change Assistant to run tests for the PeopleSoft Test Framework (PTF) step.



Test Framework page on the Change Assistant Options dialog box

Server:Port Enter the server name and port number for the environment.

Use the format <machine_name>:<https_port>

Node ID Enter the name of the PeopleSoft node with which the integration gateway is to communicate.

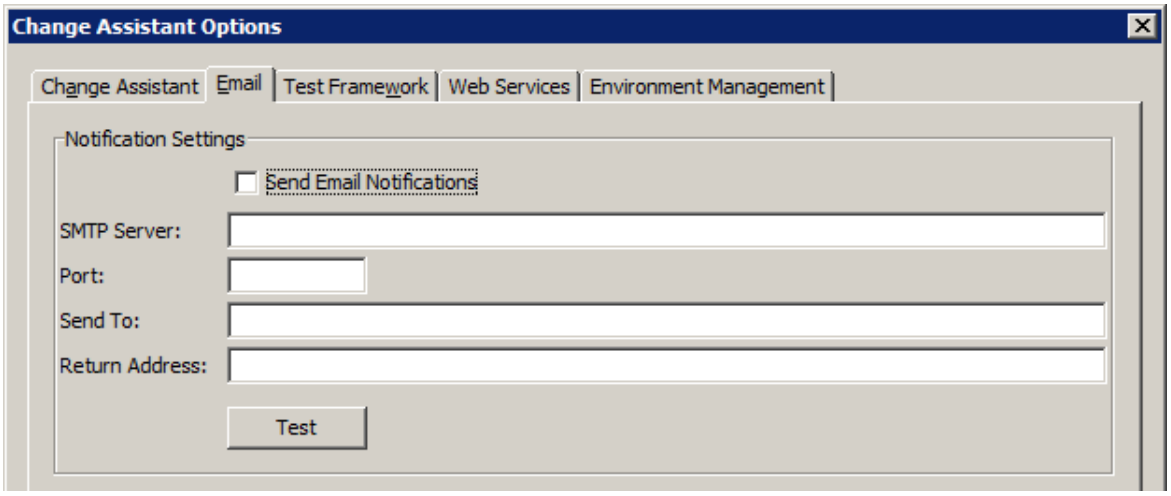
This field is required if more than one database is connected to the server. Contact your Integration Broker administrator or system administrator for the correct values.

Path to PTF client Enter or browse to select the path to the PeopleSoft Test Framework client installation.

See *PeopleTools 8.52: PeopleSoft Test Framework PeopleBook*

Task 13-2-3: Setting Email Options

Select Tools, Options, Email.

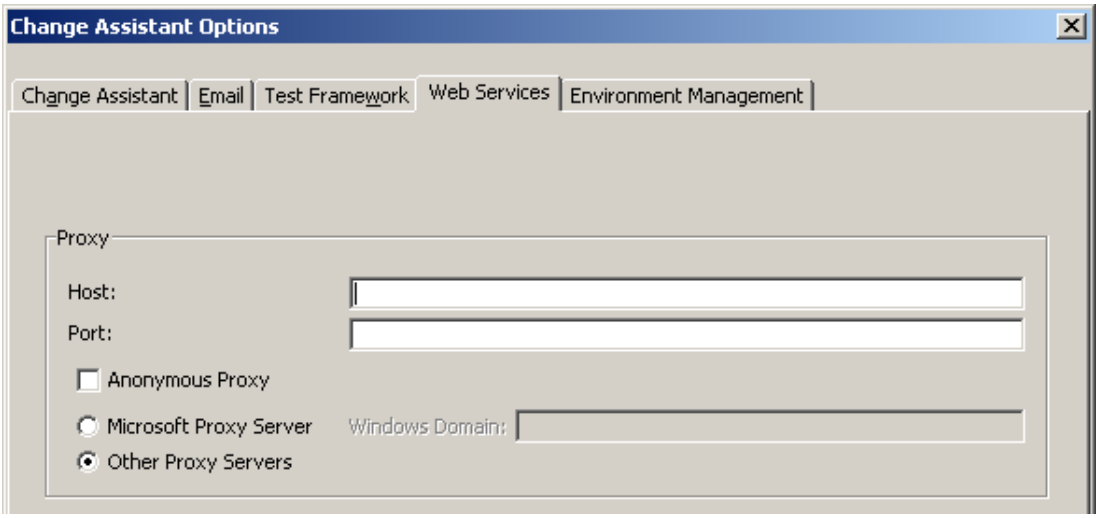


Email page on the Change Assistant Options dialog box

Send Email Notifications	Select this check box to receive email notifications if there are errors in the update process. Change Assistant also sends you a completion message when it encounters a *Stop* in the update process.
SMTP Server	Enter the SMTP mail server from which you receive the error or completion messages.
Port	Enter the port from which you want to access the email.
Send To	Enter the address to which you want the email sent.
Return Address	Enter the email address of the sender. Use this to identify who sent the notification.
Test	Click this button to validate that email is sent to the designated recipients and is working correctly

Task 13-2-4: Setting Web Services Options

Select Tools, Options, Web Services.

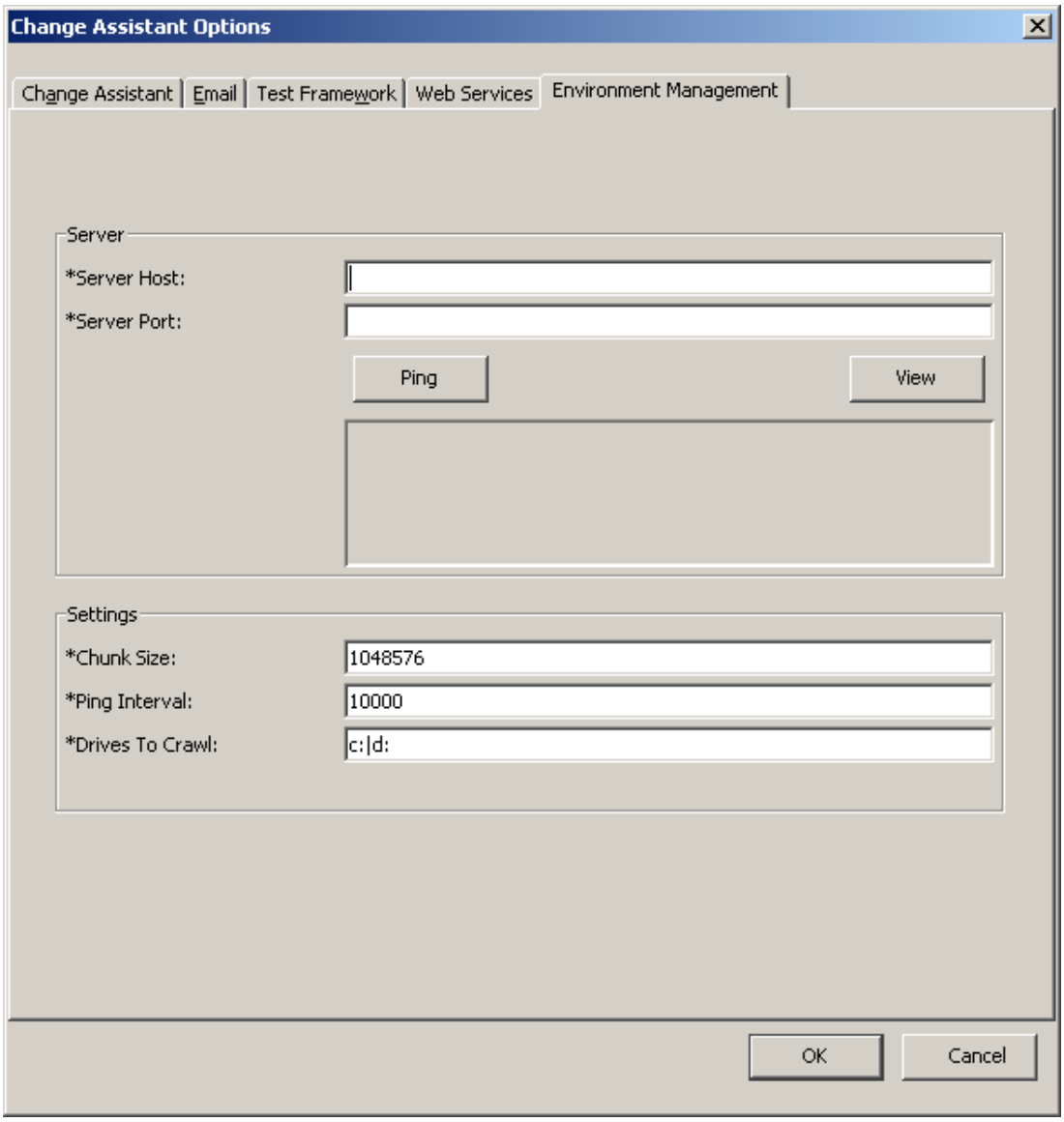


Web Services page on the Change Assistant Options dialog box

Host	(Optional) Enter the name of the proxy server if you want to run Change Assistant behind the firewall using a proxy server.
Port	(Optional) Enter the port number for the proxy server.
Anonymous Proxy	Indicates that you are using a proxy server that does not require authenticated connections.
Microsoft Proxy Server	Indicates that you are using a proxy server with Windows NT authentication.
Windows Domain	The domain to which you belong.
Other Proxy Servers	Indicates you are using non-Microsoft proxy servers.

Task 13-2-5: Setting Environment Management Options

Select Tools, Options, Environment Management.



Environment Management page on the Change Assistant Options page

***Server Host**	The host name of the server in which the Environment Management components reside.
***Server Port**	Indicates the port in which to connect to the Environment Management hub.
Ping (button)	Click to verify a valid server URL. If you see "Service is off" to the right of this button, then you must correct the server URL and ping again until you see "Service is on." This option is visible only if your display is set to Windows Classic style. To change the Windows display, select Programs, Control Panel, Display. Select the Appearance tab and choose Windows Classic style from the Windows and buttons drop-down list.
View (button)	Click to display the list of all PeopleSoft components discovered and registered in the Environment Management hub. **Note.** This option is visible only if your display is set to Windows Classic style.
***Chunk Size**	Used for deploying files during a software update. Default is 1024 * 1024 bytes. Typically this does not need to be changed unless there are a significant number of files greater that 1024 KB in a software update.
***Ping Interval**	Ping interval is in milliseconds for Change Assistant to contact the hub for new messages.
***Drives to Crawl**	Setting of drives to crawl to identify the configuration of the Change Assistant machine. Windows directories need to use the forward slash (/) character. Include your local drive in this setting so that Change Assistant can locate the SQL Query tool used for automating steps. Also include the path of the SQL Query tool.

Task 13-3: Exporting Jobs to XML, HTML, or Microsoft Excel Format

Change Assistant allows users to export jobs to XML, HTML, or Microsoft Excel file formats. Do this by selecting File, Export Job in Change Assistant. Then, enter the desired exported filename and select the desired file type format.

Task 13-4: Validating Change Assistant Settings

After you have set up and configured PeopleSoft Change Assistant and the Environment Management components, you should validate your PeopleSoft Change Assistant and environment settings.

PeopleSoft Change Assistant validates settings by:

- Locating valid SQL query tools required to run SQL scripts.
- Testing the Environment Management hub and ensuring that PeopleSoft Change Assistant can communicate with it.

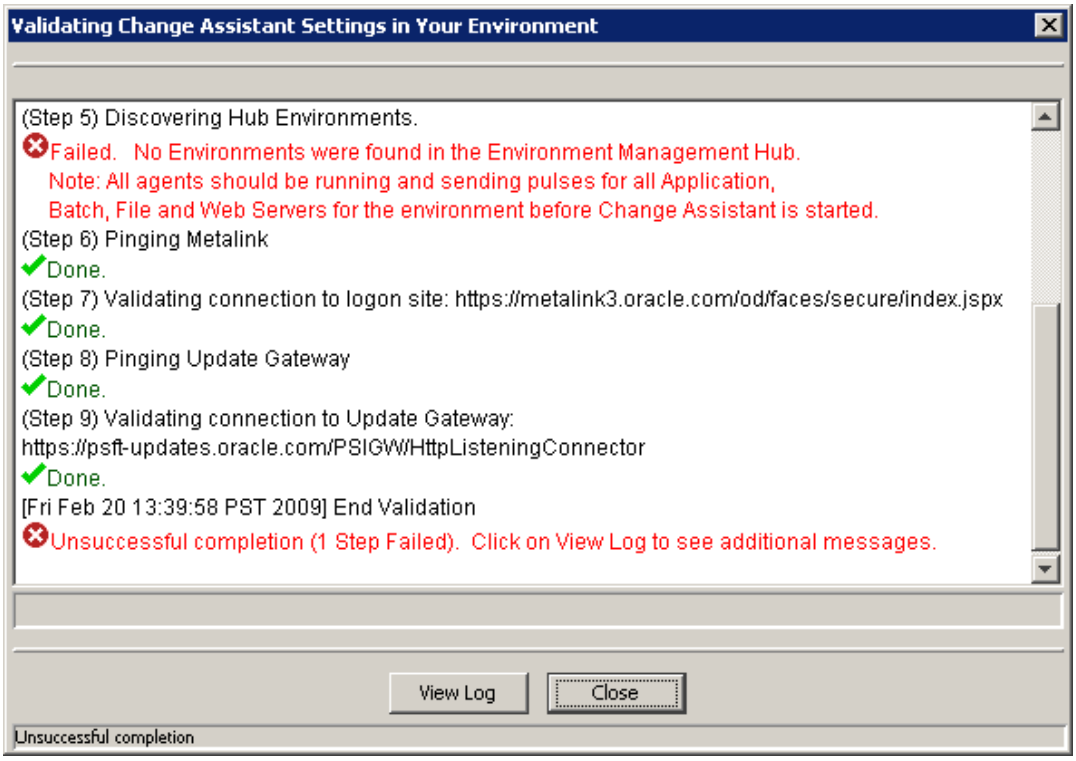
- Testing My Oracle Support and ensuring that PeopleSoft Change Assistant can communicate with it.

  PeopleSoft Change Assistant sends a ping to My Oracle Support and then tests the connection. In order for the validation to succeed, the machine where you have PeopleSoft Change Assistant installed must have the ping feature enabled.

You can also print a summary of your environment, which can facilitate the diagnosis of problems by Oracle Global Customer Support.

To validate your environment, select Tools, Options, Validate. Click Start Validation.

If any of the steps were unable to complete successfully, open the log file to determine the cause. This example shows a summary with both successful messages (“Done”) and unsuccessful (“Failed” or “Unsuccessful completion”):



Validating Change Assistant Settings in Your Environment

Note. If you use proxy servers, the system will ping those and prompt for proxy server user ID and password. In this case, the validation step numbers would be different from the example.

To review the log file, click the View Log button at the bottom of the screen. This example shows the first several lines of a log file:

validate_2009_2_20_13_39.log - Notepad

File Edit Format View Help

```
[Fri Feb 20 13:39:46 PST 2009] Begin Validation
output written to: C:\Program Files\PeopleSoft\Change
Assistant\validate\validate_2009_2_20_13_39.log
(Step 1) Creating a Summary of Your Environment
PS_HOME: C:\pt850\
Output Directory: C:\pt850_Output\
Staging Directory: C:\pt850_Staging\
Path: C:\Program Files\PeopleSoft\Change
Assistant\jre\bin;.;C:\WINDOWS\Sun\Java\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\pt850
\bin\client\winx86;C:\oracle\product\10.2.0\db_1
\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\apps\db\oracle102\bin;C:\Program
Files\Microsoft SQL Server\80\Tools\BINN;C:\bea\tuxedo9.1_VS2005_v2\bin
CLASSPATH: C:\Program Files\PeopleSoft\Change Assistant\changeassistant.jar;C:\Program
Files\PeopleSoft\Change Assistant\mx4j-jmx.jar;C:\Program Files\PeopleSoft\Change
Assistant\xercesImpl.jar;C:\Program Files\PeopleSoft\Change Assistant\xml-apis.jar;C:\Program
Files\PeopleSoft\Change Assistant\xalan_2_7_0.jar;C:\Program Files\PeopleSoft\Change
Assistant\serializer.jar;C:\Program Files\PeopleSoft\Change Assistant\commons-logging-
1.0.1.jar;C:\Program Files\PeopleSoft\Change Assistant\commons-httpclient-2.0-rc1.jar;C:\Program
Files\PeopleSoft\Change Assistant\commons-codec-1.1.jar;C:\Program Files\PeopleSoft\Change
Assistant\xmldb-api-20021118.jar;C:\Program Files\PeopleSoft\Change Assistant\xmldb-
common.jar;C:\Program Files\PeopleSoft\Change Assistant\xmldb-xupdate-20040205.jar;C:\Program
Files\PeopleSoft\Change Assistant\xindice-1.1b5-dev.jar;C:\Program Files\PeopleSoft\Change
Assistant\psemf.jar;C:\Program Files\PeopleSoft\Change Assistant\AbsoluteLayout.jar;C:\Program
Files\PeopleSoft\Change Assistant\log4j-1.2.8.jar;C:\Program Files\PeopleSoft\Change
Assistant\jxl.jar;C:\Program Files\PeopleSoft\Change Assistant\j2ee.jar
Current Working Directory: C:\Program Files\PeopleSoft\Change Assistant
Done.
(Step 2) Validating your SQL Query Tools
Found Microsoft SQL Query Tool at c:\Program Files\Microsoft SQL Server\80\Tools\Binn\OSQL.exe
Found Oracle SQL Query Tool at c:\Apps\db\oracle102\bin\sqlplus.exe
Done.  2 SQL Query Tools found.
(Step 3) Pinging Environment Management Hub
Pinging PLE-INFODEV-11
Done.
(Step 4) Connecting to Hub: http://PLE-INFODEV-11:80/PSEMHUB/hub
Done.
(Step 5) Discovering Hub Environments.
Failed.   No Environments were found in the Environment Management Hub.
```

Validation log

CHAPTER 14

Installing PeopleSoft Change Impact Analyzer

This chapter discusses:

- Prerequisites
- Installing PeopleSoft Change Impact Analyzer

Prerequisites

Oracle's PeopleSoft Change Impact Analyzer is a tool you can use to evaluate the effect of changes you make on your installation. PeopleSoft Change Impact Analyzer can help you monitor the impact a Change Package has on your system, as well as monitor the impact from other changes such as customizations.

Ensure that your system meets the following requirements before you begin this installation:

- PeopleSoft Change Impact Analyzer runs on Microsoft Windows platforms. For database platforms that do not run on Microsoft Windows, install PeopleSoft Change Impact Analyzer on the Windows client.
- You can install PeopleSoft Change Impact Analyzer from downloaded files as a standalone application, or as a part of your PeopleSoft PeopleTools installation. You can also install PeopleSoft Change Impact Analyzer as a part of the PeopleSoft Change Assistant installation, as mentioned in the previous chapter. These instructions assume you have installed PeopleSoft PeopleTools on the machine on which you want to run PeopleSoft Change Impact Analyzer, and have completed the PeopleSoft Change Assistant installation.
- You must install JDBC drivers for connectivity to your database platform. PeopleSoft Change Impact Analyzer uses Type 4 JDBC drivers by default.

  You can normally obtain JDBC drivers from your RDBMS vendor. Search the vendor's web site or contact the vendor for information.

See Also

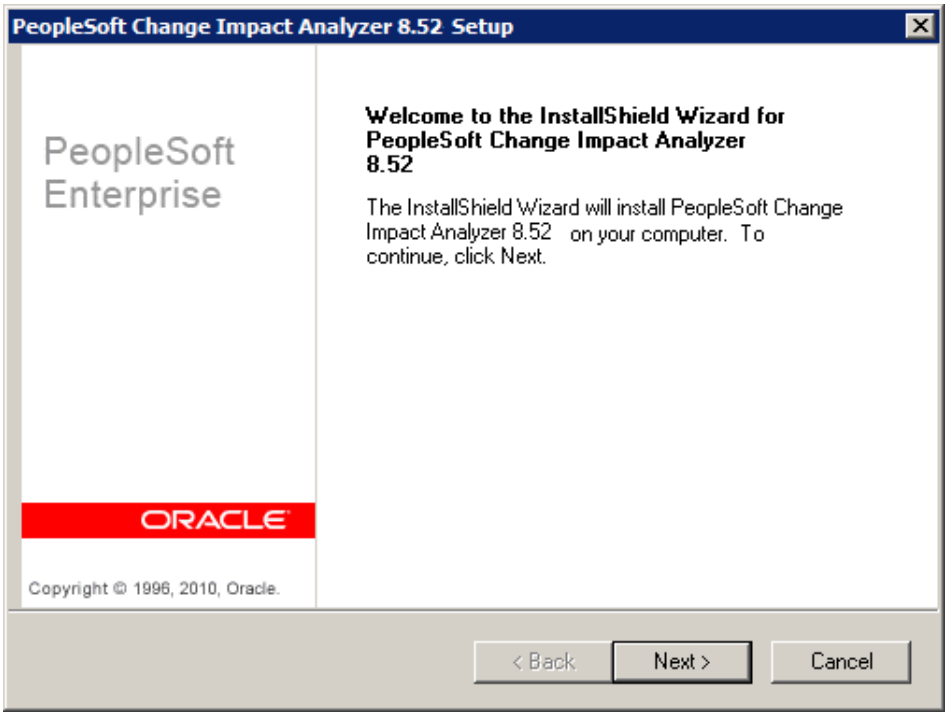
PeopleTools 8.52: Change Impact Analyzer PeopleBook

Task 14-1: Installing PeopleSoft Change Impact Analyzer

To install PeopleSoft Change Impact Analyzer and Rules Editor:

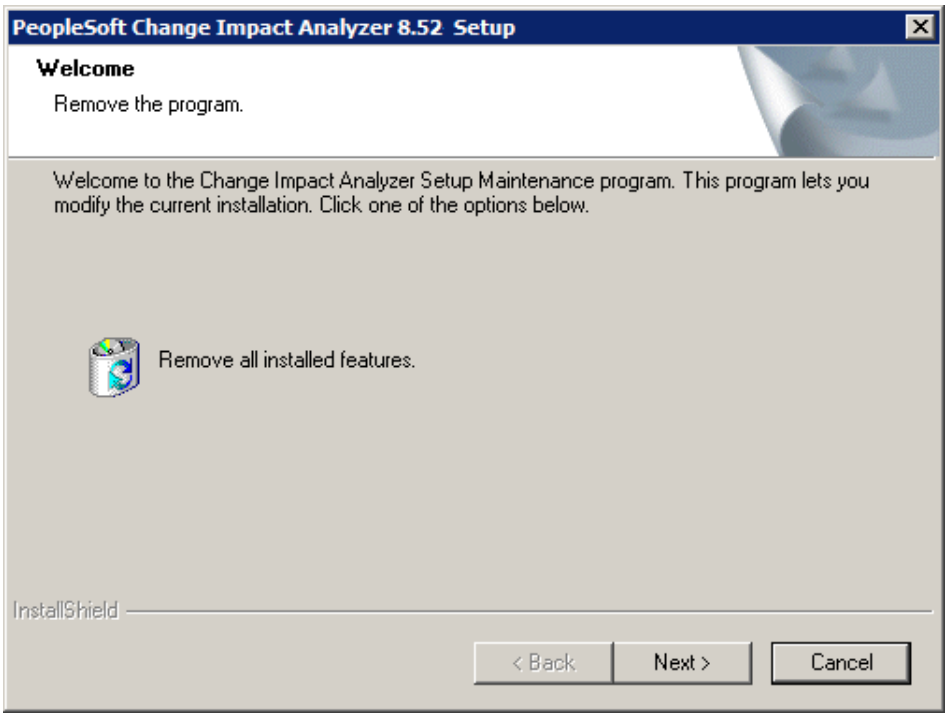
1. From the *PS_HOME*\setup\PsCIA directory, run `setup.exe`.

   A Welcome to the InstallSheld Wizard for PeopleSoft Change Impact Analyzer 8.52 window appears.



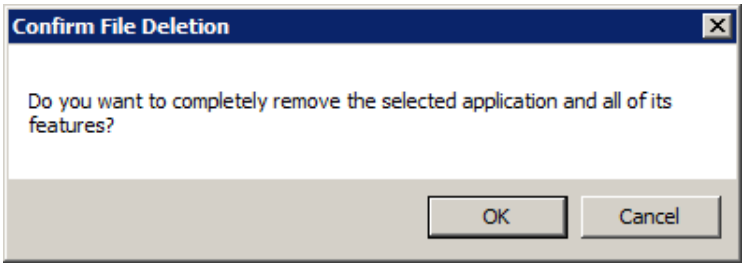
PeopleSoft Change Impact Analyzer Welcome window

2. If there is an existing installation of PeopleSoft Change Impact Analyzer on your machine, a screen appears telling you to remove it.



PeopleSoft Change Impact Analyzer Setup window to remove all installed features

Click Next, and then click OK on the Confirm File Deletion dialog box, with the question “Do you want to completely remove the selected application and all of its features?”



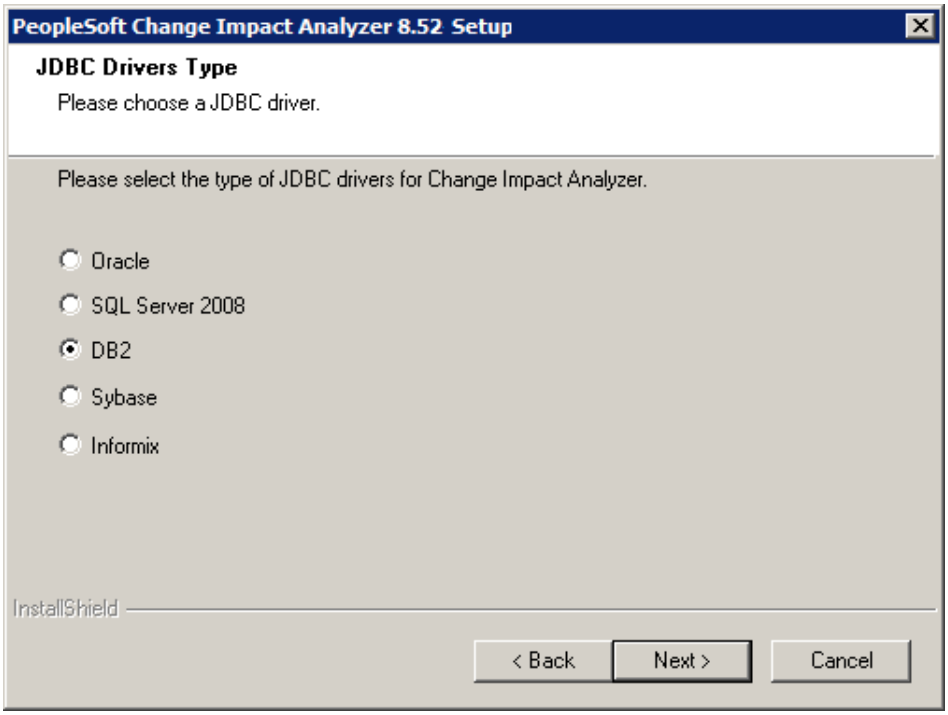
Confirm File Deletion dialog box for the PeopleSoft Change Impact Analyzer Installation

3. Run *PS_HOME*\setup\PsCIA\`setup.exe` again.

   The Welcome window shown in step 1 appears.

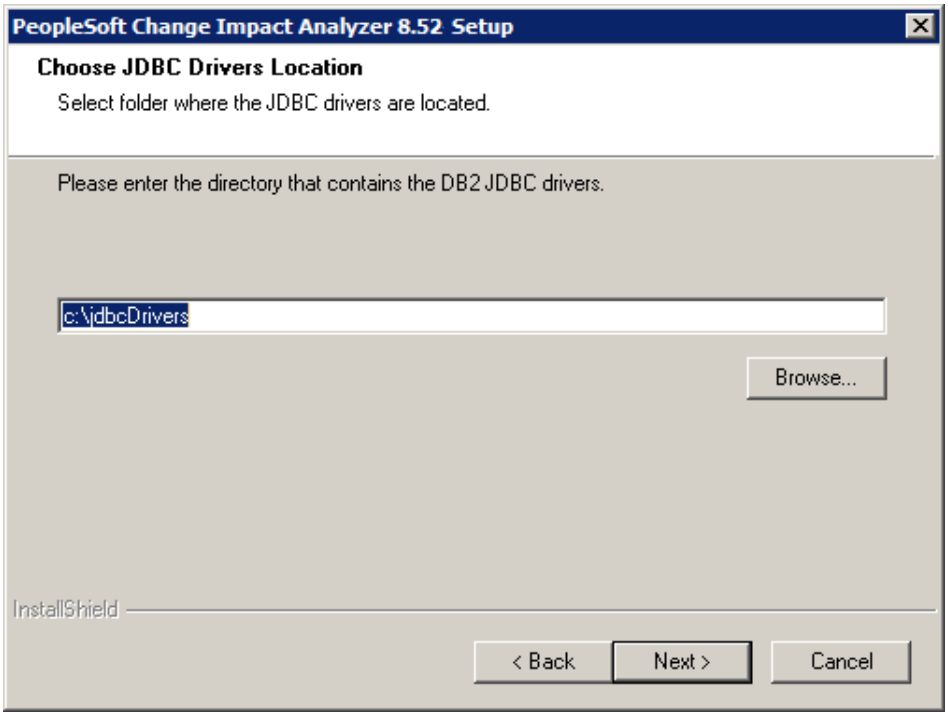
4. Click Next on the Welcome window.
5. Select the JDBC drivers for your database platform.

   In this example the option DB2, for DB2 z/OS and DB2/LUW, is selected.



PeopleSoft Change Impact Analyzer JDBC Drivers Type window

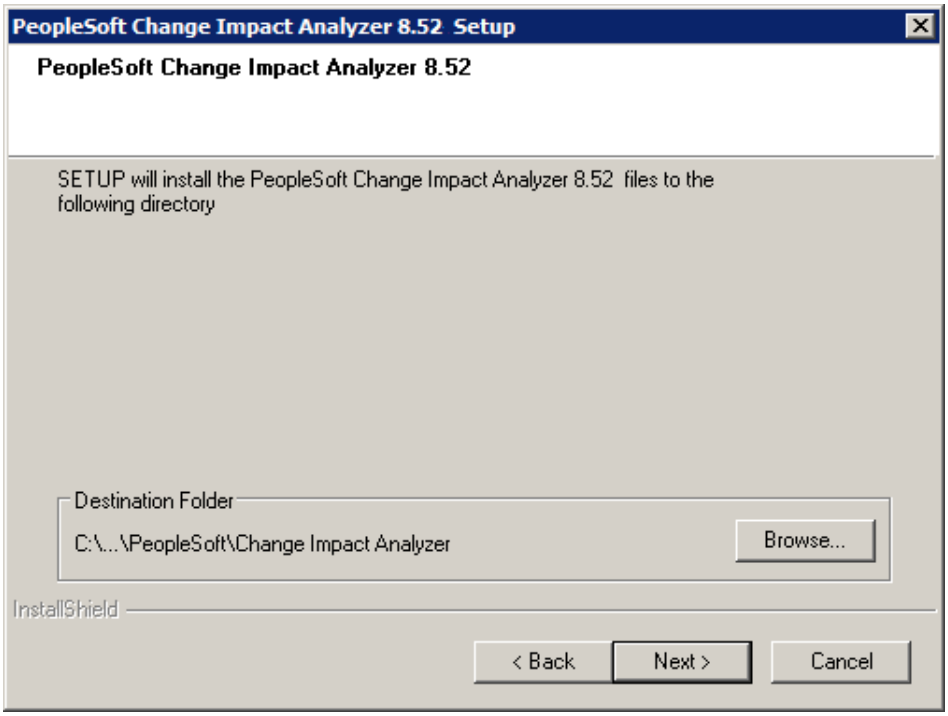
6. Browse to select the directory where the JDBC drivers are installed, or accept the default location.



PeopleSoft Change Impact Analyzer Setup Choose JDBC Drivers Location window

7. Browse to select the directory where PeopleSoft Change Impact Analyzer will be installed, or accept the default directory.

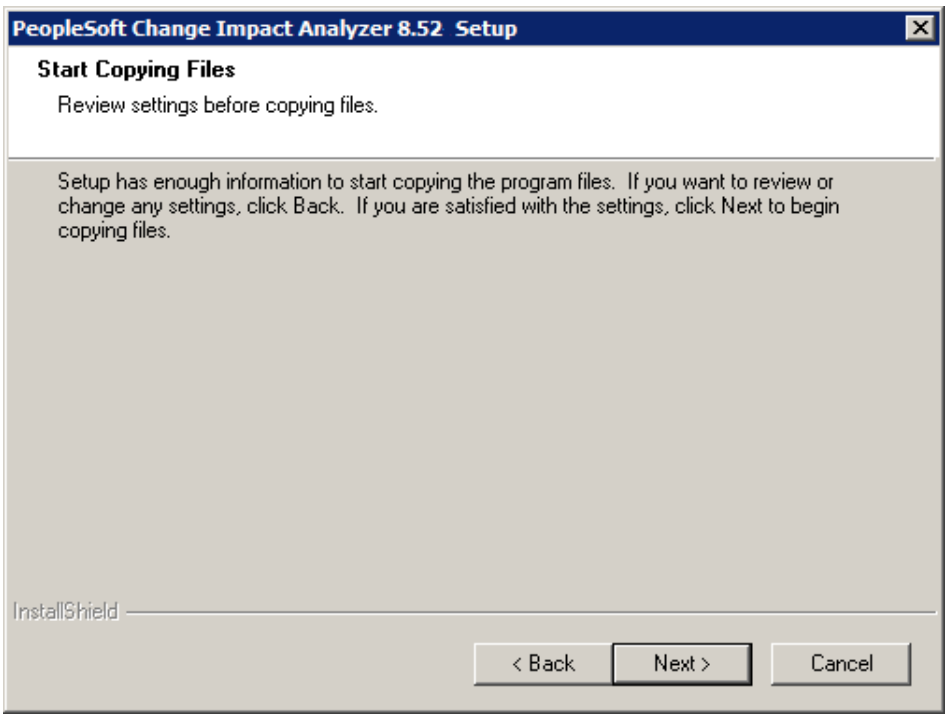
   The default directory, which is truncated in this example, is C:\Program Files\PeopleSoft\Change Impact Analyzer.



Specifying the PeopleSoft Change Impact Analyzer destination folder

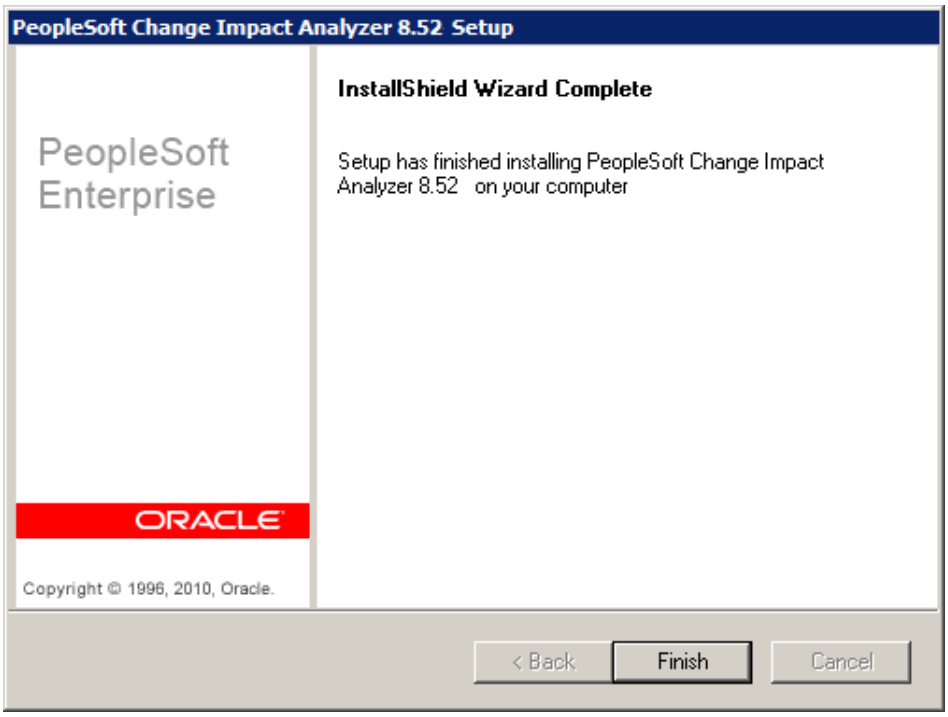
8. Click Back to review or change any settings.

   If you are satisfied with your settings, click Next to begin copying files to the designated directory.



PeopleSoft Change Impact Analyzer Start Copying Files window

9. Click Finish to exit when the installation is complete, on the InstallShield Wizard Complete window.



PeopleSoft Change Impact Analyzer Setup Complete window

10. To start PeopleSoft Change Impact Analyzer, select Start, Programs, PeopleSoft 8.52, Change Impact Analyzer.

CHAPTER 15

Installing and Configuring Software for Crystal Reports

This chapter discusses:

- Understanding Crystal Reports Software Installation and Configuration
- Determining the Crystal Reports Runtime Environment
- Obtaining SAP BusinessObjects Enterprise and Crystal Reports Software
- Installing Crystal Reports 2008
- Installing SAP BusinessObjects Enterprise XI 3.1
- Migrating your SAP BusinessObjects Enterprise XI 3.1 Installation to a New Version of PeopleTools
- Administering and Using SAP BusinessObjects Enterprise XI 3.1
- Removing the Integrated SAP BusinessObjects Enterprise XI 3.1 Installation
- Converting Crystal Reports

Understanding Crystal Reports Software Installation and Configuration

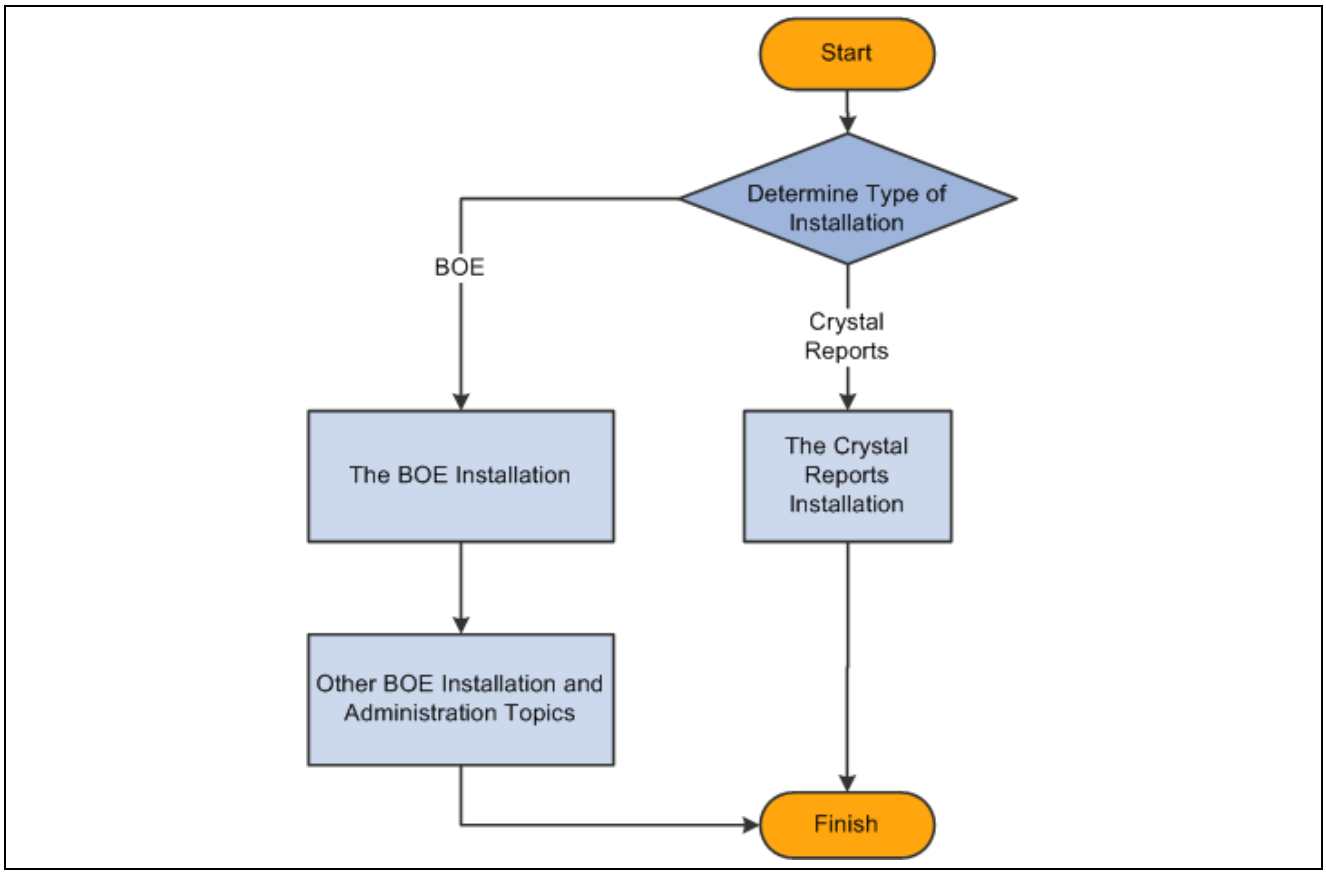
This chapter addresses the installation and administration of a Crystal Reports environment. Depending on the type of installation that you have, some parts of this chapter may not be relevant to you. The installation of SAP Crystal Reports or BusinessObjects Enterprise XI 3.1 is optional for PeopleSoft PeopleTools 8.52.

As of June 2011, Oracle no longer sells SAP Crystal Reports or SAP BusinessObjects Enterprise licenses for new customers. Customers who purchased PeopleSoft software prior to July 2011 will retain their license to SAP Crystal Reports and SAP BusinessObjects Enterprise products. For more information, consult Oracle Global Customer Care. Crystal Report definition files (.RPT files) will continue to be delivered to new and existing customers.

The chapter is divided into sections. Within each section are parts that provide informative background information or describe installation and administration tasks.

The following flowchart describes how to use the information in this chapter to install and configure the software that you need to run Crystal Reports on your PeopleSoft system:

Note. In this flowchart, “BOE” refers to SAP BusinessObjects Enterprise XI 3.1, and “Crystal Reports” refers to Crystal Reports 2008.



Using this chapter to install the software for Crystal Reports

See Also

PeopleTools 8.52: Crystal Reports for PeopleSoft PeopleBook

My Oracle Support, Certifications

Task 15-1: Determining the Crystal Reports Runtime Environment

You can use SAP Crystal Reports 2008 to create and edit report definitions for your PeopleSoft application. As delivered, PeopleSoft applications are configured to work with the Crystal Reports 2008 runtime environment.

If you are using PeopleSoft PeopleTools 8.50 or higher *and* are using PeopleSoft applications at Release 9 or higher, you can optionally use the SAP BusinessObjects Enterprise XI 3.1 runtime environment to run and view your reports. You use the Crystal Reports 2008 product to create and edit report definitions.

Note. For the exact version of Crystal Reports 2008 and SAP BusinessObjects Enterprise XI 3.1 supported for your environment, see the PeopleSoft Certification information on My Oracle Support.

For any particular PeopleSoft application you can use either Crystal Reports 2008 or SAP BusinessObjects Enterprise XI 3.1—you cannot run a “mixed” environment where some reports are run using SAP Crystal Reports 2008 and some reports are run using SAP BusinessObjects Enterprise XI 3.1.

If you decide to use SAP BusinessObjects Enterprise XI 3.1, you can run a PeopleSoft-supplied conversion program to convert report definitions from Crystal 9 format to Crystal Reports 2008 format.

The advantages of SAP BusinessObjects Enterprise XI 3.1 (compared to SAP Crystal Reports 2008) are:

- Runs on other operating systems (AIX, HP-UX, Linux, Solaris) besides Microsoft Windows
- Runs on a scalable server platform; that is, you can scale across machines
- Users can view interactive reports over the web (such as search, filter, or table of contents).

The restrictions of the PeopleSoft Integration with SAP BusinessObjects Enterprise XI 3.1 are:

- The PeopleSoft Process Scheduler that you use to run reports on the SAP BusinessObjects Enterprise XI 3.1 server can run only on one of the operating systems that SAP BusinessObjects Enterprise XI 3.1 runs on.
- You need to convert all your reports from Crystal 9 format to Crystal 2008 format to run them using SAP BusinessObjects Enterprise XI 3.1.
- The PeopleSoft Integration does not support some platforms that a standalone SAP BusinessObjects Enterprise XI 3.1 installation supports.

  That is, not all platforms that SAP BusinessObjects Enterprise XI 3.1 runs on were tested in the integrated SAP BusinessObjects Enterprise XI 3.1/PeopleSoft solution. For example, while standalone SAP BusinessObjects Enterprise XI 3.1 supports Tomcat as a web server, the integrated SAP BusinessObjects Enterprise XI 3.1/PeopleSoft solution does not.

The advantages of using the Crystal Reports 2008 runtime are:

- Works the same as previous releases of PeopleSoft PeopleTools
- Requires little configuration and administration
- Run to Crystal Reports 2008 from Windows Query Designer is available
- Does not require a database management system for report management
- Report output is smaller in size compared to SAP BusinessObjects Enterprise XI 3.1, as the latter contains more internal information about the report.

  The observed difference in tests indicates that report output generated from SAP BusinessObjects Enterprise XI 3.1 will be 30 to 40% larger. This may vary by report and by the amount of business data in the report.

One restriction on SAP Crystal Reports 2008 is that it runs only on Microsoft Windows.

Task 15-2: Obtaining SAP BusinessObjects Enterprise and Crystal Reports Software

This section discusses:

- Understanding the SAP BusinessObjects Enterprise and Crystal Reports Software Distribution
- Obtaining the Software from Oracle Global Customer Care
- Obtaining the Software from SAP BusinessObjects

Understanding the SAP BusinessObjects Enterprise and Crystal Reports Software Distribution

Oracle certifies specific versions of SAP Crystal Reports and BusinessObjects Enterprise XI 3.1 to work with specific versions of PeopleSoft PeopleTools. See the Certifications section of My Oracle Support for specific information about the correct releases for your situation.

See My Oracle Support, Certifications.

As mentioned, as of July 2011, Oracle no longer sells SAP Crystal Reports or SAP BusinessObjects Enterprise licenses for new customers. This section provides more information on how this affects new and existing customers.

Existing customers are those who licensed PeopleSoft software prior to July 1, 2011.

Existing customers can contact Oracle Global Customer Care to gain access at no charge to media pack that were previously available from Oracle, which contains the SAP BusinessObjects Enterprise and Crystal Reports software that you need (see the section Obtaining Software from Oracle Global Customer Care below).

New customers are those who license PeopleSoft software after July 1, 2011.

In order to obtain the versions certified by Oracle for a PeopleSoft PeopleTools release you must license and obtain the software directly from SAP/BusinessObjects (see the section Obtaining Software from SAP BusinessObjects below).

Task 15-2-1: Obtaining the Software from Oracle Global Customer Care

Oracle Global Customer Care will make available to you a media pack of zip files that contain the SAP Crystal Reports and BusinessObjects Enterprise XI 3.1 software that you will need, as follows:

- SAP Crystal Reports 2008 SP3
- SAP Crystal Reports 2008 SP3 .NET Redistributable Runtime
- SAP BusinessObjects Enterprise XI 3.1 SP3
- SAP BusinessObjects Enterprise XI 3.1 SP3 Integration Kit for PeopleSoft
- SAP BusinessObjects Enterprise XI 3.1 SP3 Report Migration Files

The directory where you save these files is referred to in this documentation as *BOE_INSTALL*.

1. Extract the files into *BOE_INSTALL*.
2. If it is necessary to transfer the files to a UNIX computer using FTP, you must change the permissions to make them executable (using the chmod +x command, for example).

Task 15-2-2: Obtaining the Software from SAP BusinessObjects

Design Software

In order to create Crystal report definitions (and modify delivered Crystal report definitions) you will need to license Crystal Reports 2008.

Be sure to obtain a Service Pack certified by Oracle for PeopleSoft PeopleTools.

Runtime Software

In order to run Crystal reports with PeopleTools Process Scheduler using the Crystal Print Engine you will need to download from SAP Crystal Reports 2008 .NET redistributable runtime.

Be sure to obtain a Service Pack certified by Oracle for PeopleSoft PeopleTools installations.

In order to run Crystal reports with PeopleTools Process Scheduler using BusinessObjects Enterprise XI 3.1 with PeopleSoft PeopleTools you will need to download:

- SAP BusinessObjects Enterprise XI 3.1
- SAP BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft

Be sure to obtain a Service Pack certified by Oracle for PeopleSoft installations.

In order to proceed with the installation and configuration tasks in this chapter, download the installation files that you get from SAP to a directory on your machine, referred to in this documentation as *BOE_INSTALL*. Be sure to obtain all the necessary files for your installation.

Use these guidelines to obtain the software from SAP. Be aware that the navigation on the SAP web site may change.

1. Go to the SAP Market Place web site:

   https://websmp105.sap-ag.de/~SAPIDP/002006825000000234912001E
2. Select SAP Support Portal*.
3. Enter the user ID and password for your account.

   Note. You may be prompted to enter the credentials more than once.
4. From the tabs at the top, select Software Downloads, Installation and Upgrades.
5. Select A - Z Index from the links on the left.
6. To download the base software:
   a. Select “B”.
   b. Select the links for SBOP BI platform (former SBOP Enterprise), BOBJ EnterpriseXI 3.1, Installation.
7. To download the integration kit:
   a. Select “I”.
   b. Select the links for SBOP INTGR. FOR PSFT, BOBJ INTGR. FOR PSFT XI 3.1, Installation.
8. Select the operating system platform on which you are installing.
9. Select the Downloads tab, and then select the options for the appropriate version to download.
10. Download all the required files.
11. Extract the files into *BOE_INSTALL*.
12. If it is necessary to transfer the files to a UNIX computer using FTP, you must change the permissions to make them executable (using the chmod +x command, for example).

Task 15-3: Installing Crystal Reports 2008

This section discusses:

- Understanding the Crystal Reports 2008 Installation
- Installing Crystal Reports 2008
- Installing Crystal Reports 2008 .NET Runtime

Understanding the Crystal Reports 2008 Installation

If you choose to use Crystal Reports to design reports on a Windows-based workstation (also known as the PeopleTools Development Environment), you must install the SAP Crystal Reports 2008 application. Process Scheduler servers that will be used to run Crystal Reports do not require the Crystal Reports 2008 Application to be installed, but do require that the Crystal Reports 2008 .NET Runtime be installed. Upon configuration of the Process Scheduler domain, the required PeopleSoft/Crystal Runtime integration will be configured in order to support the running of PeopleSoft Crystal Reports processes.

Note. Although some versions of Crystal Reports include web server applications such as Web Component Server, they are not tested, certified, or supported by Oracle for the PeopleSoft installation. Consult My Oracle Support for the current certification information for Crystal Reports 2008.

See Also

PeopleTools 8.52: Crystal Reports for PeopleSoft PeopleBook, "Using Crystal Reports 2008"

Task 15-3-1: Installing Crystal Reports 2008

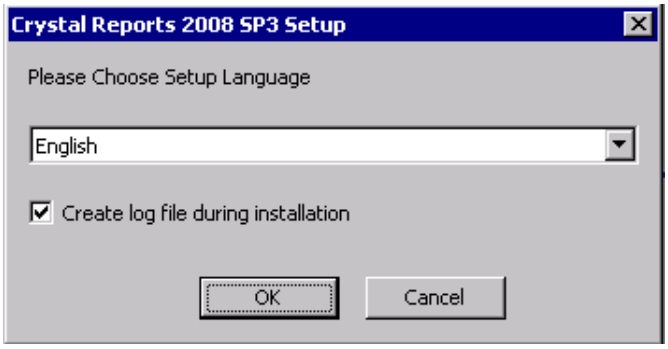
This section assumes that you downloaded the necessary files to a directory referred to here as *BOE_INSTALL*. You must log on to the Microsoft Windows machine as a user included in the Administrator group.

See Obtaining SAP BusinessObjects and Crystal Reports Software.

To install Crystal Reports 2008:

1. Change directory to *BOE_INSTALL* and run `setup.exe`.
2. Select the setup language.

   Select the option to Create a log file during installation if desired, and then click OK.

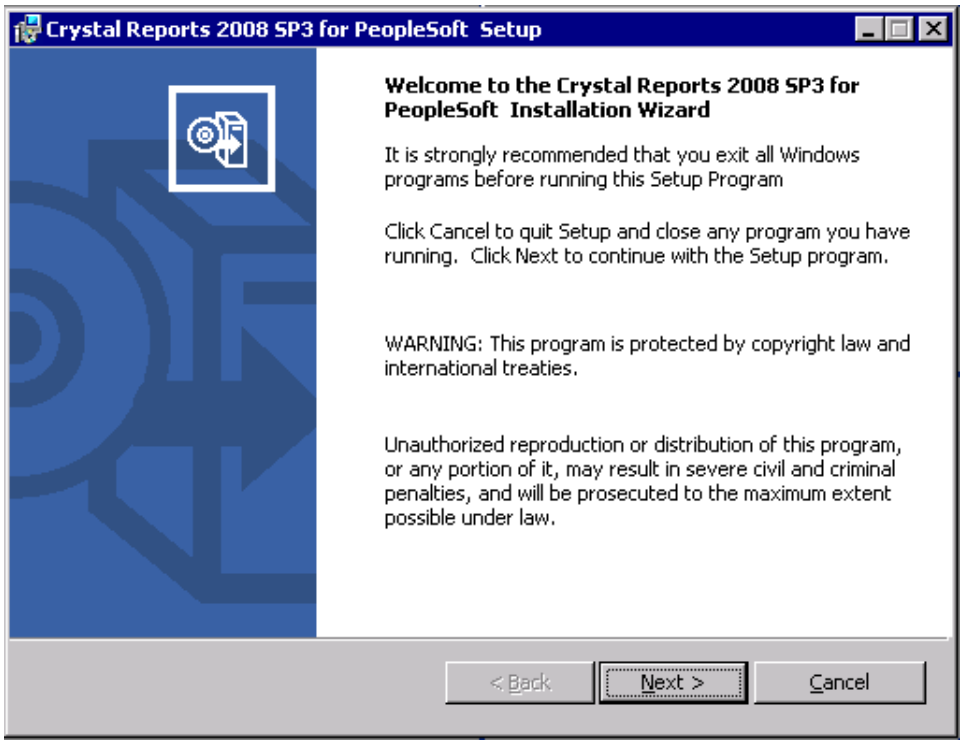


Crystal Reports 2008 Setup dialog box

   The Welcome window appears.

3. Click Next.

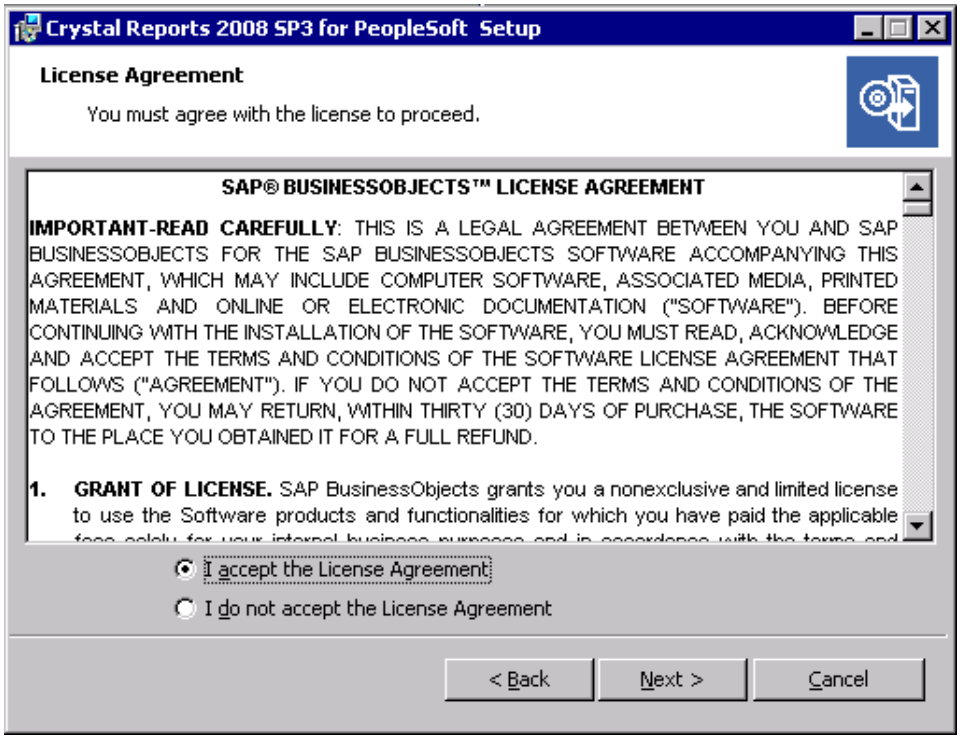
   The window includes the recommendation to exit all Windows programs before running the setup.



Crystal Reports 2008 Setup Welcome window

4. Select the I accept the License Agreement radio button and click Next.

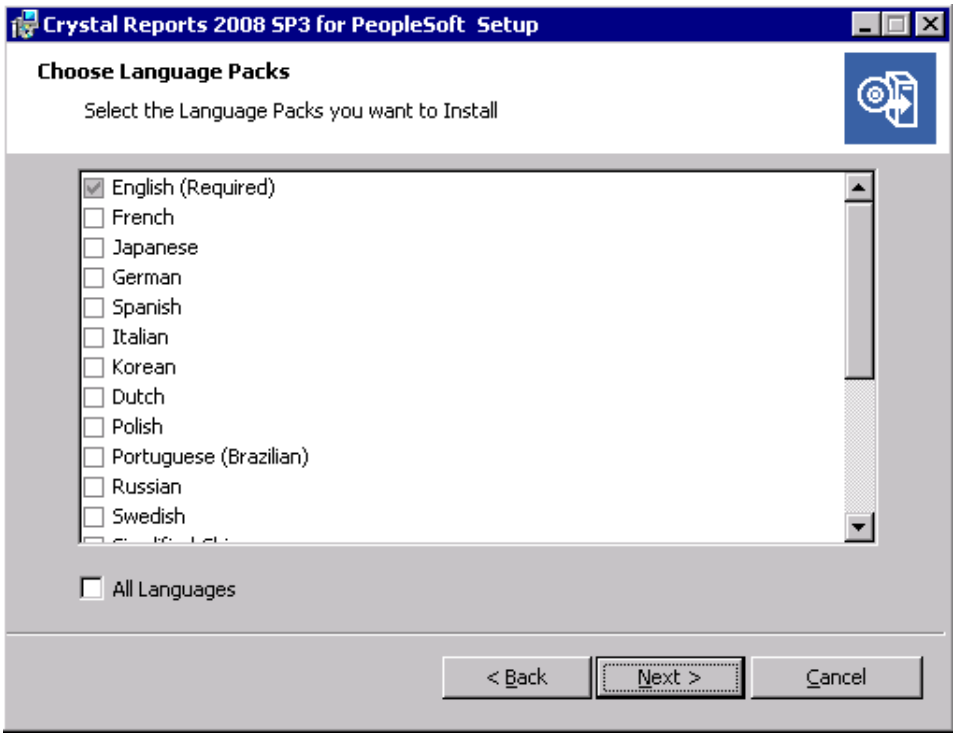
   You must agree with the SAP BusinessObjects license agreement to proceed.



Crystal Reports 2008 Setup License Agreement window

5. Select the languages that you want to install and click Next.

English is required.

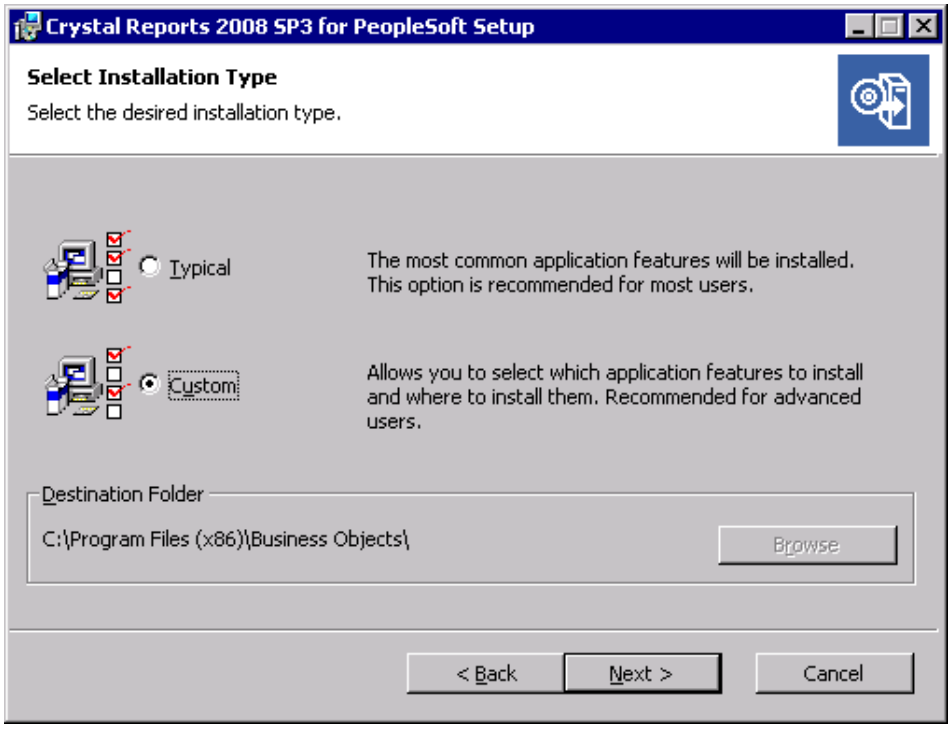


Crystal Reports 2008 Setup Choose Language Packs window

6. Select the Custom option and click Next.

   If necessary, use the Browse button to set your destination folder.

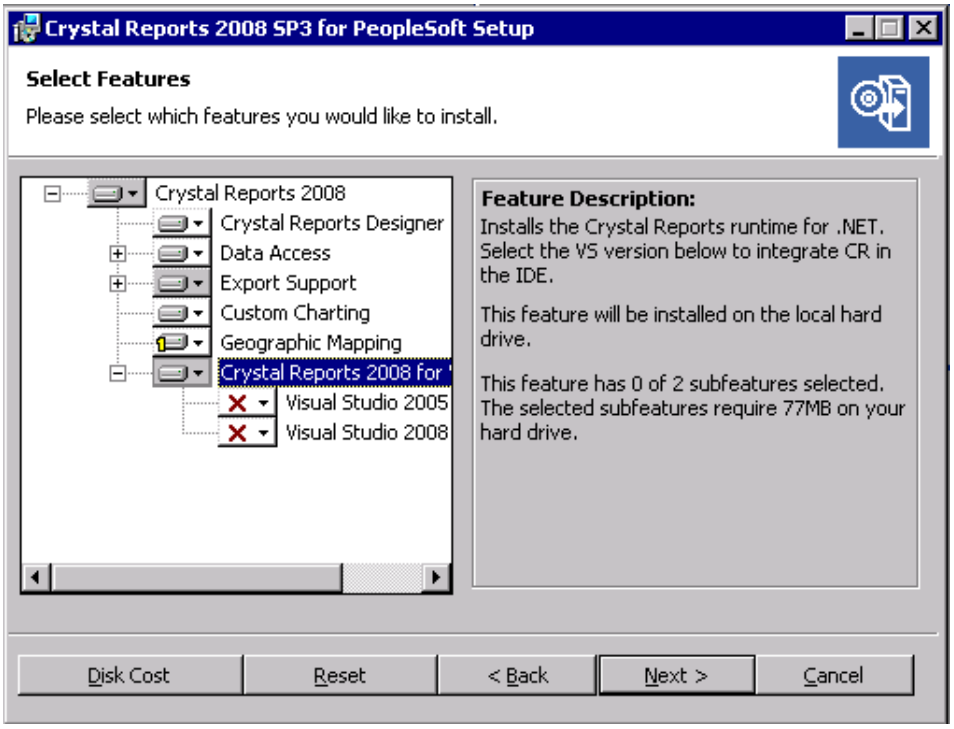
Note. If a Business Objects product is already installed, the destination folder will point to that and cannot be changed.



Crystal Reports 2008 Setup Select Installation Type window

7. On the Select Features window, under Crystal Reports 2008 for Visual Studio, clear all subfeatures under it, and then click Next.

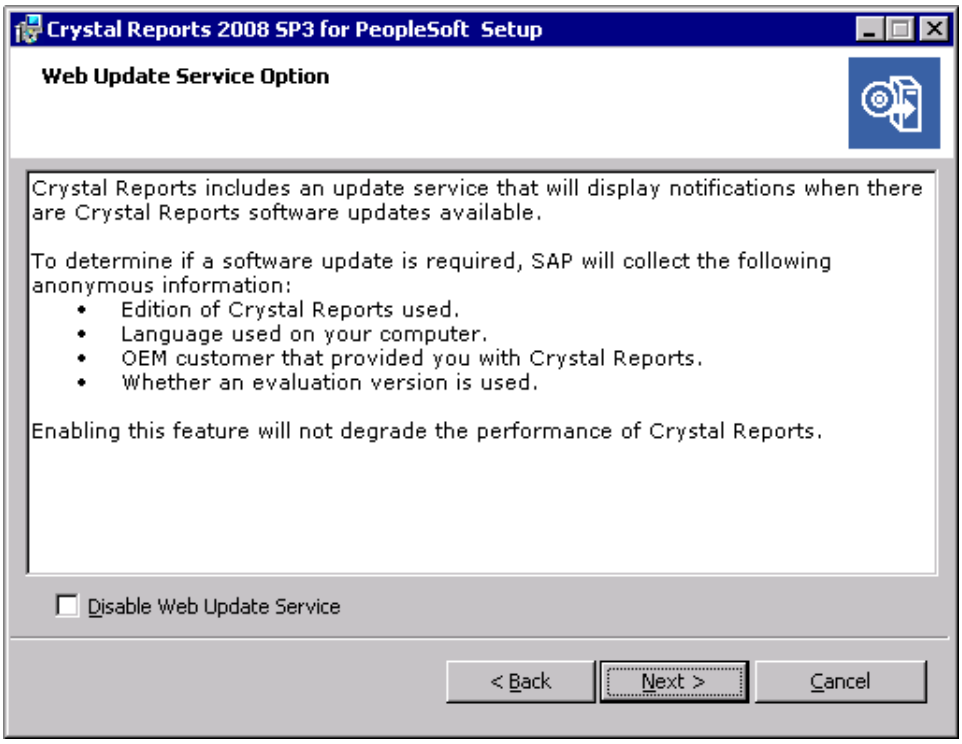
Note. Make sure that the feature “Crystal Reports 2008 for Visual Studio” is selected, only deselecting the subfeatures under it, as shown in the example.



Crystal Reports 2008 Setup Select Features window

8. Select the option to disable the Web Update Service if desired on the Web Update Service Option window, and then click Next.

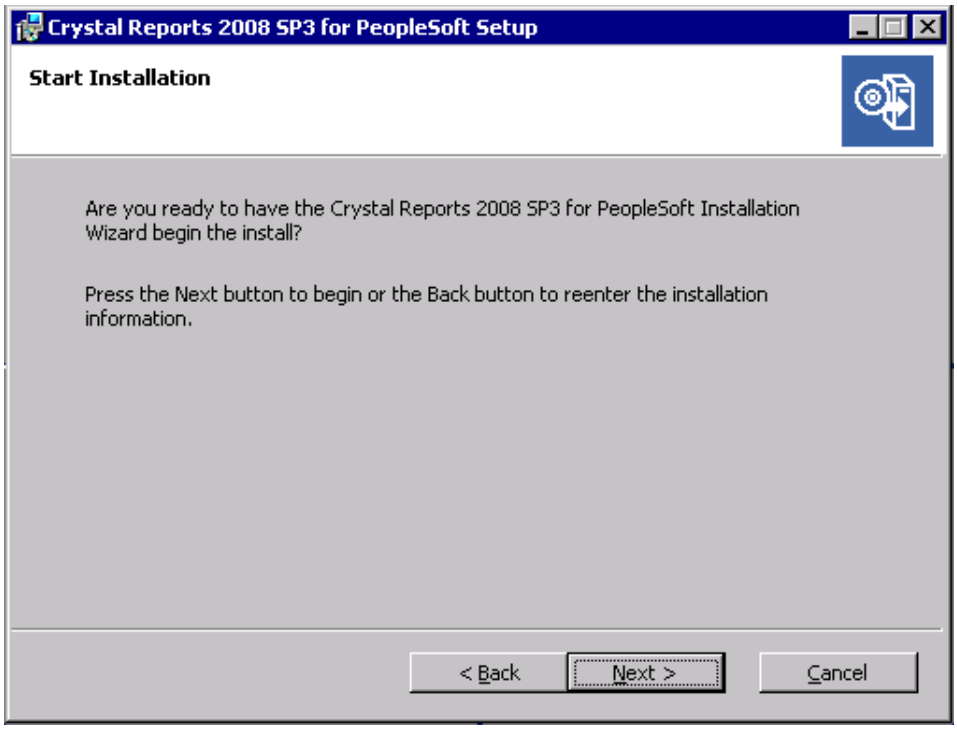
   The information in this example explains that the update service offers notification of Crystal Reports software updates, and gives privacy information.



Crystal Reports 2008 Setup Web Update Service Option window

9. Click Next to begin the installation.

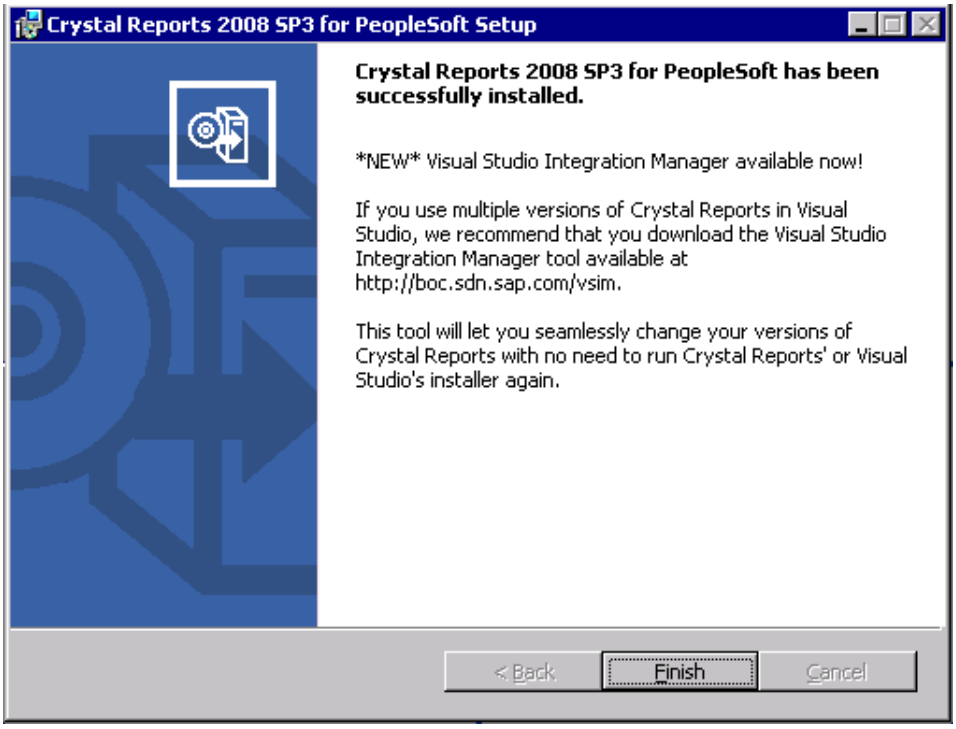
   Click Back to go to a previous window to change the installation information.



Crystal Reports 2008 Setup Start Installation window

10. Click Finish to exit the installation window.

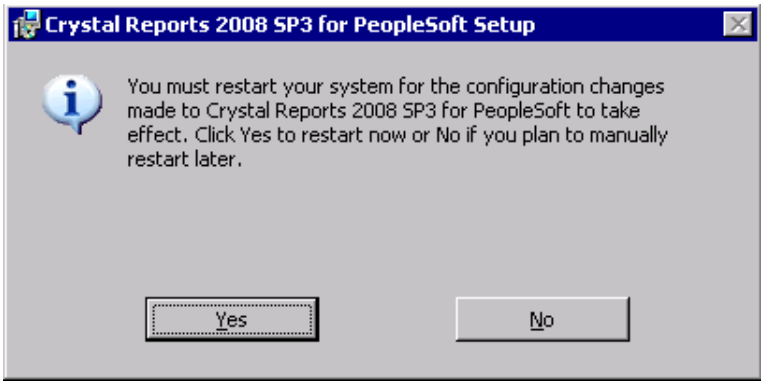
    You must reboot your machine to complete the installation.



Crystal Reports 2008 Setup Successful Installation window

11. Click Yes or No when asked whether to restart your machine.

    The dialog box includes the information that you may restart now or later.



Crystal Reports 2008 Setup restart message

Task 15-3-2: Installing Crystal Reports 2008 .NET Runtime

Before installing SAP Crystal 2008 .NET Runtime, read this prerequisite information. SAP Crystal 2008 .NET Runtime requires Microsoft .NET Framework 2.0. Follow the instructions in the task “Installing Products for PS/nVision” to install the Microsoft .NET Framework version 3.5 if not already installed on the machine, as this version includes the .NET 2.0 Framework.

See "Setting Up Process Scheduler for Windows," Installing Products for PS/nVision.

To install SAP Crystal Reports 2008 .NET Runtime:

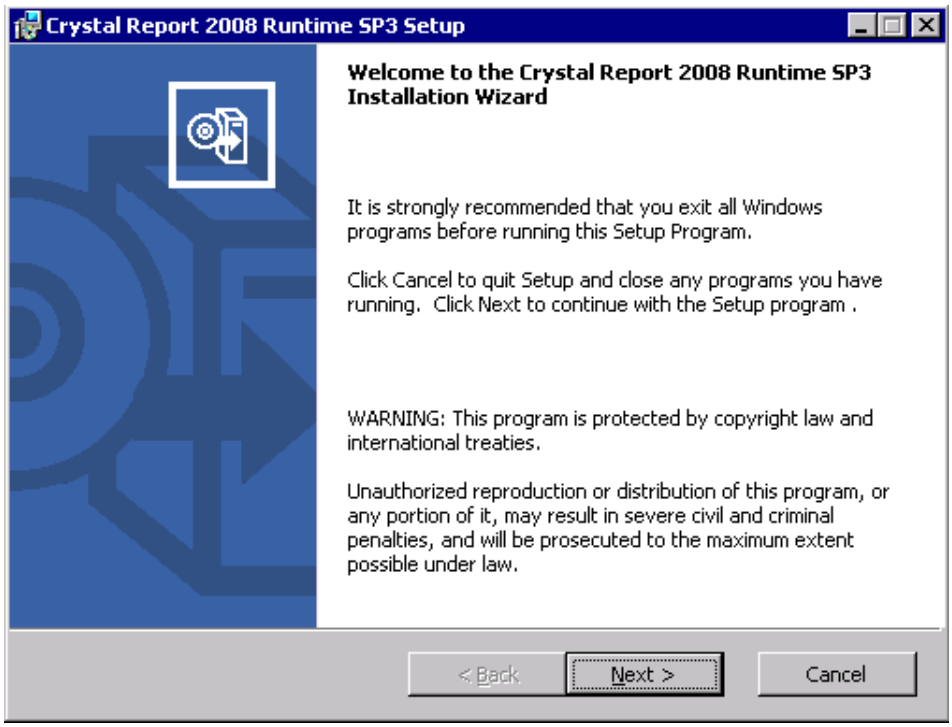
1. Change directory to *BOE_INSTALL* and extract the contents of the Crystal 2008 Redistributable Runtime Zip file to this directory.

2. Run the installer .exe file, for example, `CRRuntime_12_3_mlb.exe`.

   The Welcome window appears.

3. Click Next.

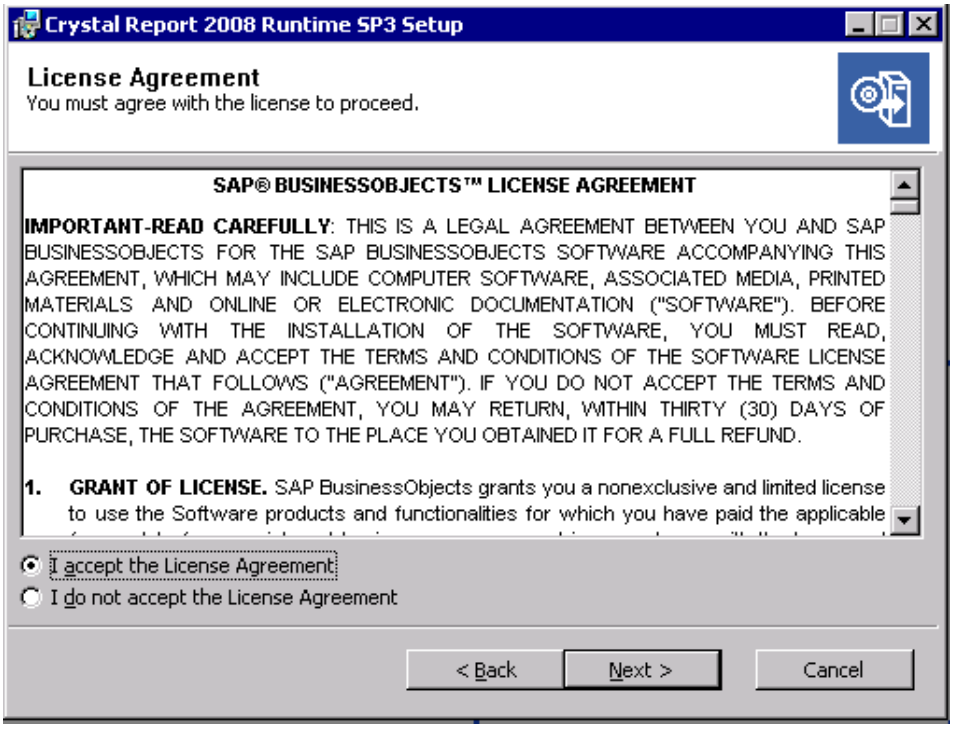
   The window includes the recommendation to exit all Windows programs before running the setup program.



Crystal Reports 2008 Runtime Setup Welcome window

4. Select the I accept the License Agreement option and click Next.

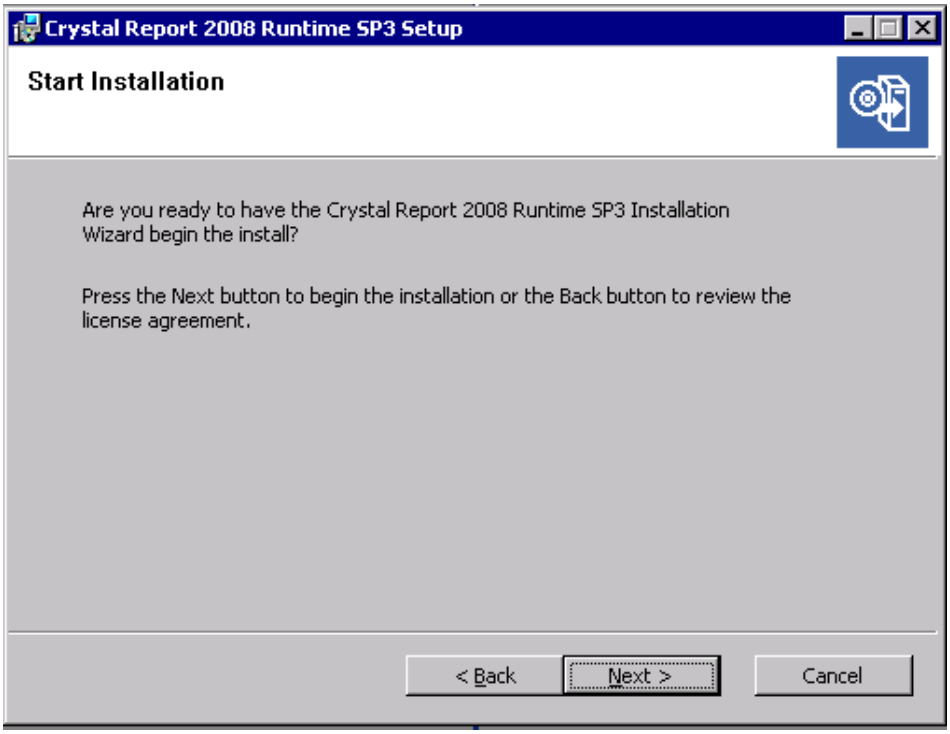
   You must accept the SAP BusinessObject license agreement to proceed.



Crystal Reports 2008 Runtime Setup License Agreement window

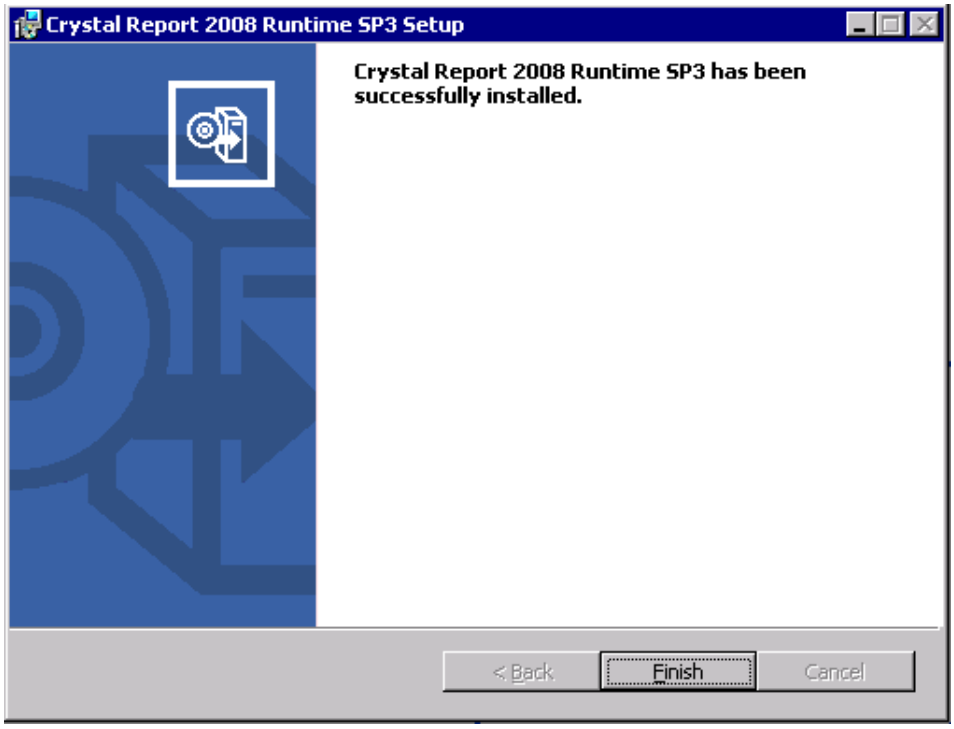
5. Click Next to begin the installation.

   Click Back to go to a previous window to change the installation information.



Crystal Reports 2008 Runtime Setup Start Installation window

6. Click Finish to exit the installation window.



Crystal Reports 2008 Runtime Setup successful installation window

Note. You will need to convert all your existing custom Crystal Reports to Crystal Reports 2008. See the section Converting Crystal Reports in this chapter for additional information and tasks.

See Also

Configuring Crystal Reports 2008 for SAP BusinessObjects Enterprise XI 3.1

Task 15-4: Installing SAP BusinessObjects Enterprise XI 3.1

This section discusses:

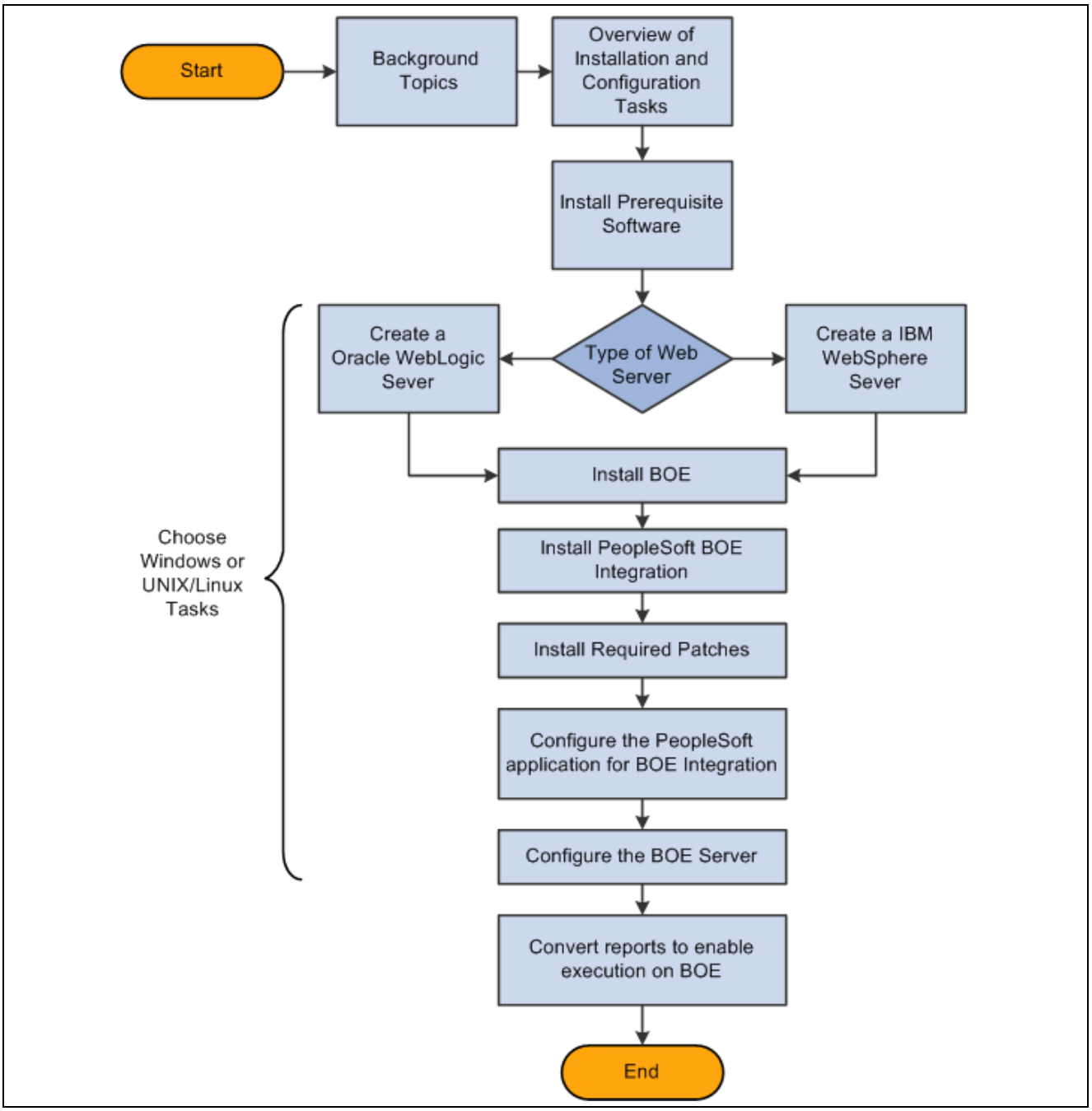
- Understanding the SAP BusinessObjects Enterprise XI 3.1 Installation
- Understanding Integration Between SAP BusinessObjects Enterprise XI 3.1 and PeopleSoft Enterprise
- Understanding Query Access Services
- Reviewing Key SAP BusinessObjects Enterprise XI 3.1 Components
- Planning your SAP BusinessObjects Enterprise XI 3.1 Integration
- Installing the PeopleSoft Application Environment
- Creating a Web Server for SAP BusinessObjects Enterprise XI 3.1 on Windows
- Installing SAP BusinessObjects Enterprise XI 3.1 on Windows
- Installing BusinessObjects Integration Kit for PeopleSoft on Windows
- Installing Fix Packs or Service Packs on Windows

- Creating the BusinessObjects Enterprise Archive and Installing Files on Windows
- Extracting the Archive on Windows
- Installing TrueType Fonts on Windows
- Creating a Web Server for SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux
- Installing SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux
- Installing BusinessObjects Integration Kit for PeopleSoft on UNIX or Linux
- Installing Fix Packs or Service Packs on UNIX or Linux
- Creating the BusinessObjects Enterprise Archive and Installing Files on UNIX or Linux
- Extracting the Archive on UNIX or Linux
- Installing TrueType Fonts in UNIX or Linux
- Confirming Access to the SAP BusinessObjects Enterprise XI 3.1 Administration and Central Management Console
- Configuring the PeopleSoft Application for BusinessObjects Enterprise XI 3.1 Integration
- Importing the Security Certificate to the Oracle WebLogic Server
- Importing Security Certificate to the IBM WebSphere Server
- Configuring the SAP BusinessObjects Enterprise XI 3.1 Server
- Configuring Crystal Reports 2008 for SAP BusinessObjects Enterprise XI 3.1
- Modifying the SAP BusinessObjects Enterprise XI 3.1 Chunk Size
- Verifying the PeopleSoft to SAP BusinessObjects Enterprise XI 3.1 Integration

Understanding the SAP BusinessObjects Enterprise XI 3.1 Installation

Use the following flowchart to understand which parts of this section are relevant to your particular circumstances. The flowchart is an overview of the entire process. After the step to install the prerequisite software, you must choose the type of web server software, then continue with several installation and configuration steps. This section includes the instructions for the installation on Windows, and on UNIX or Linux.

Note. In the following flowchart, “BOE” refers to SAP BusinessObjects Enterprise XI 3.1.



Navigating the BOE Installation and Configuration

To familiarize yourself with the most current support information and information about any required service packs for SAP BusinessObjects Enterprise XI 3.1 and supporting software, based on operating system platform or PeopleSoft PeopleTools versions, consult My Oracle Support or the hardware and software requirements guide.

See Also

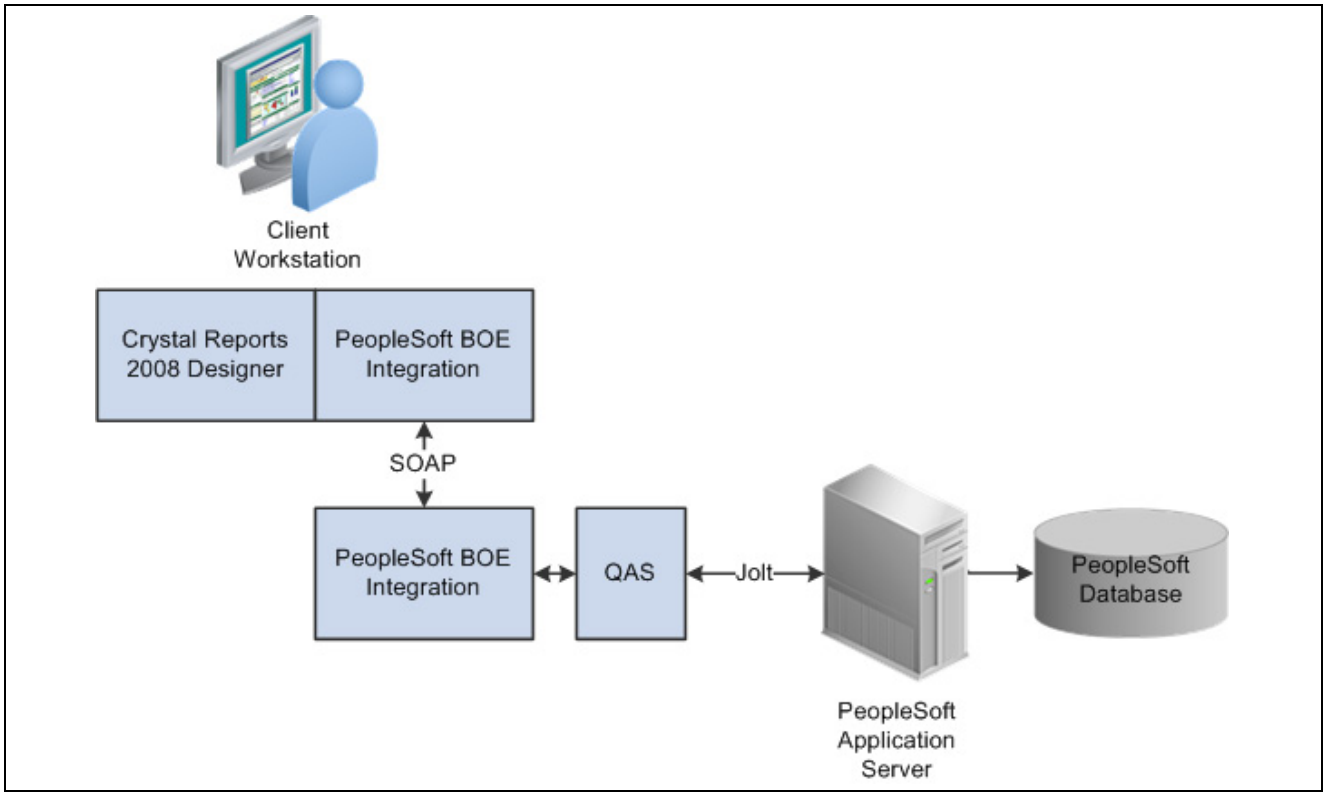
My Oracle Support, Certifications

PeopleTools 8.52 Hardware and Software Requirements Guide

Understanding Integration Between SAP BusinessObjects Enterprise XI 3.1 and PeopleSoft Enterprise

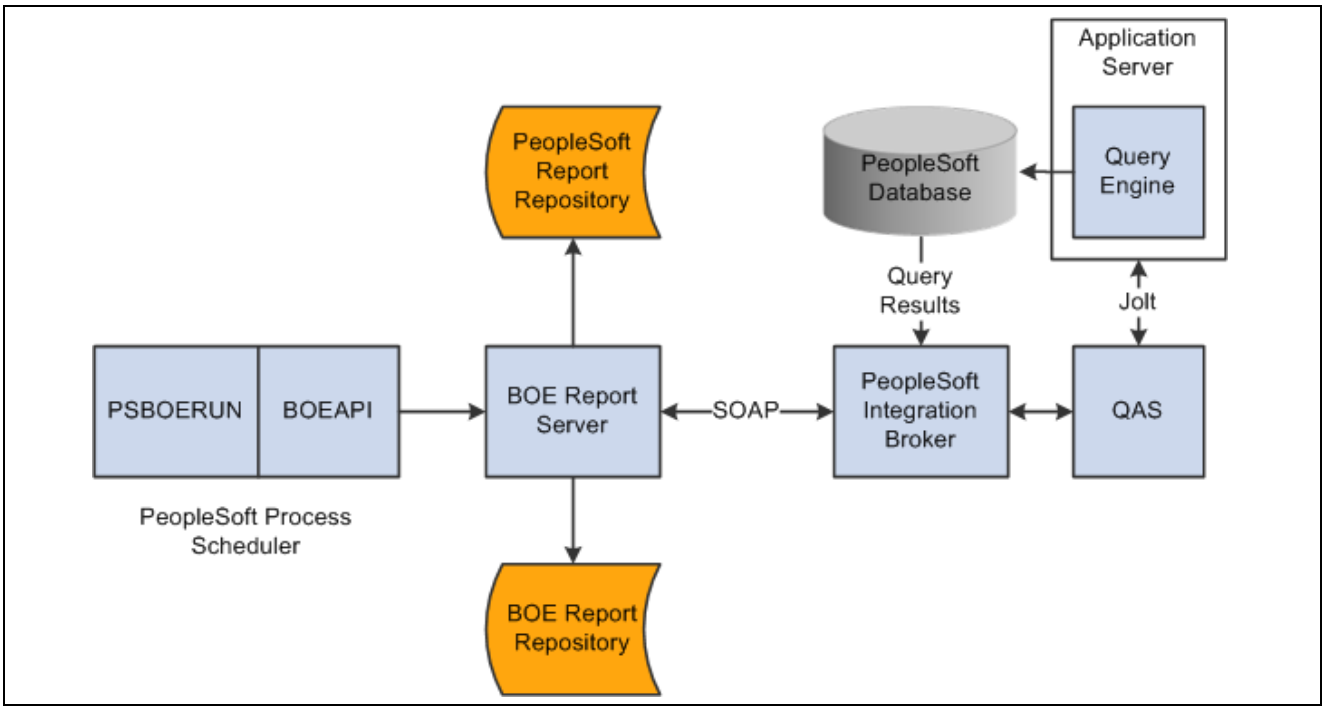
PeopleSoft Enterprise, together with Business Objects, provides a robust suite of reporting tools to be used with PeopleSoft products. The diagrams in this section illustrate how SAP BusinessObjects Enterprise XI 3.1 integrates with PeopleSoft Enterprise.

The following diagram illustrates the process by which the PeopleSoft BusinessObjects Enterprise integration communicates with the PeopleSoft Integration Broker, Application Server, and the database, when a user designs a report.



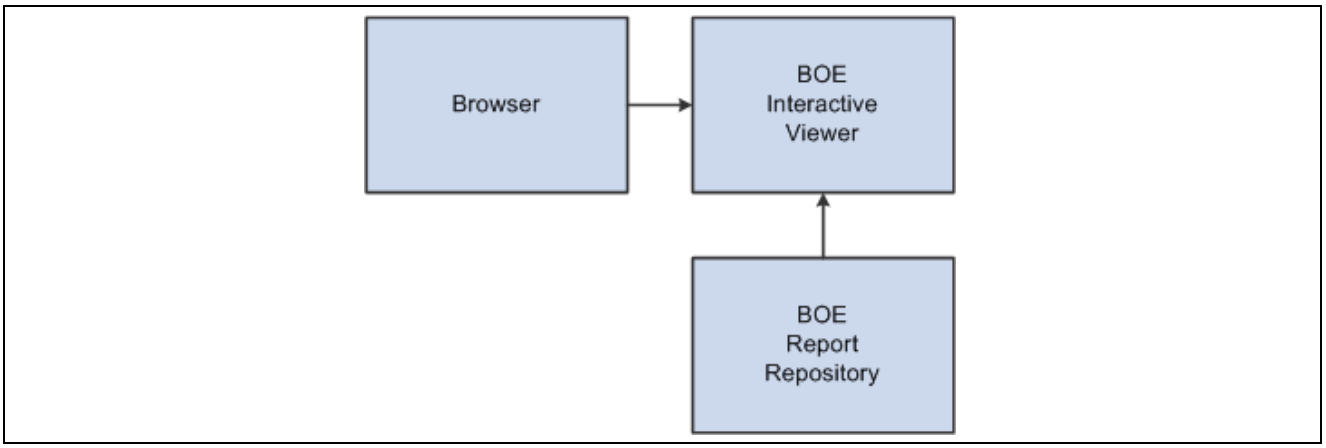
Design a report with the PeopleSoft BusinessObjects Enterprise XI 3.1 integration

The following diagram illustrates the process by which the BusinessObjects Enterprise integration works with PeopleSoft Process Scheduler and PeopleSoft Integration Broker to run a report.



Run a report with the PeopleSoft BusinessObjects Enterprise XI 3.1 integration

The following diagram illustrates the interaction between the end-user browser, the BusinessObjects Enterprise InfoViewer, and the BusinessObjects Enterprise report repository in displaying a report.



View a report stored in the BusinessObjects Enterprise XI 3.1 Repository

Implementation of this integration requires:

- installation of SAP BusinessObjects Enterprise XI 3.1 server
- installation of PeopleSoft-specific components on the SAP BusinessObjects Enterprise XI 3.1 server
- configuration tasks in your PeopleSoft application
- configuration tasks in your SAP BusinessObjects Enterprise XI 3.1 server
- conversion of Crystal report definitions from Crystal 9 format to Crystal 2008 format.

SAP BusinessObjects Enterprise XI 3.1 for PeopleSoft Enterprise interacts with PeopleSoft Enterprise security server using a plug-in. This integration provides single signon and ensures the synchronization of users and roles between PeopleSoft Enterprise and SAP BusinessObjects Enterprise XI 3.1. Using a data driver that uses the Query Access Services, SAP BusinessObjects Enterprise XI 3.1 receives data from PS Query and builds a report using Report Application Server (RAS) API.

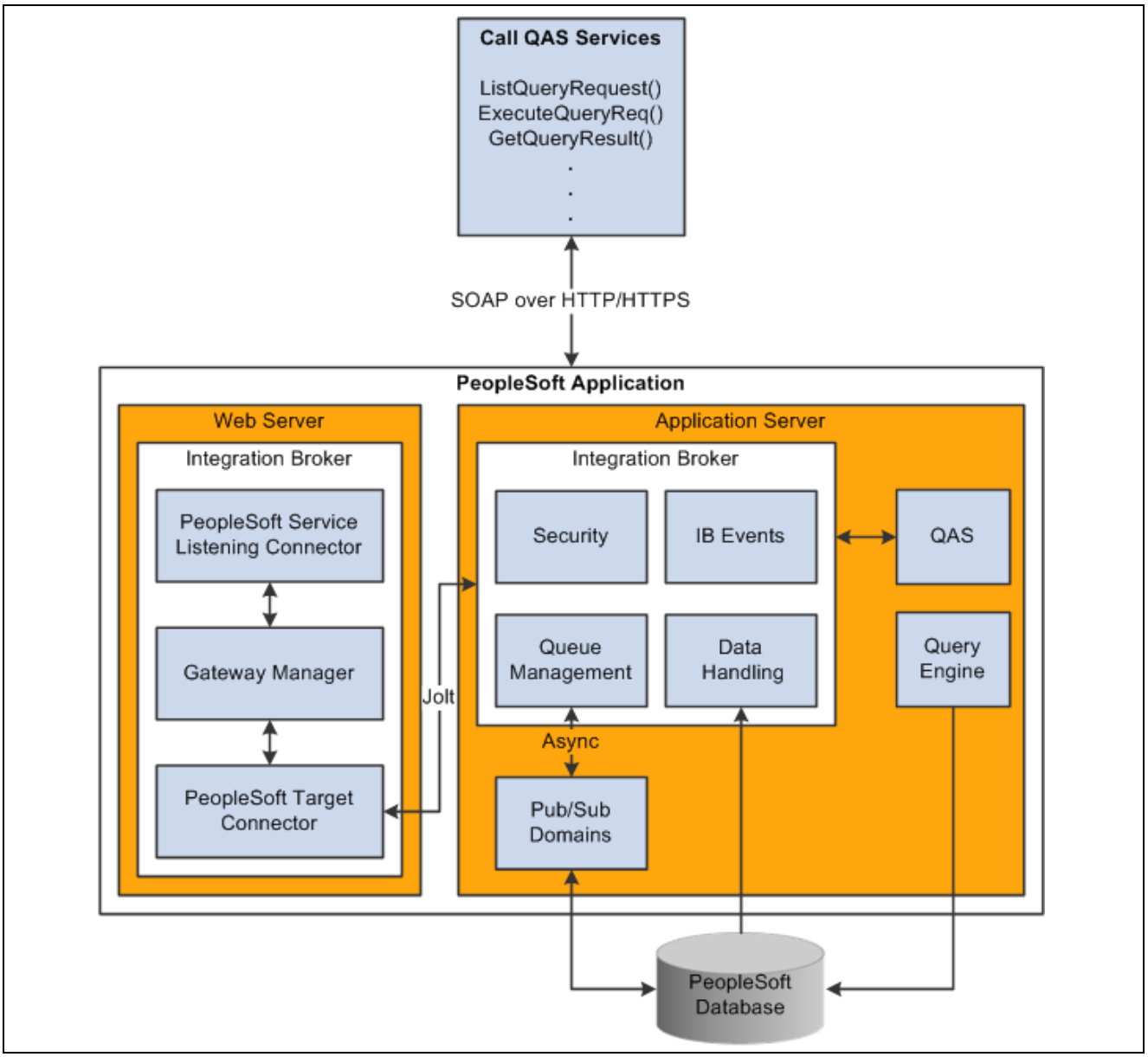
Understanding Query Access Services

Query Access Services (QAS) provides PeopleSoft query results to BusinessObjects Enterprise over the web to create Crystal reports.

QAS plays the following roles in SAP BusinessObjects Enterprise XI 3.1 for PeopleSoft Enterprise:

- Provides a mechanism for the SAP BusinessObjects Enterprise XI 3.1 to access Query metadata so that users can design Crystal Reports based on the queries.
- Provides a mechanism for the SAP BusinessObjects Enterprise XI 3.1 to obtain results for a query to be used in report definitions.

The following diagram illustrates the QAS architecture and the relationship of the QAS components to the PeopleSoft servers and BusinessObjects Enterprise. The components are described in detail immediately following the diagram:



QAS interaction with PeopleSoft application

The following sections describe the components in the Query Access Services architecture:

- SAP BusinessObjects Enterprise XI 3.1

  When SAP BusinessObjects Enterprise XI 3.1 makes a request to obtain XML data from Integration Broker, the request is authenticated and sent to the Integration Gateway.

- Web Server

  The Integration Gateway is a component of PeopleSoft Integration Broker, and resides on a PeopleSoft web server that generates the URL to navigate inside BusinessObjects Enterprise. The Integration Gateway receives every SOAP request coming from BusinessObjects Enterprise over HTTP/HTTPS, and forwards the request to the integration engine running on the application server.

- Application Server

PeopleCode running on the application server implements most of the QAS services and generates the required response. Several components on the application server are involved in the query and responses, including the Integration Broker integration engine, the QAS query engine, and the application server publish/subscribe domains.

When a query execution request arrives, it is executed and the requested data returned as a message or as the URL of an XML file. The query execution is carried out in one of three ways:

- Synchronous Request/Response
- Asynchronous Request/Asynchronous Response
- Synchronous Request/Synchronous Poll with chunked response

Reviewing Key SAP BusinessObjects Enterprise XI 3.1 Components

BusinessObjects Enterprise involves the interaction of the following components:

- Central Management Console (CMC)

  The Central Management Console (CMC) enables you to perform administrative tasks. Administrative tasks include authenticating users, granting rights to groups, adding domains, mapping PeopleSoft roles with BusinessObjects Enterprise roles, and adding users.

- Security Plugin

  The Central Management Server uses the SAP BusinessObjects Enterprise XI 3.1 security plug-in to verify the user name and password against the system database. In the context of BusinessObjects Enterprise for PeopleSoft Enterprise, the security plug-in enables you to map user accounts and groups from PeopleSoft into SAP BusinessObjects Enterprise XI 3.1. The user names and passwords are authenticated against the SAP BusinessObjects Enterprise XI 3.1 user list that is synchronized with the users and roles in the PeopleSoft database.

Task 15-4-1: Planning your SAP BusinessObjects Enterprise XI 3.1 Integration

This section discusses:

- Installing Prerequisite Software
- Understanding SAP BusinessObjects Enterprise XI 3.1 License Keys
- Configuring Environment Variables

Note. These are steps that should be done prior to starting the installation and configuration of PeopleSoft PeopleTools and SAP BusinessObjects Enterprise XI 3.1. Completing these tasks will make the installation and configuration process proceed smoothly.

Installing Prerequisite Software

Several different alternative software packages are supported for SAP BusinessObjects Enterprise XI 3.1. These alternatives are listed in the PeopleSoft PeopleTools hardware and software guide. Additional detailed information on specific release levels supported is available online on My Oracle Support.

Note. The versions of the prerequisite software required for proper installation of SAP BusinessObjects Enterprise XI 3.1 may differ from the versions required for PeopleSoft PeopleTools. Take care in noting the versions required.

See *PeopleTools 8.52 Hardware and Software Requirements.*

See My Oracle Support, Certifications.

- Operating System

  In order for the integration between PeopleSoft software and SAP BusinessObjects Enterprise XI 3.1 to work, the PeopleSoft Process Scheduler must be installed on an operating system that SAP BusinessObjects Enterprise XI 3.1 supports. This is because PSBOERUN.EXE, the PeopleSoft process that calls SAP BusinessObjects Enterprise XI 3.1, uses Business Objects-supplied APIs.

- Database Software

  SAP BusinessObjects Enterprise XI 3.1 requires a relational database, which stores report definitions as well as report output. Oracle, DB2/LUW, Microsoft SQL Server, and Sybase are all supported database platforms.

  The database server software can run on a different machine in the same network as your installation of SAP BusinessObjects Enterprise XI 3.1.

  Before you begin to install SAP BusinessObjects Enterprise XI 3.1, you should identify the database server that you want to use. Make note of the database or schema name, user account name, and password for the database, as you will need this information to complete the SAP BusinessObjects Enterprise XI 3.1 installation. A database must exist, which will become the Central Management Server database.

  Note. MySQL is not a supported database platform for the integration between PeopleSoft PeopleTools and SAP BusinessObjects Enterprise XI 3.1.

- Database Connectivity Software

  SAP BusinessObjects Enterprise XI 3.1 runs under a web server and requires a database, which stores report definitions as well as report output. In order for SAP BusinessObjects Enterprise XI 3.1 to communicate with the database software, the appropriate database client connectivity software must be installed on the server running SAP BusinessObjects Enterprise XI 3.1.

  Before you begin to install SAP BusinessObjects Enterprise XI 3.1, install the appropriate database connectivity software on the server where SAP BusinessObjects Enterprise XI 3.1 will reside.

- Java SDK

  If your web application server software does not automatically install the Java SDK as part of its installation process, you must install the J2SE SDK first. Ensure that your machine's PATH environment variable includes the Java SDK bin directory.

- Web Application Server Software

  SAP BusinessObjects Enterprise XI 3.1 runs under a web application server, either Oracle WebLogic or IBM WebSphere. Before you begin to install SAP BusinessObjects Enterprise XI 3.1, install the appropriate web server software on the server where SAP BusinessObjects Enterprise XI 3.1 will reside.

  Note that the Business Objects web server support can differ from the PeopleSoft PeopleTools support. Obtain and install the software and license from Oracle or IBM before beginning this procedure.

Note. You must install SAP BusinessObjects Enterprise XI 3.1 with the same user account as that used to install the web server software.

For successful integration between the PeopleSoft system and SAP BusinessObjects Enterprise XI 3.1, you must set up Secure Sockets Layer (SSL) on the web server.

See *PeopleTools 8.52: Security Administration PeopleBook.*

See *PeopleTools 8.52: Integration Broker Administration PeopleBook,* "Setting Up Secure Integration Environments."

- Application Server Domains

  In PeopleSoft PeopleTools 8.50 and later, you can configure more than one PeopleSoft application to run with a single SAP BusinessObjects Enterprise XI 3.1 server. For example, if your environment includes both an application server domain on a Financials database, and another on a Human Capital Management database, you can configure both with the same SAP BusinessObjects Enterprise XI 3.1 server, and the state of one PeopleSoft application (running or not running) does not adversely impact the ability of the other PeopleSoft application to run reports on the SAP BusinessObjects Enterprise XI 3.1 server.

  Thus when you generate reports from the Financials domain, as long as the Financials domain is up and running, you will be able to access the reports even if the Human Capital Management domain is down.

The instructions in this section assume SAP BusinessObjects Enterprise XI 3.1 is installed on one server machine that is separate from the machine on which you have installed (or will install) the PeopleSoft software. The SAP BusinessObjects Enterprise XI 3.1 installation documentation includes instructions for other installation configurations.

Understanding SAP BusinessObjects Enterprise XI 3.1 License Keys

There are two types of license keys relevant to SAP BusinessObjects Enterprise XI 3.1:

- Named Users licenses

  Named users licenses allow a specific user access to SAP BusinessObjects Enterprise XI 3.1. If you are a named user, you have access to SAP BusinessObjects Enterprise XI 3.1 regardless of how many other users are connected to the system.

- Concurrent Access licenses

  Concurrent access licenses allow a certain number of unspecified users access to SAP BusinessObjects Enterprise XI 3.1 from a pool of users. If you are a concurrent user, you have access to SAP BusinessObjects Enterprise XI 3.1 only if there are Concurrent Access Licenses that are not being used by other concurrent users.

During the SAP BusinessObjects Enterprise XI 3.1 configuration, you must specify one license key.

In the context of PeopleSoft applications integrated with SAP BusinessObjects Enterprise XI 3.1, one Named User License is reserved for use by Process Scheduler to schedule reports to be run by SAP BusinessObjects Enterprise XI 3.1.

In the context of PeopleSoft applications integrated with SAP BusinessObjects Enterprise XI 3.1, Concurrent Access licenses are used in these ways:

- when a user views a report using the SAP BusinessObjects Enterprise XI 3.1 InfoViewer
- when a user logs into the SAP BusinessObjects Enterprise XI 3.1 Central Management Console (CMC) directly using a user id set up as a concurrent user

After a user is done viewing the report in either scenario, the Concurrent Access license is then free to be used by another user.

Note. Viewing a report in Adobe Acrobat (pdf) format or in viewers other than the SAP BusinessObjects Enterprise XI 3.1 InfoViewer does not use a Concurrent Access License.

A relatively small number of concurrent access licenses can support a large number of users. The number of users that it will support depends on how many reports users view and how long they view them.

You may need to purchase additional Concurrent Access licenses to provide greater access for more users. When you purchase more Concurrent Access licenses from SAP, you will be provided a license code. You will need to add this license code to your SAP BusinessObjects Enterprise XI 3.1 installation. To add license keys, use the procedure in the section Configuring the SAP BusinessObjects Enterprise XI 3.1 Server.

Configuring Environment Variables

To configure environment variables for UNIX platforms:

1. Set the JAVA_HOME environment variable:

   ```
   JAVA_HOME= java_installDirectory; export JAVA_HOME
   ```

2. Set the LC_ALL environment variable to include a UTF-8 locale in your login environment.
3. Run the `locale -a` command to verify that all of the related locale environment variables were properly set by LC_ALL.

   Note. If the `locale` command does not return the correct values, contact your system administrator to set the values properly.

Task 15-4-2: Installing the PeopleSoft Application Environment

Install PeopleSoft PeopleTools and your PeopleSoft application environment as you normally would. There are special configuration steps that you will have to perform later in order to complete the integration of the PeopleSoft system with SAP BusinessObjects Enterprise XI 3.1. The machine with the PeopleSoft PeopleTools and PeopleSoft application installation must also include the BusinessObjects Integration Kit for PeopleSoft and Crystal 2008. The machine with the SAP BusinessObjects Enterprise XI 3.1 installation must include web server software in addition to the SAP BusinessObjects Enterprise XI 3.1 software.

Task 15-4-3: Creating a Web Server for SAP BusinessObjects Enterprise XI 3.1 on Windows

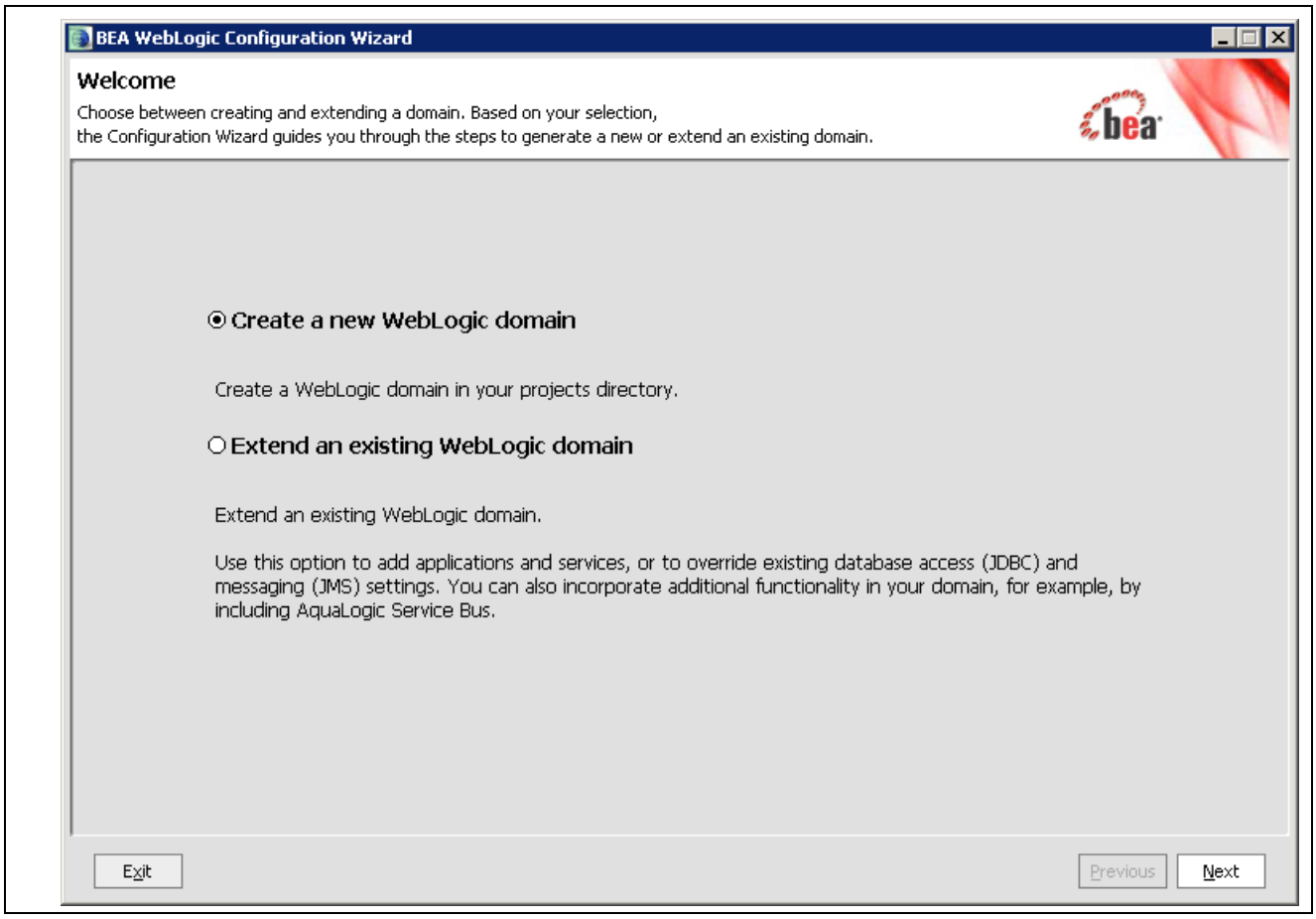
This section discusses:

- Creating an Oracle WebLogic Server on Windows
- Creating an IBM WebSphere Server on Windows

Creating an Oracle WebLogic Server on Windows

Before beginning this procedure, you must have installed Oracle WebLogic on the server where SAP BusinessObjects Enterprise XI 3.1 is installed.

1. Select Start, Programs, BEA Products, Tools, Configuration Wizard to launch the Configuration Wizard.
2. Verify that Create a new WebLogic domain is selected and click Next.

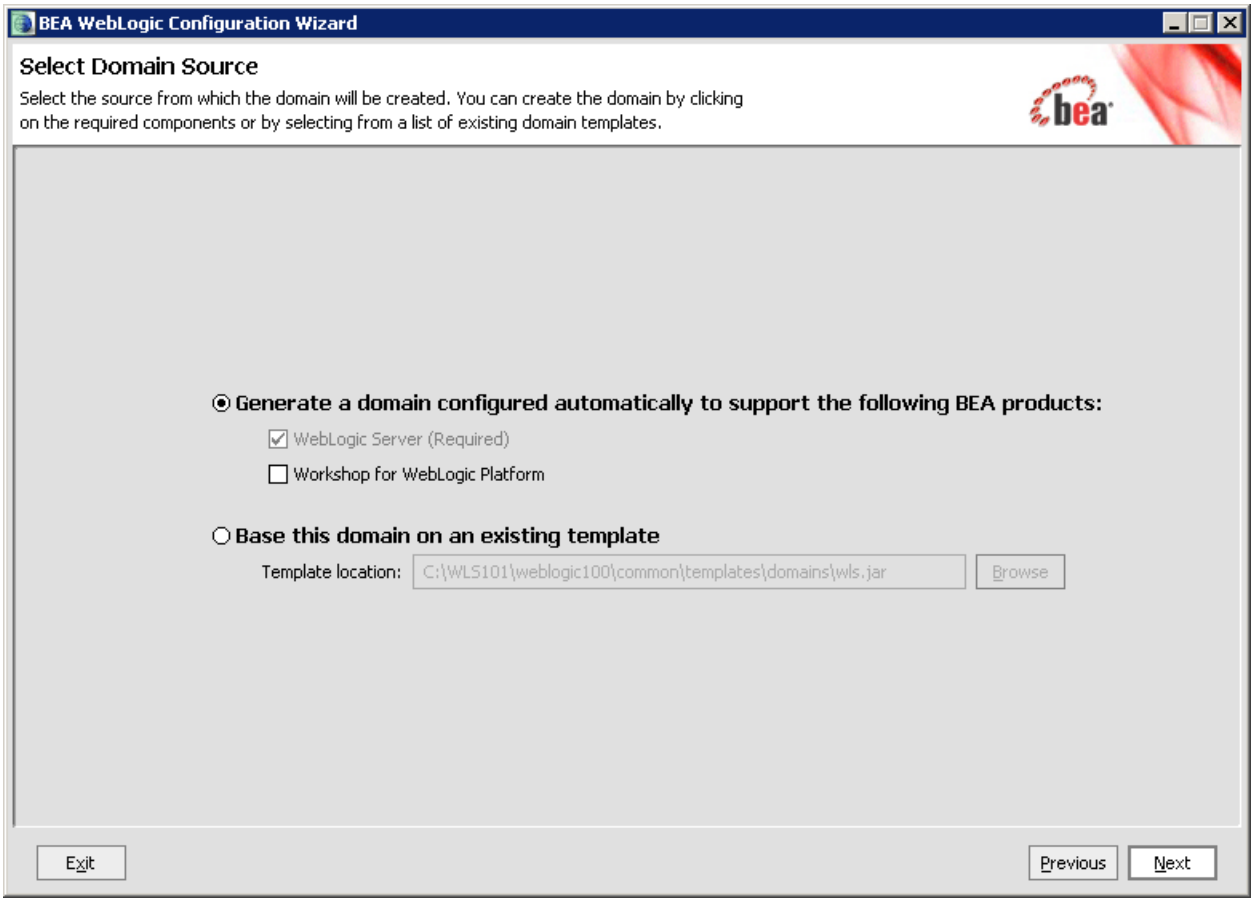


BEA WebLogic Configuration Wizard Welcome window

The Select Domain Source window appears.

3. Select Generate a domain configured automatically to support the following BEA products:

   When you select this option, the check box for WebLogic Server (Required) is selected.

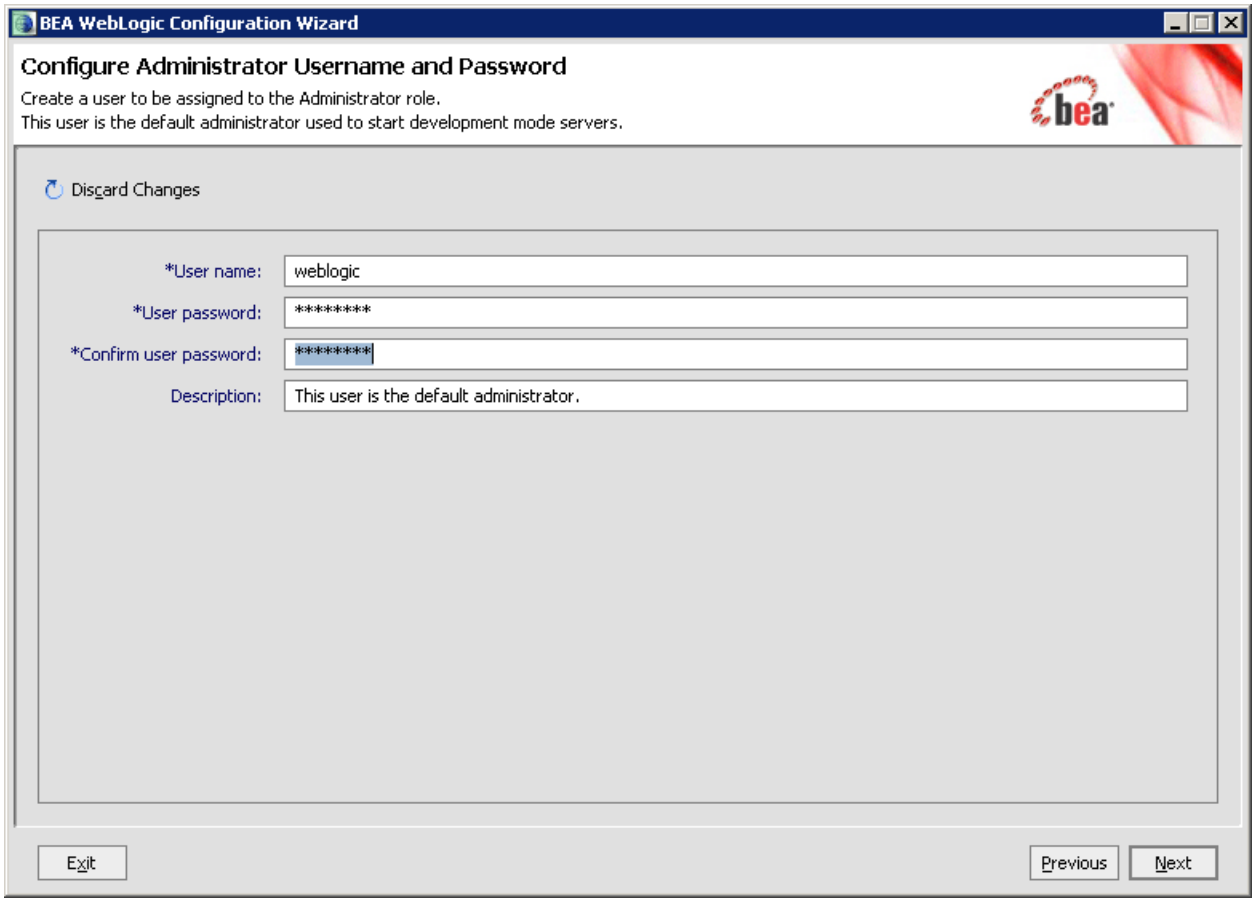


Select Domain Source window

4. Enter a password, confirm the password, and click Next.

   In the following example, *weblogic* is entered for the user name.

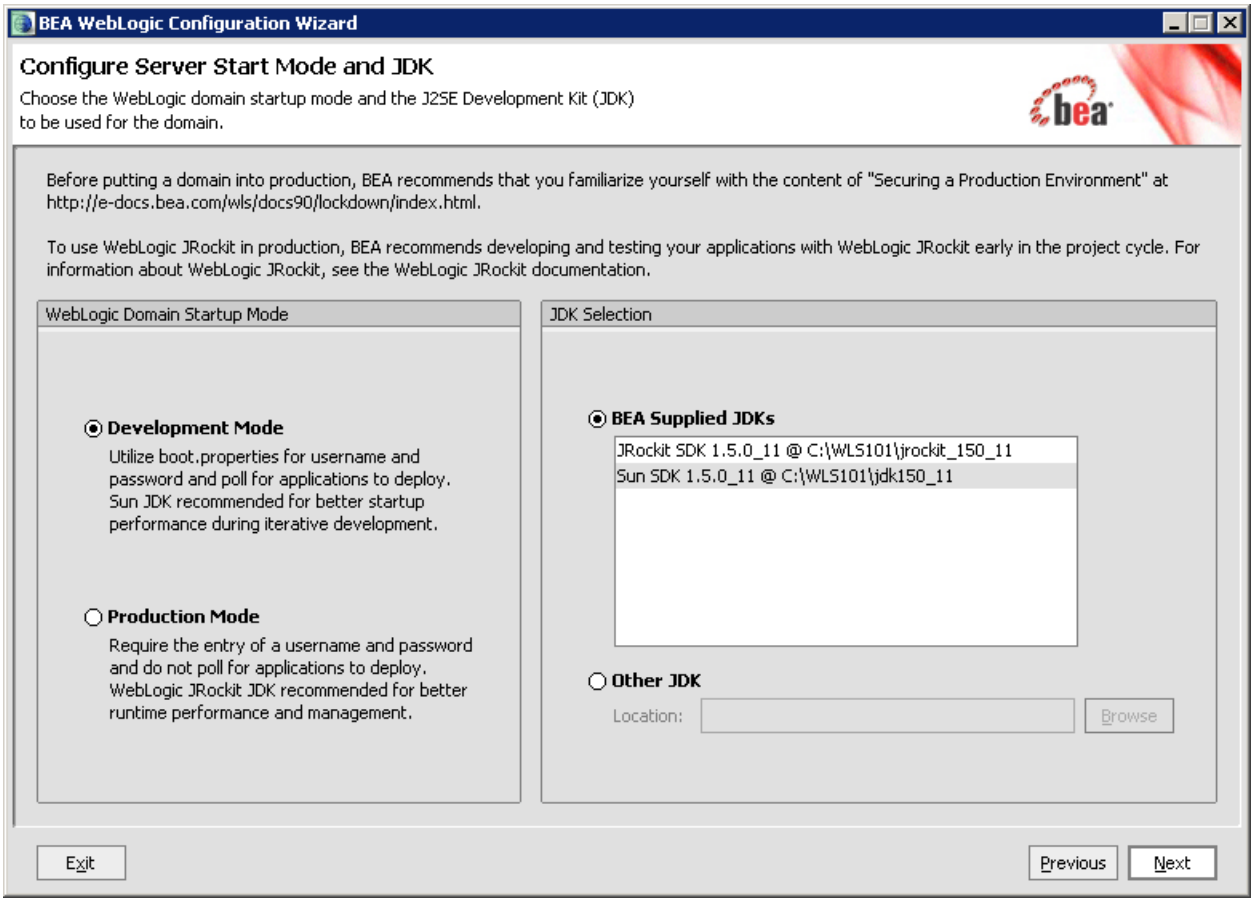
   Note. For testing, *password* is often used as the password.



Configure Administrator Username and Password window

The Configure Server Start Mode and JDK window appears.

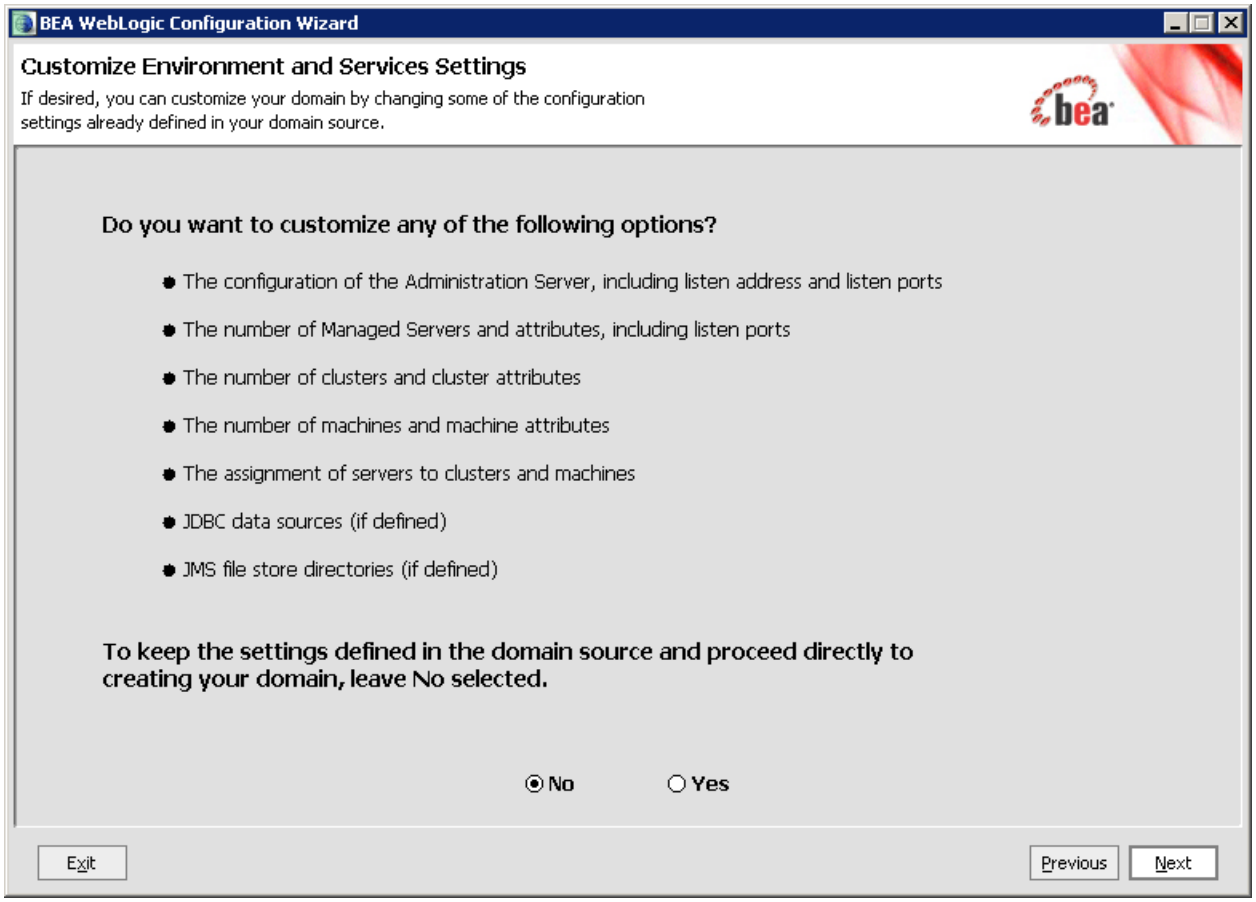
5. Select the Development Mode option and any supported JDK you installed, and click Next.



Configuring the Server Start Mode and JDK window

6. On the Customize Environment and Services Settings window, accept No, the default option, and click Next.

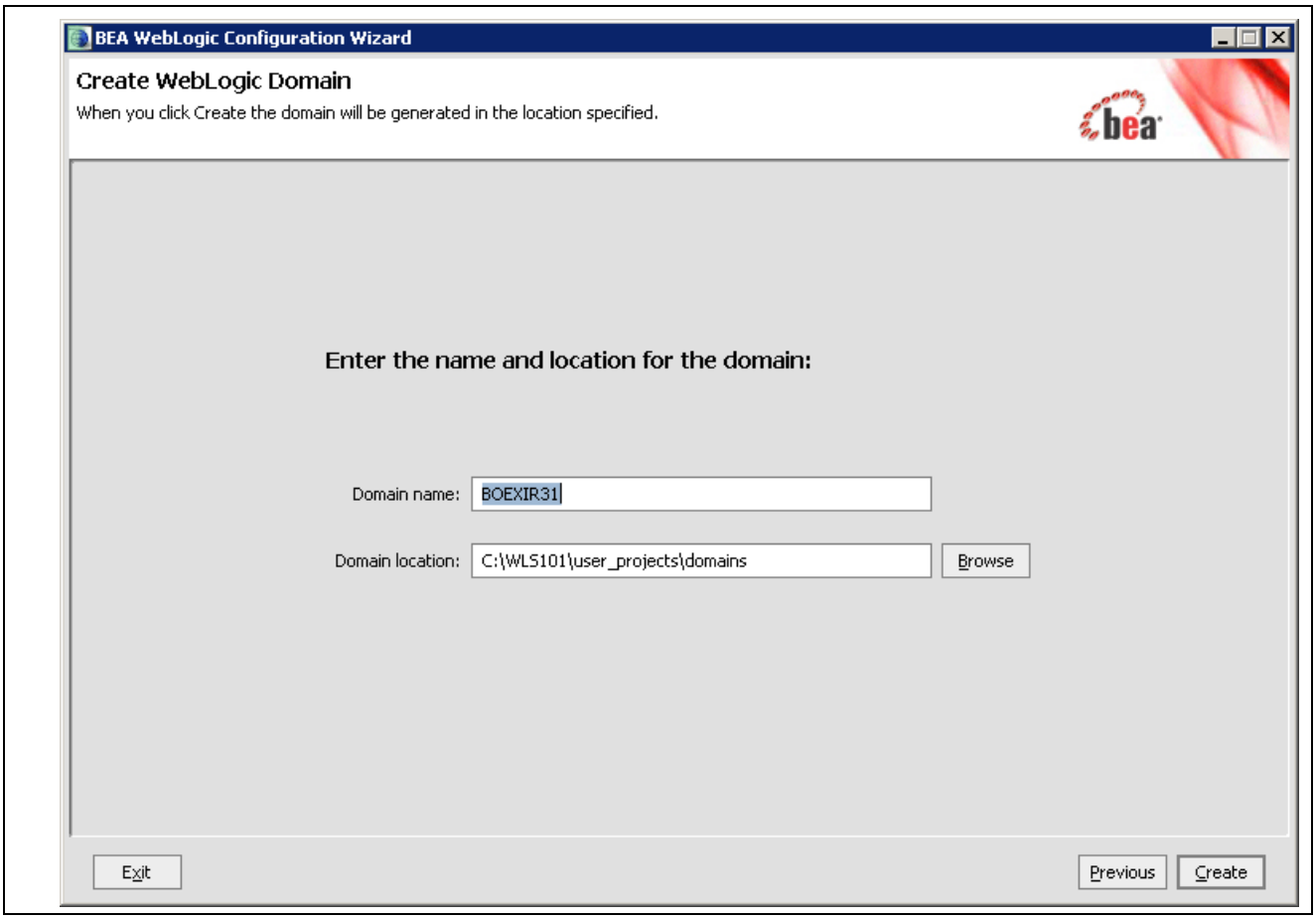
Note. If you want to change the default port number, or other settings, select Yes and complete the screens that follow.



Customize Environment and Service Settings window

7. Enter a meaningful domain name, select the location of the domain and click Create.

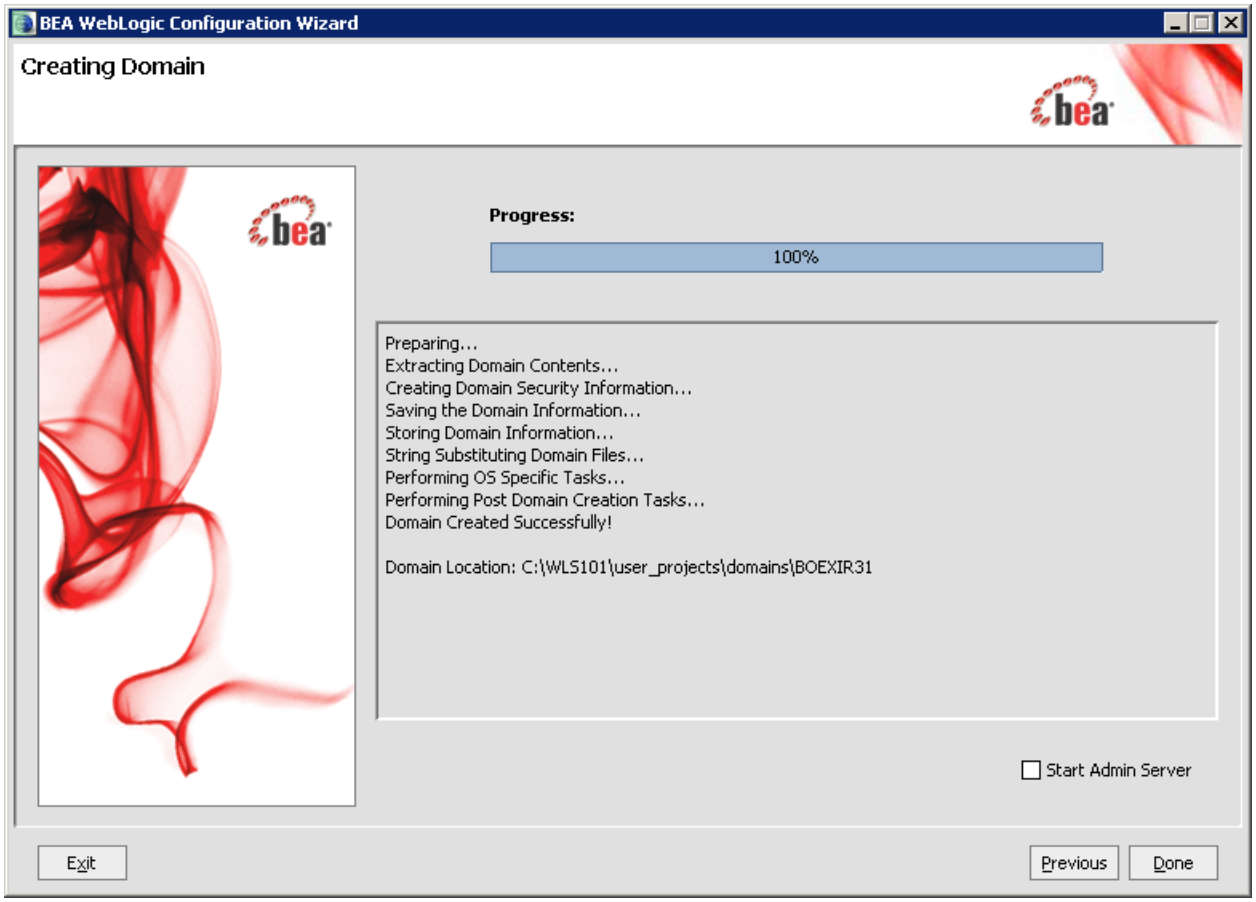
   In the following example, the domain name is *BOEXIR31*, and the domain location is C:\WLS101\user_projects\domains.



Create WebLogic Domain window

8. Select Done to complete the wizard.

   You have now created a web server at the default port 7001.



Creating Domain window

9. To start the web server, select Start, Programs, BEA Products, User Projects, *domain_name*, Start Admin Server for WebLogic Server Domain.

   An MS-DOS window opens. Wait until a message containing the phrase "Server started in RUNNING mode" appears, indicating that the web server is active.

   Note. You perform this step to start the web server. You will need to perform this step after you reboot the machine or close down the Oracle WebLogic web server.

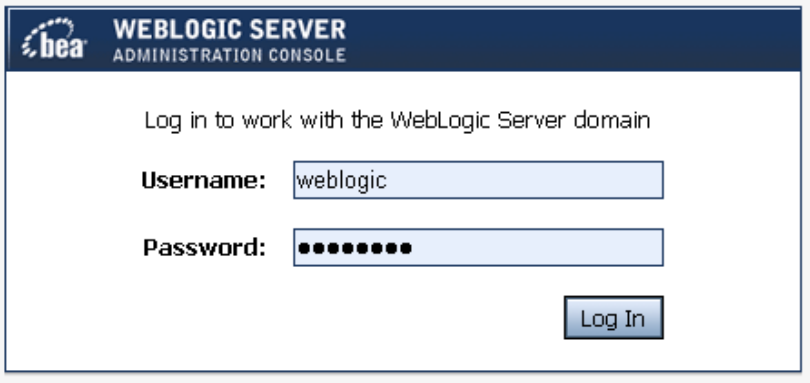
10. To confirm that you can log in to the web server, enter this URL in a browser:

    http://*machine_name*:7001/console

11. In the login window, enter the user name and password for the Oracle WebLogic administrator that you entered during your installation of Oracle WebLogic.

    In the following example, the user name is *weblogic*.

    Click Log In.



Oracle WebLogic Server Administration Console Login Window

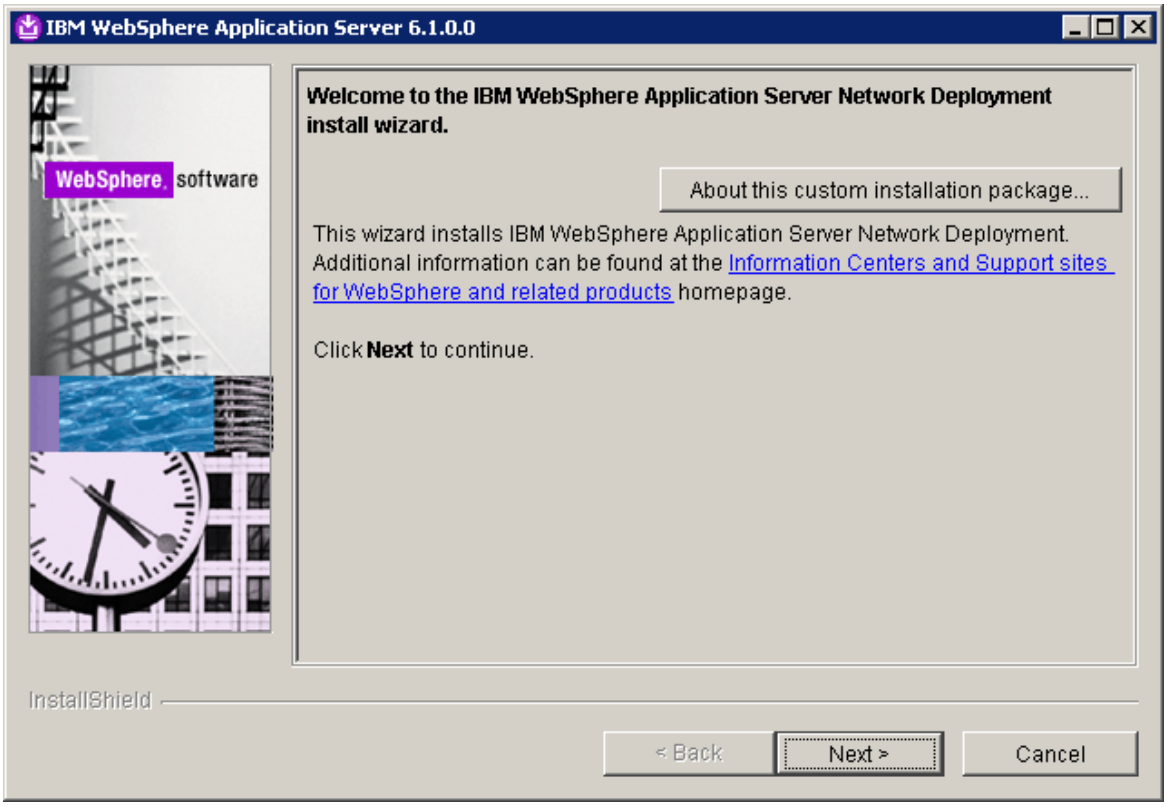
12. If you are logged in, this verifies that your Oracle WebLogic server setup was successful.

Creating an IBM WebSphere Server on Windows

Before beginning this procedure, you must have installed IBM WebSphere on the server where SAP BusinessObjects Enterprise XI 3.1 is installed.

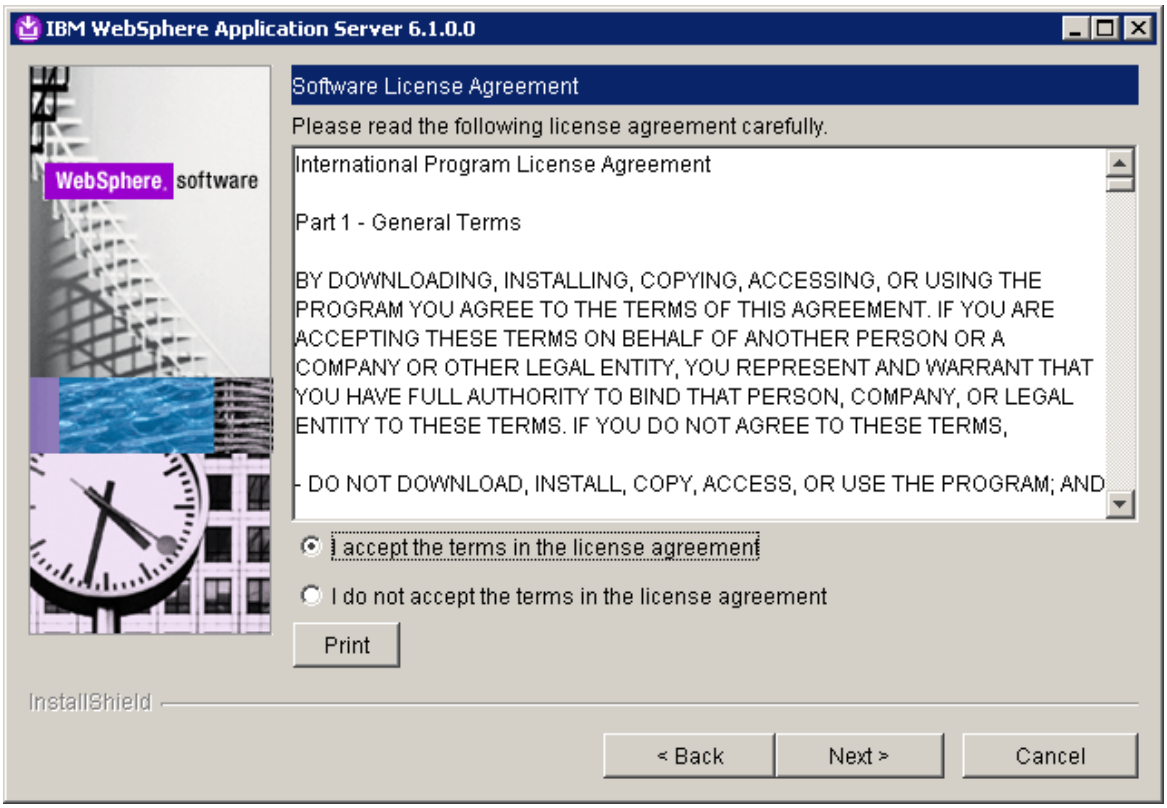
1. Run installWAS.bat from the WebSphere installation.

   A welcome window appears.



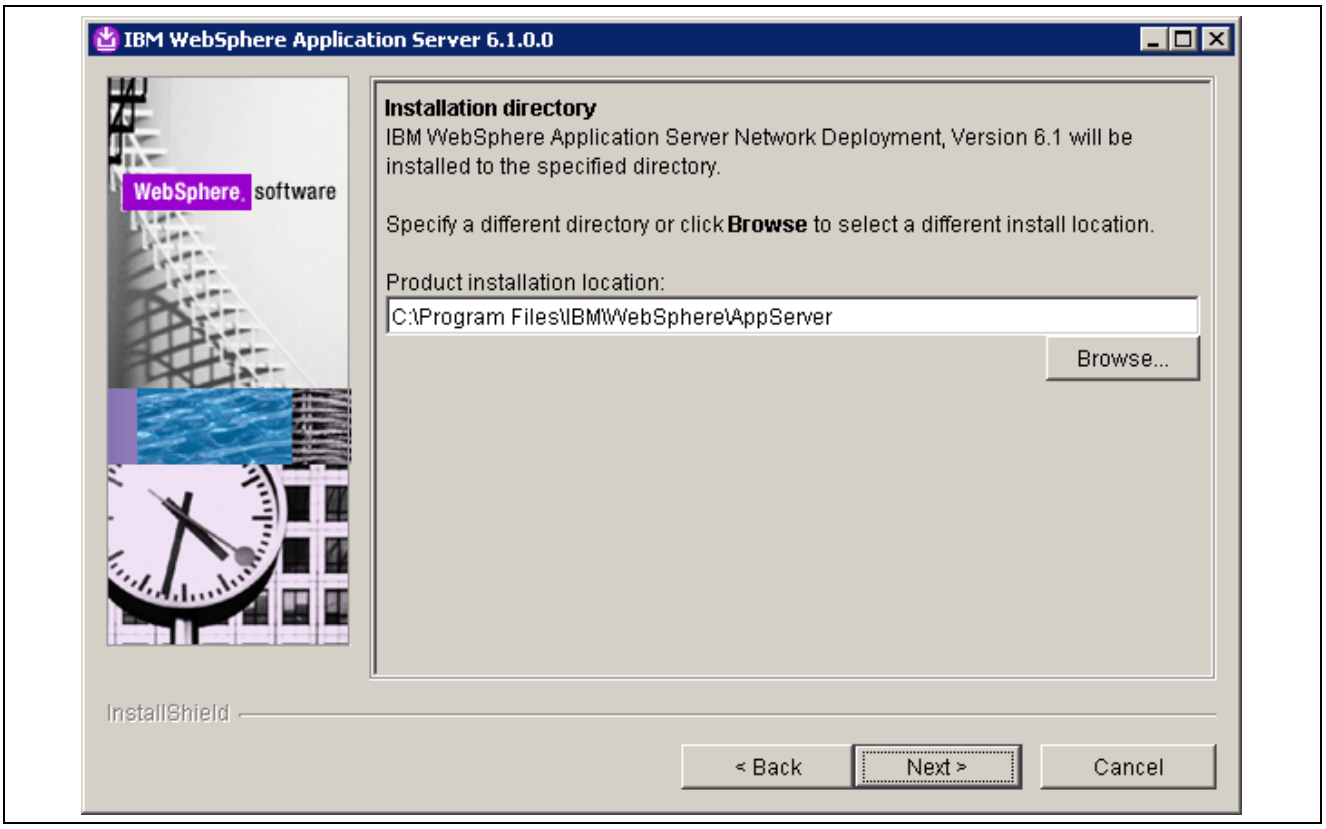
IBM WebSphere Application Server welcome window

2. Click Next.
3. Accept the license agreement and click Next.



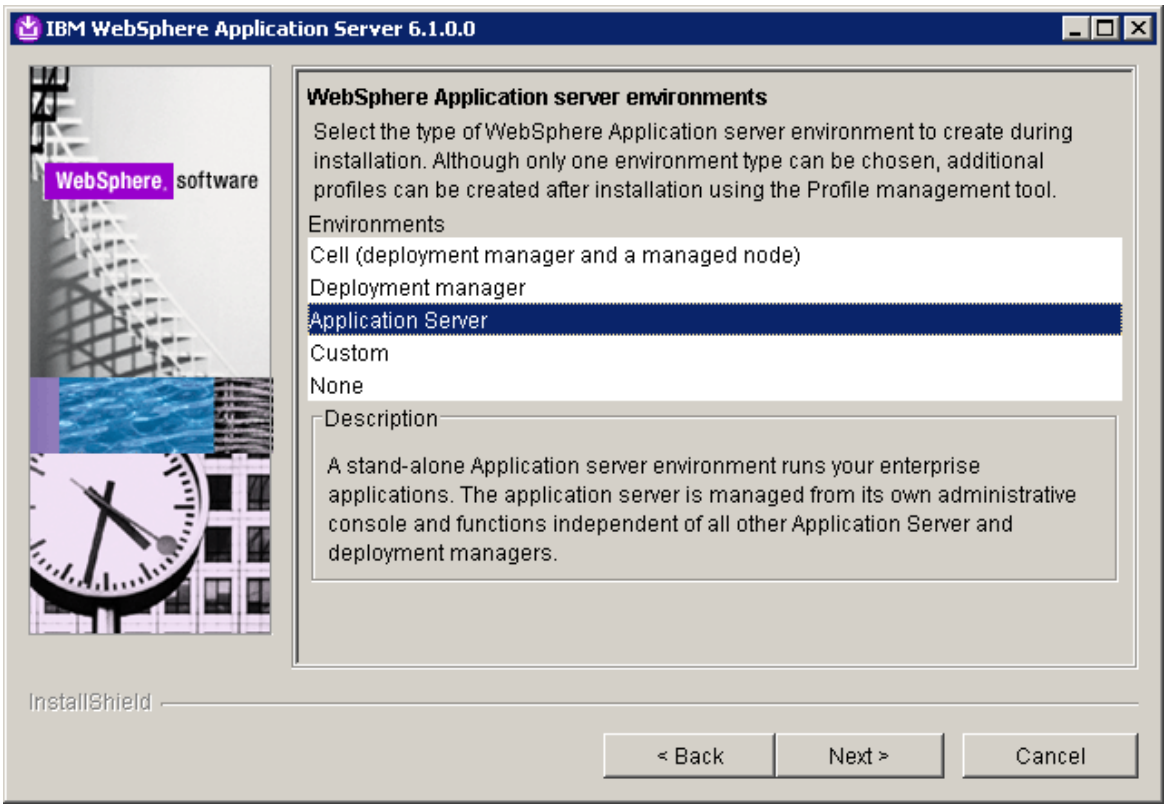
IBM WebSphere Application Server License Agreement window

4. The IBM WebSphere installer carries out a system check and displays an error message if your system does not meet the prerequisites.
5. Select an installation location and click Next.



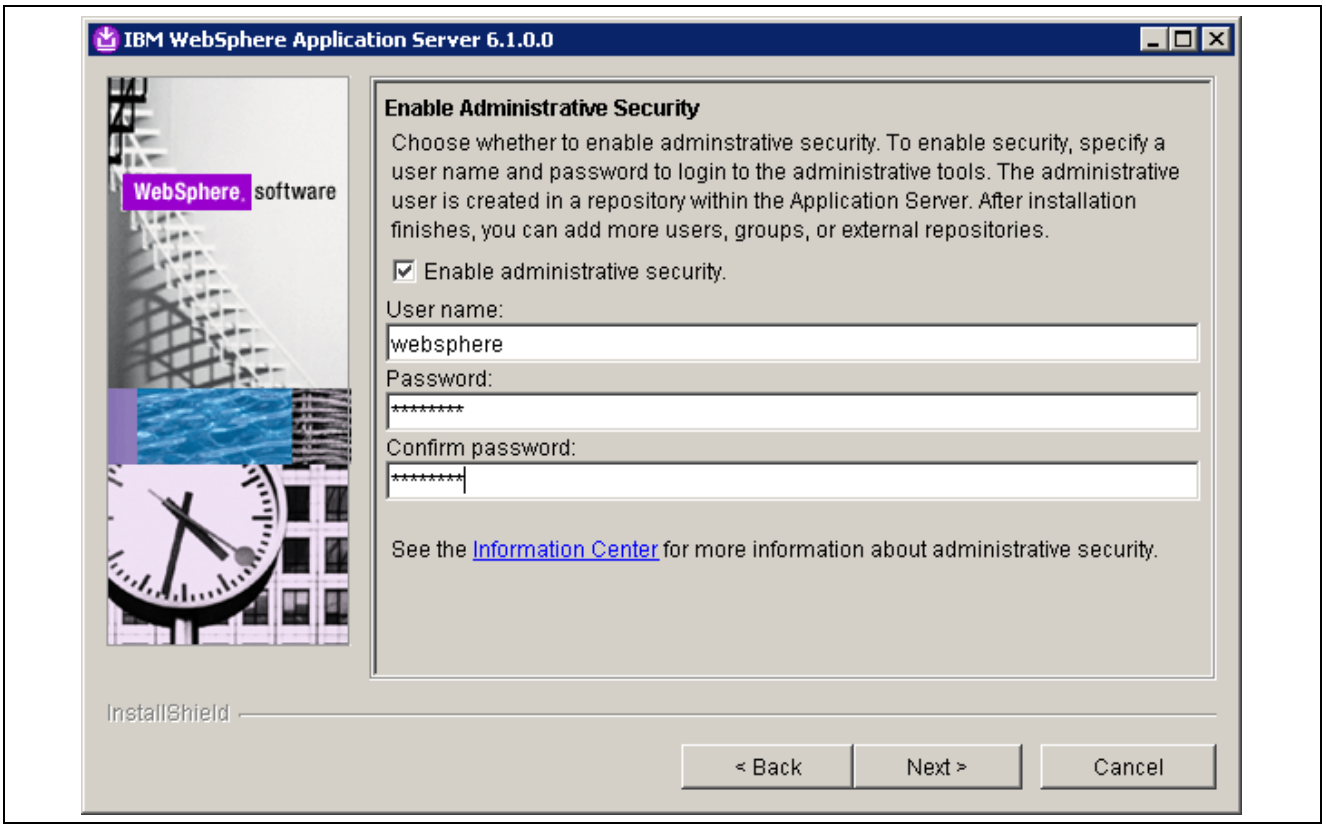
IBM WebSphere Application Server Installation directory window

6. On the WebSphere Application server environment window, select *Application Server* from the list of environments.



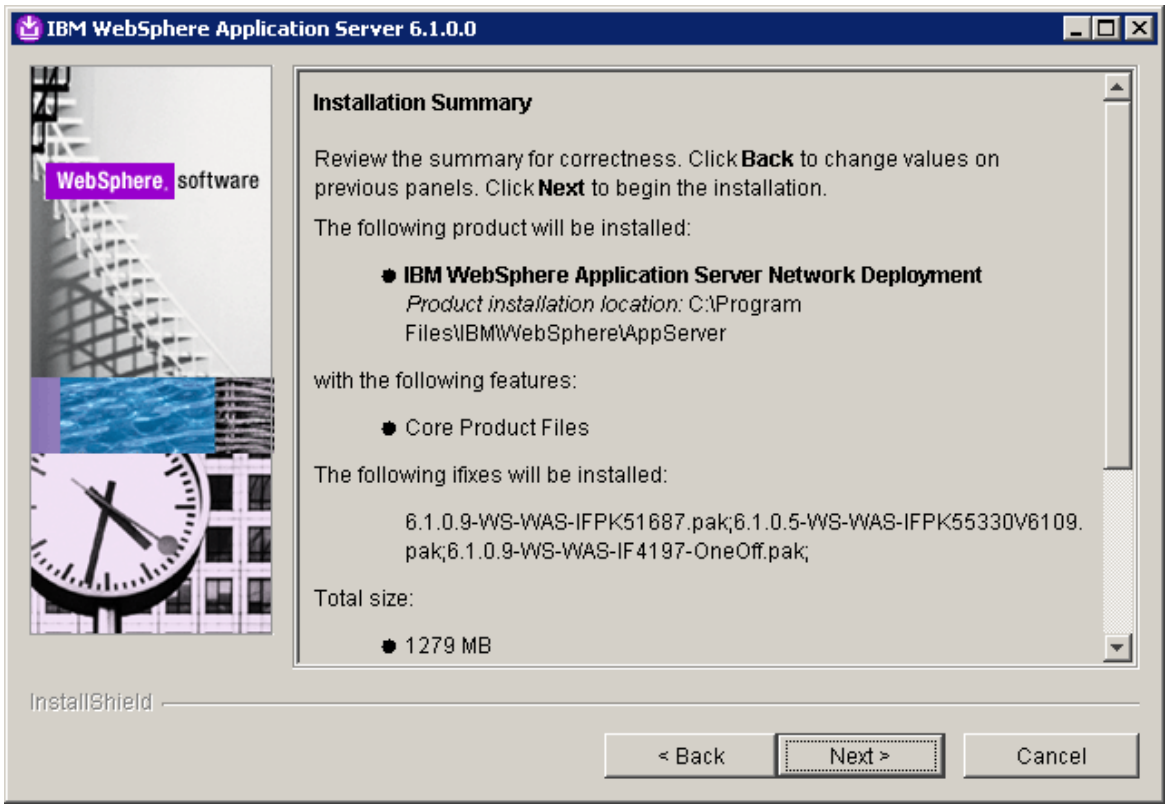
IBM WebSphere Application Server environments window

7. Select the default profile and click Next.
8. Enter the user name and password for the Administrator user; for example websphere and password. Select the Enable Administrative security check box.



Enable Administrative Security window

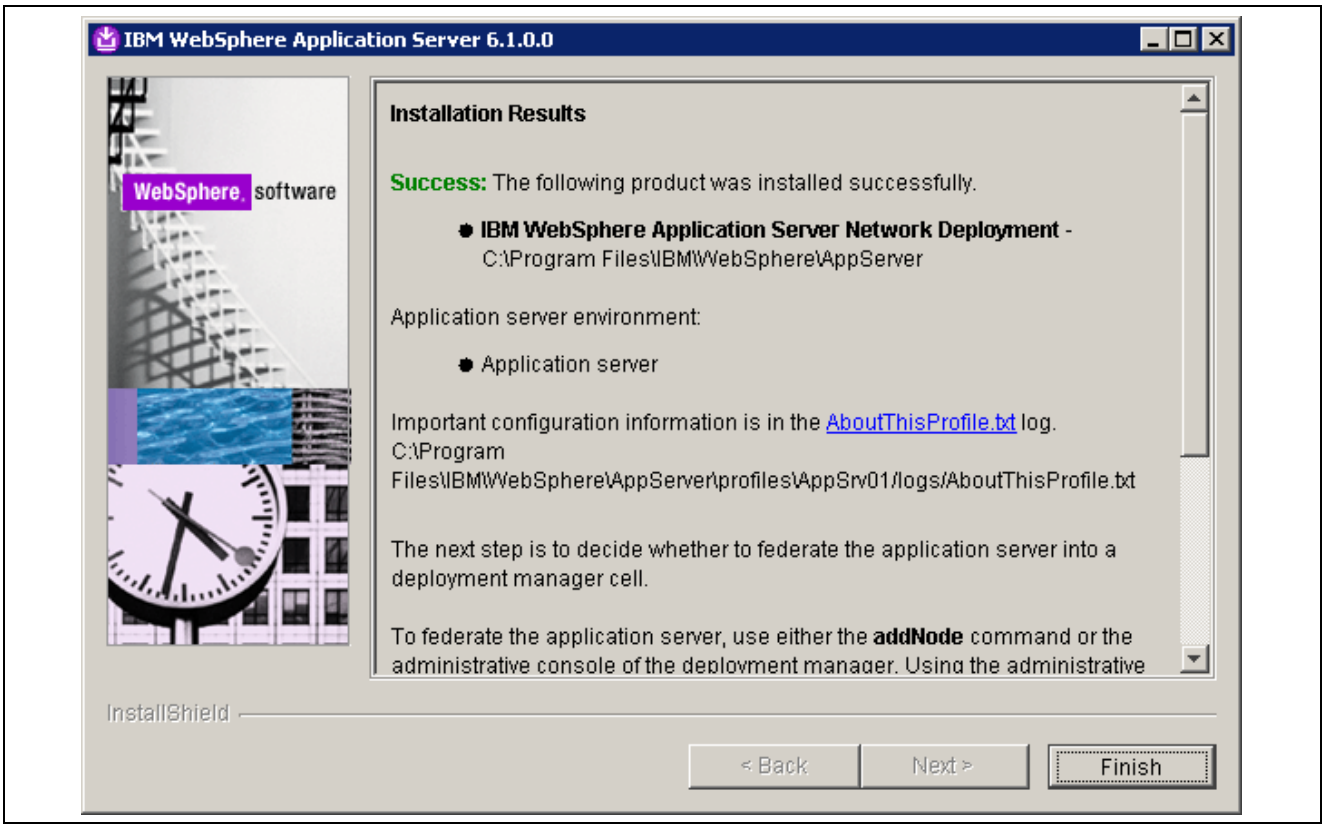
9. Review the installation summary and click Next to begin the installation.



Installation Summary window

10. When the installation completes successfully, you see the installation results window.

    Click Finish to open the First Steps dialog box. If you don't want to open the First Steps dialog box, clear the option Launch First Steps.



Installation Results window

11. To start the server after the installation is complete, select Start, Programs, IBM WebSphere, Application Server Network Deployment V6.1, Profiles, AppSrv01, Start the Server.

Task 15-4-4: Installing SAP BusinessObjects Enterprise XI 3.1 on Windows

This section assumes that you downloaded the necessary files to a directory referred to here as *BOE_INSTALL*.

See Obtaining SAP BusinessObjects Enterprise and Crystal Reports Software.

You must log on to the Windows machine as a user included in the Administrator group.

To install SAP BusinessObjects Enterprise XI 3.1:

1. Change directory to *BOE_INSTALL* and run `setup.exe`.

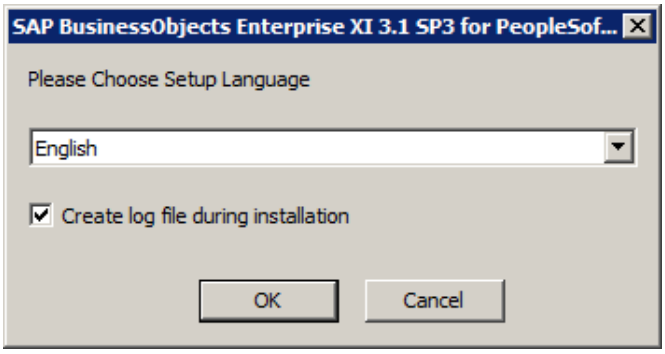
   Note. If you are installing from a network, you must run `setup.exe` from the network location.

   The install program searches for any previous version of SAP BusinessObjects Enterprise XI 3.1 and then presents a Welcome message. Click OK.

2. Choose a Setup language and click OK.

   The example shows English as the Setup language.

   If you don't want the installer to create a log file, clear the option Create log file during installation. If you accept the default to create the log file, it is created in *BOE_HOME*, the directory where you install SAP BusinessObjects Enterprise XI 3.1 as *BOE_HOME*\BusinessObjects Enterprise 12.0\Logging\BOEInstall_*X*.log.

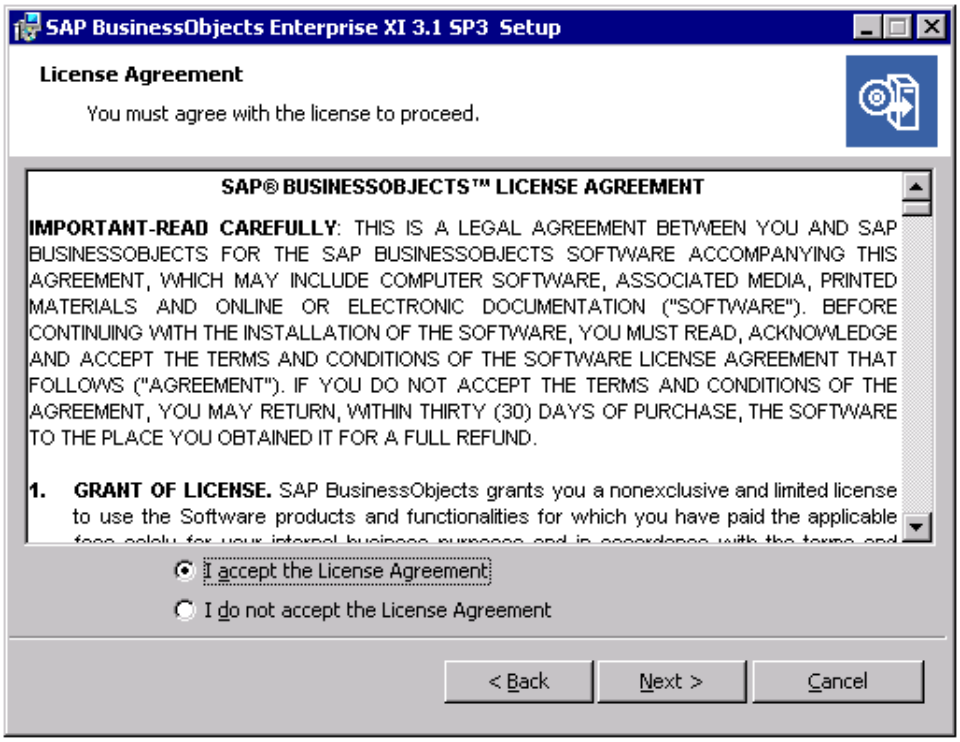


Choosing the setup language for SAP BusinessObjects Enterprise for PeopleSoft

3. Click Next on the welcome window.

SAP BusinessObjects Enterprise XI 3.1 SP3 Setup Welcome window

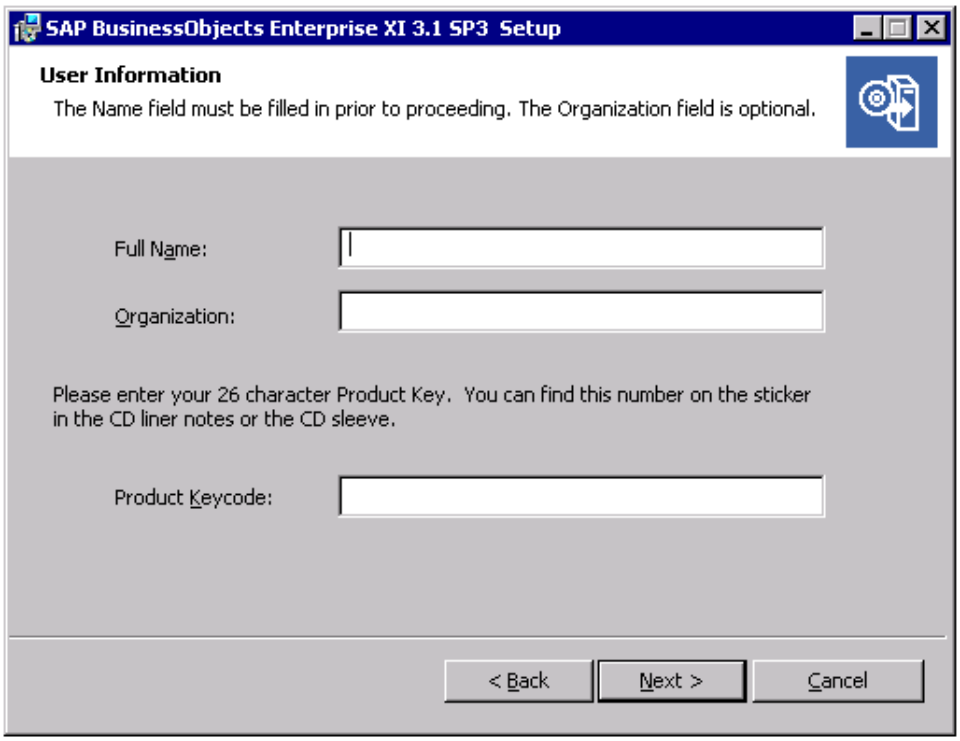
4. Read the license agreement and select I accept the License Agreement.



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup License Agreement window

5. Click Next.

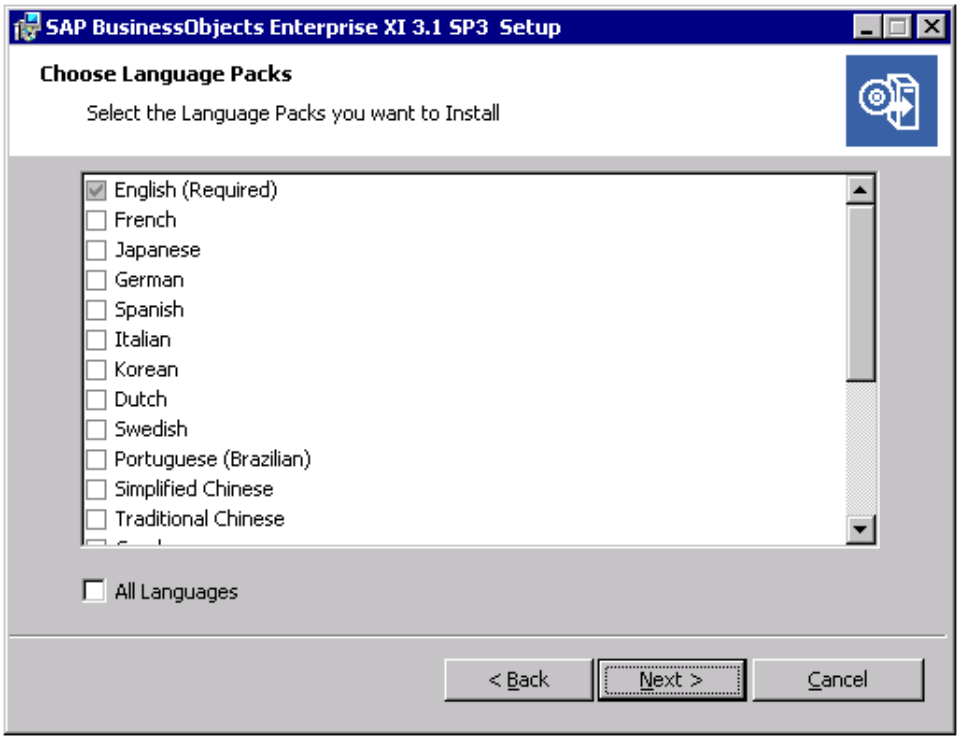
   The User Information window appears. Enter a name, organization name (optional), and 26-character Product Keycode.



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup User Information window

6. Select a language pack on the Choose Language Pack window and click Next to continue.

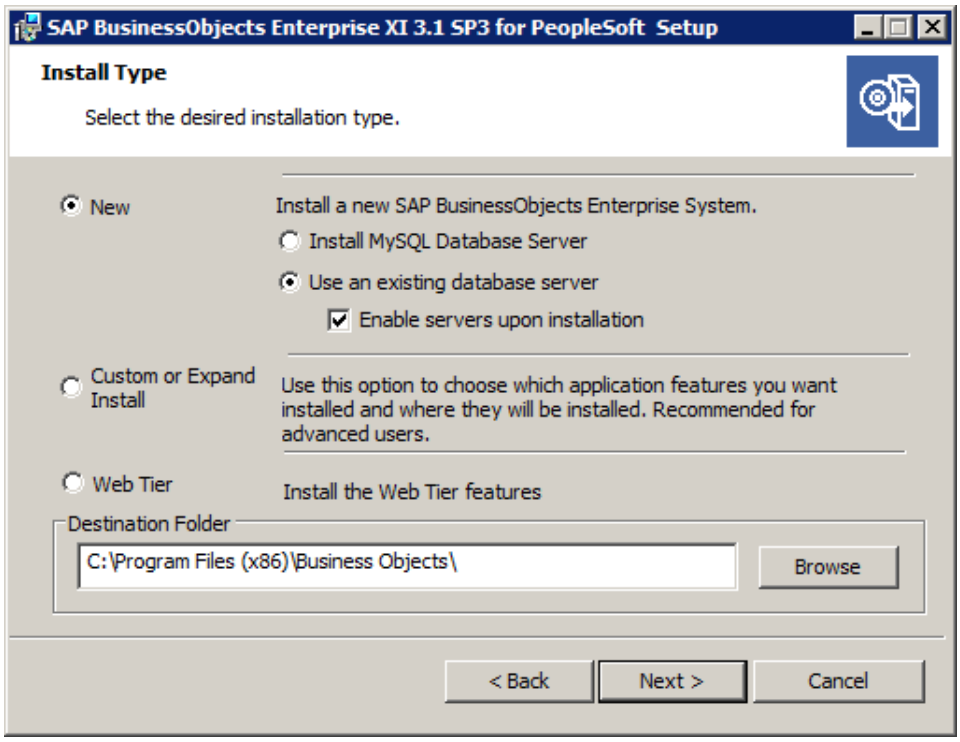
Note. English is mandatory because it is used as a backup language in case of a problem with a language pack. The check box for English cannot be cleared.



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup Choose Language Packs window

The Install Type window appears.

7. Select New as the installation type.



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup Install Type window

Select one of the following options:

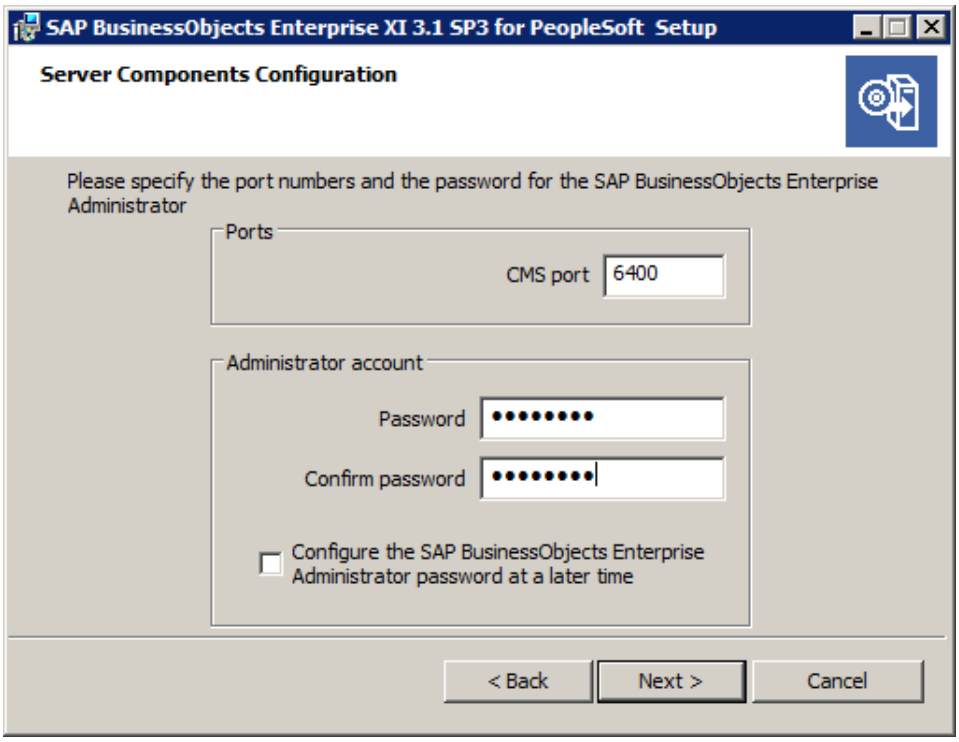
- Select Use an existing database server if you want to use an existing database server. (This is the option selected in the example.)
- Select Enable servers upon installation if you want to launch BusinessObjects Enterprise when the installation process finishes.
- Specify where to install the SAP BusinessObjects Enterprise XI 3.1 SP3 components in the Destination Folder field.

  The installation directory is referred to in this documentation as *BOE_HOME*. In this example the installation directory is C:\Program Files (x86)\Business Objects.

8. Click Next.

   The Server Components Configuration window appears.

9. Specify the following information:



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup Server Components Configuration window

- CMS port

  The default Central Management Server (CMS) port number is 6400. The CMS will communicate with other BusinessObjects Enterprise servers through the specified port. If the port you specified is unavailable, you will be requested to specify another port number.

  Use this port number with your machine name to log in from the Central Configuration Manager later in this section.

- Password

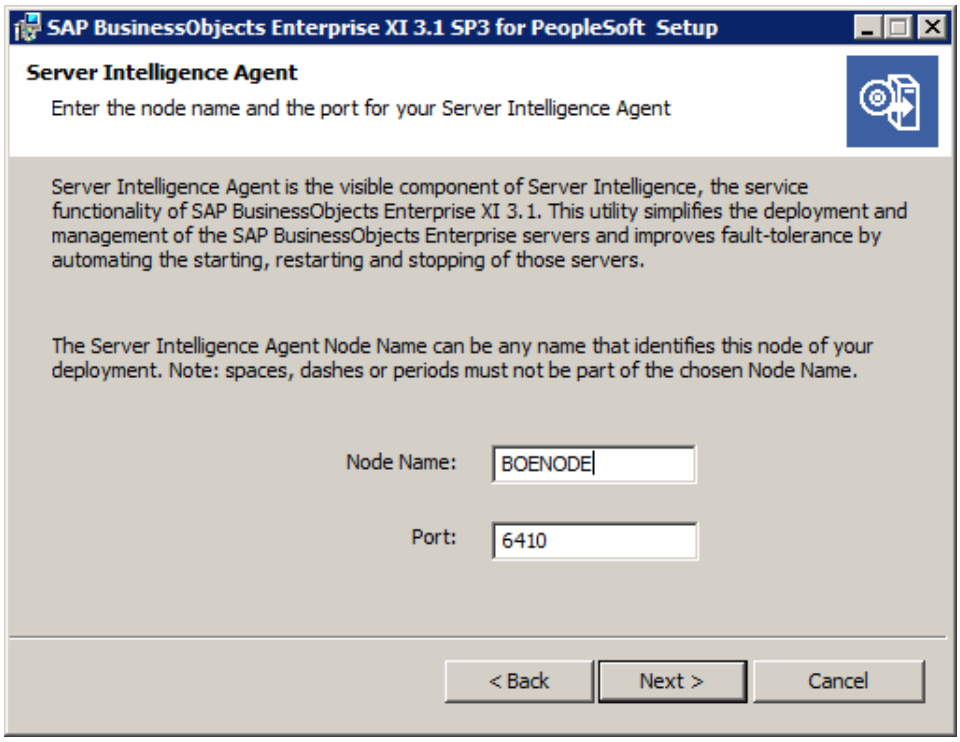
  Specify a secure password for the CMS administrator account in the Password and Confirm password fields.

  Use this password with user name *Administrator* to log in from the Central Configuration Manager later in this section. You will also need it during the setup process for the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft.

10. Click Next.

    The Server Intelligence Agent (SIA) window appears.

11. Specify the following information:



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup Server Intelligence Agent window

- *Node Name*

  Provide a unique name to identify the SIA node. The name in the example is BOENODE.

  Note. Do not use spaces or non-alphanumeric characters in a SIA node name.

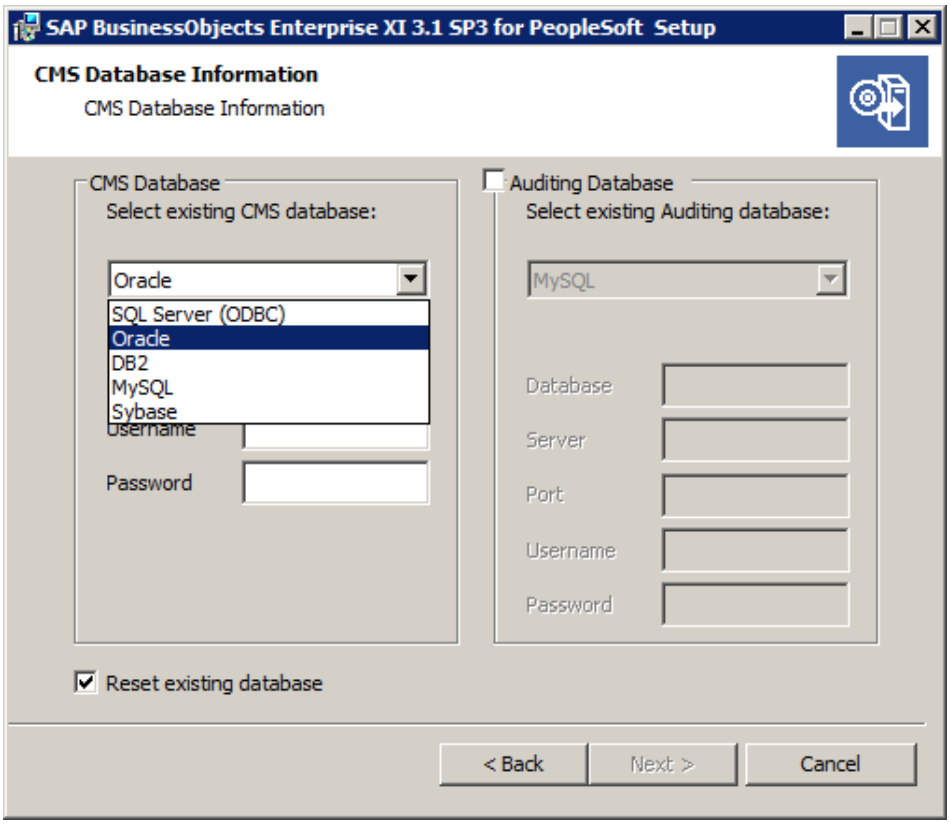
- *Port*

  Specify a port number for the SIA. The default is 6410, as shown in the example. This port will be used by the Server Intelligence Agent to communicate with the Central Management Server.

  After you enter the SIA information, the port number will be validated. A warning will appear if the port you specify is not available. After the port is validated, you can proceed to configure the CMS database for your installation.

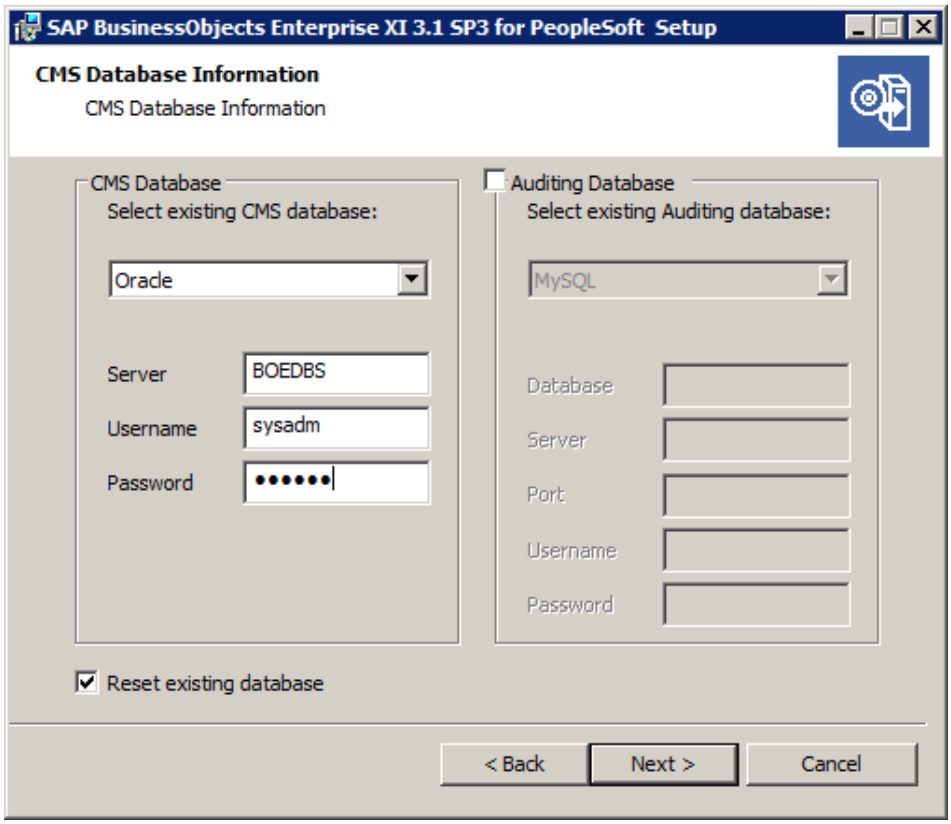
12. Click Next.

    The CMS Database Information window appears.



SAP BusinessObjects Enterprise XI 3.1 SP3 Setup window CMS Database Information window

13. If you chose the option to use an existing database server, enter connection and authentication details for the database as follows:



CMS Database Information for an Oracle database

- Select a database type from the Select existing CMS database drop-down list in the CMS Database pane.

  Depending on your database server selection, corresponding input fields are displayed in the CMS Database pane.

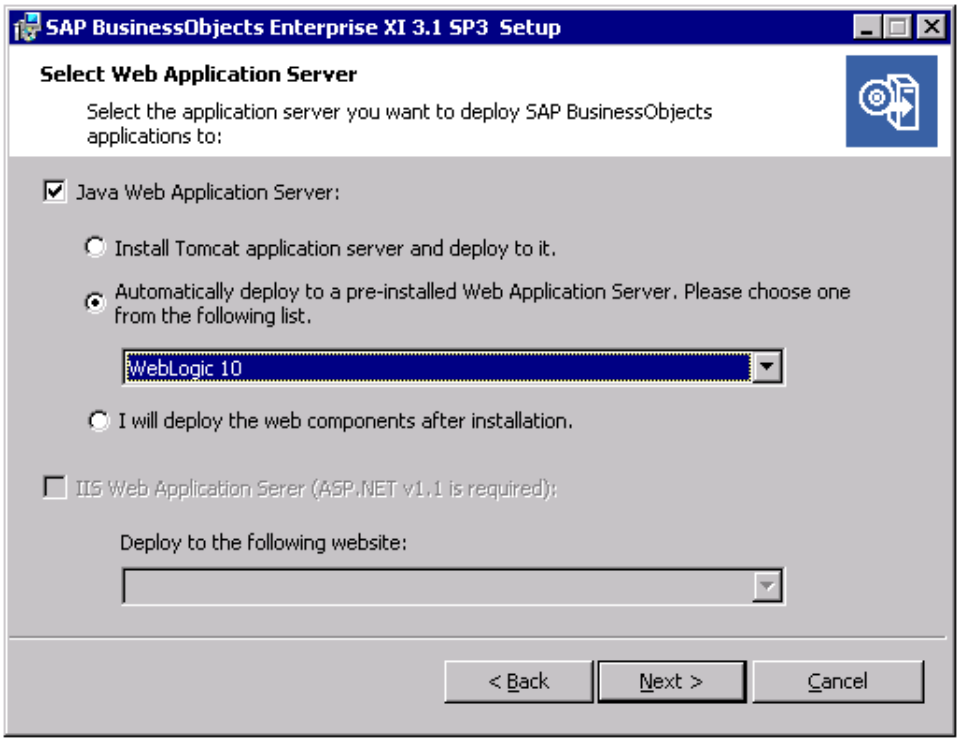
- Provide all the required information for the database in the fields provided in the CMS Database pane. The table below summarizes all the information required for each database type:

Database Platform	Required Information
DB2 LUW	• Server: DB2 LUW database alias • User name for login • Password for login
Microsoft SQL Sever (ODBC)	ODBC DSN This is specified in the Microsoft Windows Data Sources (ODBC) dialog box. Select Start, Programs, Control Panel, Administrative Tools, Data Sources (ODBC).
MySQL	MySQL is not supported in the integration of PeopleSoft with BusinessObjects Enterprise XI.
Oracle	• Server: tnsnames connect identifier • User name for login • Password for login
Sybase	• Server: Sybase Server Name The Sybase server name is a combination of the host name and the port number which is set by your database administrator in the file sql.ini. • User name for login The user name should be a default user for the SAP BusinessObjects Enterprise XI 3.1 database. • Password for login

- Select the Reset existing database box to delete all current tables and entries in existing database CMS and auditing databases.

14. Click Next to continue with the installation.

    The Select Web Application Server window appears. This screen only appears if a connection is established with the database configuration you provided.



SAP BusinessObjects Enterprise XI 3.1 SP3 Select Web Application Server window

15. Select Java Web Application Server option, and select one of the options for the web server software from the drop-down list under Automatically deploy to a pre-installed Web Application Server:

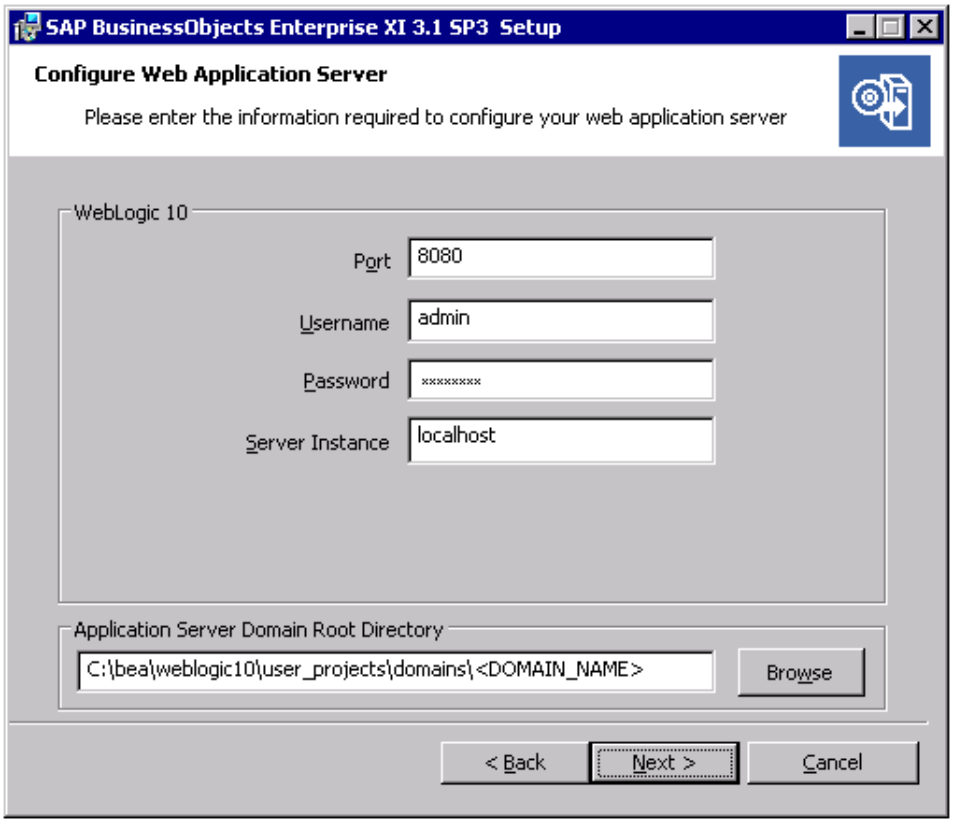
Note. Tomcat and IIS web application servers are not supported by Oracle for PeopleSoft installations.

- Oracle WebLogic (The example above shows WebLogic 10.)
- IBM WebSphere

16. Click Next.

    The options on the screen that appears next depend upon which web application server you select.

17. If you selected the option for Oracle WebLogic, the following Configure Web Application server window appears:



SAP BusinessObjects Enterprise XI 3.1 SP3 Configure Web Application Server window for Oracle WebLogic

Enter the following information for an Oracle WebLogic web server:

See Creating an Oracle WebLogic Server

- *Port*

  Enter the application port of the web application server; in this example, the port is 8080.

- *Username*

  Enter the name for the user with administration rights to the web application server; in this example, the user name is admin.

- *Password*

  Enter the password for the administrator user account.

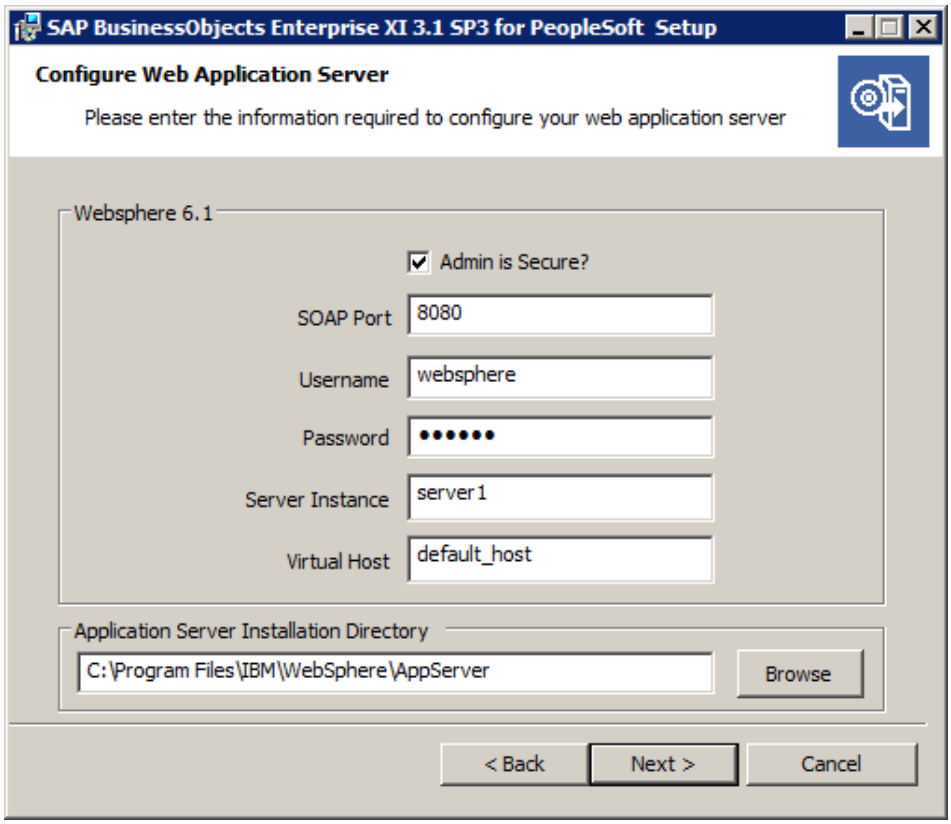
- *Server Instance*

  Enter the name for the current web application server instance; in this example, localhost.

- *Application Server Domain Root Directory*

  The root directory for the web server domain; in this example, the directory is C:\bea\weblogic10\user_projects\domains\<DOMAIN_NAME>.

18. If you selected the option for IBM WebSphere, the following Configure Web Application server window appears:



SAP BusinessObjects Enterprise XI 3.1 SP3 Configure Web Application Server window for IBM WebSphere

Enter the following information for an IBM WebSphere web server:

- *SOAP Port*

  The SOAP Connector Port of the application server (the default is 8080 as shown in the example).

- *Username*

  User name with administration rights to the WebSphere application server; for example, websphere.

- *Password*

  Password for account with administration rights to the application server.

- *Server Instance*

  Name of the current web application server instance. The default is server1, as shown in the example.

- *Virtual Host*

  The virtual host to which the application must be bound. The default is default_host, as shown in the example.

- *Admin is secure?*

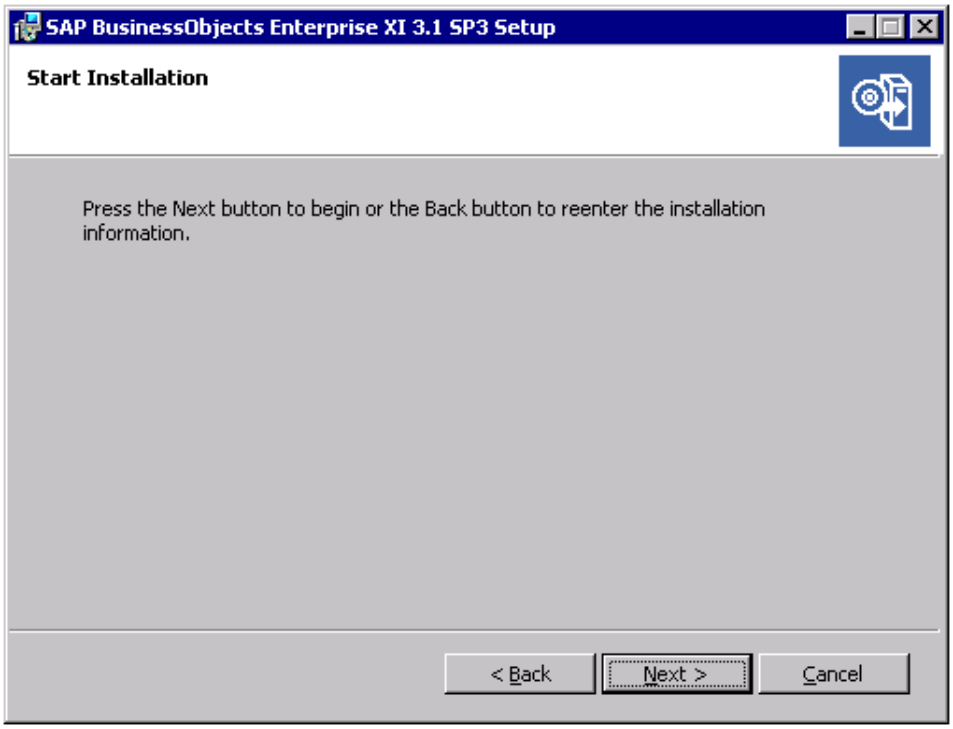
  Select this option to enable security requiring administrative access credentials to the application.

  Note. Values for Username and Password must be set when Admin is Secure is enabled.

- *Application Server Installation Directory*

  The directory where the web application server is installed (for example, C:\Program Files\IBM\WebSphere\AppServer).

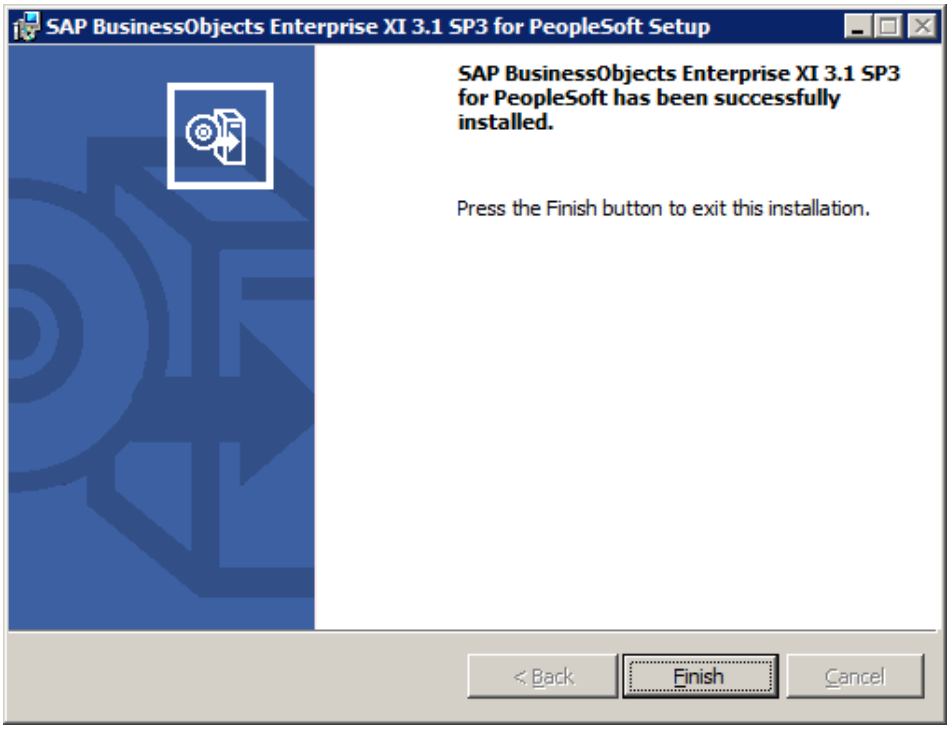
19. Click Next to start the installation process.



SAP BusinessObjects Enterprise XI 3.1 SP3 Start Installation window

20. Click Finish when the installation is complete.

    Reboot your machine.

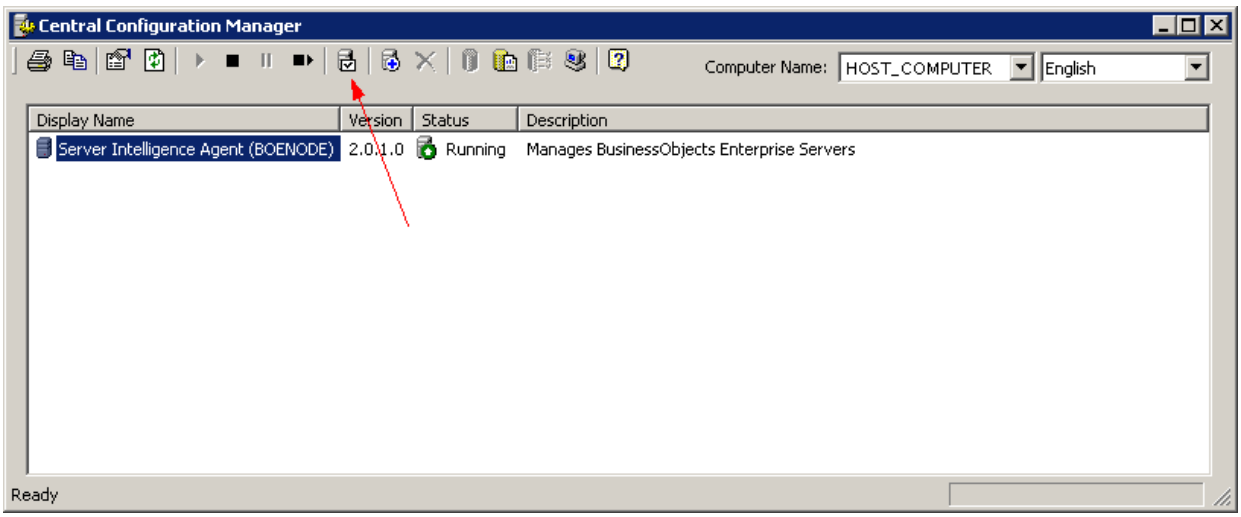


SAP BusinessObjects Enterprise XI 3.1 SP3 for PeopleSoft Setup has been successfully installed window

21. Select Start, Programs, BusinessObjects XI 3.1, BusinessObjects Enterprise, Central Configuration Manager.

    The Central Configuration Manager appears.

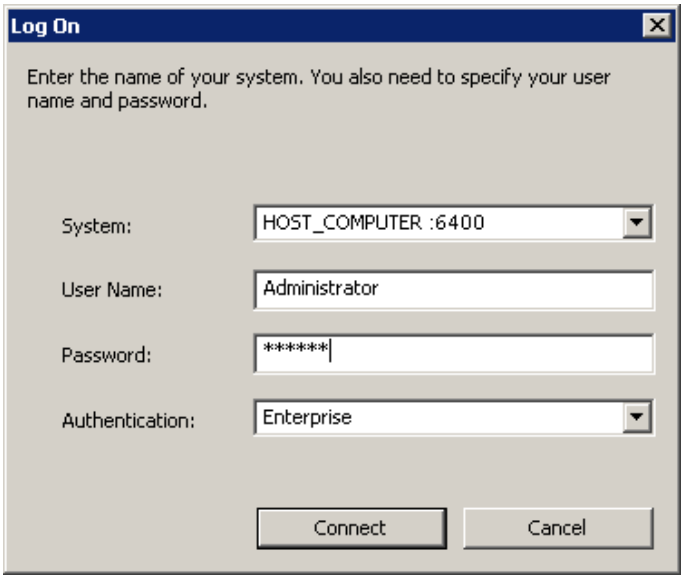
22. Click the Manage Servers icon, indicated by the red arrow in the example below.



Central Configuration Manager dialog box

    The Log On dialog box appears.

23. Enter the following information to log on:



Log on dialog box

- *System*

  Enter the node name and port, separated by a colon. The default name is the machine name, and the default port is 6400.

- *User Name*

  Enter the CMS administrator user name; the default is Administrator.

- *Password*

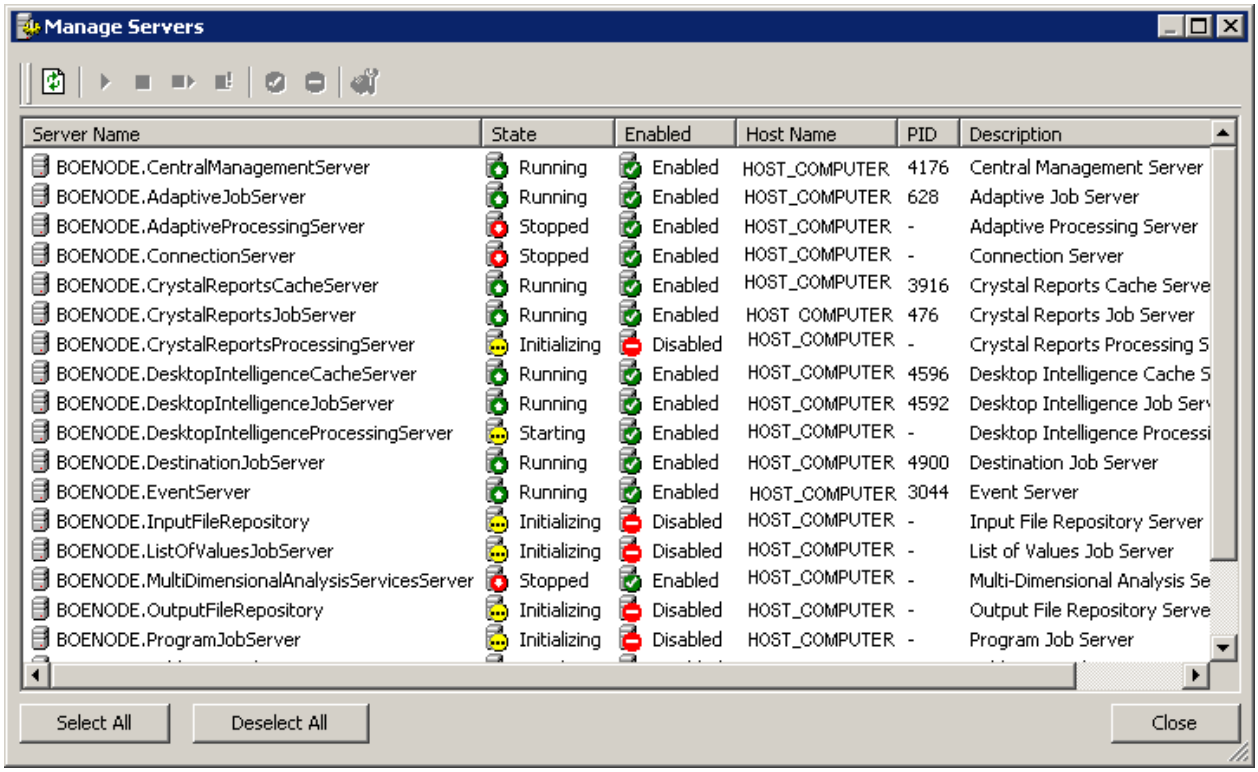
  Enter the CMS administrator password, as you specified on the Server Components Configuration window above.

- *Authentication*

  Select *Enterprise* from the drop-down list.

24. Click Connect.

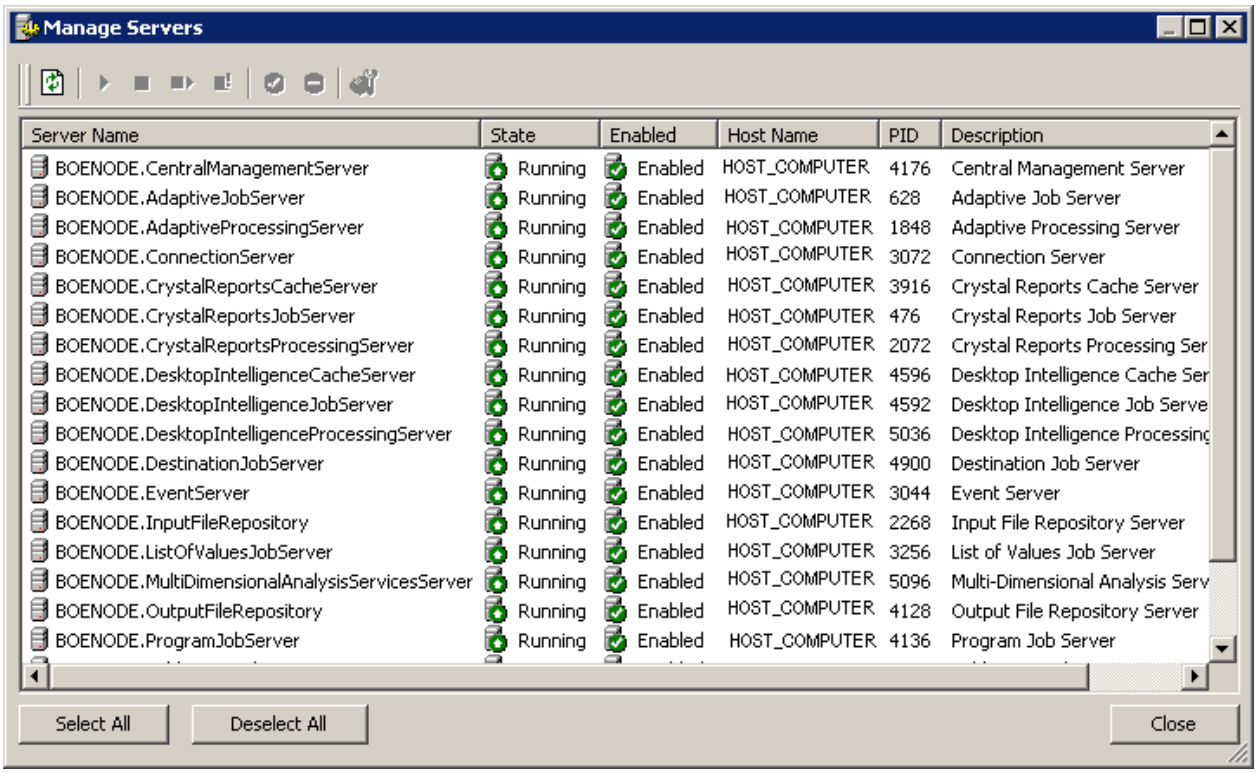
    The Manage Servers dialog box appears with all servers and their state. The servers take a couple of minutes to start up. The listing is not refreshed unless the refresh button is clicked.



Manage Servers dialog box before refreshing

Ensure all servers are started, as indicated by the status Running in the State column.

Note. After each machine reboot, you have to restart the Server Intelligence Agent in the Central Configuration Manager.



Manage Servers dialog box after refreshing

25. Set the following environment system variables after the SAP BusinessObjects Enterprise XI 3.1 installation is complete:

Important! If these system variables are not set, the deployment of the BusinessObjects Enterprise web applications will fail as they are dependent on these environment settings.

Note. *BOE_HOME* refers to the folder in which you installed SAP BusinessObjects Enterprise XI 3.1 (for example, C:\Program Files (x86)\BusinessObjects\). Substitute your path in the following.

The PATH environment system variable should include:

```
BOE_HOME\BusinessObjects Enterprise 12.0\win32_x86
```

26. Reboot your machine.

If your web server software is Oracle WebLogic 10.3, see the section on deploying web applications manually later in this chapter.

See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually on Oracle WebLogic 10.3.

Task 15-4-5: Installing BusinessObjects Integration Kit for PeopleSoft on Windows

Before you begin, ensure that:

- The Central Management Server (CMS) and web server are running.

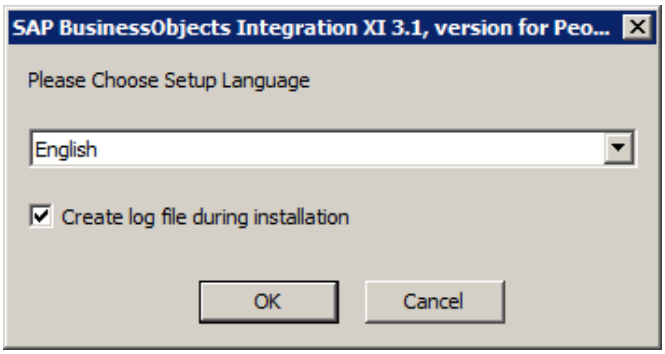
- You know the logon credentials for the BusinessObjects Enterprise Administrator account and for the web server. You will be prompted for administrator logon details for the CMS machine and the web server.
- You have downloaded the installation files for the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft from Oracle E-Delivery and extracted them into a convenient directory, referred to here as *BOE_INTEG_INSTALL*.

Carry out this procedure on the machine where SAP BusinessObjects Enterprise XI 3.1 is installed.

To install the integration kit:

1. Run *BOE_INTEG_INSTALL*\setup.exe.
2. Choose the setup language and click OK.

   Note. This is the language in which you want to perform the installation.



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Choose Setup Language window

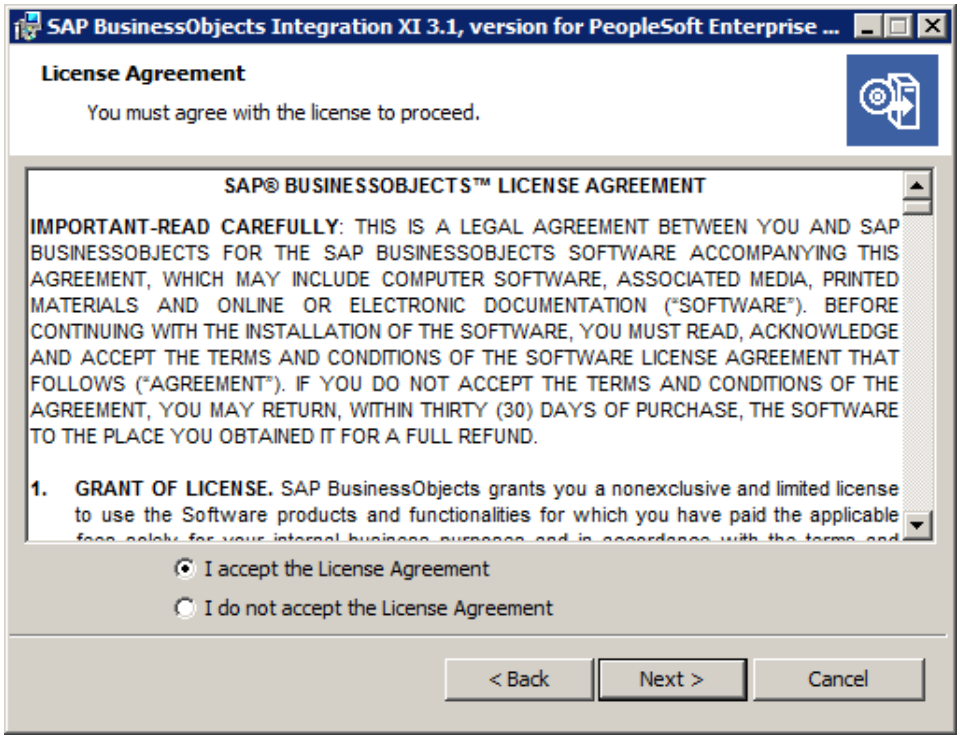
   The Welcome window appears.

3. Read the recommendation to exit all Windows programs, and click next

SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Welcome window

The License Agreement dialog box appears.

4. To continue the installation, you must accept the license agreement and click Next.

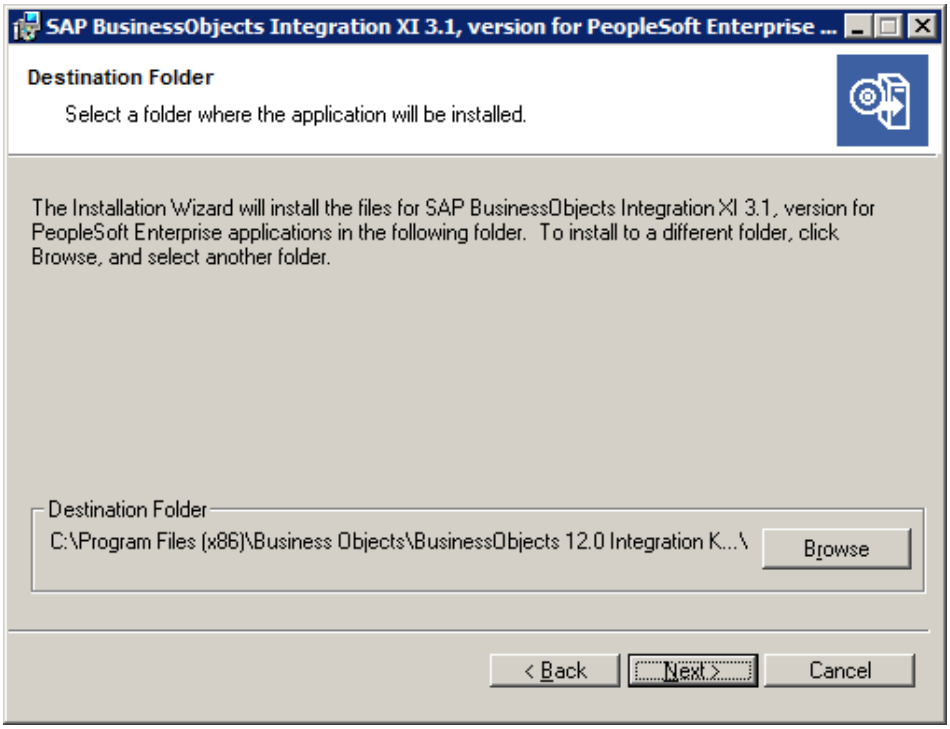


SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise License Agreement window

The Destination Folder window appears.

5. Specify the folder where you want the integration product files to be installed, or accept the default, and click Next.

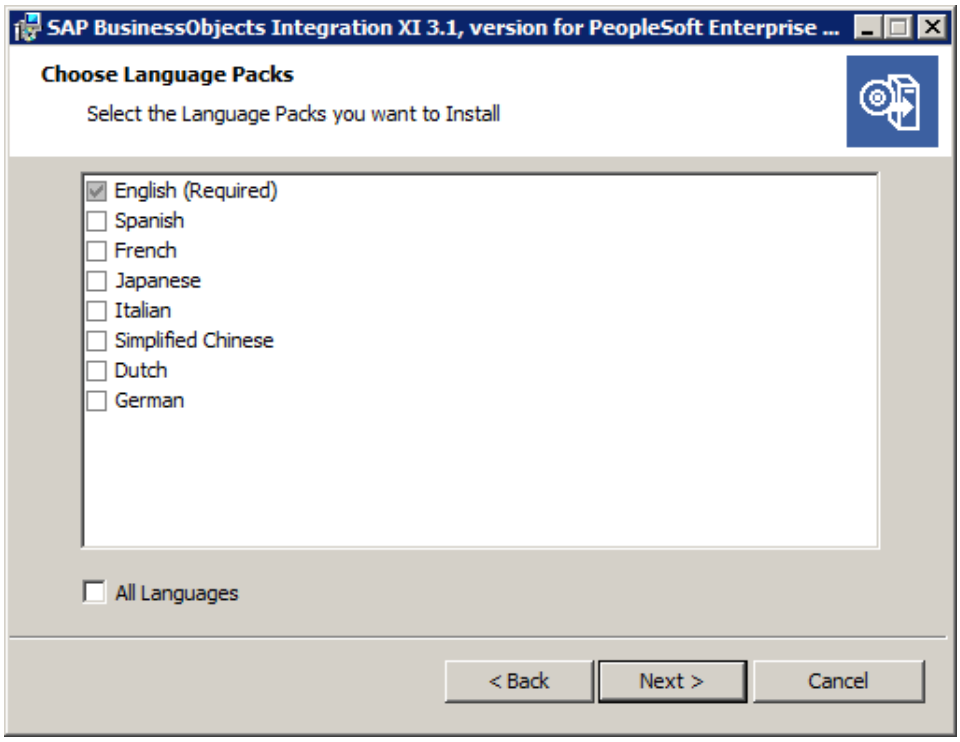
   In this example, the default is C:\Program Files (x86)\Business Objects\BusinessObjects 12.0 Integration Kit for PeopleSoft.



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Destination Folder window

   The Choose Language Pack window appears.

6. Choose the language pack you want to install and click Next.

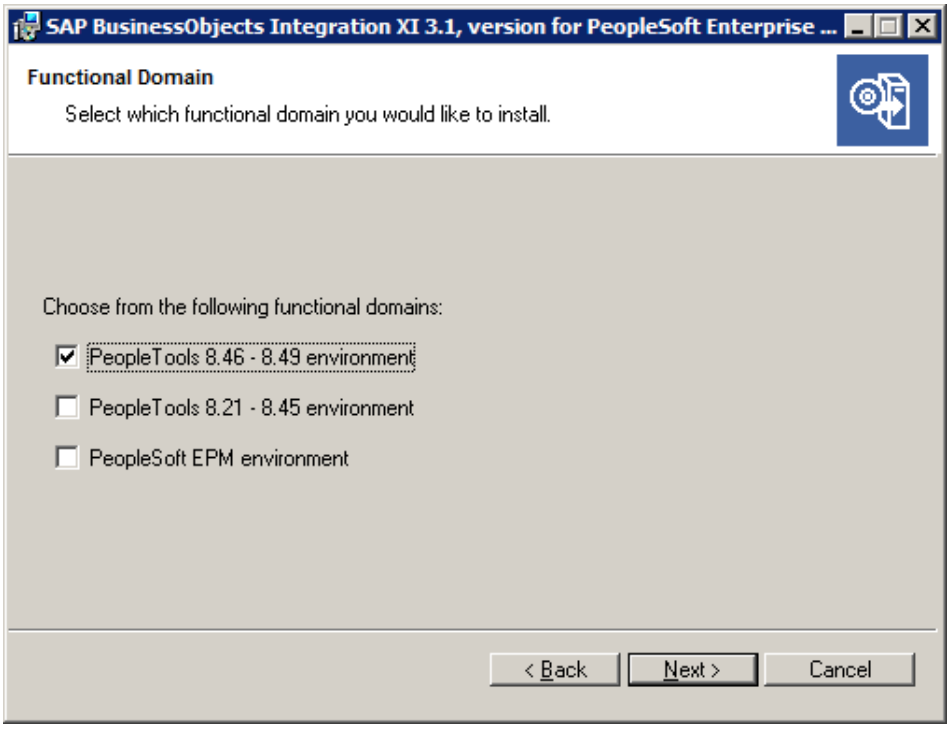


SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Choose Language Packs window

The Functional Domain window appears.

7. Select the first option PeopleTools 8.46-8.49 environment and click Next.

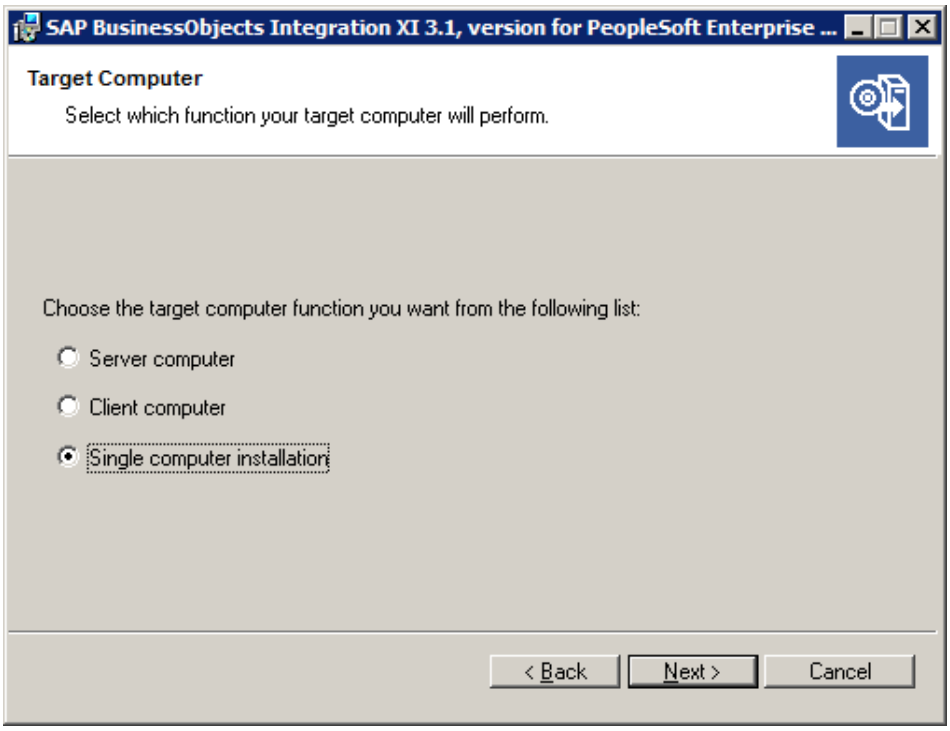
Note. This option is correct for PeopleSoft PeopleTools 8.50 and higher as well as for PeopleTools 8.46-8.49.



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Functional Domain window

The Target Computer window appears.

8. Choose Server computer, Client computer, or Single Computer, as follows:



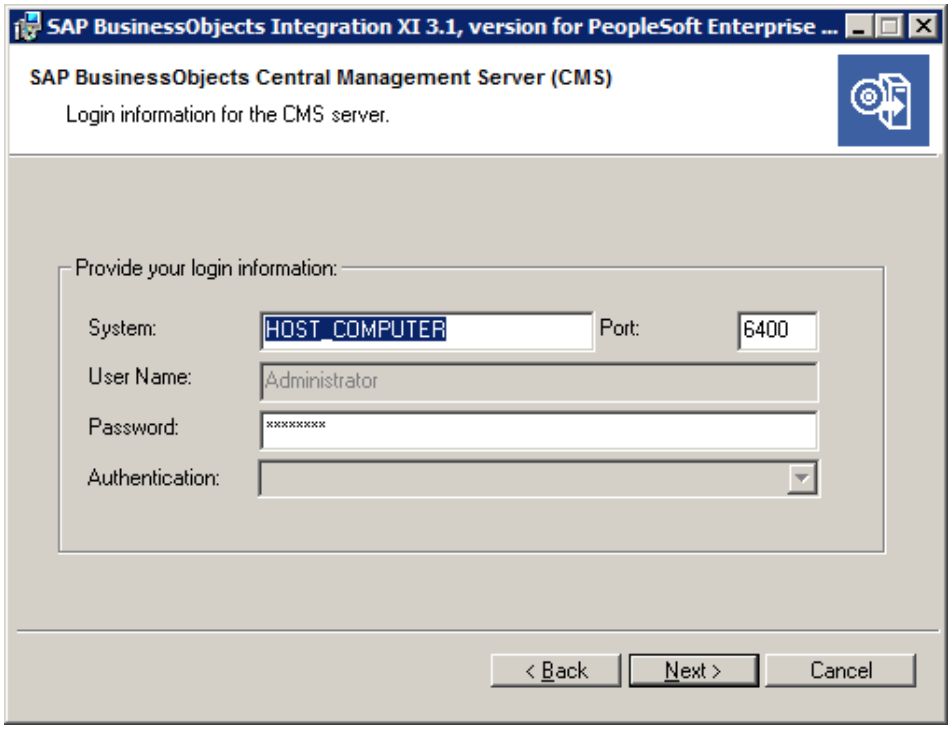
SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Target Computer window

- If only BusinessObjects Enterprise is installed, select the Server computer type.

- If only Crystal Reports or Business View Manager or Publishing Wizard is installed, select the Client computer type.
- If both BusinessObjects Enterprise and Crystal Reports or Business View Manager or Publishing Wizard are installed, select the Single computer type.

9. Click Next.

   The BusinessObjects Central Management Server window appears.



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Central Management Server window

   Enter the following information:

   - *System*

     Enter the name of the computer on which you installed SAP BusinessObjects Enterprise XI 3.1. This example uses HOST_COMPUTER.

   - *Port*

     Enter the CMS port number, 6400 in this example, you entered on the Server Components Configuration window when installing SAP BusinessObjects Enterprise XI 3.1.

   - *User Name*

     When you enter the System and Port, the user name Administrator is populated.

   - *Password*

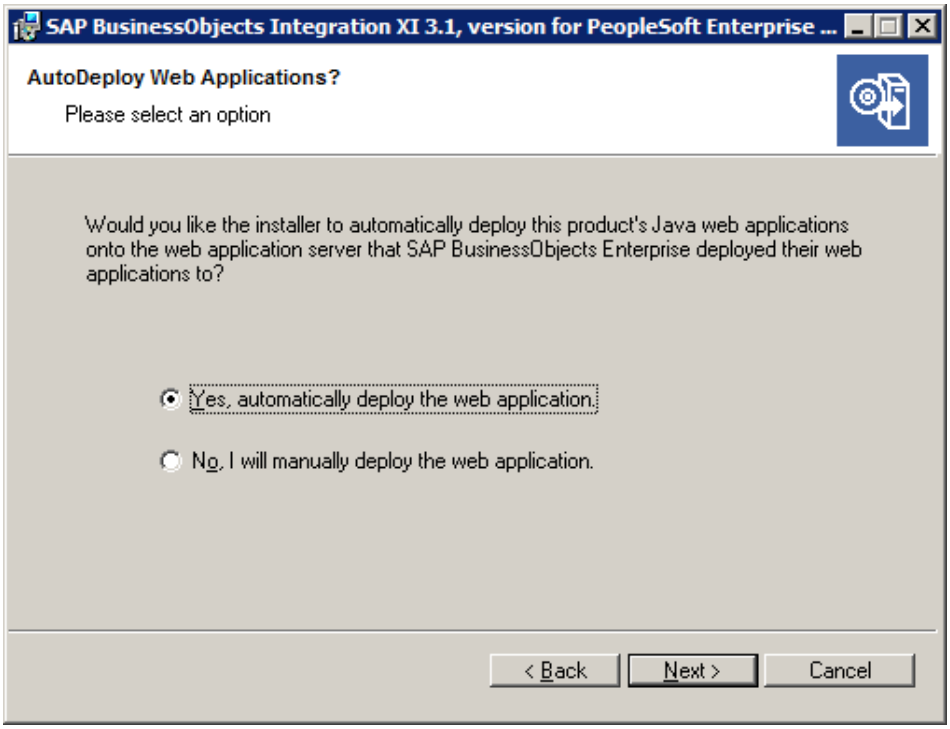
     Enter the password for the CMS Administrator account that you entered on the Server Components Configuration window.

   - *Authentication*

     When you fill out the above fields, and click Next, this field is populated with Enterprise.

10. Click Next.

The AutoDeploy Web Applications window appears.

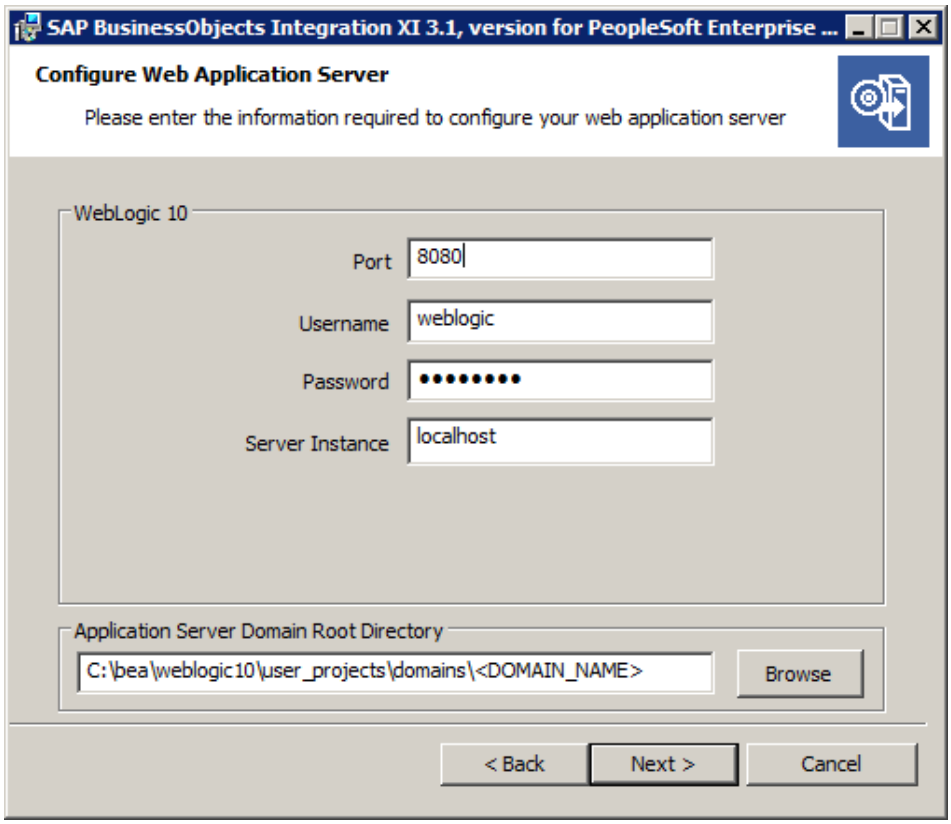


SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise AutoDeploy Web Applications window

11. If your web server is Oracle WebLogic, select the first option, Yes automatically deploy the web application, and click Next.
12. If your web server is IBM WebSphere, select the second option, No, I will manually deploy the web application.

    Skip the next step, for Oracle WebLogic. The instructions for manual deployment for IBM WebSphere are given in a later section.

    See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually Through IBM WebSphere Console.
13. If your web server is Oracle WebLogic, the following Configure Web Application Server Window appears:



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Configure Web Application Server window

Enter the following information for the web application server that you created before you installed SAP BusinessObjects Enterprise XI 3.1:

- *Port*

  Enter the listening port for the web application server. In this example, the port is 8080.

- *Username*

  Enter the administrator user name that you entered when installing the web application software. In this example, for Oracle WebLogic, the user name is weblogic.

- *Password*

  Enter the administrator password that you entered for the web application software.

- *Server Instance*

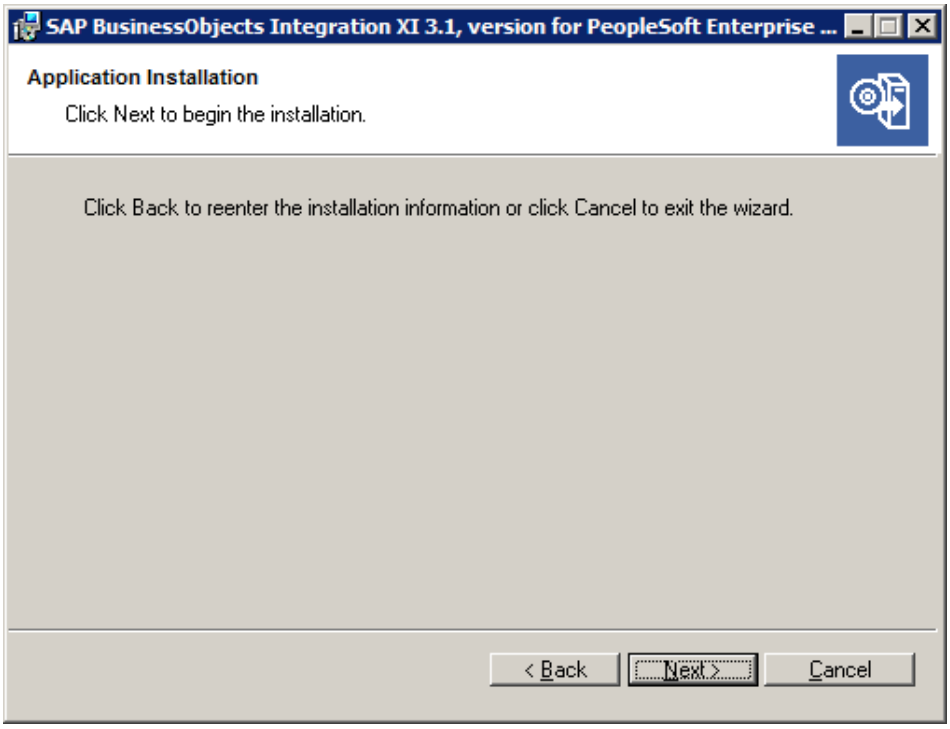
  Enter the server instance, in this example, localhost. For Oracle WebLogic, the default is AdminServer.

- *Application Server Domain Root Directory*

  Browse to find the directory of the domain you created for the web server. In this example, the directory is C:\bea\weblogic10\user_projects\domains\<DOMAIN_NAME>.

14. Click Next.

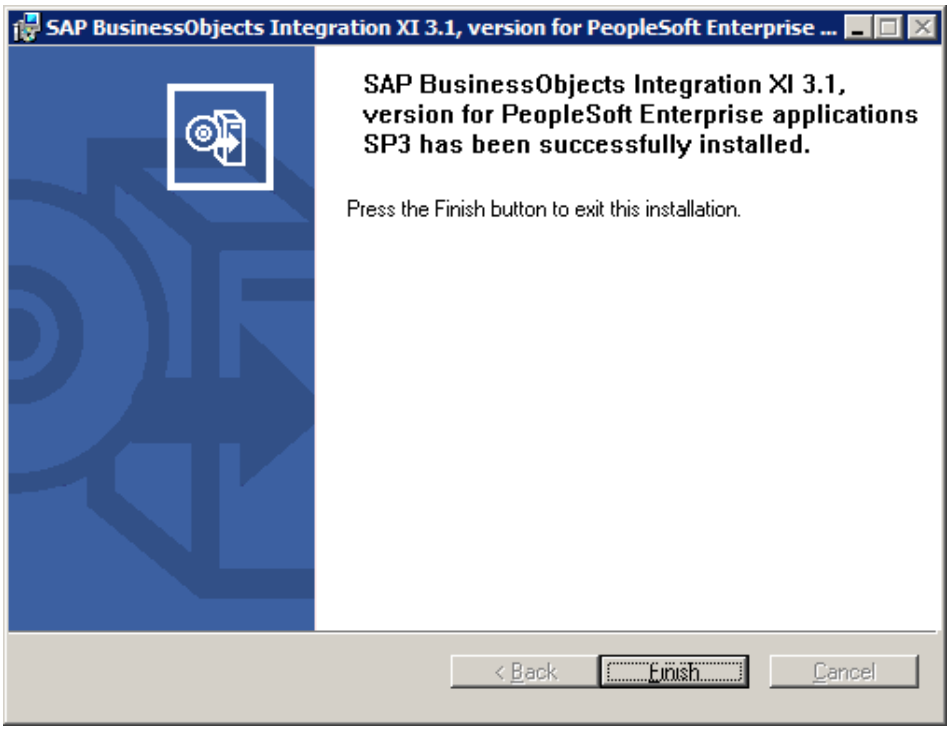
    The Application Installation dialog box appears.



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise Application Installation window

15. Click Next to begin the installation.

    When the installation is complete, click Finish.



SAP BusinessObjects Integration XI 3.1, version for PeopleSoft Enterprise has been successfully installed window

Task 15-4-6: Installing Fix Packs or Service Packs on Windows

After completing the full installation of SAP BusinessObjects Enterprise XI 3.1 and the BusinessObjects Integration Kit for PeopleSoft, you must install the appropriate additional fix pack or service pack for each. Consult the certification information on My Oracle Support for the patch level required for your installation.

See "Operating System, RDBMS & Additional Component Patches Required for Installation PeopleTools," My Oracle Support, (search for article name).

Use these instructions to apply each fix pack:

1. Go to the local directory where you downloaded and extracted the fix pack.
2. Launch the installation by running setup.exe.
   - If you see the following error message:

     ```
     The install has detected that a recommended Microsoft patch is not present on⇒
      this machine. If you continue, the following error message might be⇒
      displayed: "Error 1718. File was rejected by digital signature policy". To⇒
      prevent any error messages during installation, please refer to Microsoft⇒
      kbase article ID 925336.
     ```

     See the information in this Microsoft web site: http://support.microsoft.com/kb/925336.
   - If you see the following error message:

     ```
     This patch only applies to BusinessObjects Enterprise XI 3.1. Setup will now⇒
      exit.
     ```

     Locate the setup.ini file in the directory where you downloaded the fix pack installation files. Open it in a text editor, and add “for PeopleSoft” as shown in the following examples:

     Original:

     ```
     [Bootstrap]
     ProductName=BusinessObjects XI 3.0
     Msi=package\BusinessObjects.msp
     Transform=package\
     TempFilePrefix=BOE_SP1FP6_Install_
     CheckLargePackage=Yes
     PatchForTargetMSI={5418F914-1D31-4849-822C-314AC28B06BF};12.1.0;Business⇒
     Objects Enterprise XI 3.1
     PatchDispName=FP1.6
     ```

     Modified:

     ```
     [Bootstrap]
     ProductName=BusinessObjects XI 3.0
     Msi=package\BusinessObjects.msp
     Transform=package\
     TempFilePrefix=BOE_SP1FP6_Install_
     CheckLargePackage=Yes
     PatchForTargetMSI={5418F914-1D31-4849-822C-314AC28B06BF};12.1.0;Business⇒
     Objects Enterprise XI 3.1 for PeopleSoft
     PatchDispName=FP1.6
     ```

3. Click Next on the Welcome window.
4. Click Next on the License Agreement window.
5. Enter the same CMS information that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation:
   - *System*

     Enter the name of the computer on which you installed BusinessObjects Enterprise XI Release.
   - *CMS port*

     Enter the CMS port number you entered on the Server Components Configuration window when installing SAP BusinessObjects Enterprise XI 3.1.
   - *Password*

     Enter the password for the CMS Administrator account that you entered on the Server Components Configuration window.
6. Select Yes, automatically re-deploy the web applications.
7. If you created the web server on Oracle WebLogic, enter the same values that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation for the following:
   - Port
   - Username
   - Password
   - Server instance
   - Application server domain root directory
8. If you created the web server on IBM WebSphere, enter the same web server information that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation for the following:
   - SOAP port
   - Username
   - Password
   - Server Instance
   - Virtual host
   - Administrative security option
   - Application server installation directory
9. Click Next to begin the installation.

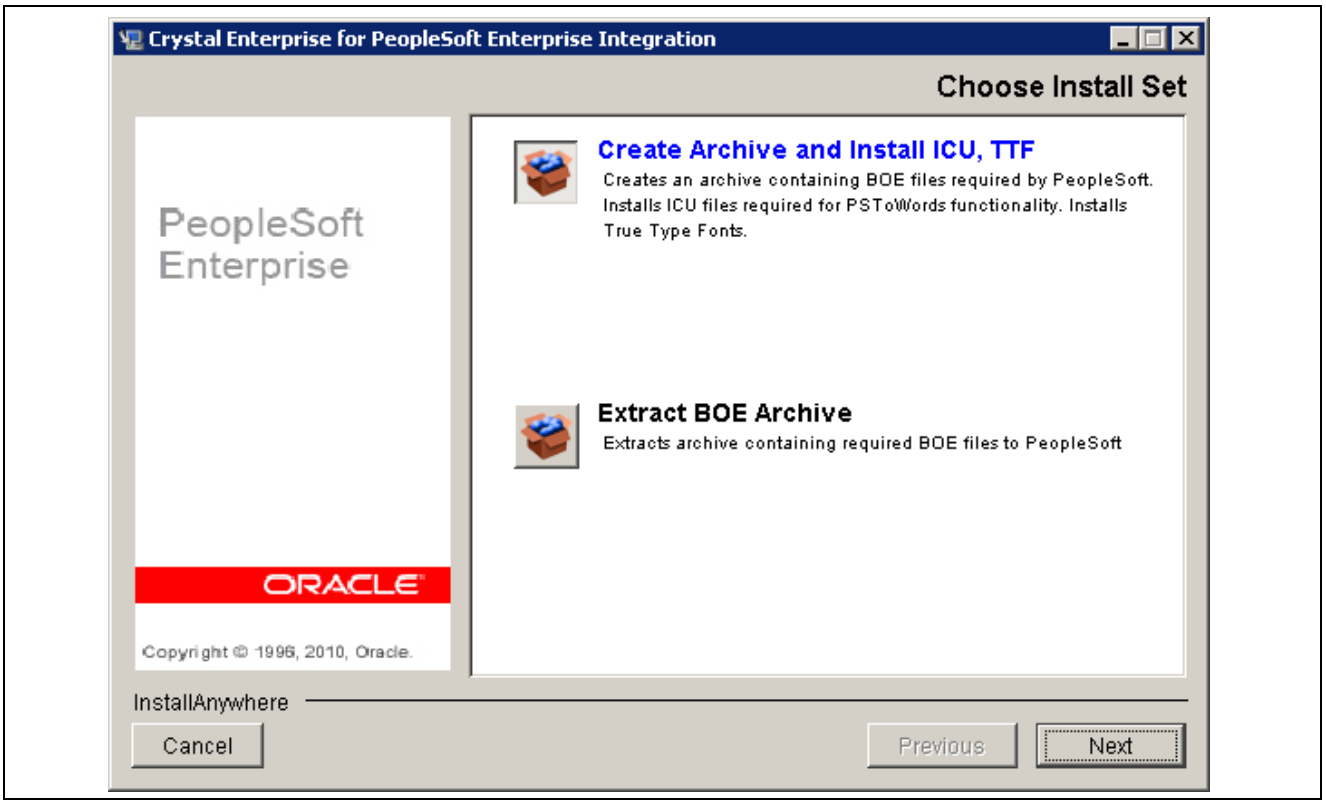
Task 15-4-7: Creating the BusinessObjects Enterprise Archive and Installing Files on Windows

In this section you consolidate the files that are needed for the PeopleSoft to BusinessObjects Enterprise integration in an archive. Also, this procedure installs International Components for Unicode (ICU) files that are required for the PSToWords functionality that is used with Crystal reports.

See *PeopleTools 8.52: Crystal Reports for PeopleSoft PeopleBook,* "Working with Multiple Languages."

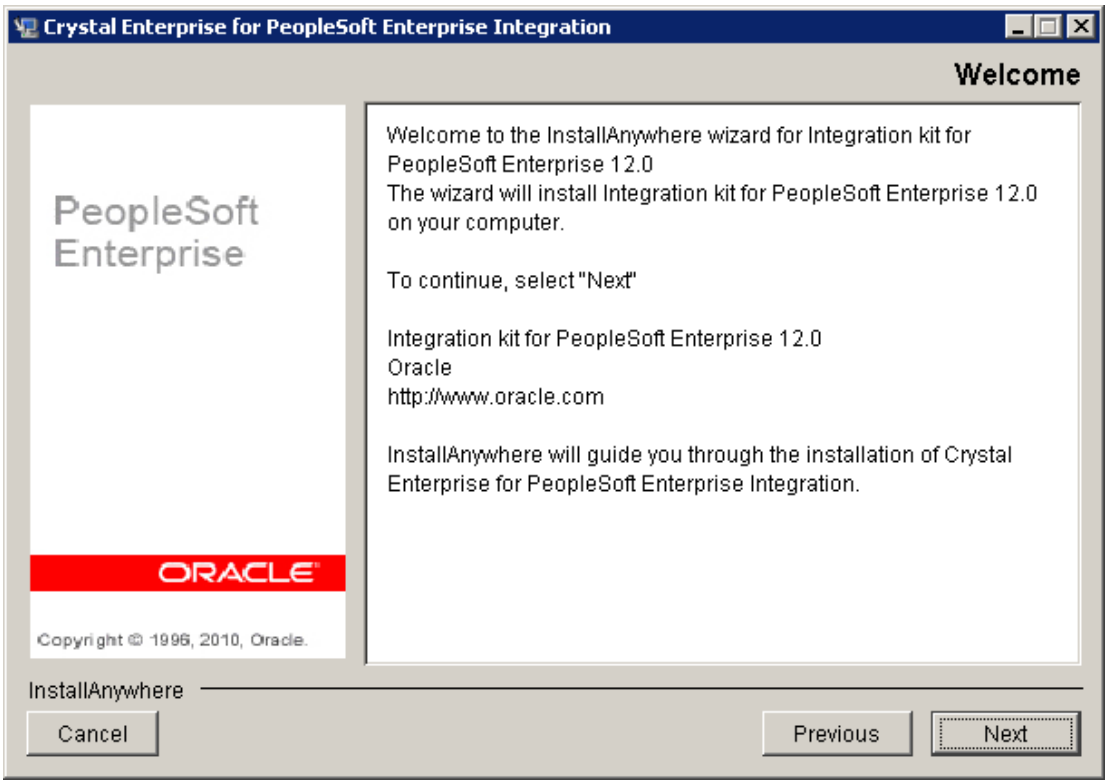
1. Go to *PS_HOME*\setup\PsMpCrystalInstall\Disk1 and run `setup.bat`.

2. Select the option Create Archive and Install ICU, TTF, and then click Next.



Crystal Enterprise for PeopleSoft Enterprise Integration Choose Install Set window

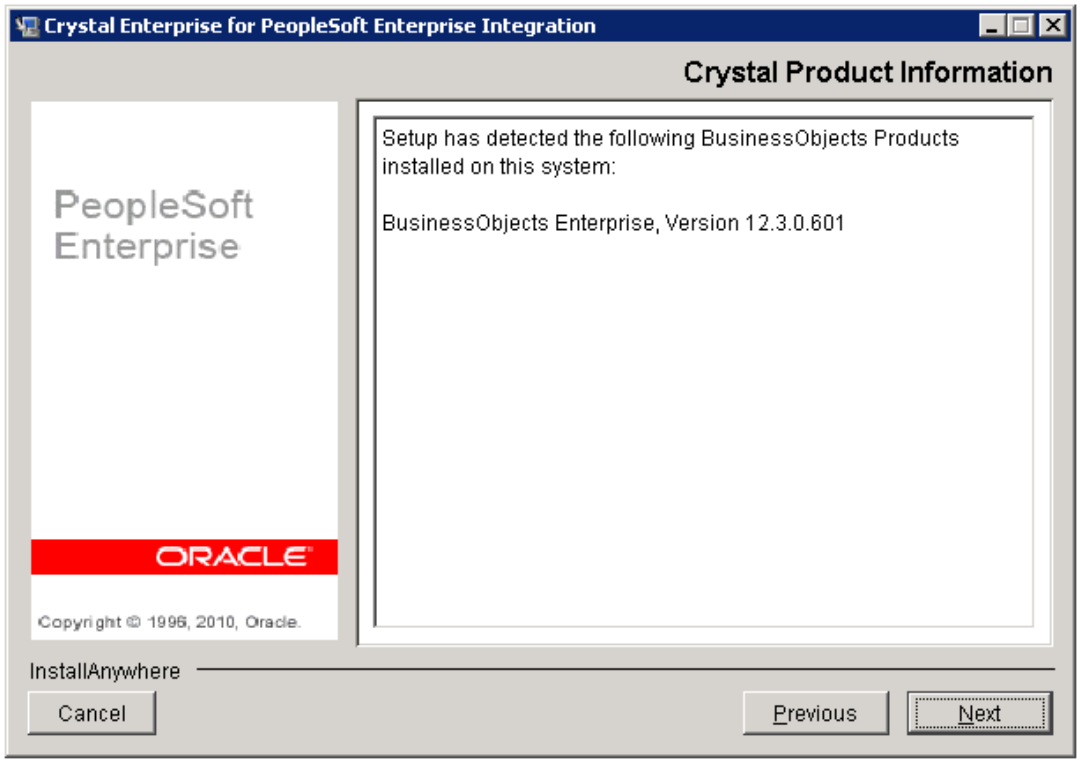
3. Click Next on the Welcome window.



Crystal Enterprise for PeopleSoft Enterprise Integration Welcome window

4. Click Next on the Crystal Product window.

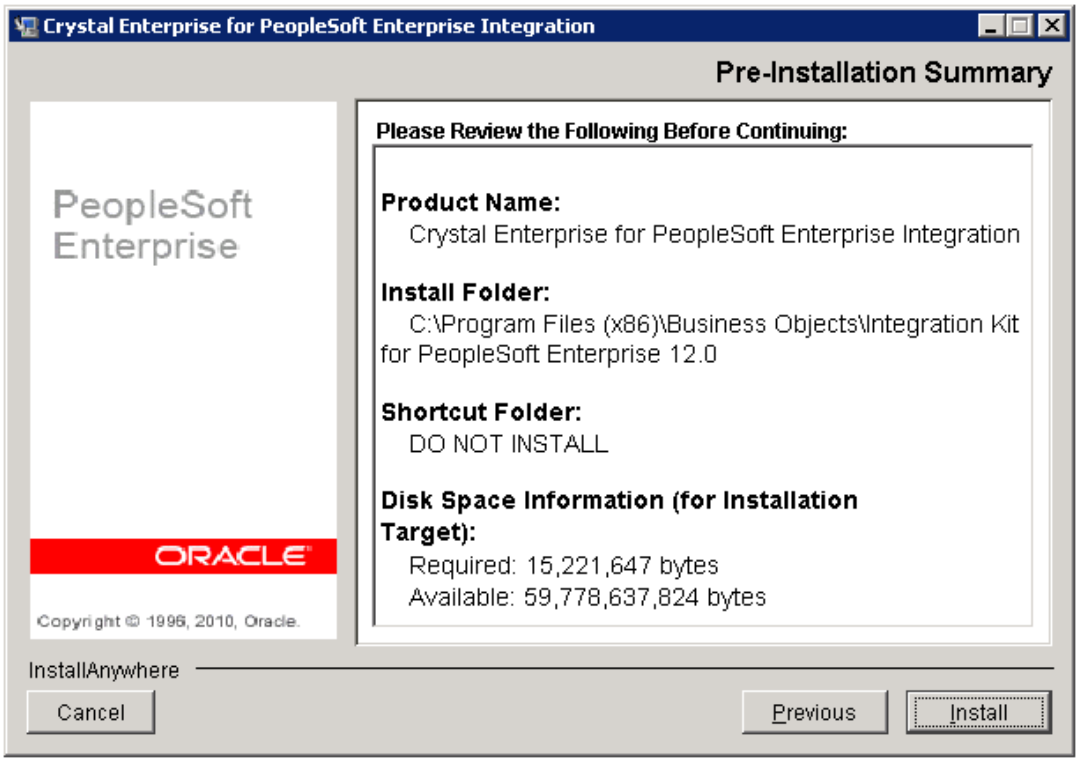
   The installer checks your system for the correct version of BusinessObjects Enterprise and display the version details. In this example, Version 12.3.0.601.



Crystal Enterprise for PeopleSoft Enterprise Integration Crystal Product Information window

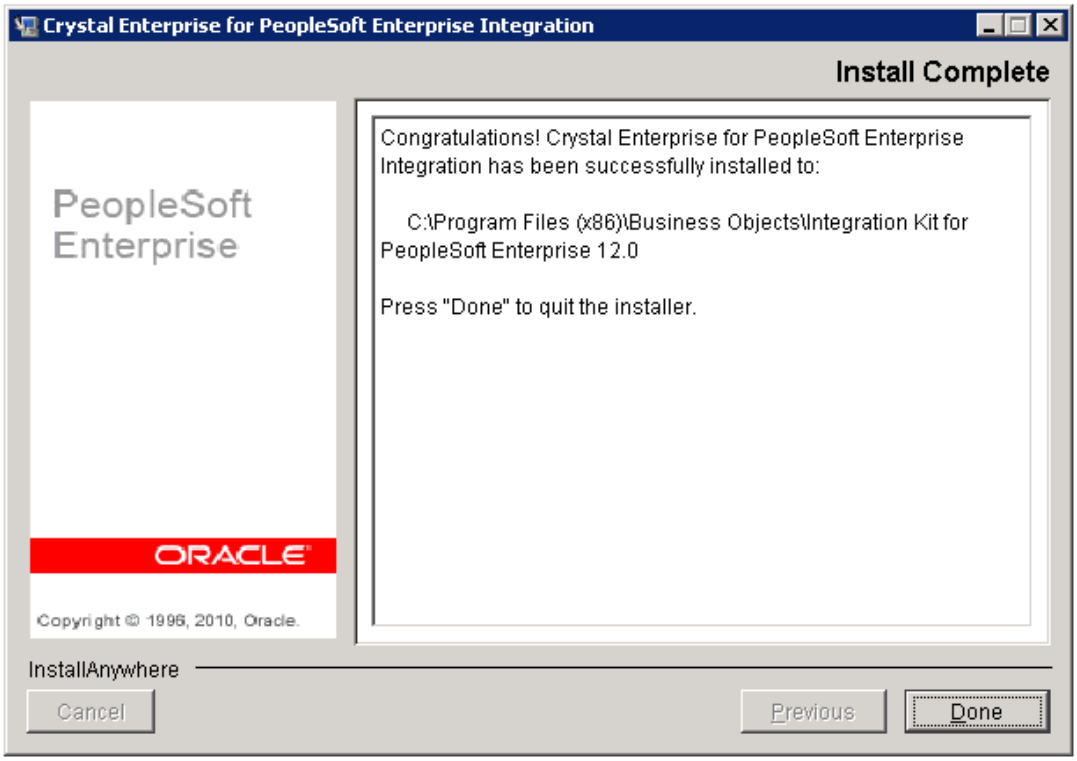
5. Review the installation summary, including the install folder and disk space information, and then click Install to begin the installation.

   In this example the install folder is C:\Program Files (x86)\Business Objects\Integration Kit for PeopleSoft Enterprise 12.0.



Crystal Enterprise for PeopleSoft Enterprise Integration Pre-Installation Summary window

6. Click Done to finish the installation.



Crystal Enterprise for PeopleSoft Enterprise Integration Install Complete window

7. Restart all BusinessObjects Enterprise servers.

The archive is saved as boearchive.zip in *PS_HOME*\PsMpCrystalInstall\Disk1\InstData.

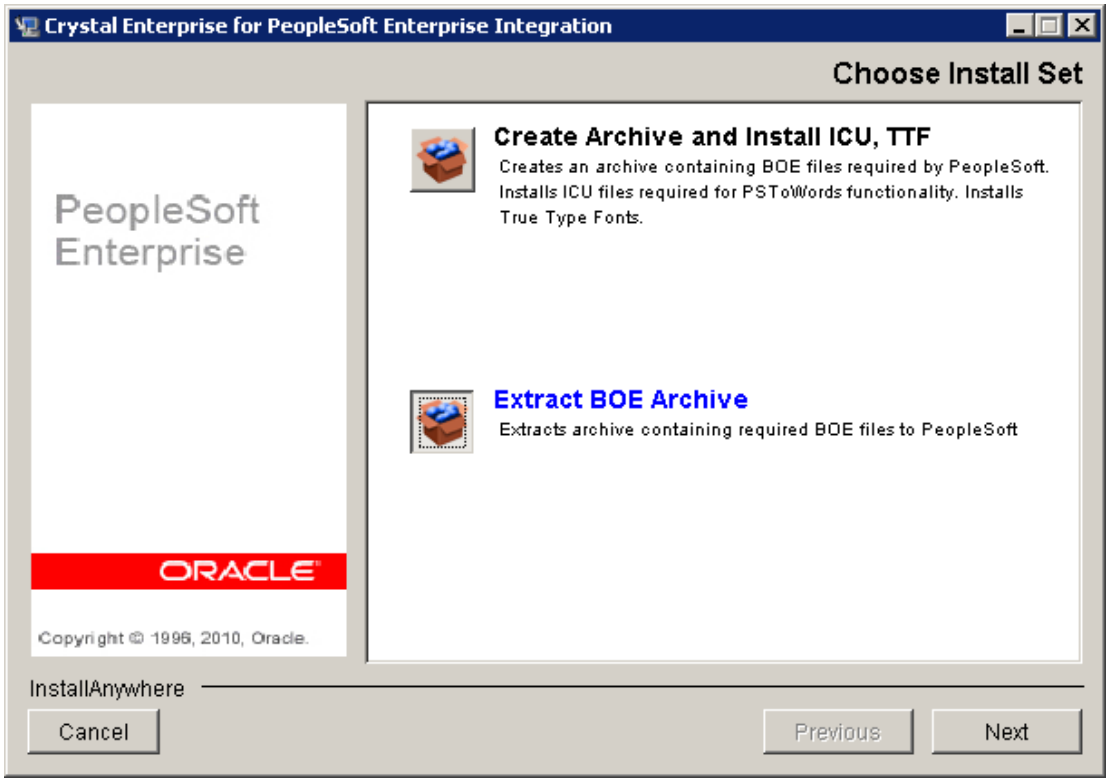
Task 15-4-8: Extracting the Archive on Windows

After you create the boearchive.zip as described in the previous section, you must extract it to the following locations:

- *PS_HOME* on the machine that is used for report conversion
- *PS_HOME* on the Process Scheduler server
- *PIA_HOME* on the machine used for viewing reports

To extract the archive:

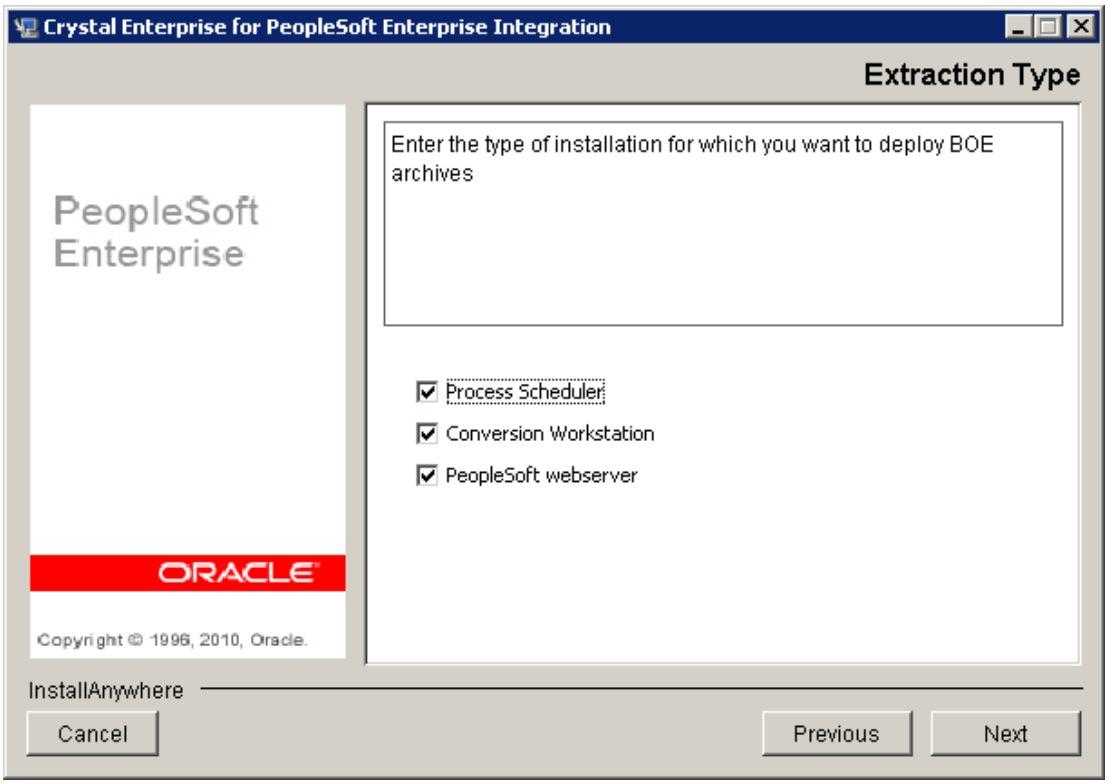
1. Copy boearchive.zip to PsMpCrystalInstall\Disk1\InstData under *PS_HOME* or *PIA_HOME*.
2. Go to *PS_HOME*\PsMpCrystalInstall\Disk1 or *PIA_HOME*\PsMpCrystalInstall\Disk1 and run `setup.bat`.
3. Select the option Extract BOE archive and then click Next.



Crystal Enterprise for PeopleSoft Enterprise Integration Choose Install Set window with extracting archive option

4. Select the types of installation you require and then click Next.

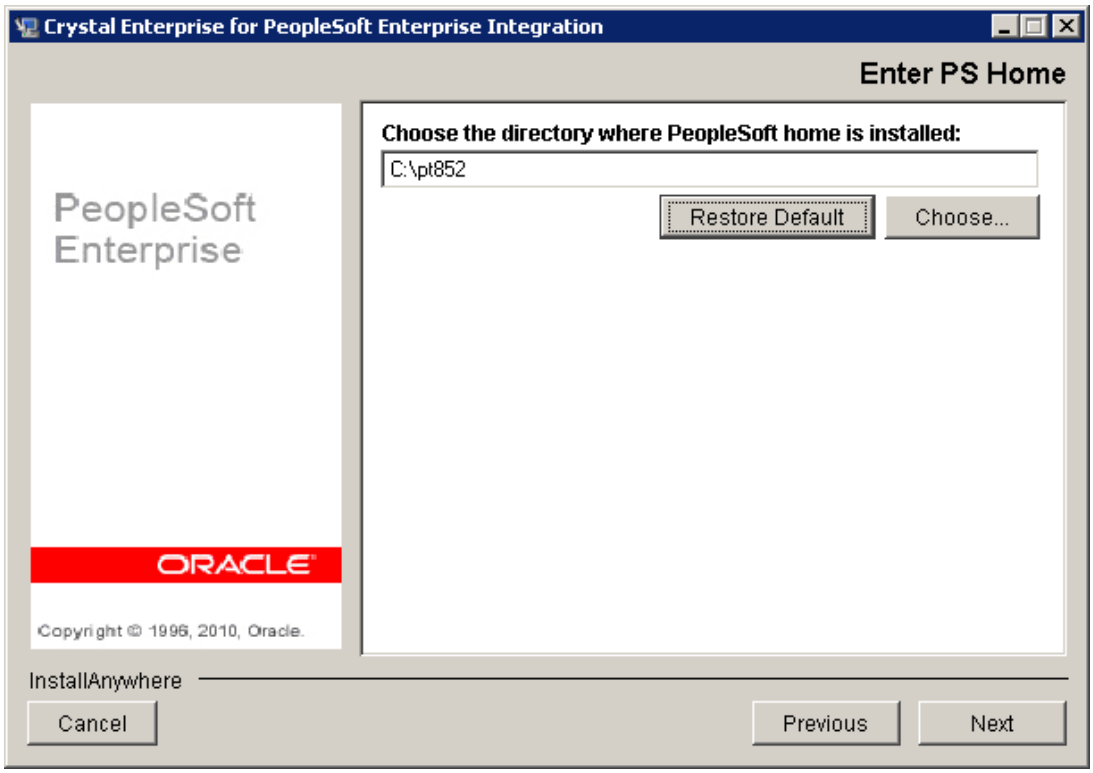
   The options you choose depend upon your setup. You can select all three options, Process Scheduler, Conversion Workstation, and PeopleSoft webserver, if you have the Process Scheduler and web server set up on the same system, and also plan to use this system for the report conversion. If not, select only the options that you need and continue.



Crystal Enterprise for PeopleSoft Enterprise Integration Extraction Type window

5. If you selected Process Scheduler or Conversion Workstation, specify the location of *PS_HOME*, and then click Next.

   This example uses C:\pt852 for *PS_HOME*.



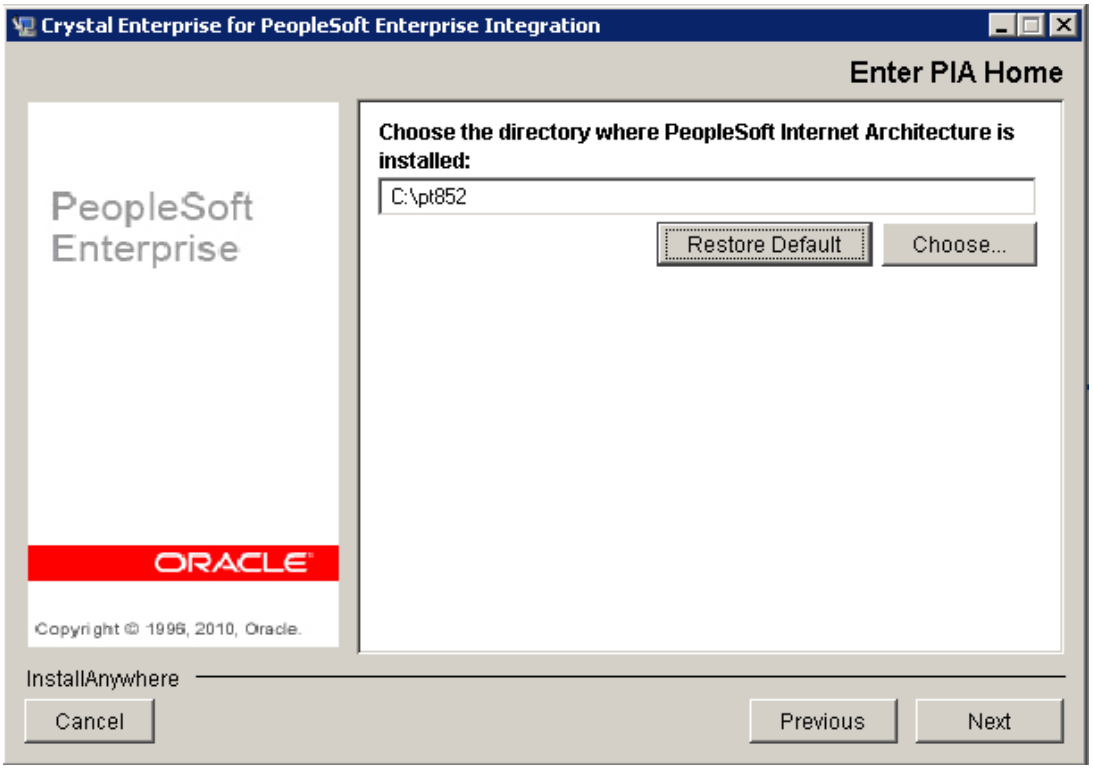
Crystal Enterprise for PeopleSoft Enterprise Integration Enter PS Home window

6. If you select PeopleSoft webserver, specify the location of *PIA_HOME*, and then click Next.

   This example uses C:\pt852 for *PIA_HOME*.

Note. Although in this example *PIA_HOME* is the same as *PS_HOME*, that is not a requirement. Your environment may be different.

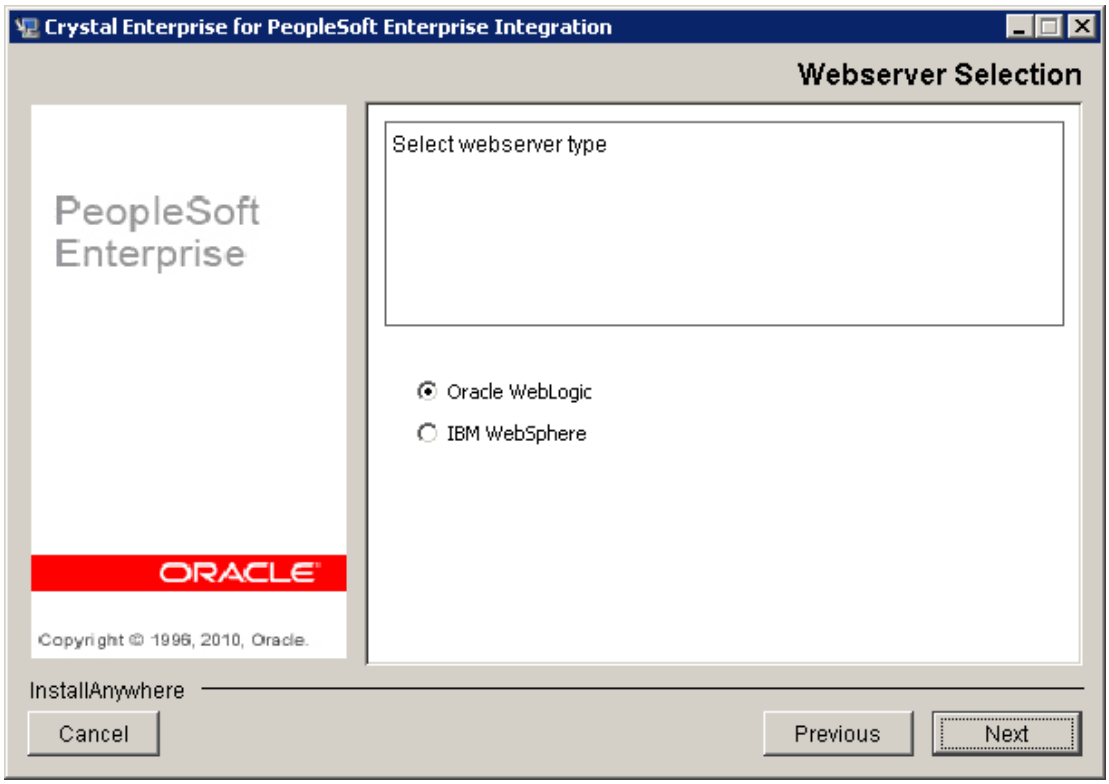
See “Preparing for Installation,” Defining Installation Locations.



Crystal Enterprise for PeopleSoft Enterprise Integration Enter PIA Home window

7. Select the option for the web server software installed on your system, Oracle WebLogic or IBM WebSphere, and then click Next.

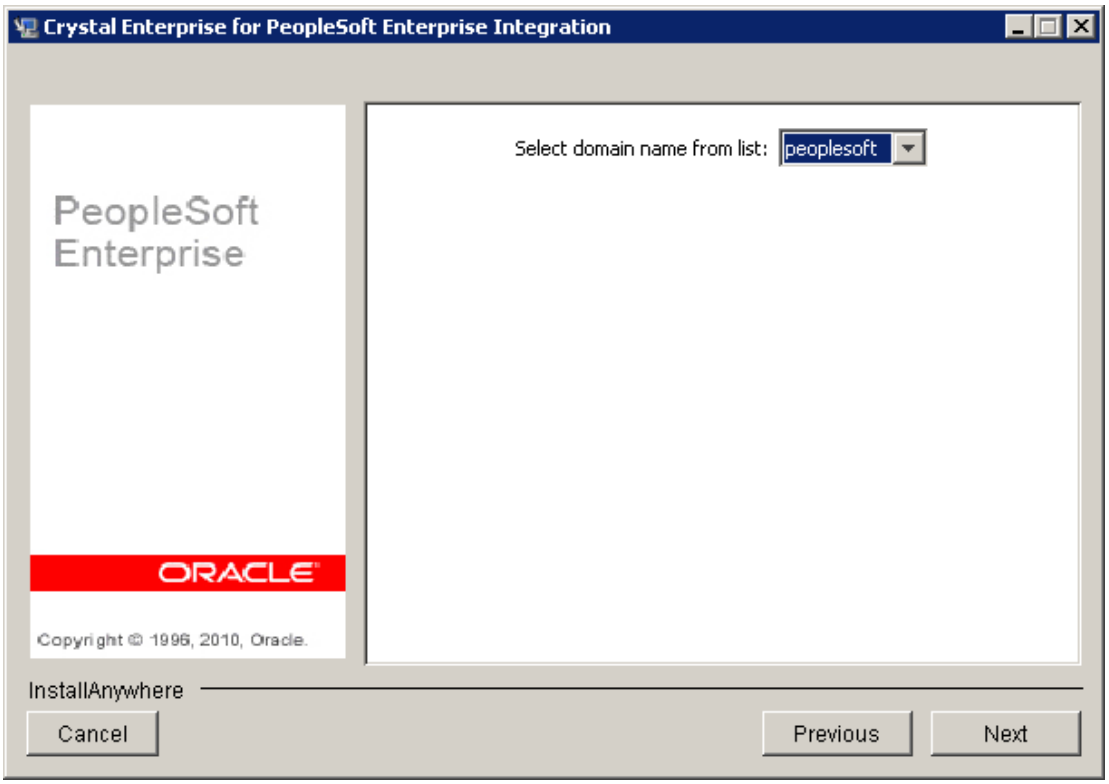
   This example selects Oracle WebLogic:



Crystal Enterprise for PeopleSoft Enterprise Integration Webserver Selection window

8. Select the domain name (for Oracle WebLogic) or application name (for IBM WebSphere) from the drop-down list and then click Next.

   The default is peoplesoft for both web servers, as shown in this example.

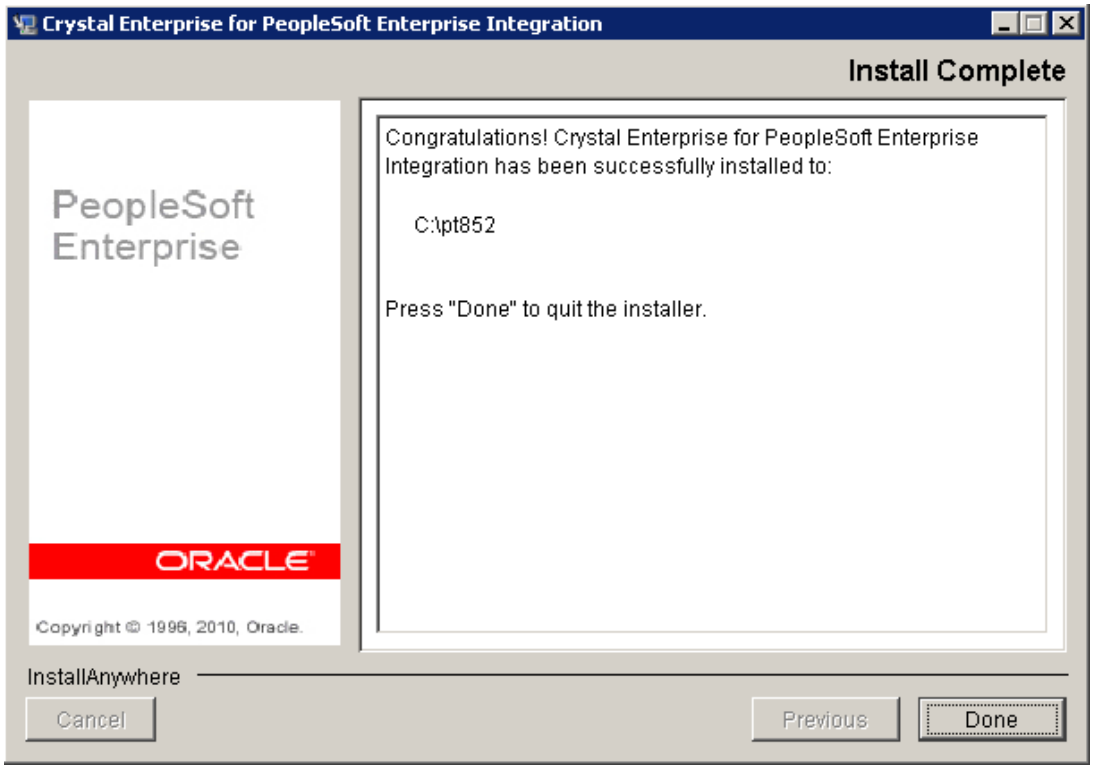


Crystal Enterprise for PeopleSoft Enterprise Integration Selecting the domain name

9. Review the summary information, which includes the *PS_HOME* and *PIA_HOME* values you entered, and click Install to begin the installation.

Crystal Enterprise for PeopleSoft Enterprise Integration Pre-Installation Summary window

10. Click Done to finish the installation.



Crystal Enterprise for PeopleSoft Enterprise Integration Install Complete window

11. If you installed on a web server, restart the web server.

Task 15-4-9: Installing TrueType Fonts on Windows

To run certain reports you may need special fonts that do not normally come with SAP BusinessObjects Enterprise XI 3.1. The PeopleSoft system packages and installs two such TrueType fonts in its directory structure:

- MICR___.ttf: MICR font for check printing
- B39R00.ttf: 3of9 barcode font

You can copy and install them on your machine where SAP BusinessObjects Enterprise XI 3.1 is installed to make them available to that application.

To install TrueType fonts on Microsoft Windows:

1. Copy the *PS_HOME*\FONTS\Truetype folder to your SAP BusinessObjects Enterprise XI 3.1 machine (the C:\Windows\Fonts folder is a good place to copy it to).
2. Select Start, Settings, Control Panel.
3. Double-click the Fonts directory to display its contents.
4. Select File, Install New Font.
5. Locate the fonts you want to install:
   - In the Drives list, select the drive that contains the fonts you want to install.

- In the Folders list, select the folder that contains the fonts you want to install.

  The fonts in the folder appear under List of Fonts.

6. Select the fonts to install.

   To select more than one font, hold down the CTRL key and click each font.

7. To copy the fonts to the Fonts folder, make sure the Copy fonts to Fonts folder check box is selected
8. Click OK to install the fonts.

Task 15-4-10: Creating a Web Server for SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux

This section discusses:

- Creating an Oracle WebLogic Server on UNIX or Linux
- Creating an IBM WebSphere Server on UNIX or Linux

Creating an Oracle WebLogic Server on UNIX or Linux

Before beginning this procedure, you must have installed Oracle WebLogic on the server where SAP BusinessObjects Enterprise XI 3.1 is installed. You must use the same user account to install Oracle WebLogic and SAP BusinessObjects Enterprise XI 3.1.

To create a Oracle WebLogic server on UNIX:

1. Start the Configuration Wizard by running `config.sh` from the *WLS_HOME*/weblogic100/common/bin directory.
2. Select *1*, Create a new WebLogic configuration and press Enter.
3. Select *1*, Choose WebLogic Platform components and press Enter.
4. Accept the default template, WebLogic Server (Required).
5. Enter the Administrator user name and user password.

   The default values are *weblogic* and *password*. Press Enter.

6. At the Domain Mode Configuration prompt, choose *Development Mode* and press Enter.
7. Select the Java SDK that you installed and press Enter.
8. Accept all the default settings until you reach the Edit Domain Information prompt.
9. At the Edit Domain prompt replace base_domain with a meaningful domain name, like *BOEXI,* and press Enter.

   The web server has been created at the default port 7001.

10. If you want to use a port other than the default port of 7001, follow the steps below.

    This may be useful if you want to run both a PeopleSoft Pure Internet Architecture web server and the SAP BusinessObjects Enterprise XI 3.1 web server on the same machine.

    a. Edit the file: <*WLS_HOME*>/user_projects/domains/<*domain_name*>/config.xml.

    b. Find the text 7001 and replace it with the port number you want.

    c. Save the config.xml file and exit.

       WLS_port will be used to refer to the port number that you are now using. Substitute your specific port number as needed in the following steps.

11. Start the web server by running `startWebLogic.sh` from <*WLS_HOME*>/user_projects/domains /<*domain_name*>.

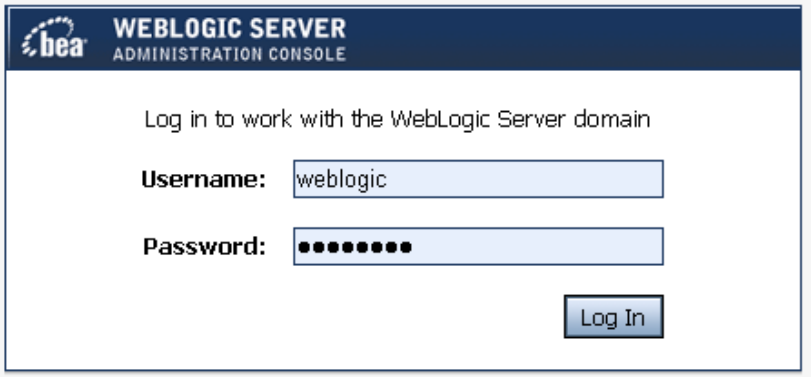
    Wait until a message containing “listening on port <WLS_port>” appears. The web server is now started.

12. Enter the following URL in a browser to confirm that you are able to log in to the web server:

    http://<*machine_name*>:<*WLS_port*>/console

13. At the login page, enter the user name and password for the Oracle WebLogic administrator that you entered during the Oracle WebLogic installation.

    For example, *weblogic/password*. Then click the Sign In button. If you are able to log in then it verifies that your Oracle WebLogic Server is set up correctly.



Oracle WebLogic Server Administration Console Log In window

If you are running on AIX and the web server is Oracle WebLogic, you must increase the value of the "ulimit" open file descriptor before beginning the installation.

A deployment to an Oracle WebLogic 10.3 system running on AIX with Sun JDK 1.6 or IBM JDK 1.6 (32 or 64-bit) may fail with the error message:

```
java.util.zip.ZipException: error in opening zip file (too many files open).
```

To avoid this issue, increase the default value of the "ulimit" open file descriptor limit from 1024 to 4096. This can be done by modifying the file *WLS_HOME*/weblogic103/common/bin/commEnv.sh to look like the example shown below:

```
maxfiles=`ulimit -H -n`
if [ "$?" = "0" -a `expr ${maxfiles} : '[0-9][0-9]*$'`
-
eq 0 ]; then
ulimit -n 4096
```

After making this change, restart your Oracle WebLogic web server.

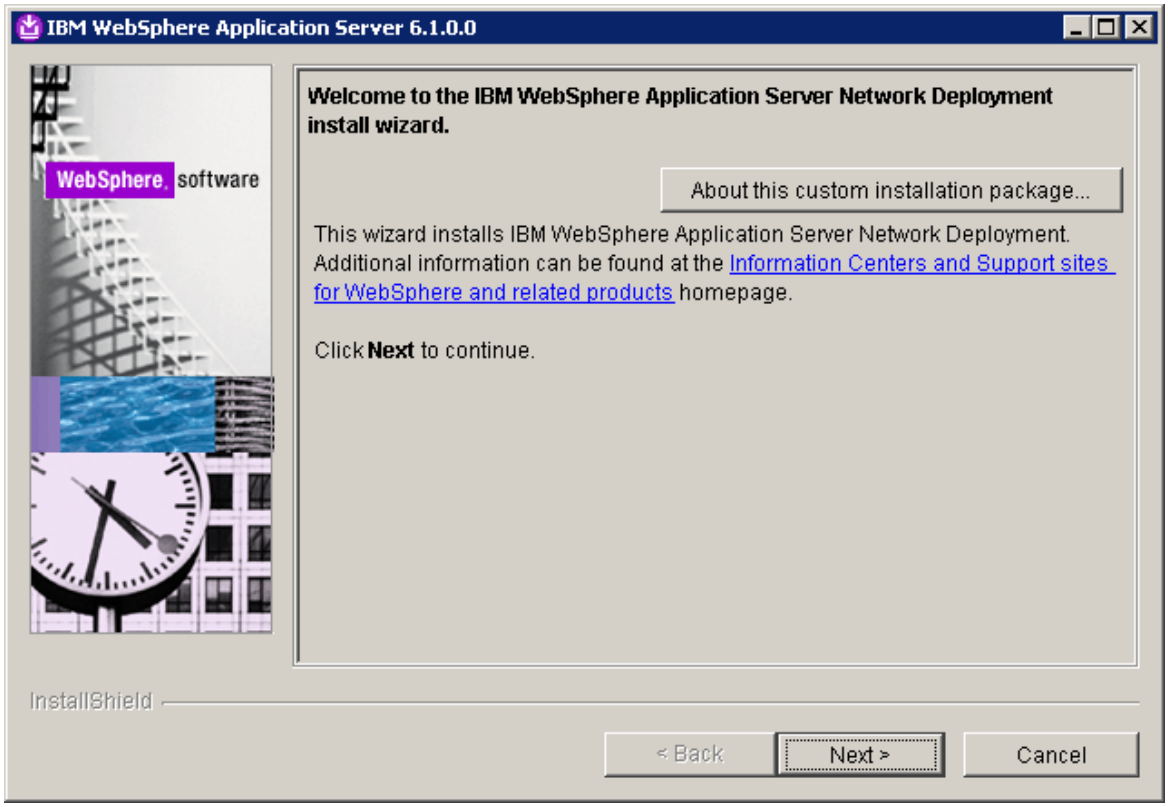
Creating an IBM WebSphere Server on UNIX or Linux

Before beginning this procedure, you must have installed IBM WebSphere on the server where SAP BusinessObjects Enterprise XI 3.1 is installed. You must use the same user account to install IBM WebSphere and SAP BusinessObjects Enterprise XI 3.1.

To install on UNIX or Linux you must have a X-Windows terminal emulation program such as Xmanager, Cygwin and so on.

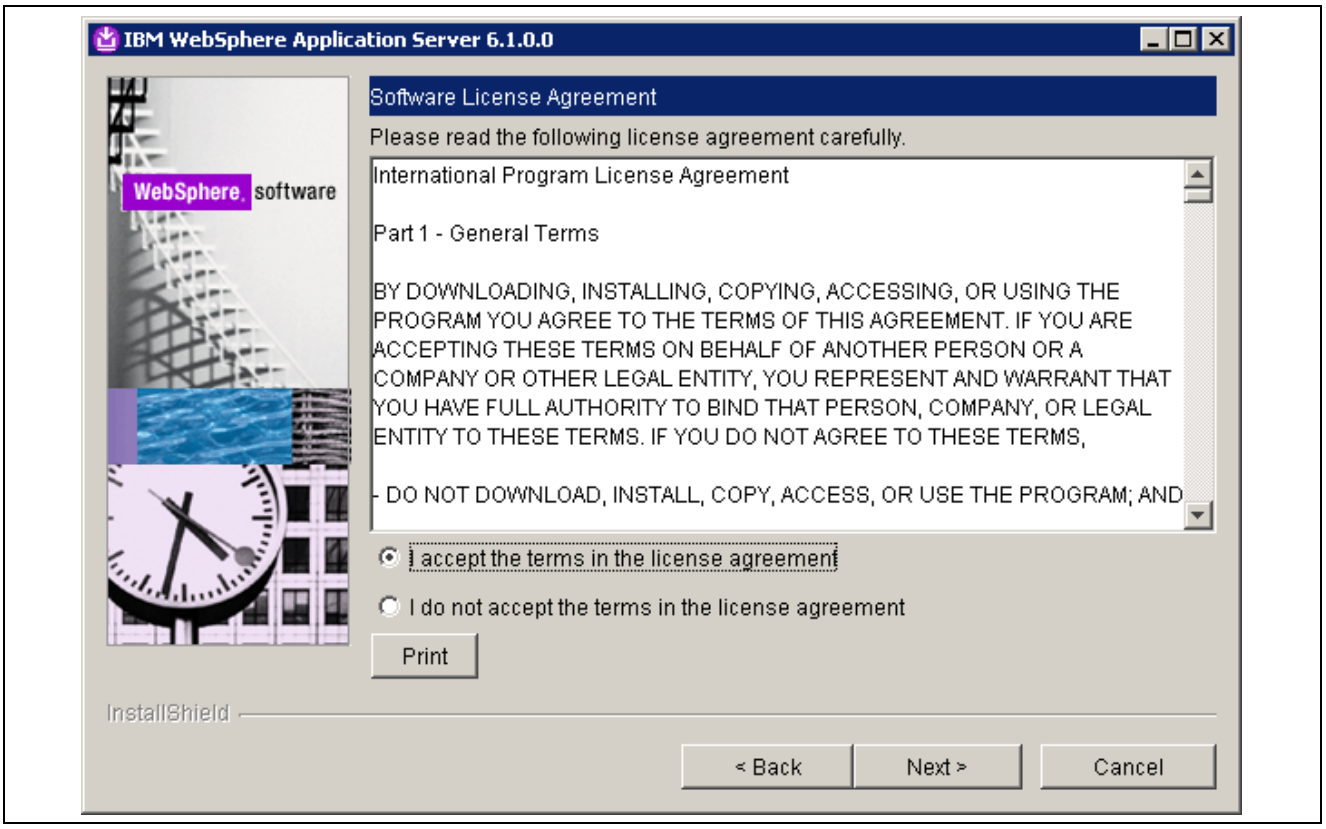
1. Run installWAS.sh from the WebSphere installation.

A welcome window appears.



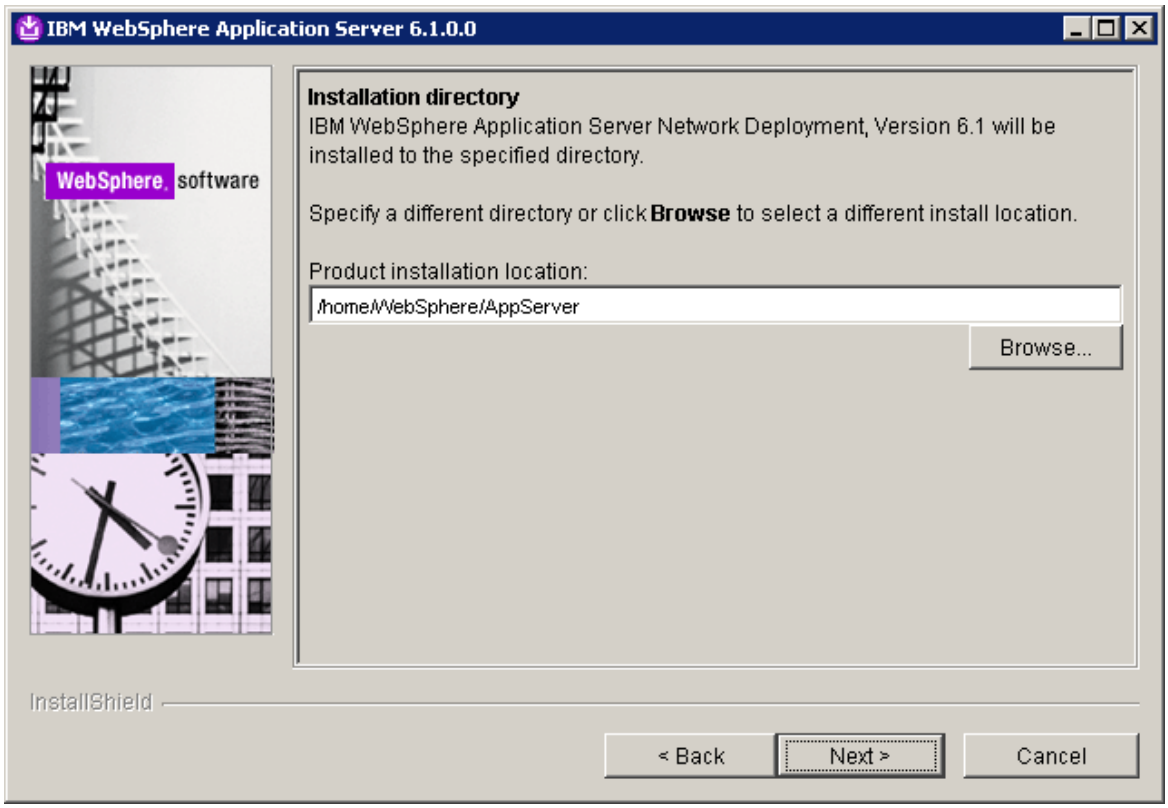
IBM WebSphere Application Server welcome window

2. Click Next.
3. Accept the license agreement and click Next.



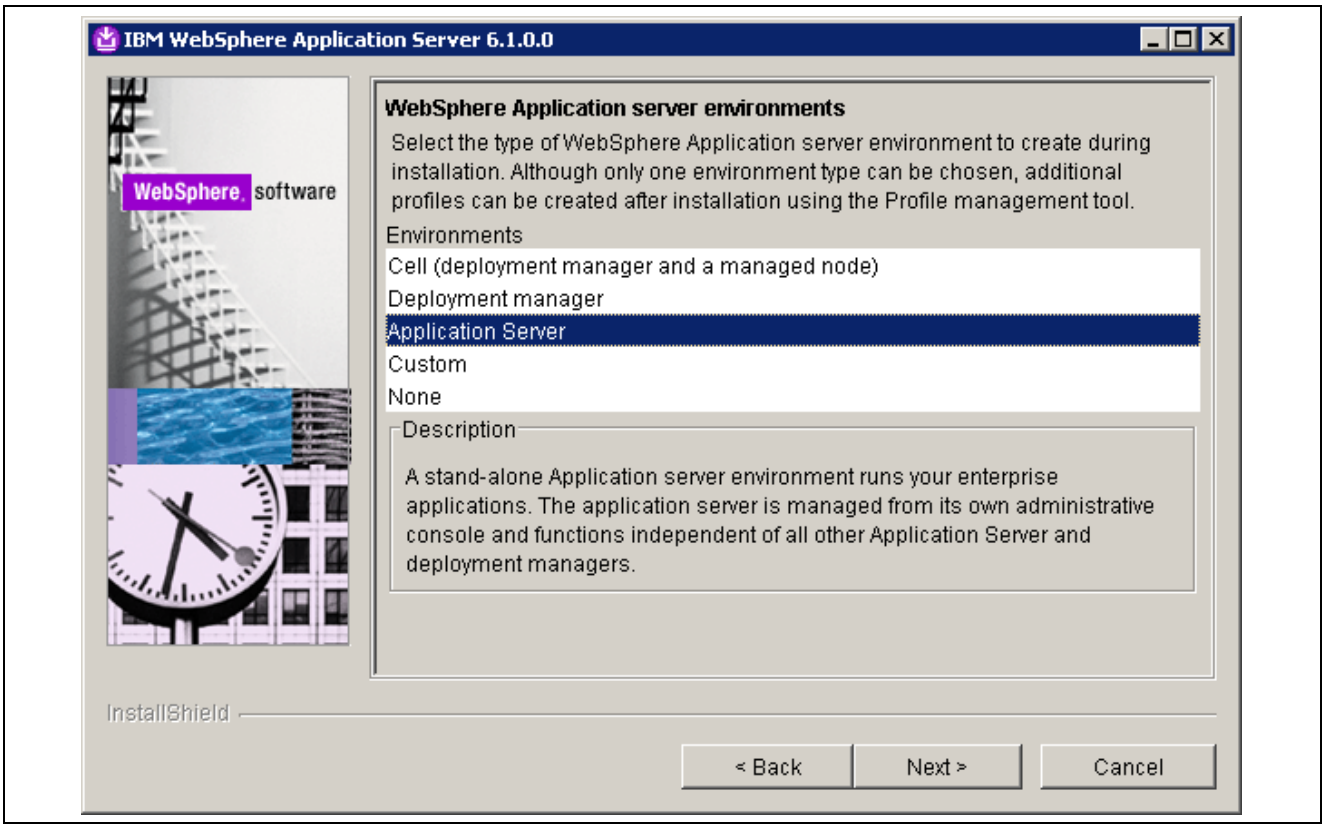
IBM WebSphere Application Server License Agreement window

4. Select an installation location, referred to as *WAS_HOME* in this documentation, and click Next.



IBM WebSphere Application Server Installation directory window

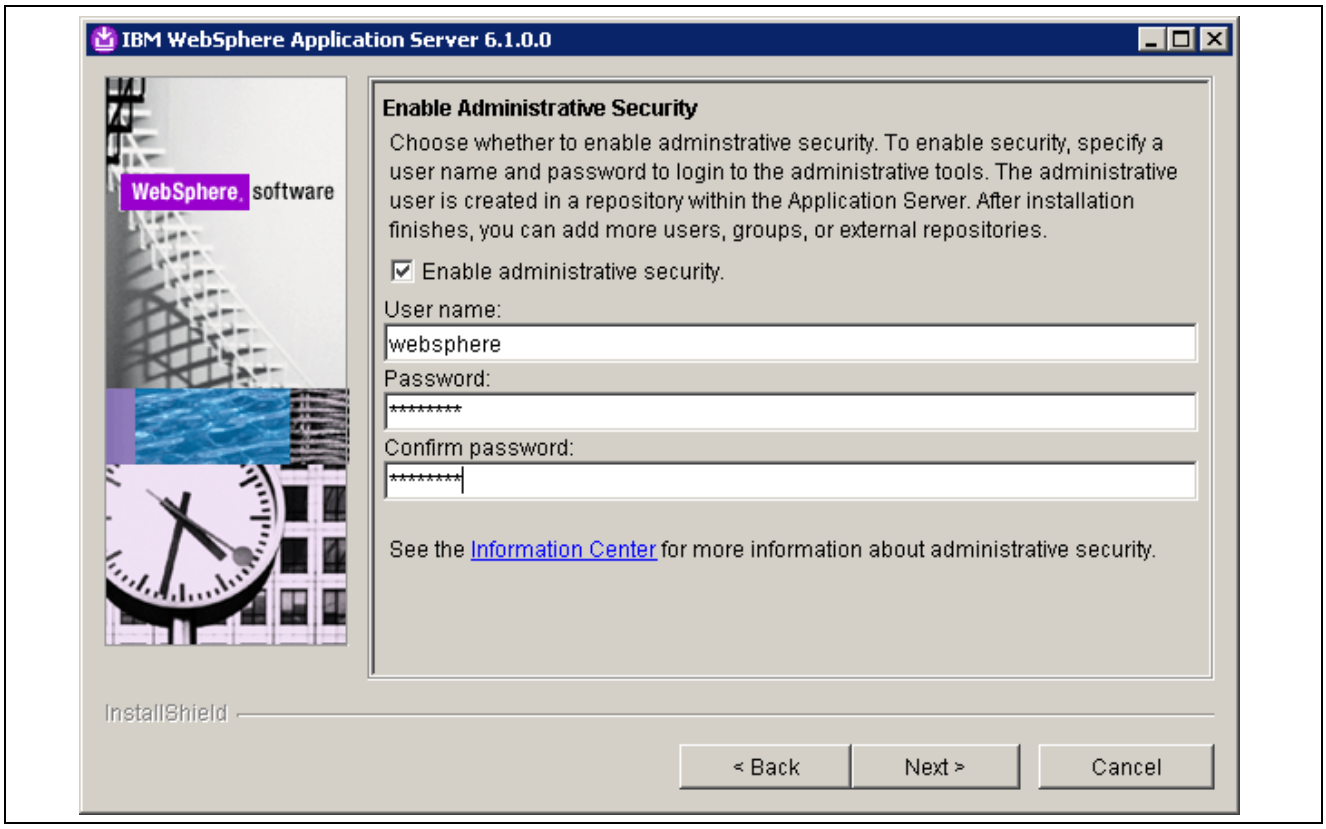
5. On the WebSphere Application server environment window, select *Application Server* from the list of environments.



IBM WebSphere Application Server environments window

6. Accept the default profile and click Next.
7. Provide the Administrator user (websphere) and password (password).

   Select the Enable Administrative Security option.



IBM WebSphere Enable Administrative Security window

8. Click Next to begin the installation.
9. To start the server after the installation is complete, enter the following command, where *<WAS_HOME>* is the installation location you specified above; *<profile_name>* is the default profile, AppSrv01; *<admin_userid>* is the WebSphere Administrator user name, and *<admin_password>* is the password for the WebSphere Administrator:

   ```
   <WAS_HOME>/profiles/<profile_name>/bin/startServer.sh server1 -username <admin_⇒
   userid> -password <admin_password>
   ```

   For example:

   ```
   /home/WebSphere/AppServer/profiles/AppSrv01/bin/startServer.sh server1 -⇒
   username websphere -password password
   ```

Task 15-4-11: Installing SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux

To install SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux do the following:

Note. You can perform this installation from the server console or with X Windows terminal emulation software such as Cygwin. Telnet and ssh clients, such as Putty, will not allow you to install the software properly.

---

1. If you are running on HP-UX PA-RISC, you must edit three environment variables before beginning the installation.

Determine the directory where you will install SAP BusinessObjects Enterprise XI 3.1, referred to in this documentation as *BOE_HOME*, and add the following to the beginning of the SHLIB_PATH, LIBPATH and LD_LIBRARY_PATH environment variables:

BOE_HOME/bobje/enterprise120/hpux_pa-risc

2. Go to the *BOE_INSTALL* directory and run `./install.sh`.

Note. If the installation files have been extracted from a *.ZIP file, the files will not have execute permission set and you will get the error "Cannot execute [Permission denied]". To avoid this, set the execute permission using the following command: `chmod -R 755 BOE_INSTALL`

---

3. Select a language in which to carry out the installation and press Enter.
4. Read the SAP BusinessObjects Enterprise License Agreement.

   Type *Y* to agree to the terms and continue with the setup program.
5. At the Enter Product Keycode prompt, enter your 26-character Product Keycode.
6. At the Installation Directory prompt, enter your own path for the installation directory, or press Enter to accept the default one, which is your current directory.
7. At the Choose Language Pack prompt, select the languages that you want to install.

   English is the default. Select any additional language packs that you want to install.
8. Choose User Install at the Install Option prompt.
9. At the Installation Type prompt, select New Installation.

   Verify that the Enable Servers after Installation option is selected. Press Enter.
10. At the Enter the information for your new CMS prompt, type the CMS port number (default 6400).
11. Type the same password under Administrator Password and Confirm Password and press Enter.
12. Select Use an existing database and press Enter.
13. Choose the type of database (Oracle, DB2 or Sybase) from the list and press Enter.

    Provide all the required information for the database. The table below summarizes all the information required for each database type:

Database Platform	Required Information
DB2 LUW	• Server: DB2 LUW database alias • User name for login • Password for login
Microsoft SQL Sever (ODBC)	ODBC DSN This is specified in the Microsoft Windows Data Sources (ODBC) dialog box. Select Start, Programs, Control Panel, Administrative Tools, Data Sources (ODBC).
MySQL	MySQL is not supported in the integration of PeopleSoft with Business.

Database Platform	Required Information
Oracle	• Server: tnsnames connect identifier • User name for login • Password for login
Sybase	• Server: Sybase Server Name The Sybase server name is a combination of the host name and the port number which is set by your database administrator in the file sql.ini. • User name for login The user name should be a default user for the SAP BusinessObjects Enterprise XI 3.1 database. • Password for login

14. At the prompt that asks for auditing database details, select the option Do not install auditing database.
15. At the Enter Server Intelligence Agent (SIA) information prompt, type a name in the Server Intelligence Agent Node field.

    Do not use spaces or non-alphanumeric characters in a SIA node name.
16. Type a valid port number under Server Intelligence Agent Port (default 6410).
17. Select Use an existing Java application server, deploy web applications, and press Enter.
18. Select your web server, Oracle WebLogic or IBM WebSphere.
19. If you selected Oracle WebLogic, provide the following information:
    - *Admin port*

      Enter the application port of the web application server.
    - *Admin login*

      Enter the name for the user with administration rights to the web application server.
    - *Admin Password*

      Enter the password for the administrator user account.
    - *Instance to install to*

      Enter the name for the current web application server instance; the default is AdminServer.
    - *Application server Domain Root directory*

      Enter the root directory for the web server domain.
20. If you selected IBM WebSphere, provide the following information:
    - *SOAP port*

      The SOAP Connector Port of the application server; for example, 8880.
    - *Admin login*

      The user name with administration rights to the WebSphere application server.
    - *Admin password*

      The password for the account with administration rights to the application server.

- *Instance to install to*

  The name of the current web application server instance. The default is server1.

- *Application server Install directory*

  The directory where the web application server is installed, for example, /opt/websphere/appserver.

21. Press Enter to begin the installation.

The installation program validates your system and installs SAP BusinessObjects Enterprise XI 3.1 in the specified directory. When the new installation is finished, the setup program starts the servers as daemons and then enables each server that is registered with the CMS.

If you are running on AIX, and your webserver is IBM WebSphere, you must complete an additional step. Use the option `deployall` as described in the section Deploying Manually with Wdeploy Tool to deploy all war files manually. After completing the manual deployment, continue with the installation.

See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually with Wdeploy Tool.

If your web server software is Oracle WebLogic 10.3, see the section on deploying web applications manually later in this chapter.

See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually on Oracle WebLogic 10.3.

Task 15-4-12: Installing BusinessObjects Integration Kit for PeopleSoft on UNIX or Linux

Before beginning this procedure, ensure that:

- The CMS is running.
- You know the credentials for the BusinessObjects Enterprise Administrator account. You will be prompted for the Administrator user name and password on the CMS machine.
- You have downloaded the installation files for the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft from Oracle E-Delivery and extracted them into a convenient directory, referred to here as *BOE_INTEG_INSTALL*.

Carry out this procedure on the machine where SAP BusinessObjects Enterprise XI 3.1 is installed.

To install the integration kit:

1. Run *BOE_INTEG_INSTALL*/install.sh.
2. Select the language in which you want to perform the installation.

   Note. Use the arrow keys on your keyboard to make your selection. Use the U and D keys to scroll up and down. Press ENTER to continue.

3. Read the license agreement and press *Y* to accept it.
4. Specify the directory where SAP BusinessObjects Enterprise XI 3.1 is installed, referred to in this documentation as *BOE_HOME*.

   The integration files are installed in the peoplesoft sub-directory in the location that you specify.

   For example, if *BOE_HOME* is /home/user/install/bobje, the integration files are saved in /home/user/install/bobje/peoplesoft.

5. Select the language packs you want to install.

   Use the arrow keys and the space bar to choose the language packs you want, and then press ENTER.

6. Select *1 - PeopleTools 8.46-8.49 environment* and press ENTER.

   Note. This option is correct for PeopleSoft PeopleTools 8.50 and higher as well as for PeopleTools 8.46-8.49.

7. Specify the following information for the Central Management Server and press ENTER.
   - *System*

     Enter the name of the computer on which you installed SAP BusinessObjects Enterprise XI 3.1.
   - *Port*

     Enter the CMS port number that you entered when installing SAP BusinessObjects Enterprise XI 3.1.
   - *Password*

     Enter the password for the CMS Administrator account that you entered when installing SAP BusinessObjects Enterprise XI 3.1.
8. At the prompt for autodeploy web applications, make the following selection depending upon your web server:
   - If your web server is Oracle WebLogic, enter *1*, Automatically deploy the web application.
   - If your web server is IBM WebSphere, enter *2*, Manually deploy the web application.

     Skip the next step, which is for Oracle WebLogic. The instructions for manual deployment for IBM WebSphere are given in a later section.

     See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually Through IBM WebSphere Console.
9. If you installed on Oracle WebLogic, enter the same values for the web application server that you entered when you installed SAP BusinessObjects Enterprise XI 3.1:
   - Admin port
   - Admin login
   - Admin password
   - Instance to install to
   - Application server Domain Root directory
10. Press ENTER to begin the installation.

If you are *running on AIX, and your webserver is IBM WebSphere*, you must complete an additional step to deploy the war files manually. After completing the manual deployment, continue with the installation.

Use the instructions in the section Deploying Manually with Wdeploy Tool to undeploy and deploy the war files in the following order:

1. undeploy InfoViewApp
2. deploy InfoViewApp
3. undeploy CmcApp
4. deploy CmcApp

5. undeploy OpenDocument
6. deploy OpenDocument
7. deploy PartnerPlatformService
8. deploy bobjpsenterprise

See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually with Wdeploy Tool.

Task 15-4-13: Installing Fix Packs or Service Packs on UNIX or Linux

After completing the full installation of SAP BusinessObjects Enterprise XI 3.1 and the BusinessObjects Integration Kit for PeopleSoft, you must install the appropriate additional fix pack or service pack for each. Consult the certification information on My Oracle Support for the patch level required for your installation.

See "Operating System, RDBMS & Additional Component Patches Required for Installation PeopleTools 8.52," My Oracle Support, (search for article name).

Use these instructions to apply each fix pack:

1. Go to the local directory where you downloaded and extracted the fix pack.
2. Launch the installation by running the following command, where BOE_HOME is the directory where you installed SAP BusinessObjects Enterprise XI 3.1:

   ```
   ./install.sh BOE_HOME
   ```

3. Enter *y* in response to the License Agreement prompt.
4. Enter the values for the CMS port and password that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation.
5. If your web server is Oracle WebLogic, select Yes, automatically re-deploy the web applications.
6. If your web server is IBM WebSphere, select No, I will manually deploy the web application.
7. If you created the web server on Oracle WebLogic, enter the same values that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation for the following:
   - Admin port
   - Admin login
   - Admin password
   - Instance to install to
   - Application server Domain Root directory
8. If you created the web server on IBM WebSphere, enter the same web server information that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation for the following:
   - SOAP port
   - Admin login
   - Admin password
   - Instance to install to
   - Application server install directory

9. Verify the installation directory, and press ENTER to start the installation.

If you are running on AIX, and your webserver is IBM WebSphere, you must complete an additional step to manually deploy the war files, using the instructions in the section Using Manual Deployment. After completing the manual deployment, continue with the installation.

- After installing fix packs (or service packs) for the SAP BusinessObjects Enterprise XI 3.1 base installation, undeploy all war files, then deploy all war files.
- After installing fix packs or service packs for the BusinessObjects Integration Kit for PeopleSoft, undeploy and deploy the war files in the following order:
  a. undeploy InfoViewApp
  b. deploy InfoViewApp
  c. undeploy CmcApp
  d. deploy CmcApp
  e. undeploy OpenDocument
  f. deploy OpenDocument
  g. undeploy PartnerPlatformService
  h. deploy PartnerPlatformService
  i. undeploy bobjpsenterprise
  j. deploy bobjpsenterprise

See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually Using Wdeploy Tool.

If your web server is Oracle WebLogic, you may get an error message saying either BusinessProcessBI or dswsbobje failed to deploy. In this case, complete the following additional steps after installing the fix pack for the SAP BusinessObjects Enterprise XI 3.1 base installation:

1. Delete the following directories:
   - <*WLS_HOME*>/user_projects/domains/<*domain_name*>/servers/AdminServer/stage/dswsbobje/dswsbobj
   - <*WLS_HOME*>/user_projects/domains/<*domain_name*>/servers/AdminServer/stage/BusinessProcessBI/BusinessProcessBI
2. Restart the web server.
3. Manually deploy dswsbobje and BusinessProcessBI using the wdeploy tool.

   See Administering and Using SAP BusinessObjects Enterprise XI 3.1, Deploying Manually Using Wdeploy Tool.

Task 15-4-14: Creating the BusinessObjects Enterprise Archive and Installing Files on UNIX or Linux

In this section you consolidate the files that are needed for the PeopleSoft to BusinessObjects Enterprise integration in an archive. Also, this procedure installs International Components for Unicode (ICU) files that are required for the PSToWords functionality that is used with Crystal reports.

See *PeopleTools 8.52: Crystal Reports for PeopleSoft PeopleBook,* "Working with Multiple Languages."

1. Go to *PS_HOME*/setup/PsMpCrystalInstall/Disk1 and run setup.sh.
2. In the Choose Install Set menu, select option *1*, Create Archive and Install ICU, TFF.
3. At the welcome prompt press ENTER to continue.
4. Enter the location where SAP BusinessObjects Enterprise XI 3.1 is installed, and then enter *1* to continue.
5. If you see the following prompt, specify *1* for *Yes to All*.

   You see this prompt if certain files exist in the installation location.

```
1- Yes to All
2- Yes
3- No
4- No to All

A newer file named "libu25pstowords.so" already exists at
   "/home/user/install/bobje/enterprise120".

Do you want to overwrite the existing file?: 1
```

6. Press ENTER at the pre-installation summary.
7. Press ENTER at the Ready to Install prompt.
8. When the installation is complete, press ENTER to exit the installer.

   The archive is created in *PS_HOME*/PsMpCrystalInstall/Disk1/InstData/boearchive.zip.
9. Restart all BusinessObjects Enterprise servers.

Task 15-4-15: Extracting the Archive on UNIX or Linux

After you create the boearchive.zip as described in the previous section, you must extract it to the following locations:

- *PS_HOME* on the Process Scheduler server
- *PIA_HOME* on the machine used for viewing reports

To extract the archive:

1. Copy boearchive.zip to PsMpCrystalInstall/Disk1/InstData under *PS_HOME* or *PIA_HOME*.
2. Go to *PS_HOME*/PsMpCrystalInstall/Disk1 or *PIA_HOME*/PsMpCrystalInstall/Disk1 and run `setup.sh`.
3. Select option *2*, Extract BOE Archive.
4. Select the types of installation you require by entering the corresponding numbers. Enter *0* to continue when you have finished.

   The options you choose depend upon your setup. You can select both options, Process Scheduler and PeopleSoft webserver, if you have the Process Scheduler and web server set up on the same system. If not, select only the option that you need and continue.
5. If you selected the Process Scheduler installation type, enter the location of *PS_HOME*, and then press ENTER.
6. If you selected the PeopleSoft webserver installation type, enter the location of *PIA_HOME*, and then press ENTER.

Note. Keep in mind that *PIA_HOME* can be the same as or different from *PS_HOME*. Enter the correct path for your installation environment.

See “Preparing for Installation,” Defining Installation Locations.

---

7. Select the option for the web server software installed on your system, Oracle WebLogic or IBM WebSphere, and then press ENTER.
8. Specify the domain name (for Oracle WebLogic) or application name (for IBM WebSphere) and then press ENTER.

   The default is peoplesoft for both web servers.
9. Review the pre-installation summary and press ENTER to start the installation.
10. Press ENTER to exit the installer.
11. If you installed on a web server, restart the web server.

Task 15-4-16: Installing TrueType Fonts in UNIX or Linux

To install a custom TrueType supported font in SAP BusinessObjects Enterprise XI 3.1 on supported UNIX and Linux platforms, copy the font from the *PS_HOME*/FONTS/Truetype directory to the following directory:

<*BOE_HOME*>/bobje/enterprise120/<*platform*>/crpe/fonts

Depending on the operating system, substitute <*platform*> with the appropriate value from the following list:

- solaris_sparc (Solaris)
- aix_rs6000 (AIX)
- hpux_pa-risc (HP-UNIX)
- linux_x86 (Linux)

Keep the following points in mind while working with special fonts in UNIX or Linux:

- The Japanese version of SAP BusinessObjects Enterprise XI 3.1 for UNIX does not support True Type Collection (TTC) fonts. However, you can split your TTC fonts into two or three TTF fonts using a font conversion tool (such as FontLab). Alternatively, your font vendor may be able to provide TTF versions of your required fonts.
- To refer to a font name in its native language, the ’mainwin’ locale must be set to that language. For example, to refer to a Japanese font by its Japanese name, the locale must be set to Japanese.
- Too many installed fonts may cause slow performance. To improve performance, delete unused fonts from your /crpe/fonts directory.
- If a font or font size contained in a report cannot be found on the system where the report processing is occurring (that is, the server with Crpe32.dll installed), the processing engine will attempt to approximate the font in the generated output.

For more information on the use of supported fonts in Crystal Reports and PeopleSoft software, search the BusinessObjects documentation.

Task 15-4-17: Confirming Access to the SAP BusinessObjects Enterprise XI 3.1 Administration and Central Management Console

After you have completed the installations, you should confirm that you can access the Business Objects Central Management console. Use this procedure for both the Windows and UNIX/Linux installations.

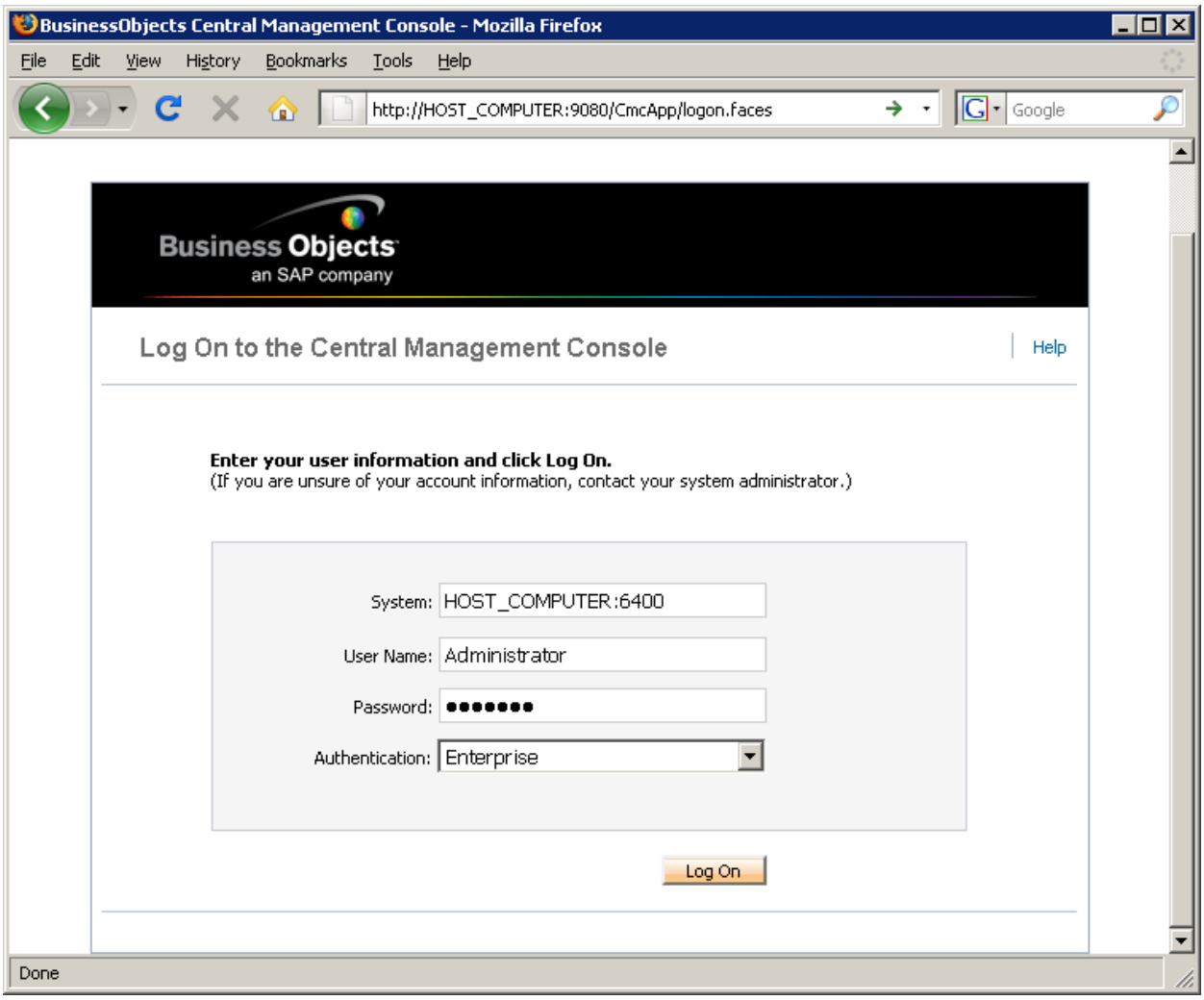
Before beginning this task, start the web server software under which you installed SAP BusinessObjects Enterprise XI 3.1.

1. In a new browser window, enter the following URL for the Central Management Console (where <*machine_name*> is the computer name and <*port*> is the web server port).

   http://<*machine_name*>:<*port*>/CmcApp

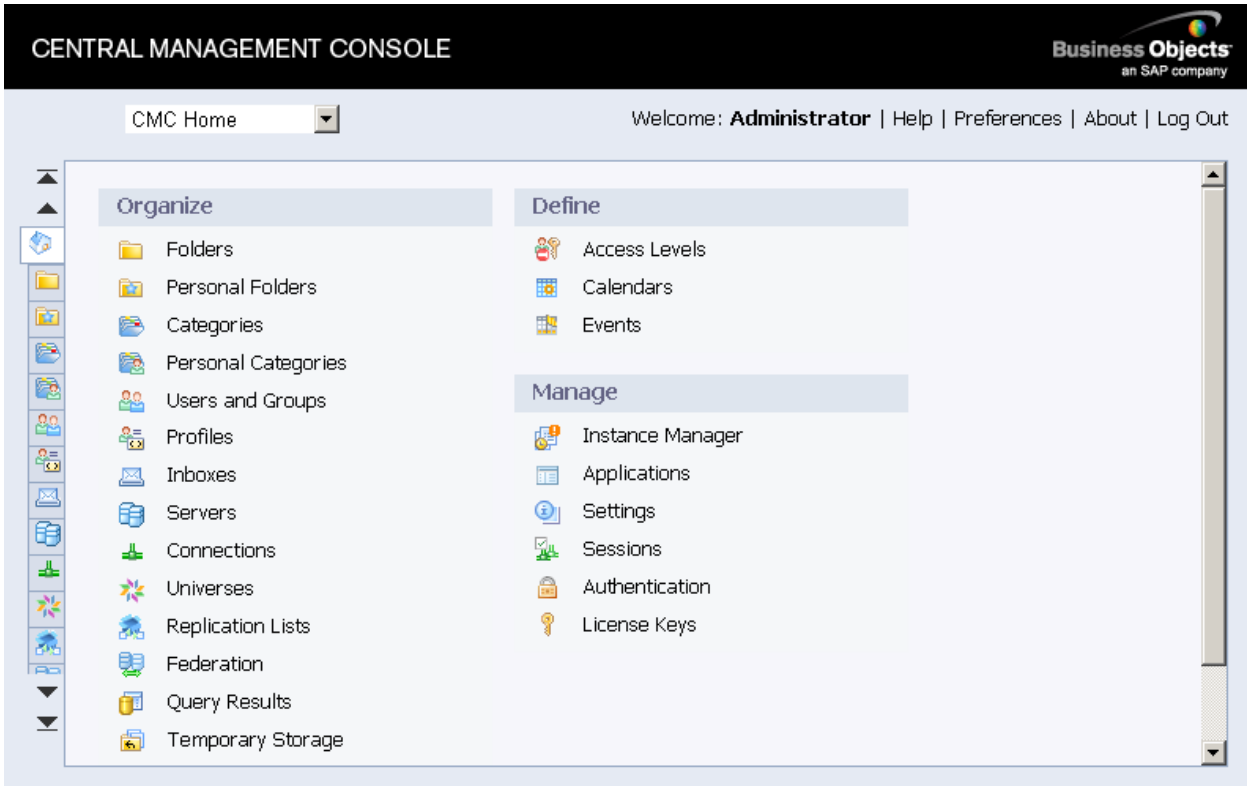
   For Oracle WebLogic, the default port is 7001.

   For IBM WebSphere, this is the HTTP port, not the SOAP port; the default is 9080. You can view this value in the file *WAS_HOME*\profiles\AppSrv01\logs\AboutThisProfile.txt. The following example shows the default port for IBM WebSphere.



Central Management Console Logon window

2. Enter the following information to confirm that you can log in:



Central Management Console home page

- System — Enter *machine_name*:6400, the name of the system where you installed SAP BusinessObjects Enterprise XI 3.1, followed by a colon and the CMS port, 6400.
- Username — Enter Administrator.
- Password — Enter the password for the CMS Administrator account that you entered during the SAP BusinessObjects Enterprise XI 3.1 installation.

Note. Remember that before you can use SAP BusinessObjects Enterprise XI 3.1, you must complete additional installation and configuration procedures

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Task 15-4-18: Configuring the PeopleSoft Application for BusinessObjects Enterprise XI 3.1 Integration

This section discusses:

- Preparing the PeopleSoft Application to Integrate with SAP BusinessObjects Enterprise XI 3.1
- Configuring the PeopleSoft Application Server
- Configuring the PeopleSoft Pure Internet Architecture
- Identifying the Local Default Node in Your System
- Running the Data Mover Script and Database Project
- Adding PeopleSoft Users and Roles
- Verifying Process Scheduler Server Definition

- Updating the PeopleSoft Integration Broker Gateway

Preparing the PeopleSoft Application to Integrate with SAP BusinessObjects Enterprise XI 3.1

In the PeopleSoft applications that you wish to integrate with SAP BusinessObjects Enterprise XI 3.1, you will have to configure settings in the following areas:

- PeopleSoft Application Server
- PeopleSoft Web Server
- PeopleSoft Integration Broker
- Query Access Services (QAS)

If the computer hosting the Process Scheduler is different from the computer where SAP BusinessObjects Enterprise XI 3.1 is installed, ensure that the machine name of the Process Scheduler computer can be pinged from the SAP BusinessObjects Enterprise XI 3.1 server box and vice versa. If not, add the full machine name and the IP address of the Process Scheduler computer to the host file of the computer where SAP BusinessObjects Enterprise XI 3.1 is installed.

Note. Carry out the steps in this section for each PeopleSoft application domain that you want to integrate with the SAP BusinessObjects Enterprise XI 3.1 server.

Configuring the PeopleSoft Application Server

To configure the application server:

1. Make sure that your PeopleSoft application server is down.
2. Access the PSADMIN Quick-Configure menu by launching `psadmin.exe` from the *PS_HOME*\appserv directory.

   Select the domain to configure.

   See "Configuring the Application Server on Windows."
3. Confirm that Pub/Sub Servers (Feature 1) and Jolt (Feature 4) are turned on (set to Yes).

   Note. To change a feature from Yes to No, type the feature number and press ENTER.

```
-------------------------------------------------------
Quick-configure menu -- domain: HRDB
-------------------------------------------------------
       Features                      Settings
      ==========                    ==========
 1) Pub/Sub Servers     : Yes   15) DBNAME      :[HRDB]
 2) Quick Server        : No    16) DBTYPE      :[DB2ODBC]
 3) Query Servers       : No    17) UserId      :[HRDMO]
 4) Jolt                : Yes   18) UserPswd    :[HRDMO]
 5) Jolt Relay          : No    19) DomainId    :[TESTSERV]
 6) WSL                 : No    20) AddToPATH   :[]
 7) PC Debugger         : No    21) ConnectID   :[people]
 8) Event Notification  : No    22) ConnectPswd :[peop1e]
 9) MCF Servers         : No    23) ServerName  :[]
10) Perf Collator       : No    24) WSL Port    :[7000]
```



```
11) Analytic Servers    : No    25) JSL Port    :[9000]
12) Domains Gateway     : No    26) JRAD Port   :[9100]

     Actions
    =========
13) Load config as shown
14) Custom configuration
 h) Help for this menu
 q) Return to previous menu

Enter selection (1-26, h, or q):
```

4. Open psappsrv.cfg, the PeopleSoft Application Server configuration file, from the <*PS_CFG_HOME*>\appserv\<*domain*> directory.
5. Change the MIN Instances and MAX Instances for the Application Server to be greater than 1.

   These settings allow multiple instances of the application server to execute. Suggested settings are 2 and 25 for MIN and MAX, respectively. Of course, the MAX setting should be no less than the MIN setting.

```
[PSAPPSRV]
;=====================================================
; Settings for PSAPPSRV
;=====================================================

;-----------------------------------------------------
; UBBGEN settings
Min Instances=2
Max Instances=25
```

6. Save and exit.
7. Re-start the application server.

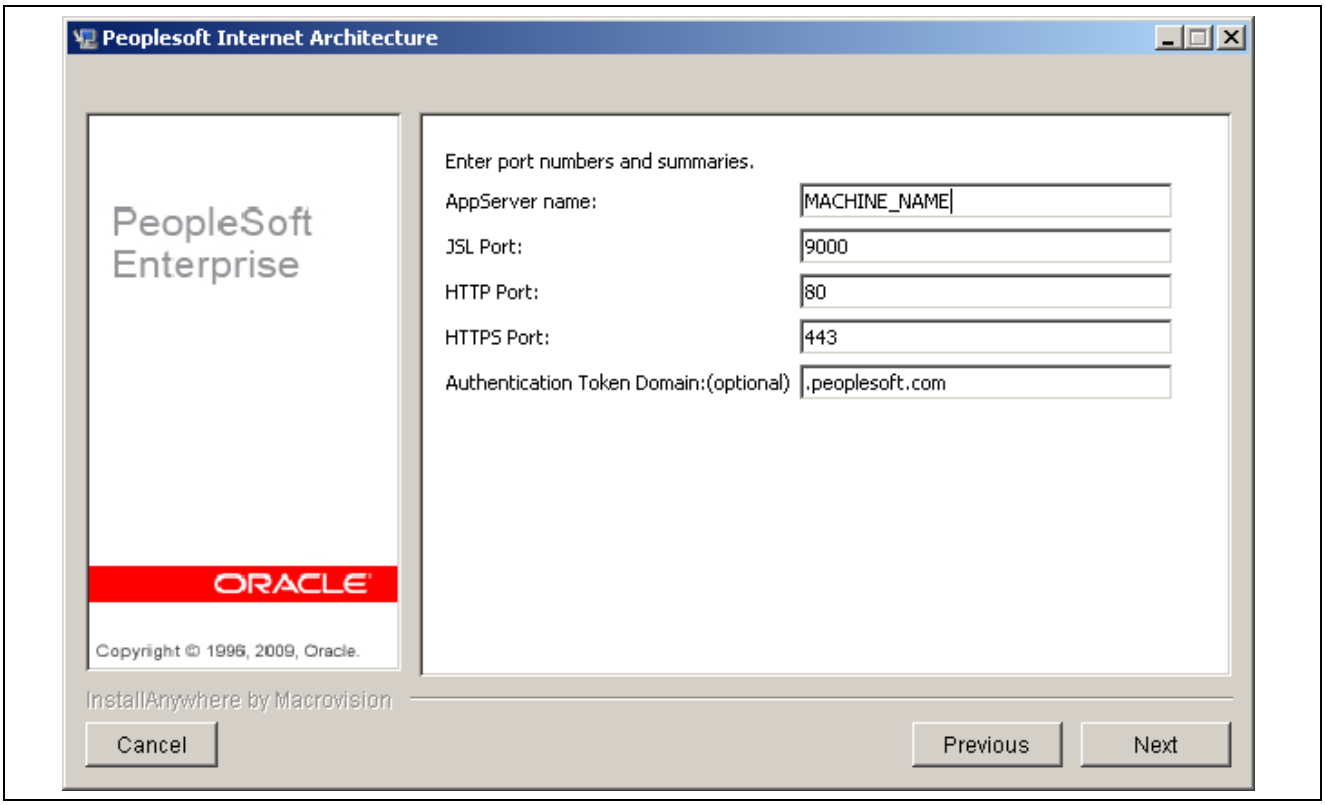
Configuring the PeopleSoft Pure Internet Architecture

To ensure that single sign-on works properly in the integration between the PeopleSoft installation and SAP BusinessObjects Enterprise XI 3.1, you must configure the Authentication Token Domain in the PeopleSoft Pure Internet Architecture and set the PeopleSoft Integration Gateway properties.

1. Run *PS_HOME*\setup\PsMpPIAInstall\setup.bat.
2. Enter a value for the Authentication Token Domain.

   In the following example, the authentication token domain is .peoplesoft.com.

   See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode," Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.



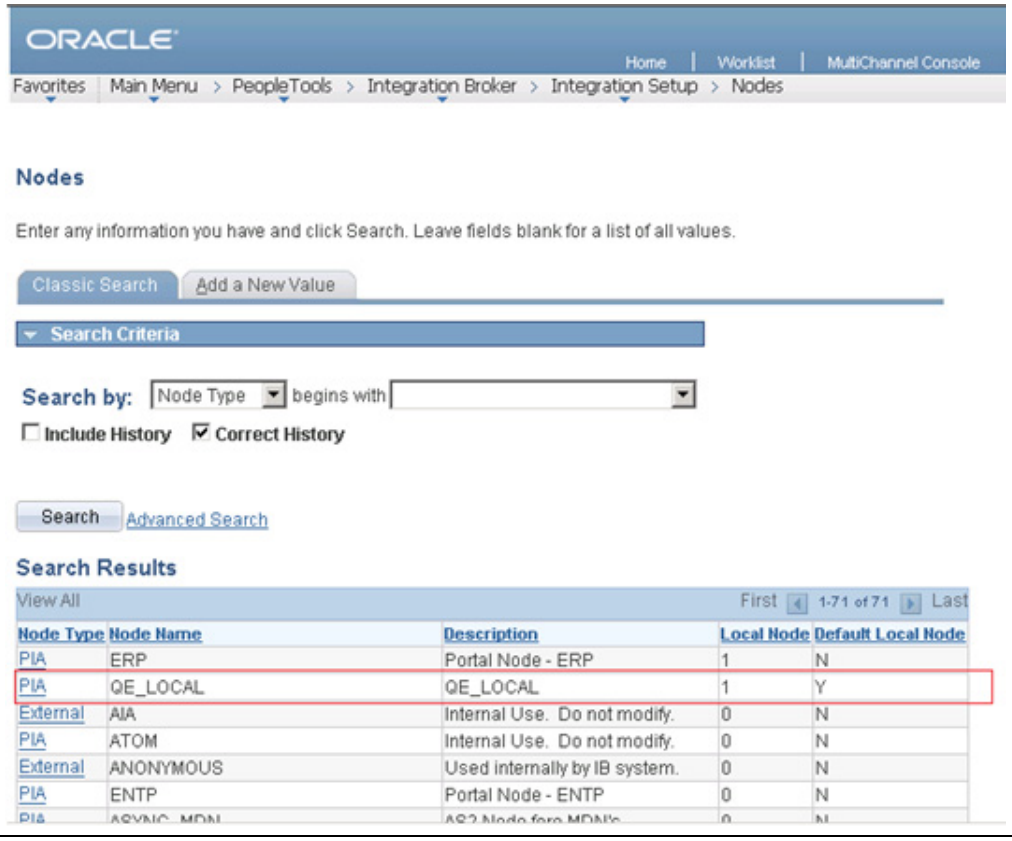
Specifying the Authentication Domain

Identifying the Local Default Node in Your System

After you identify the Local default node, use it in the next procedure.

1. Select PeopleTools, Integration Broker, Integration Setup, Nodes.
2. Click the Search button to display a list of all nodes defined in the system.

   There should be one (and only one) node designated as the Default Local Node. You can sort on the Default Local Node column header to quickly find the proper node. Look for the node that has a “Y” in the Default Local Node column in the search results. In the following example, the local default node name is QE_LOCAL.



Node search results

3. Copy the node name to a text editor, as you will use it in a later step.

   See Adding the Local Default Node as a Message Node to your Gateway.

Running the Data Mover Script and Database Project

In order to use SAP BusinessObjects Enterprise XI 3.1 to run reports with the PeopleSoft application, you need to run a Data Mover script and use the Copy Project from File functionality with the project CRTOBOE.

This will add pertinent roles and change the Crystal process types to use the SAP BusinessObjects Enterprise XI 3.1 executable.

1. Launch Data Mover and run the Data Mover script *PS_HOME*\scripts\CRTOBOE.dms.
2. Launch Application Designer and sign on to your database.
3. Select Tools, Copy Project, From File.
4. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select CRTOBOE from the list of projects, and click Select.

Adding PeopleSoft Users and Roles

SAP BusinessObjects Enterprise XI 3.1 requires two users, BOE_Admin and BOE_Viewing.

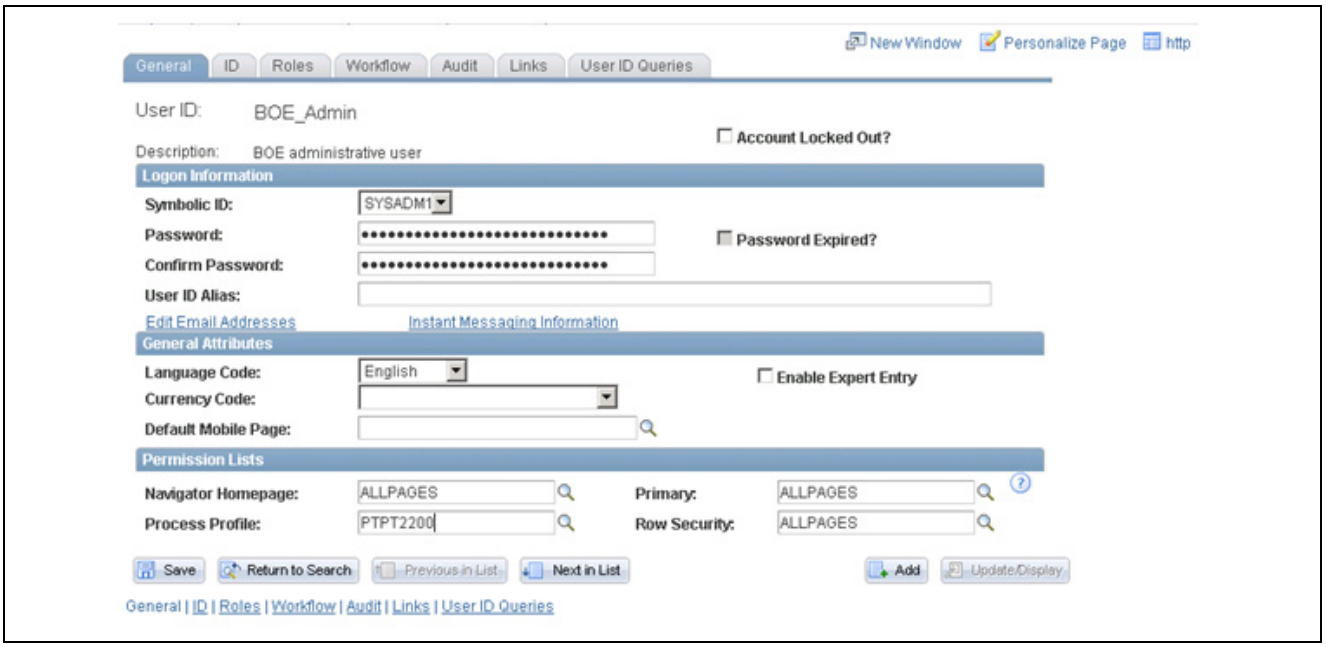
To add users BOE_Admin and BOE_Viewing:

1. Log in to the PeopleSoft application.
2. Select PeopleTools, Security, User Profiles, User Profiles.

3. Select Classic Search and search for *BOE_Admin.*

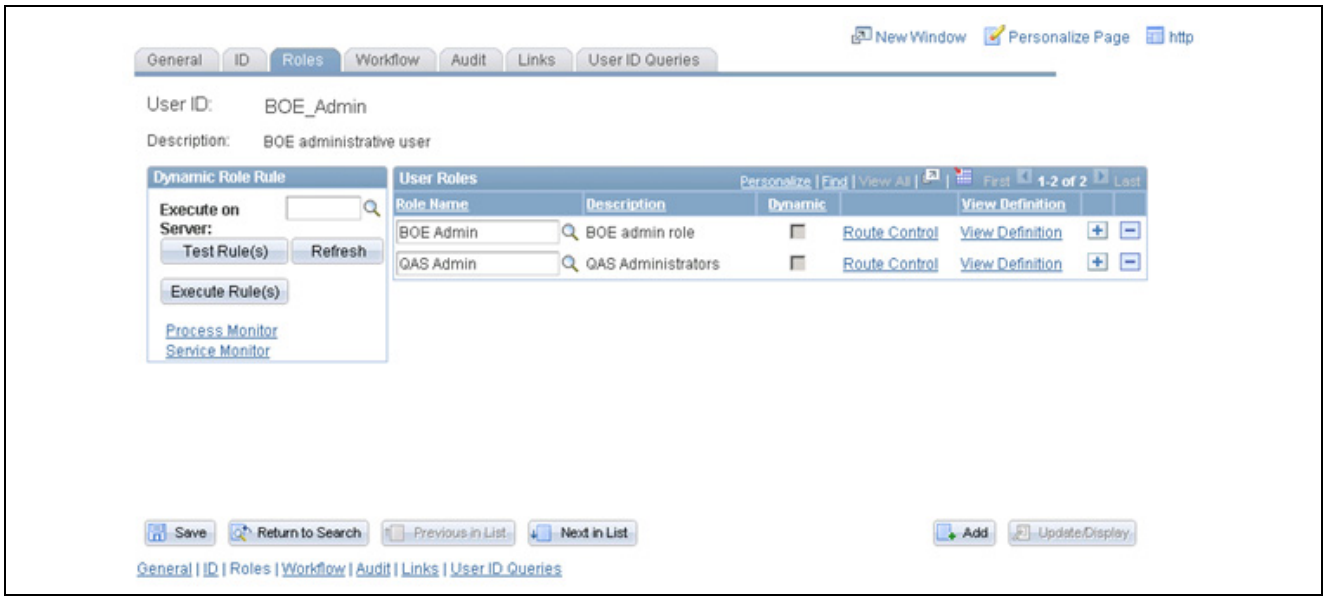
User Profiles search results showing BOE_Admin

4. If the BOE_Admin user does not exist, select Add a New Value and create it.
5. On the User ID page for BOE_Admin, on the General page, specify PTPT2200 for the Process Profile.



BOE_Admin User ID General page

6. Select the Roles tab.



BOE_Admin User ID Roles page

Verify that the following roles are present, or add them if necessary:

- BOE Admin
- QAS Admin

7. If you made any changes, click Save.
8. Repeat step 2, and search for *BOE_Viewing*.
9. If the user does not exist, select Add a New Value and create the BOE_Viewing user.
10. On the User ID: BOE_Viewing page, select the Roles tab.
11. Verify that the BOE Viewing role is present, or add it if it is not present.
12. If you made any changes, click Save.

Any PeopleSoft user ID that will run Crystal Reports through SAP BusinessObjects Enterprise XI 3.1 must have the QAS Admin role associated with it.

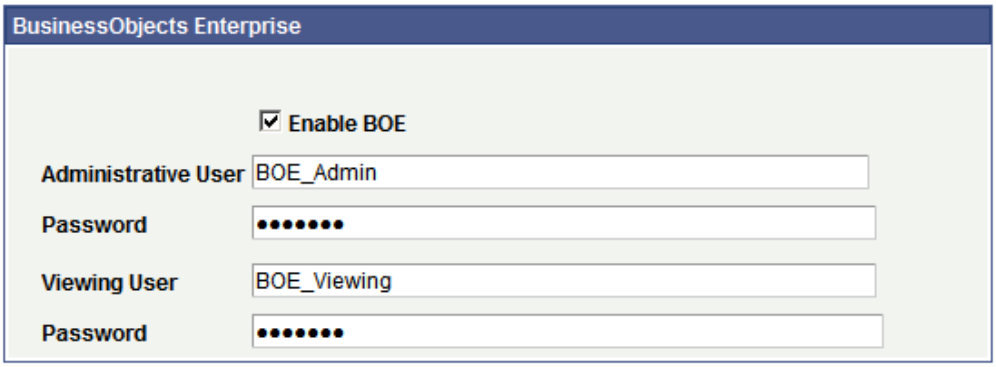
To add the “QAS Admin” role to a user:

1. Log in to the PeopleSoft application in a browser.
2. Select PeopleTools, Security, User Profiles, User Profiles.
3. Select Classic Search and search for the PeopleSoft user you want to configure, for example PTDMO.
4. Select the Roles tab.
5. Add the QAS Admin role, and click Save.

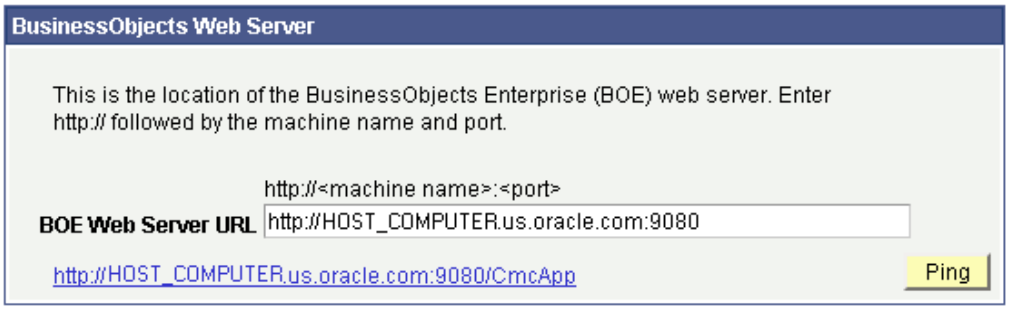
To configure the user credentials:

1. Select PeopleTools, Utilities, Administration, BOE Administration.

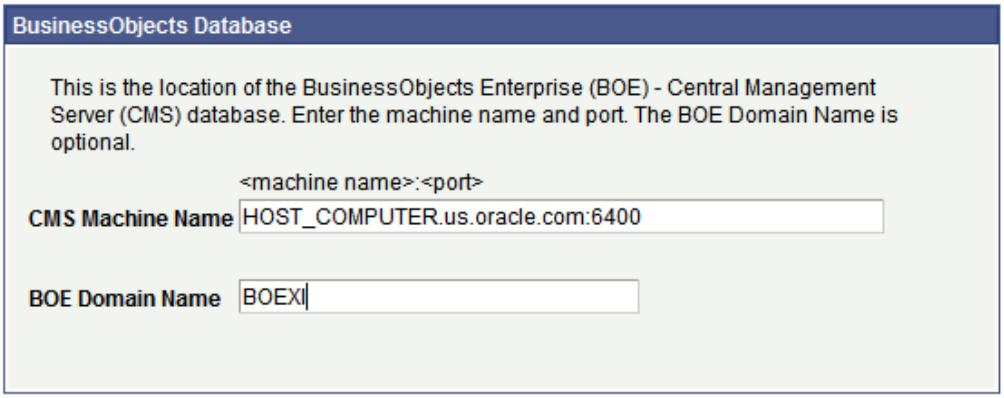
   The following examples show three portions of the BOE Integration Administration page.



BOE Integration Administration page: BusinessObjects Enterprise portion



BOE Integration Administration page: BusinessObjects Web Server portion



BOE Integration Administration page: BusinessObjects Database portion

2. Enter the following values:
   - Enable BOE

     Select the Enable BOE check box. This option is required to convert or publish reports, and to run reports through Process Scheduler. Note that *clearing* the option is not sufficient to change your environment from running with BusinessObjects Enterprise to running with Crystal Reports. That conversion is discussed in a later section.

     See Converting Crystal Reports.
   - Administrative User: Enter BOE_Admin
   - Password: Enter the password associated with BOE_Admin.
   - Viewing User: Enter BOE_Viewing.

- Viewing User Password: Enter the password associated with the user BOE_Viewing. The default password is the same as the user name; that is, BOE_Viewing for the BOE_Viewing user.
- BOE Web Server URL

  Enter http://<*machine_name*>:<*port*>
- CMS Machine Name: Enter the name of the computer where you installed SAP BusinessObjects Enterprise XI 3.1, and the port for the CMS. The default port is 6400.
- BOE Domain Name (Optional): Enter a name to identify the BOE domain.

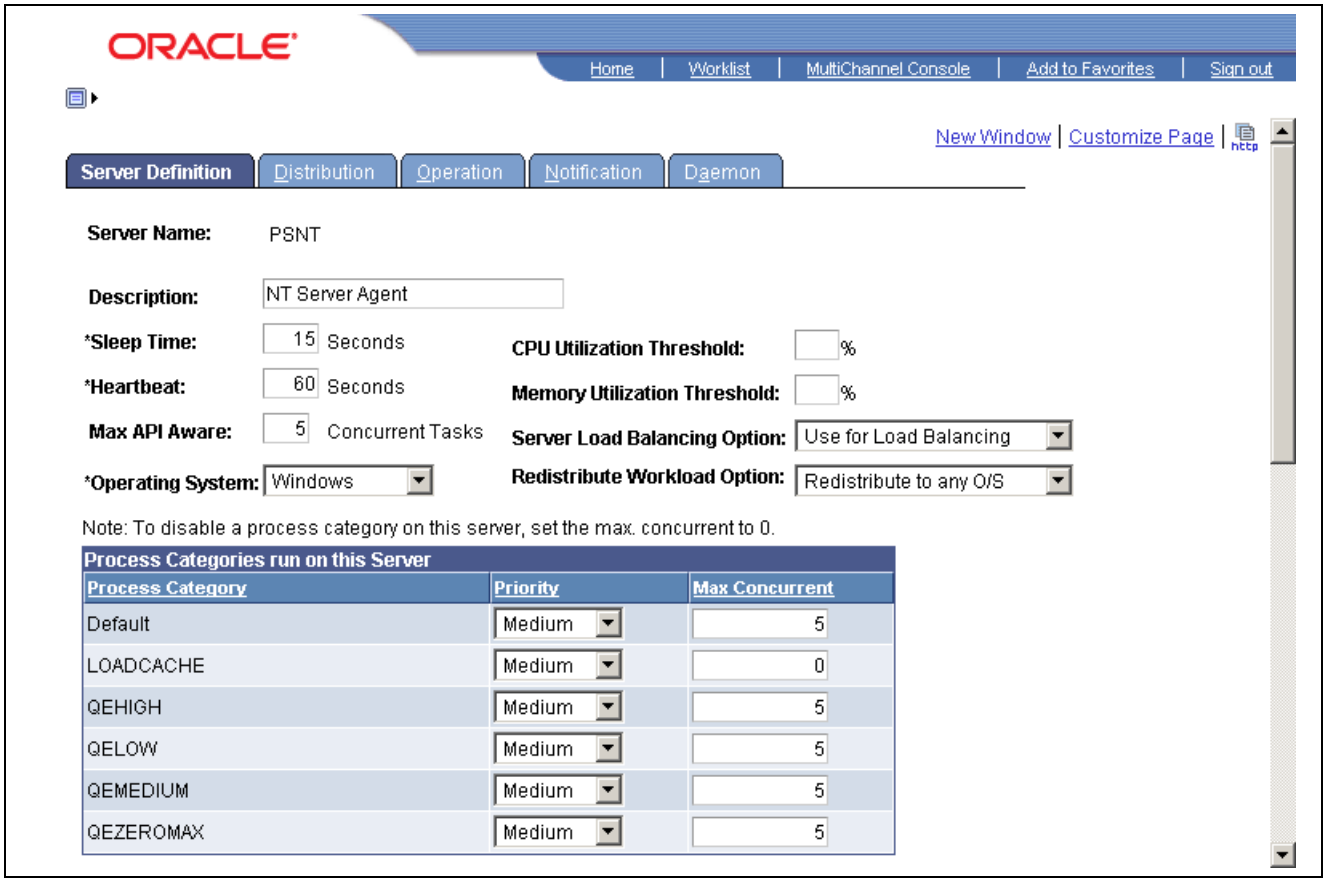
  Make a note of this domain name. You will use it on the CMC authentication page in a later step.

Verifying Process Scheduler Server Definition

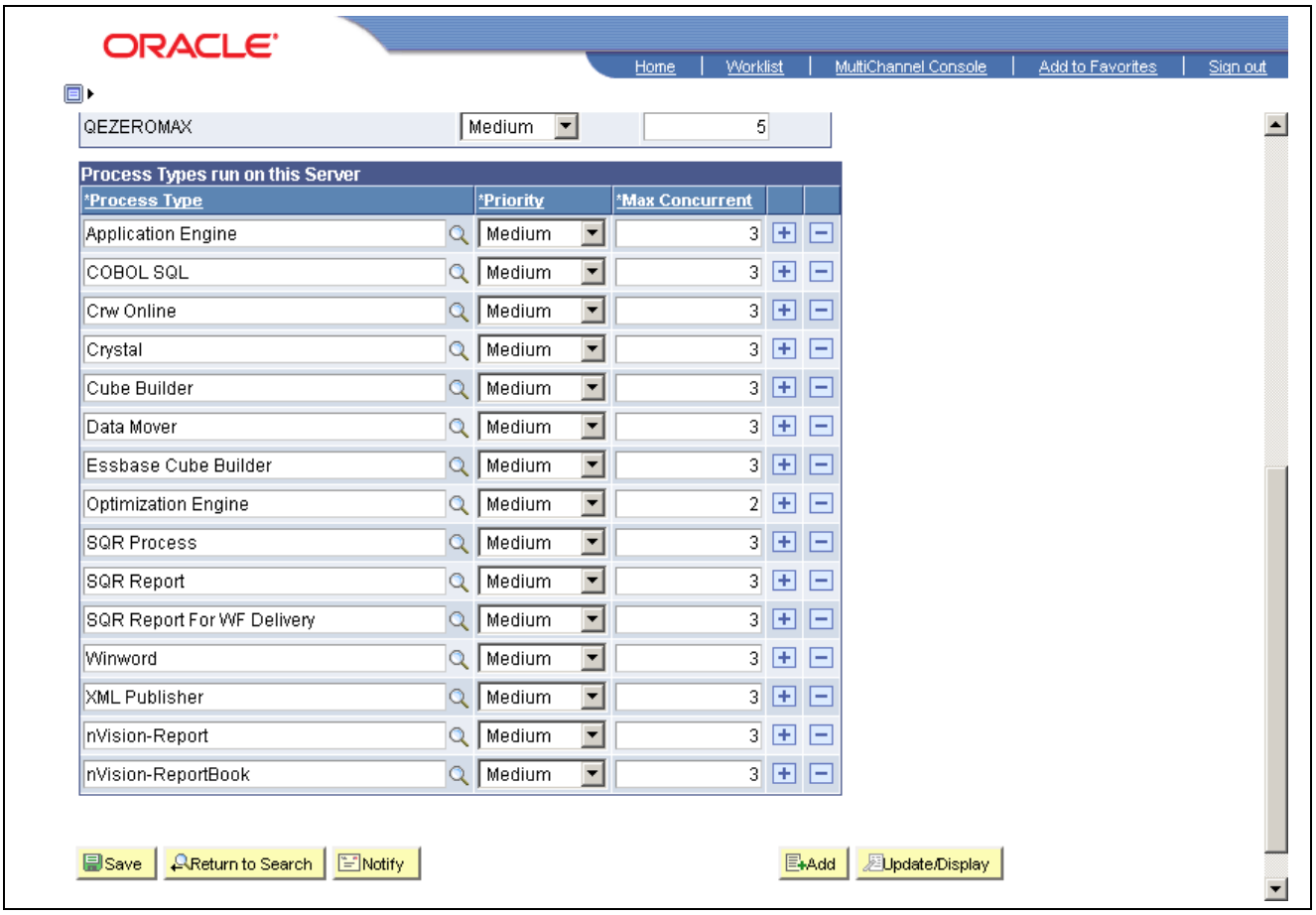
You need to verify that the Process Scheduler servers that you plan to use to run Crystal Reports are configured to run those processes.

To verify the Process Scheduler server definition:

1. Log into your PeopleSoft application in a browser.
2. Select PeopleTools, Process Scheduler, Servers.
3. Choose each server on which you plan to schedule Crystal Reports. The example below shows the Server Definition page for the PSNT server.



Server Definition page for PSNT: Part 1



Server Definition page for PSNT: Part 2

For each server, verify that Crystal is one of the Process Types in the grid Process Types run on this Server.

4. If the Crystal Process Type does not exist, add it and save the page.

Updating the PeopleSoft Integration Broker Gateway

You must update the PeopleSoft Integration Broker Gateway to recognize your PeopleSoft application server.

To configure the Integration Broker Gateway:

1. Log in to your PeopleSoft application.
2. Select PeopleTools, Integration Broker, Configuration, Gateways.
3. In the Gateway URL field, enter the following value, where <machine_name> is the machine where the Integration Broker is installed, and <port> is the port number where the PeopleSoft web server is listening.

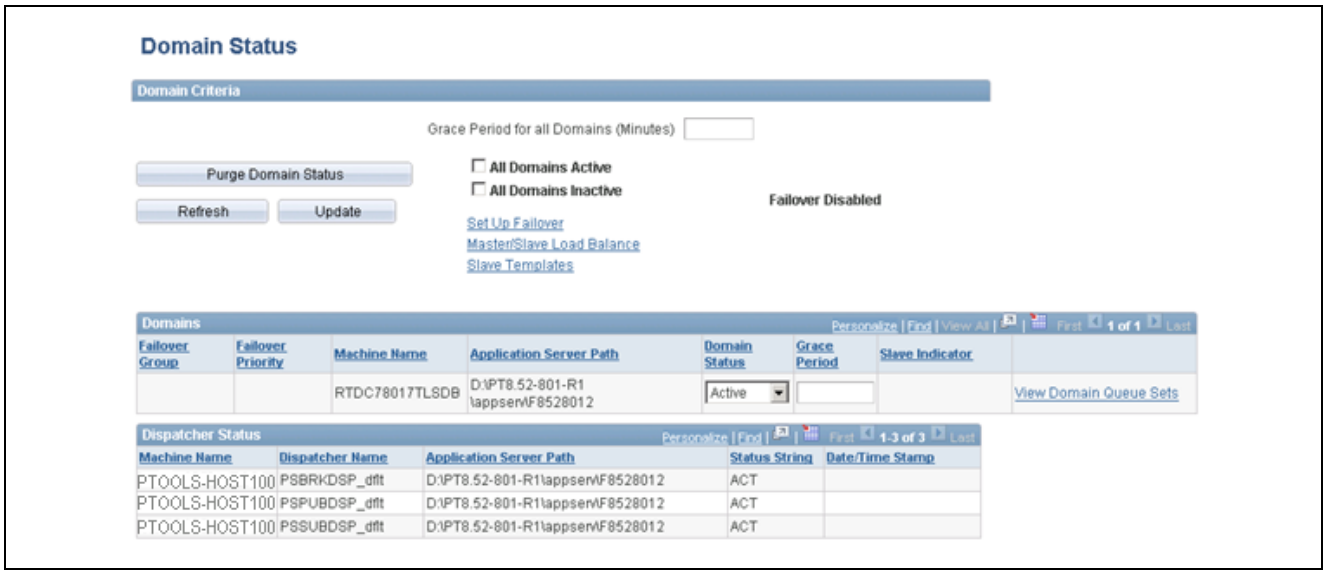
   That is, the machine where PeopleSoft PeopleTools is installed, and the port number for the web server listener; in the following example, PTOOLS-HOST100 and 7041, respectively.

   http://*<machine_name>:<port>*/PSIGW/PeopleSoftListeningConnector

Gateways page for Gateway ID Local

4. Select PeopleTools, Integration Broker, Service Operations Monitor, Administration, Domain Status.

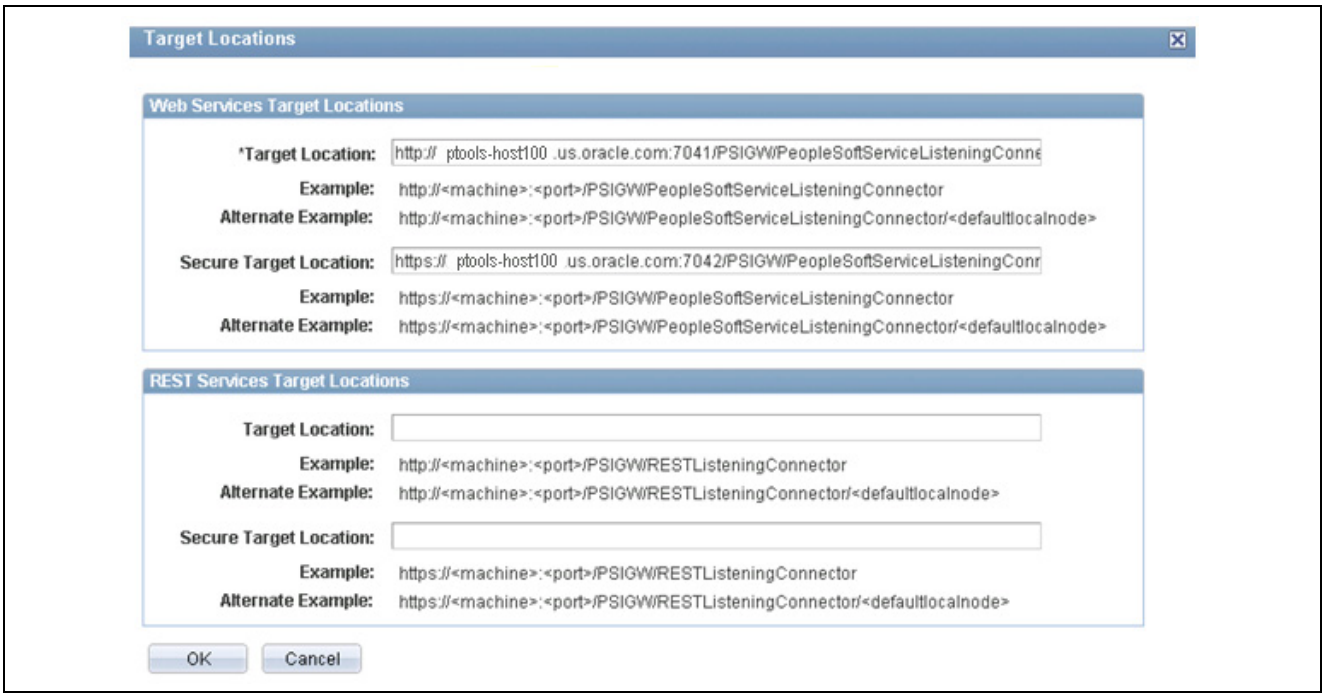
   Activate the domain by changing the status in the Domains list to Active. Select Domain Status. Select Domain Status. On the page that appears, select Purge Domains, and then click Save.



Domain Status page

5. Select PeopleTools, Integration Broker, Configuration, Service Configuration.

   Select Setup Target Locations.



Target Locations page

6. Fill in the Target Location and Secure Target Location fields.

   The SAP BusinessObjects Enterprise XI 3.1 configuration requires an HTTPS address on this page.

   - Target Location

     Enter the machine name where PeopleSoft PeopleTools is installed, and the HTTP port number for the web server (the example uses ptools-host100 and 7041, respectively):

     http://<*machine_name*>:<*http_port*>/PSIGW/PeopleSoftServiceListeningConnector

   - Secure Target Location

     The URL must be a valid HTTPS PeopleSoftServiceListeningConnector. Enter the machine name where PeopleSoft PeopleTools is installed, and the HTTPS port number for the web server (the example uses ptools-host100 and 7042, respectively):

     https://<*machine_name*>:<*https_port*>/PSIGW/PeopleSoftServiceListeningConnector

7. Select PeopleTools, Integration Broker, Configuration, Gateways.

   Click Search on the page that appears.

8. On the Gateways page, select the link Gateway Setup Properties.

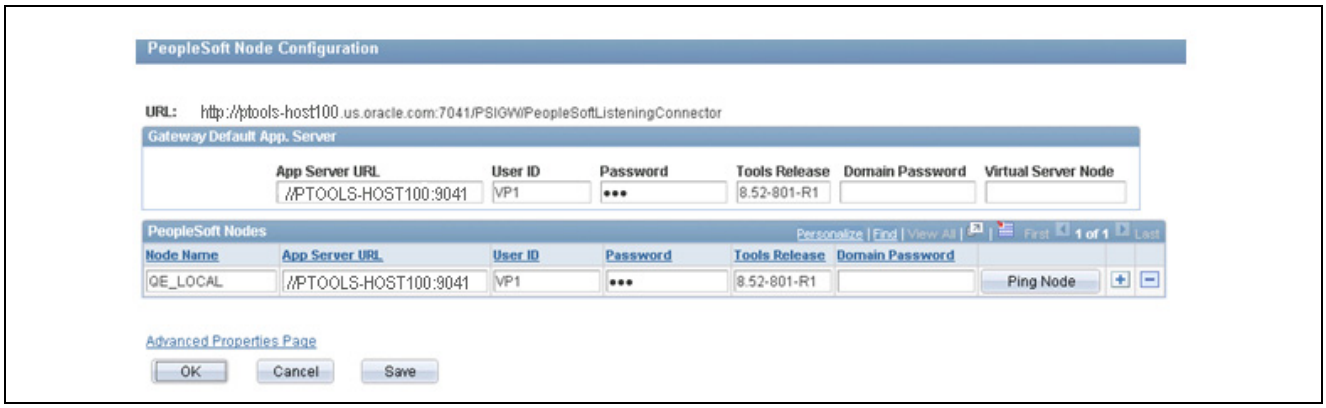
   The Gateways Properties page appears.

9. Enter the Integration Gateway administrator user ID and password.

   The default values are administrator and password.

Gateway Properties Sign on window

10. Add a new node in the PeopleSoft Node Configuration page and save.



PeopleSoft Node Configuration page

Enter the following values:

- Node Name: Enter the name of the active default node.

  This example uses QE_LOCAL as the default node.

  See Identifying the Local Default Node in Your System.
- App Server URL: Enter the URL of the web server that is connected (through Jolt) to your PeopleSoft database's application server.
- User ID: Enter user *BOE_Admin* and its password.
- Password: Enter the password for user BOE_Admin; the default password is BOE_Admin.
- Tools Release: Provide the exact PeopleSoft PeopleTools release that your application server is using; for example, 8.52-19.

11. Click Save.
12. Click Ping Node to be sure the node is accessible, and then exit.

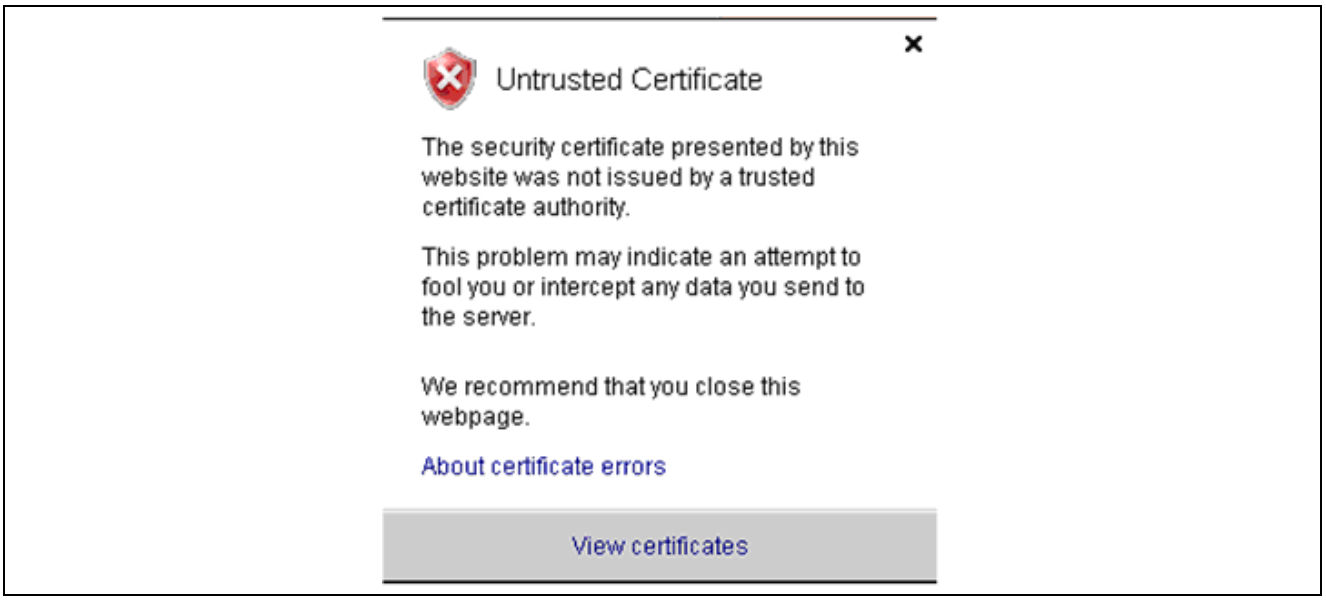
Task 15-4-19: Importing the Security Certificate to the Oracle WebLogic Server

This section describes how to export the security certificate for PeopleSoft PeopleTools and import it into SAP BusinessObjects Enterprise XI 3.1. Before carrying out this step you should have configured Secure Socket Layers (SSL) for the PeopleSoft web server.

See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with Oracle WebLogic."

1. Sign in to the PeopleSoft application using the https port.
2. In the browser menu, select View, Security Report.

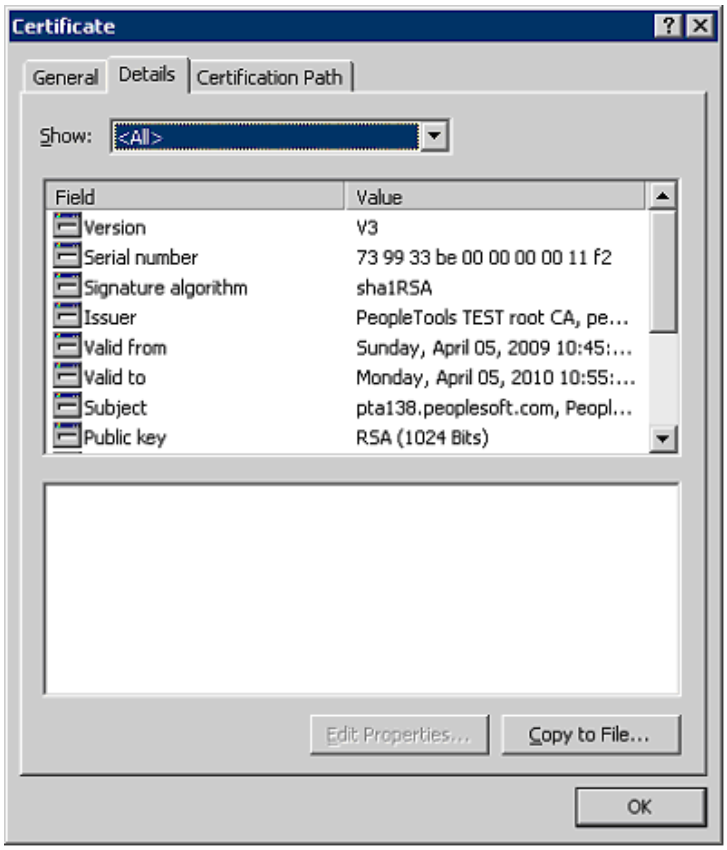
   Note. Depending upon your browser version, you may need to use another command to view the certificates.



Untrusted Certificate message

3. Click the View certificates link.

   The Certificate dialog box appears.



Certificate dialog box

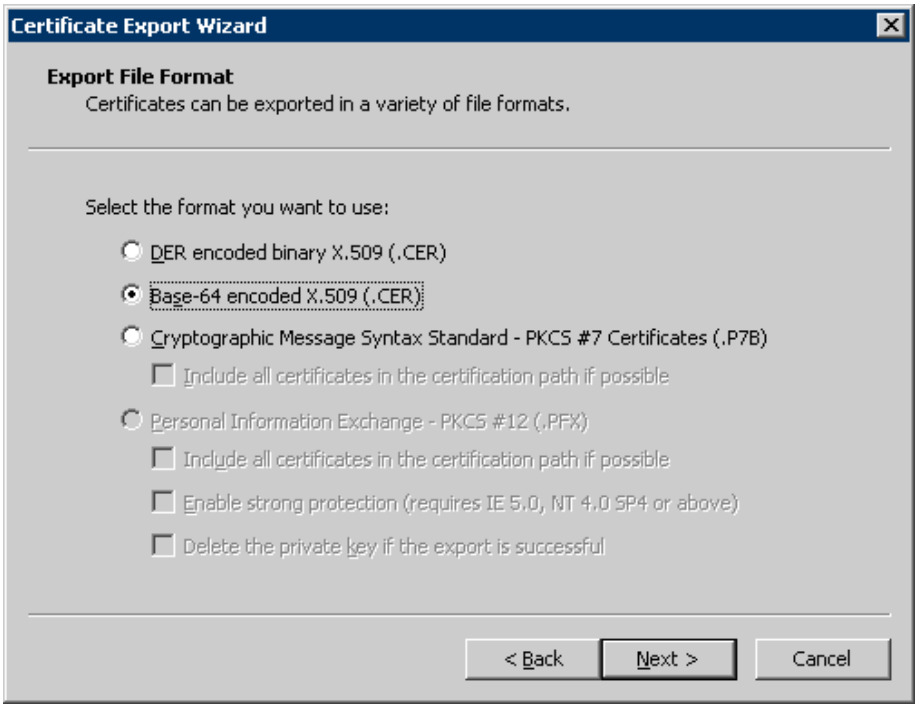
4. Click the Copy to File button.

   The Certificate Export Wizard dialog box appears.

Certificate Export Wizard dialog box

5. Click Next.

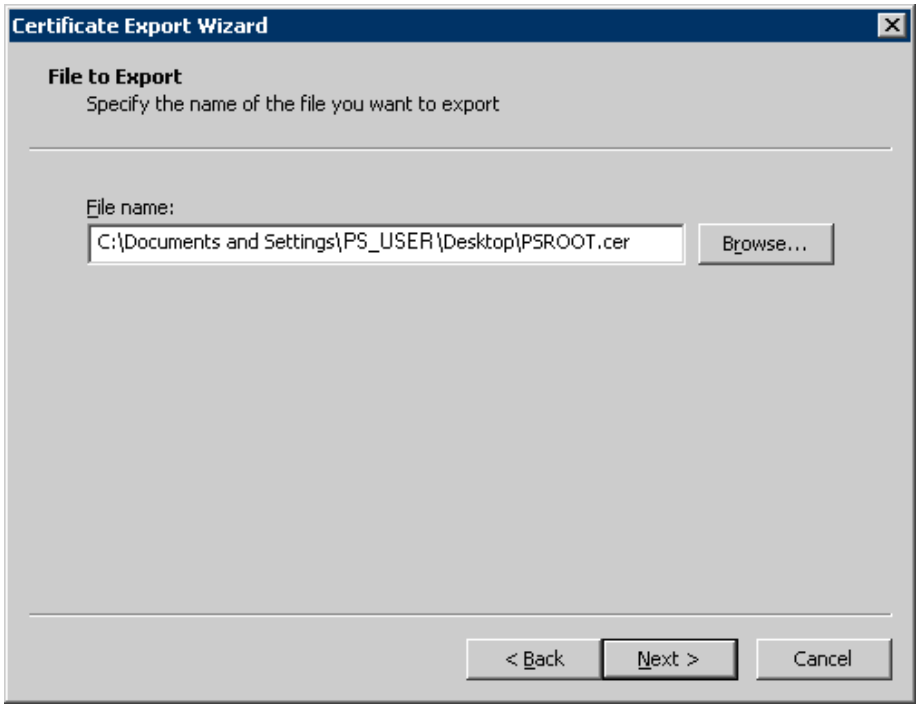
   On the Export File Format page, select Base-64 encoded X.509 (.CER), and click Next.



Export File Format page

6. Enter the name you would like to provide for the certificate and the location to export it to, and then click Next.

In this example, the full path to the file is C:\Documents and Settings\PS_USER\Desktop\PSROOT.cer.



File to Export page

7. Click Finish to export the certificate.
8. Copy the exported certificate to a directory, referred to here as *CERTIFICATE_DIR*, on the system where the you installed the web server for BOE.
9. Go to the <*WLS_HOME*>\jdk<*version*>\bin directory, where <WLS_HOME> is the directory where you installed Oracle WebLogic.

   Use the following command to import the PeopleSoft certificate to WebLogic keystore:

   ```
   keytool -import -file <certificate file> -keystore <keystore file> -alias ⇒
   <alias>
   ```

   - For <certificate file> enter the full path of the directory where you saved the exported certificate, *CERTIFICATE_DIR*.
   - For <keystore file> enter <*WLS_HOME*>\jdk<*version*>\jre\lib\security\cacerts
   - For <alias> enter any name.
10. Enter the keystore password. (The default is *changeit*.)

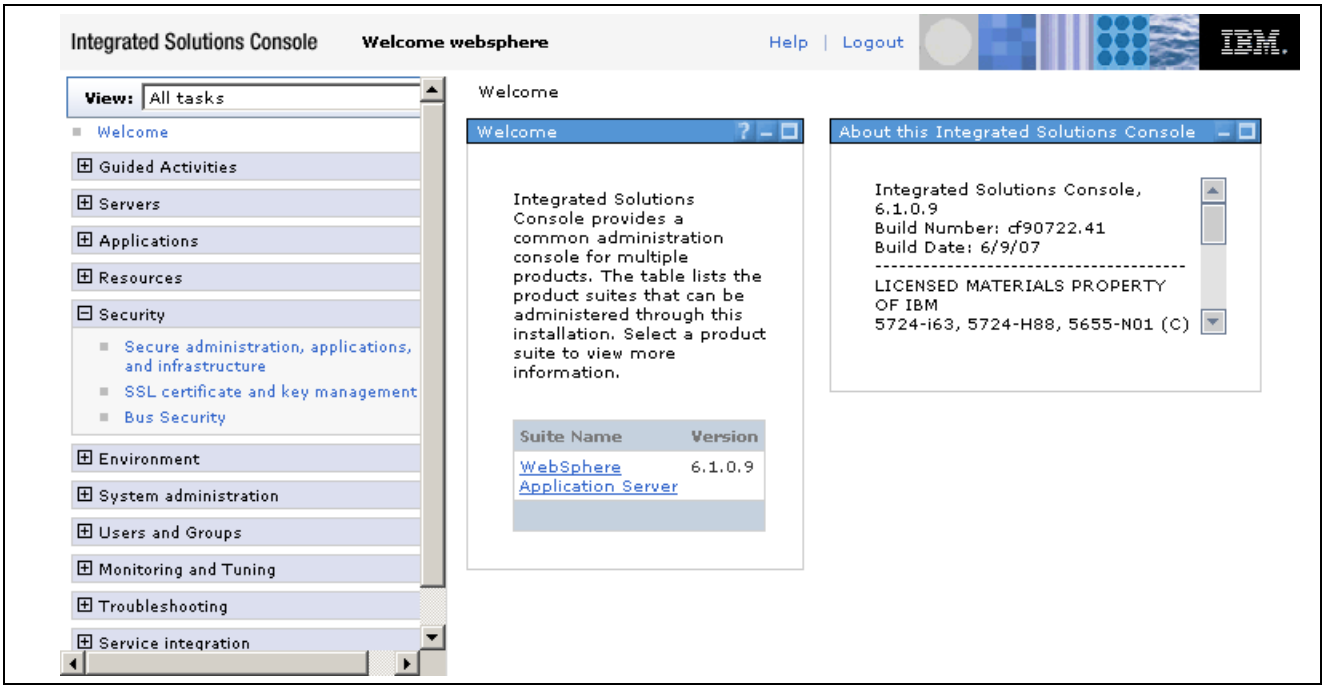
    Enter *y* to import the certificate.

Task 15-4-20: Importing Security Certificate to the IBM WebSphere Server

This section describes how to export the security certificate for PeopleSoft PeopleTools and import it for SAP BusinessObjects Enterprise XI 3.1. Before carrying out this step you should have configured Secure Socket Layers (SSL) for the PeopleSoft web server.

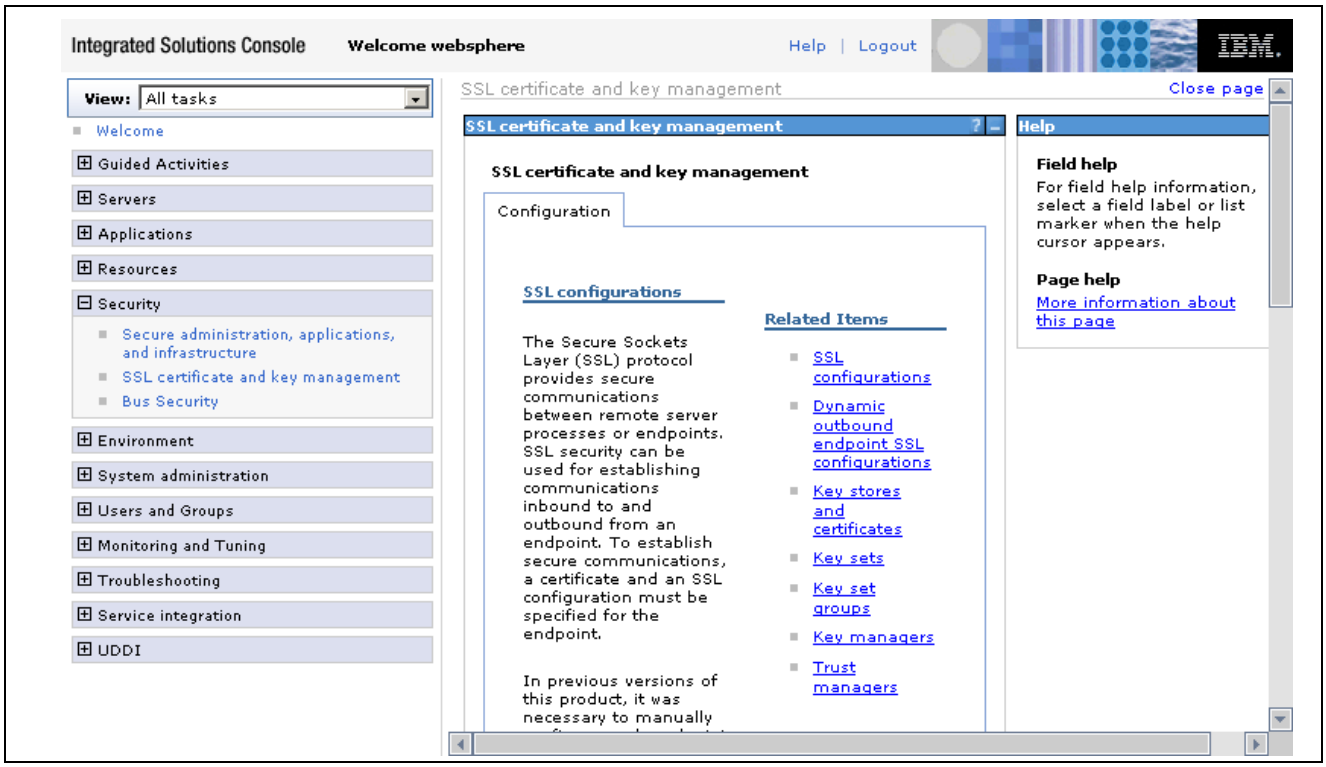
See *PeopleTools 8.52: System and Server Administration PeopleBook,* "Working with IBM WebSphere."

1. Export the certificate as described in steps 1–8 in the task above, Importing Security Certificate to the Oracle WebLogic Server.
2. Log on to IBM WebSphere Administrative Console.
3. Select Security, SSL certification and key management.



IBM WebSphere Integrated Solution Console welcome page

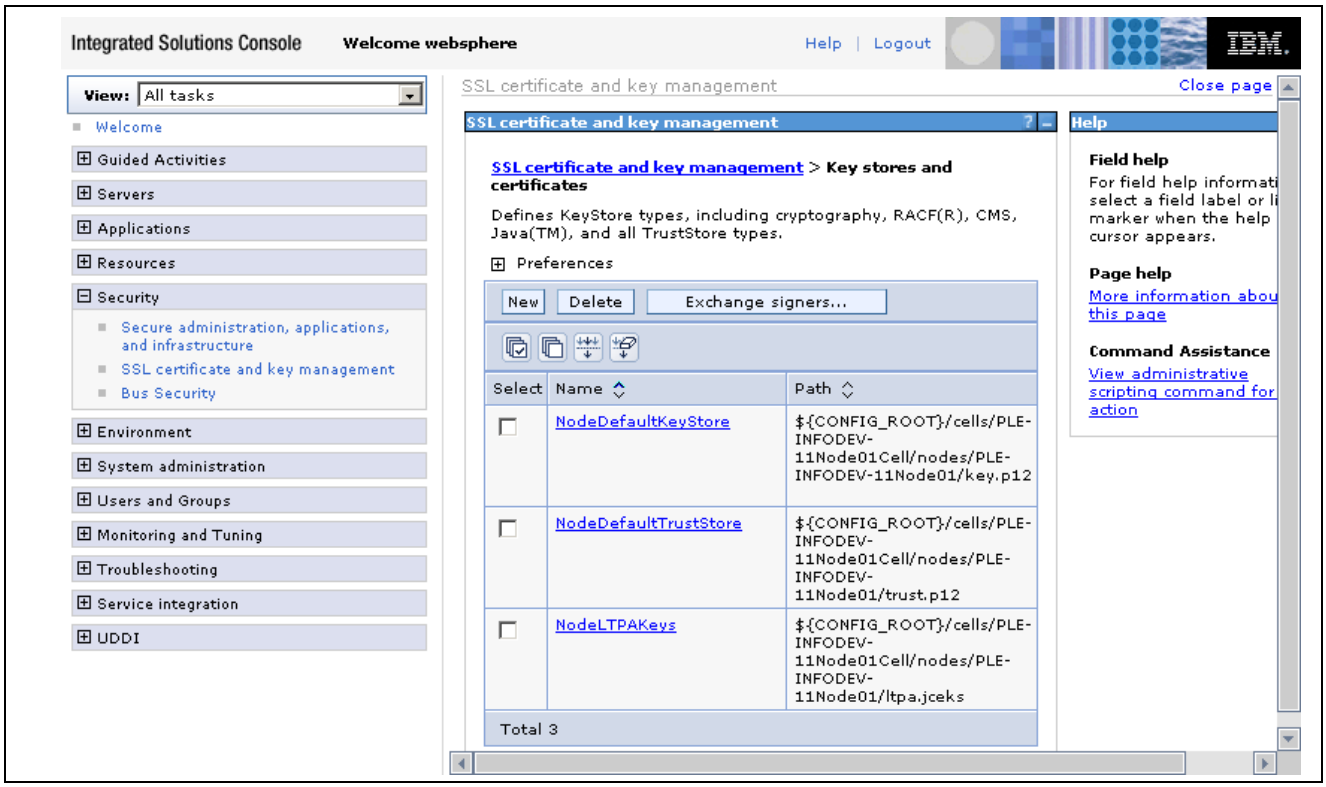
4. Select Key stores and certificates in the Related Items area.



SSL certificate and key management page

5. Select the link for NodeDefaultTrustStore.

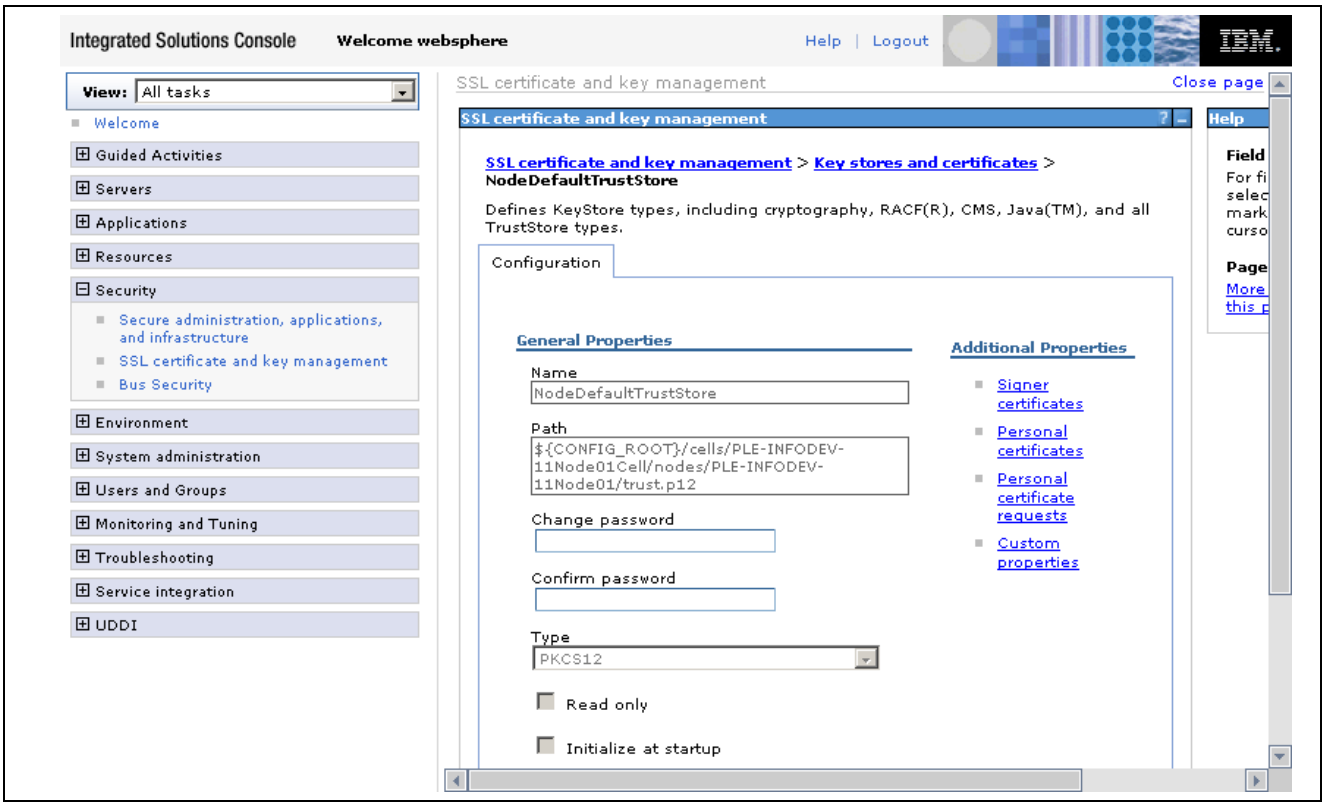
   The trust store filename can be found on the Key stores and certificates page.



Key stores and certificates page

6. On the NodeDefaultTrustStore page, make a note of the path for this trust store file and the trust store type, which is PKCS12 in this example.

   The variable *${CONFIG_ROOT}* refers to the installation directory for IBM WebSphere, referred to here as *WAS_HOME*. Note that on the NodeDefaultTrustStore page you can change the trust store password.



NodeDefaultTrustStore page

7. Run the following command to launch the IBM WebSphere ikeyman utility to import the certificate:

   Note. You can also use Java keytool, as described in the previous section.

   On Microsoft Windows:

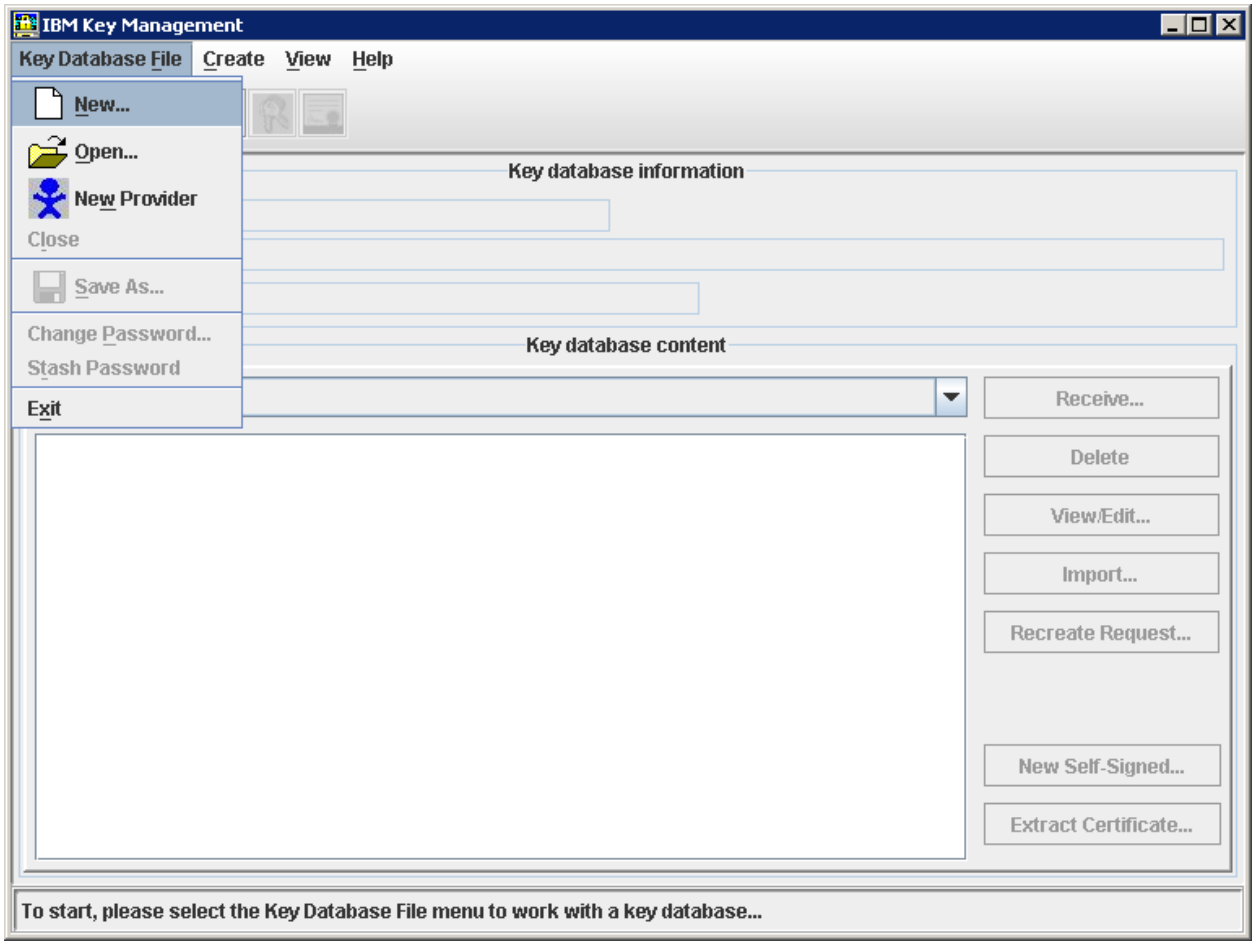
   ```
   WAS_HOME\AppServer\bin\ikeyman.bat
   ```

   On UNIX or Linux:

   Note. Use Windows X reflection tool to invoke ikeyman in GUI mode

   ```
   WAS_HOME/AppServer/bin/ikeyman.sh
   ```

8. Select Key Database File, Open.

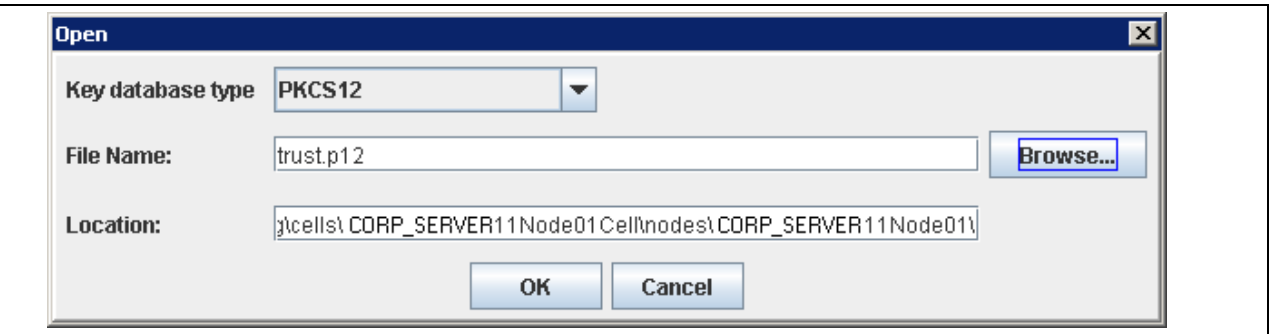


IBM Key Management dialog box

9. Browse to the trust.p12 file.

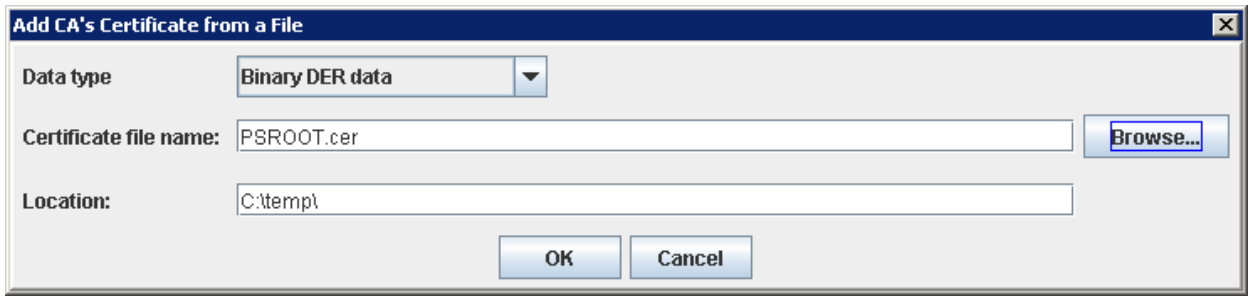
   When you browse to and open the file, there will be a prompt to enter a password. Enter the password of the key database file.

   Note. The file is found in the path listed on the NodeDefaultTrustStore page in a previous step.



Selecting the trust file

10. Click the Add button, and browse to find the PeopleSoft certificate you saved in *CERTIFICATE_DIR*.



Selecting the PeopleSoft certificate

11. Click OK, and enter any label at the Enter a Label prompt.
12. Save the trust store file.
13. Restart IBM WebSphere.

Task 15-4-21: Configuring the SAP BusinessObjects Enterprise XI 3.1 Server

This section discusses:

- Entering License Keys for the SAP BusinessObjects Enterprise XI 3.1 Server
- Entering the PeopleSoft Authentication Information into the SAP BusinessObjects Enterprise XI 3.1 Server

Entering License Keys for the SAP BusinessObjects Enterprise XI 3.1 Server

To enter the license keys for SAP BusinessObjects Enterprise XI 3.1:

See Planning your SAP BusinessObjects Enterprise XI 3.1 Components, Understanding SAP BusinessObjects Enterprise XI 3.1 License Keys.

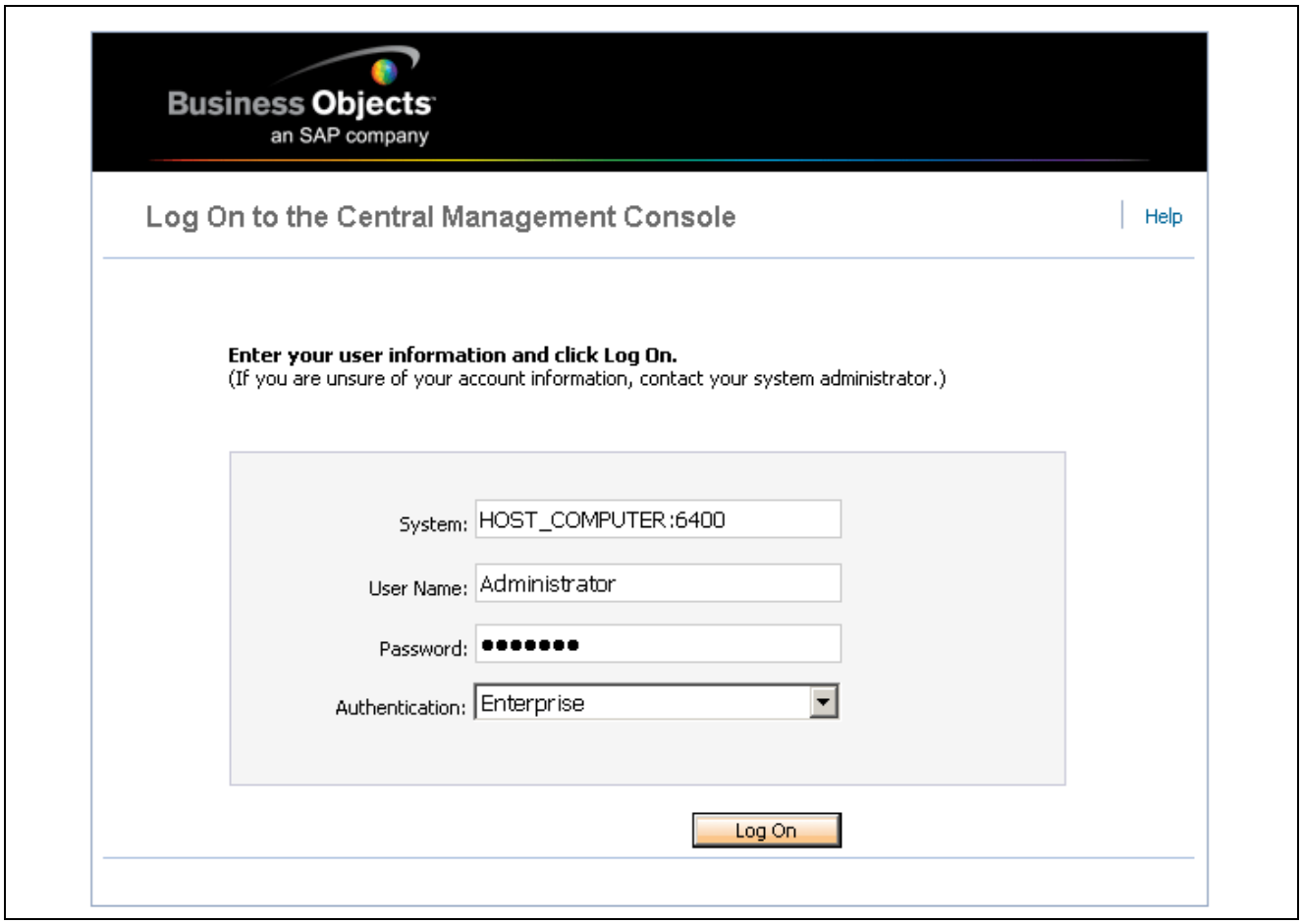
1. In a browser, enter the following URL, substituting the name of your SAP BusinessObjects Enterprise XI 3.1 server for <machine_name>, and the SAP BusinessObjects Enterprise XI 3.1 port number for <BOE_port>:

   http://<*machine_name*>:<*BOE_port*>/CmcApp.

   Note. You can also click the Webserver Ping button on the BOE administrator page to open the Central Manager Console.

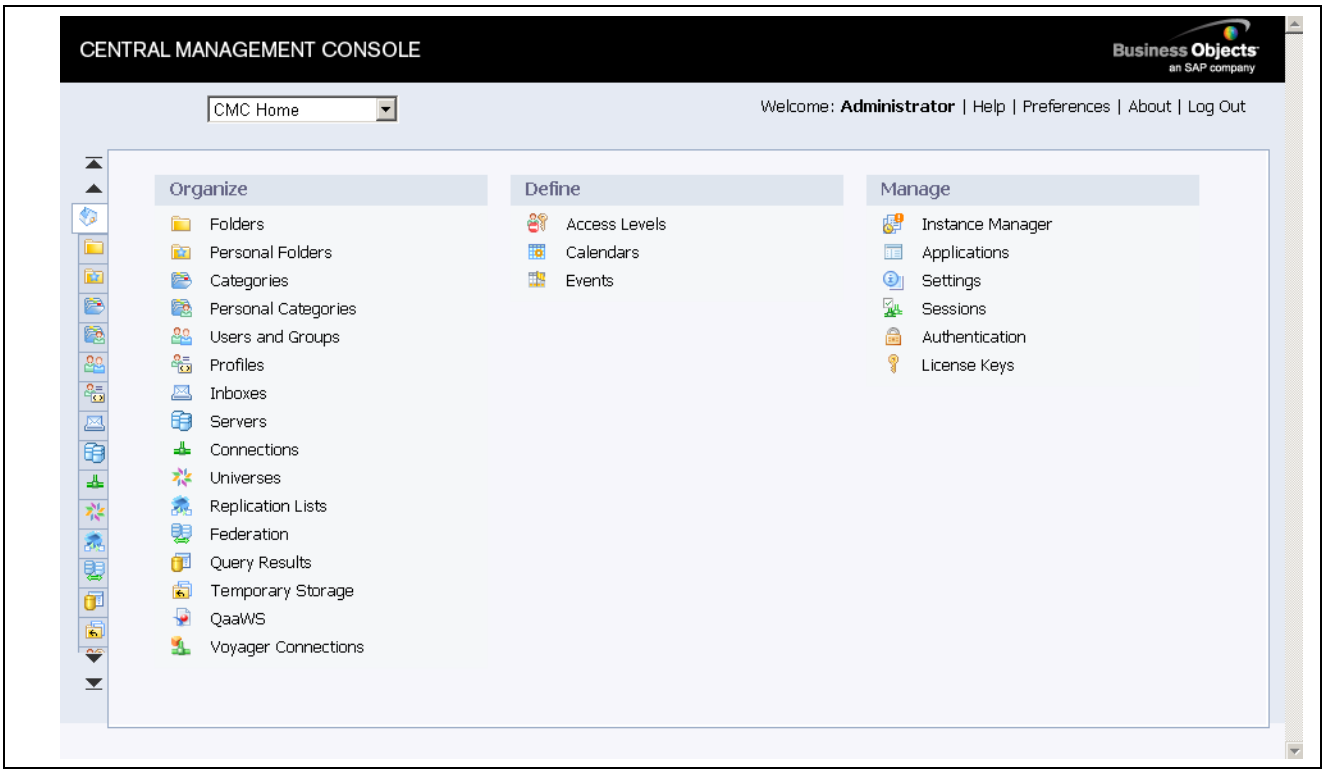
2. Log in using Administrator as the User name and the associated password:

   Note. This is the password you assigned to the Administrator account on the Server Components Configuration window when installing SAP BusinessObjects Enterprise XI 3.1.



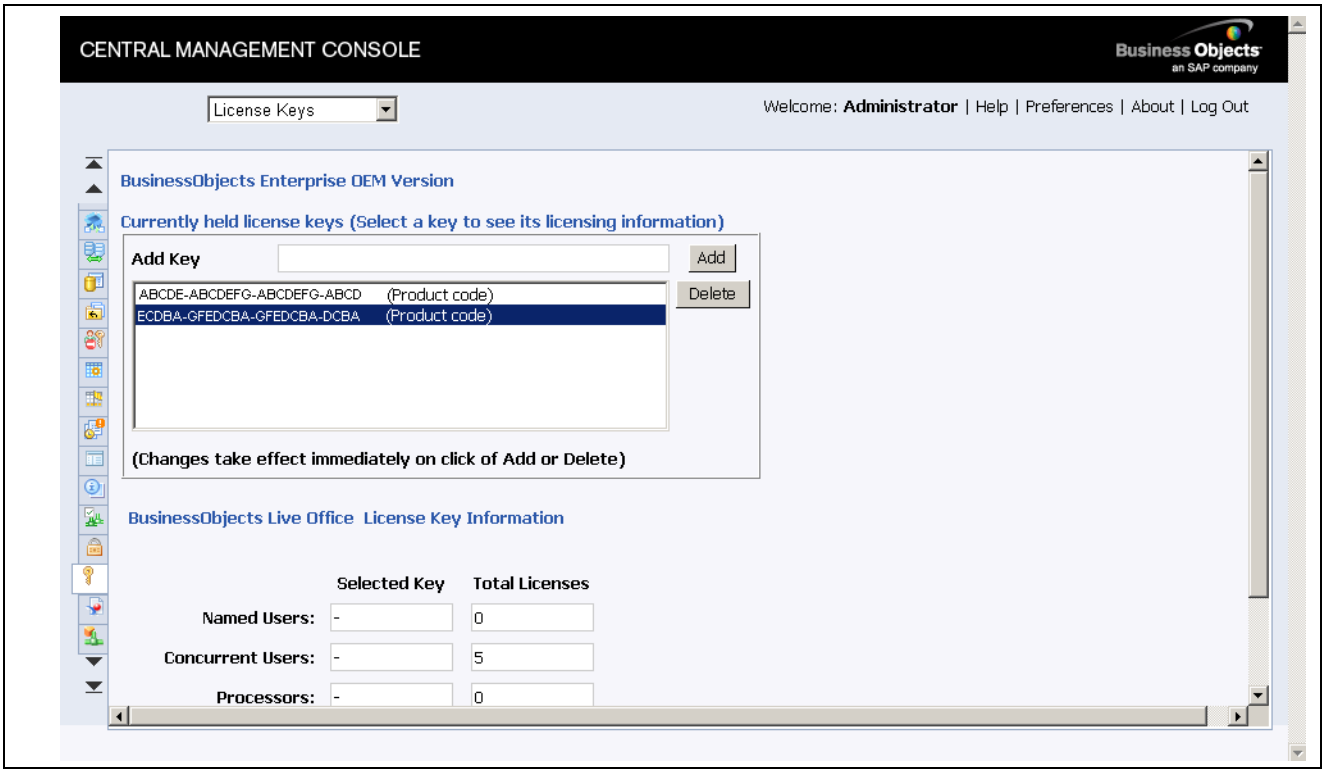
BusinessObjects Enterprise log in window

3. Select License Keys.



Central Management Console home page

4. Enter your license key in the Add Key box and click Add.



Central Management Console License Keys page

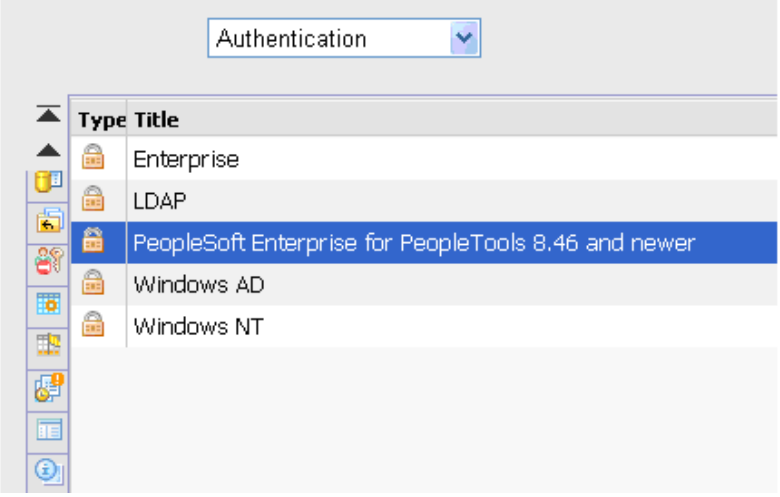
Entering the PeopleSoft Authentication Information into the SAP BusinessObjects Enterprise XI 3.1 Server

This procedure assumes you logged into the SAP BusinessObjects Enterprise XI 3.1 Central Management Console in the previous step.

To enter PeopleSoft authentication information in SAP BusinessObjects Enterprise XI 3.1:

1. On the CMC home page, click the Authentication button.
2. Double-click the PeopleSoft Enterprise link.

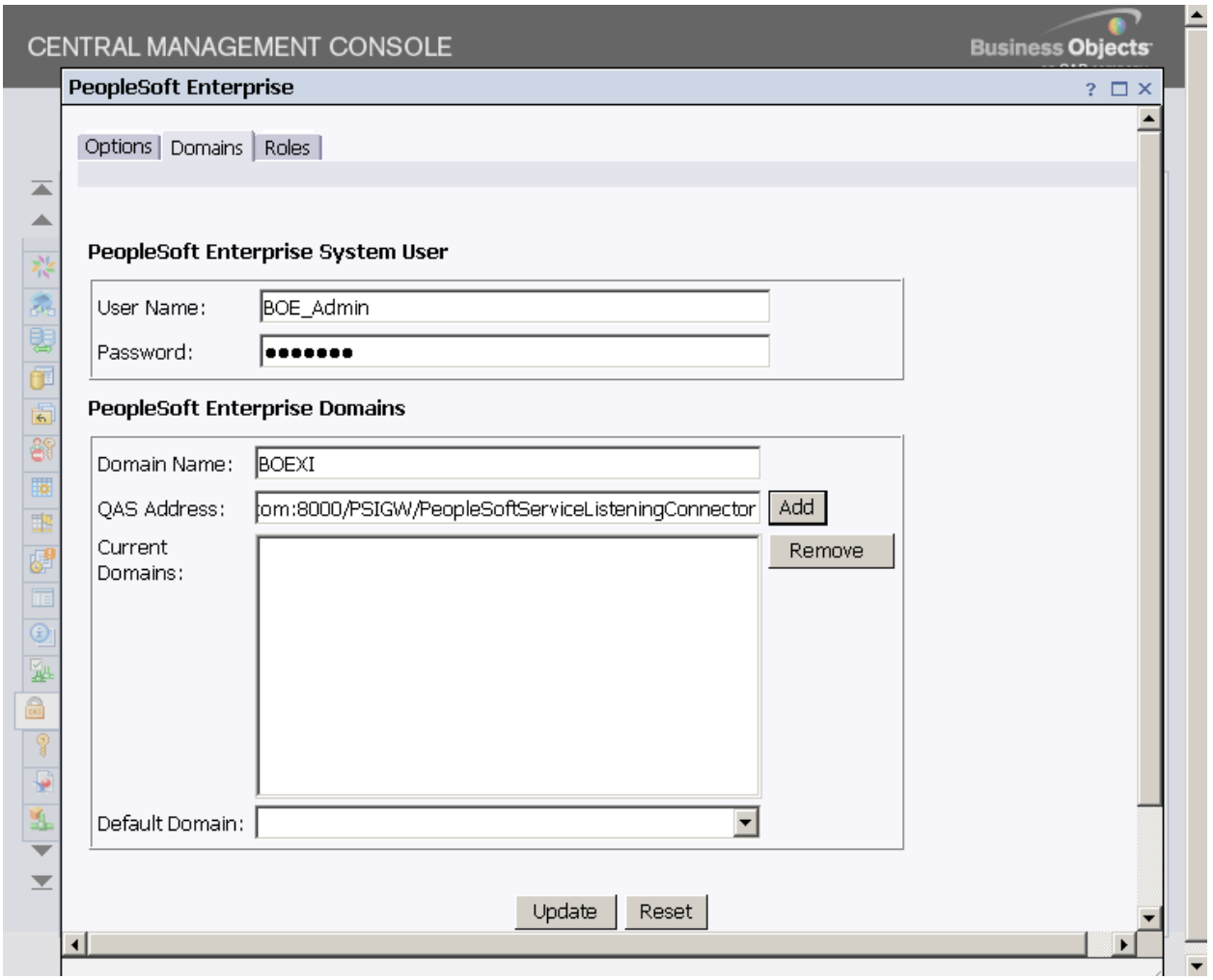
Note. If this link is not present, it means the PeopleSoft Integration Kit has not been installed.



BusinessObjects Enterprise XI 3.1 Authentication page

3. Select the Domain tab.

   The PeopleSoft Enterprise page appears.



PeopleSoft Enterprise System User page

Enter the following information:

- In the PeopleSoft Enterprise System User field, enter *BOE_Admin* as the user, and enter the password that you assigned to the BOE_Admin user in the BOE Integration Administration page.

  See Adding PeopleSoft Users and Roles.

- In the Domain Name field, enter the domain name which you entered in the BOE Integration Administration page.

  See Adding PeopleSoft Users and Roles.

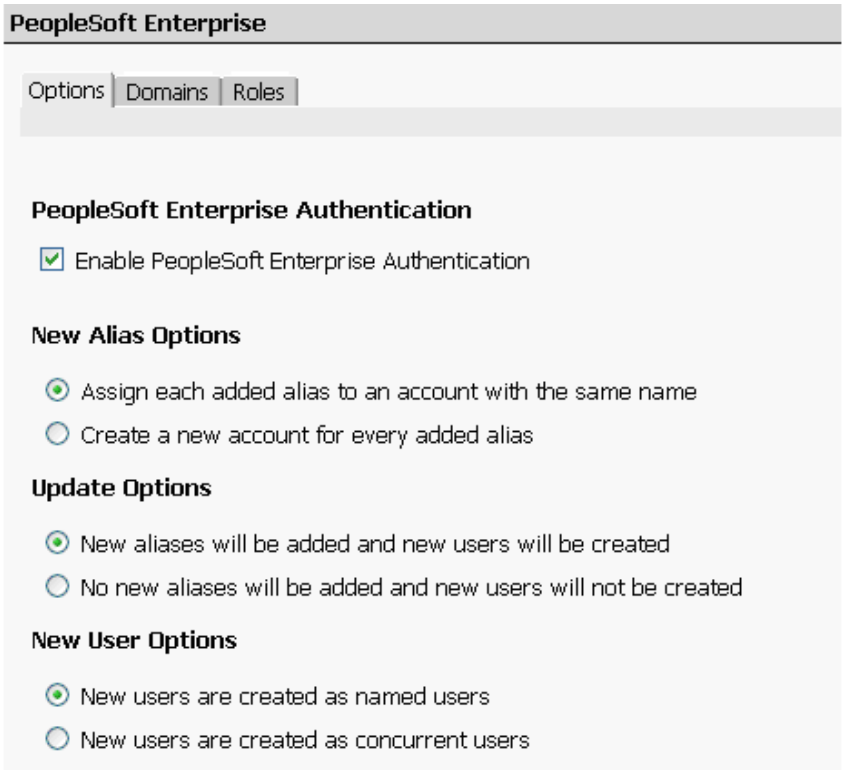
- In the QAS Address field, enter the secure Target Location (HTTPS) that you entered on the Service Configuration page when configuring Integration Broker.

  See Updating the PeopleSoft Integration Broker Gateway.

- In the Default Domain field, you can enter any domain configured in the PeopleSoft Enterprise Domains field, Current Domains section.

4. Click the Add button to add the domain to the list.
5. Click Update.

6. Select the Options tab.



Options tab

Select the following options:

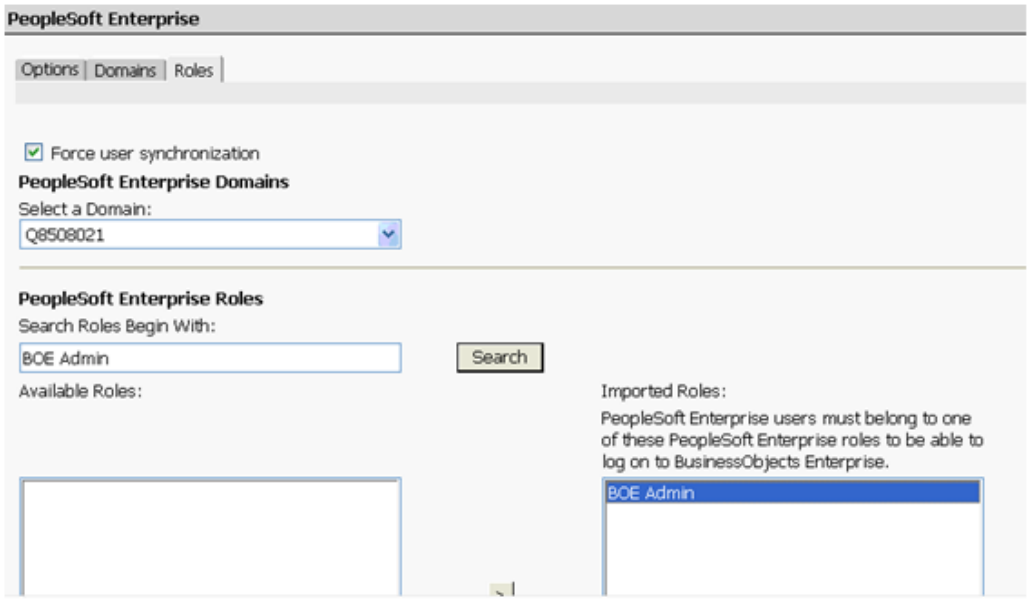
- Verify that the option Enable PeopleSoft Enterprise Authentication is selected.
- New Alias Options

  Select Choice 1: Assign each added PeopleSoft Enterprise alias to an account with the same name
- Update Options

  Select Choice 1: New aliases will be added and new users will be created
- New User Options

  Select Choice 1: New users are created as *named* users

7. Select the Roles tab.



Roles tab

a. Under PeopleSoft Enterprise Domains, select each domain configured.

b. Under PeopleSoft Enterprise Roles, search for role BOE Admin.

c. Click the Add button to add each role to the selected domain.

d. Click the Update button.

Note. Clicking the Update button should result in a new Authentication Type of PeopleSoft Enterprise as shown in the Authentication Type drop-down list when you log in to the Central Management Console. Also, User Ids from the PeopleSoft database with the given roles will automatically be added into SAP BusinessObjects Enterprise XI 3.1.

---

8. Select the Options tab, and select the following options:
   - Verify that the option Enable PeopleSoft Enterprise Authentication is selected.
   - New Alias Options

     Select Choice 1: Assign each added PeopleSoft Enterprise alias to an account with the same name
   - Update Options

     Select Choice 1: New aliases will be added and new users will be created
   - New User Options

     Select Choice 2: New users are created as *concurrent* users
9. Select the Roles tab.

   a. Under PeopleSoft Enterprise Domains, select each domain configured.

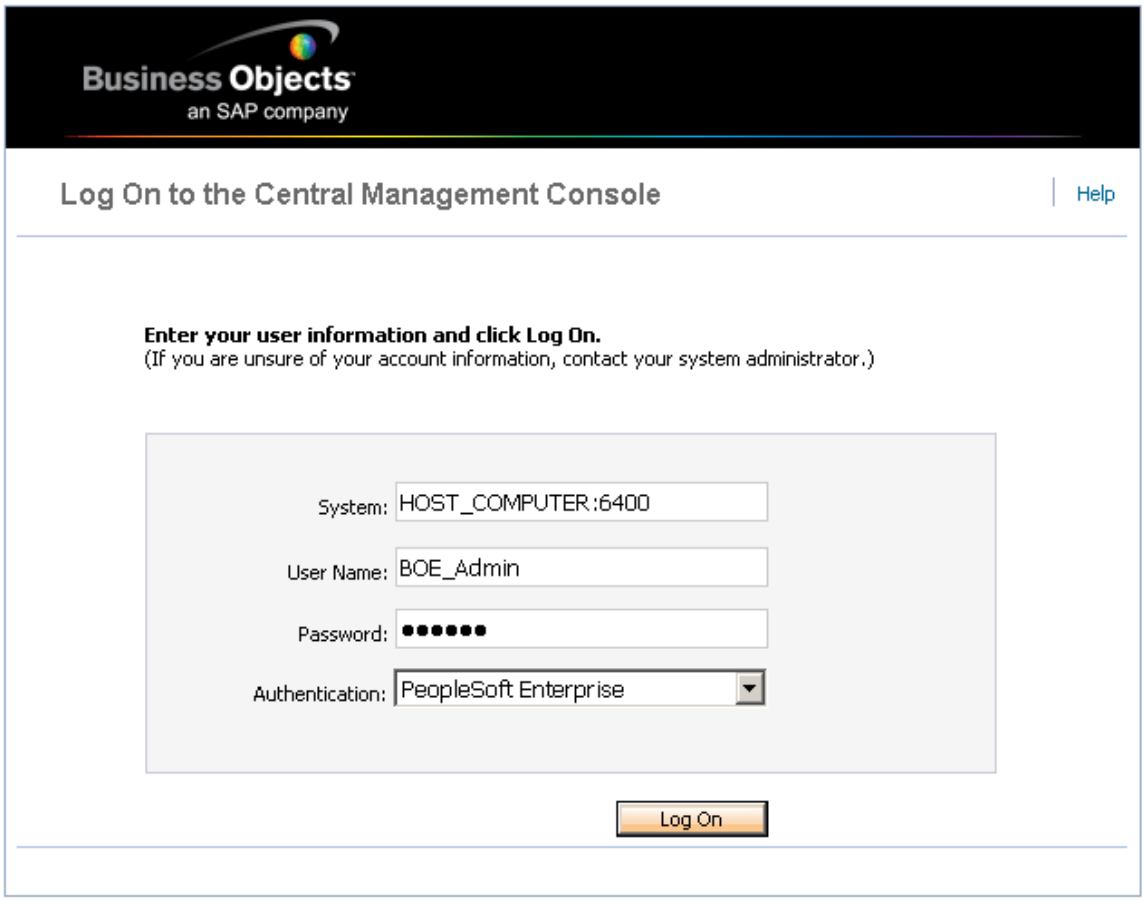
   b. Under PeopleSoft Enterprise Roles, search for role BOE Viewing.

   c. Click the Add button to add each role to the selected domain.

   d. Click the Update button.

Note. Clicking the Update button should result in a new Authentication Type of PeopleSoft Enterprise as shown in the Authentication Type drop-down list when you log in to the Central Management Console. Also, User Ids from the PeopleSoft database with the given roles will automatically be added into SAP BusinessObjects Enterprise XI 3.1.

10. Click the log-off button on the right top and re-log in again with user BOE_Admin and PeopleSoft Enterprise as Authentication Type.



Verifying configuration on log in dialog box

You have completed the installation and configuration.

Task 15-4-22: Configuring Crystal Reports 2008 for SAP BusinessObjects Enterprise XI 3.1

The prerequisites for this configuration are:

- Crystal Reports 2008 must be installed.

  See Installing Crystal Reports 2008.
- BusinessObjects XI Integration Kit for PeopleSoft must be installed.

  See Installing BusinessObjects Integration Kit for PeopleSoft for Windows.

See Installing BusinessObjects Integration Kit for PeopleSoft on UNIX or Linux.

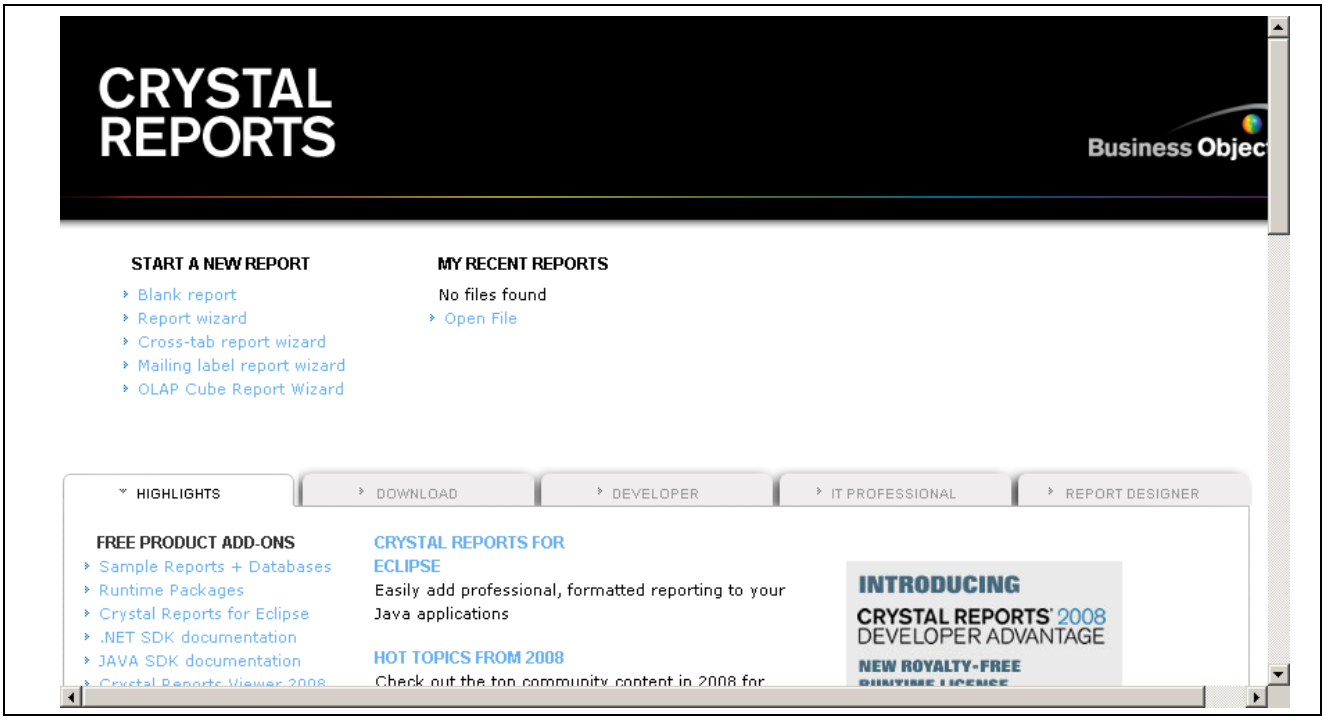
- Integration Broker and QAS must be configured.

  See Configuring the PeopleSoft Application for SAP BusinessObjects Enterprise XI 3.1 Integration.

To configure Crystal Reports 2008:

1. Select Start, Programs, Crystal Reports 2008, Crystal Reports 2008.

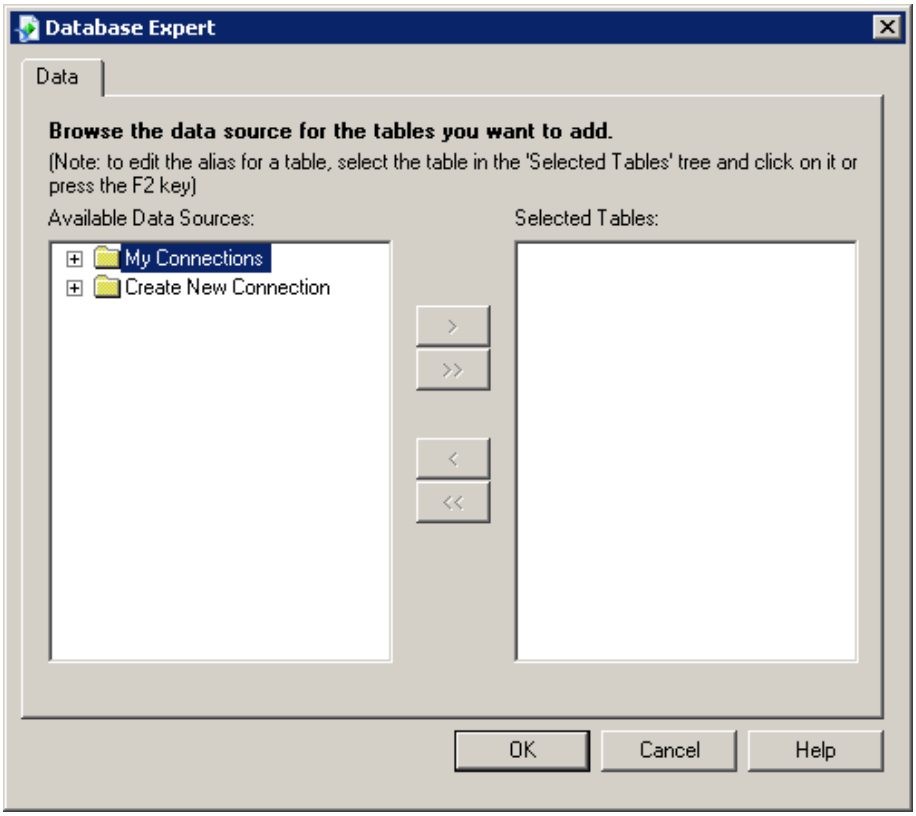
   Crystal Reports 2008 opens in a browser.



Crystal Reports home page

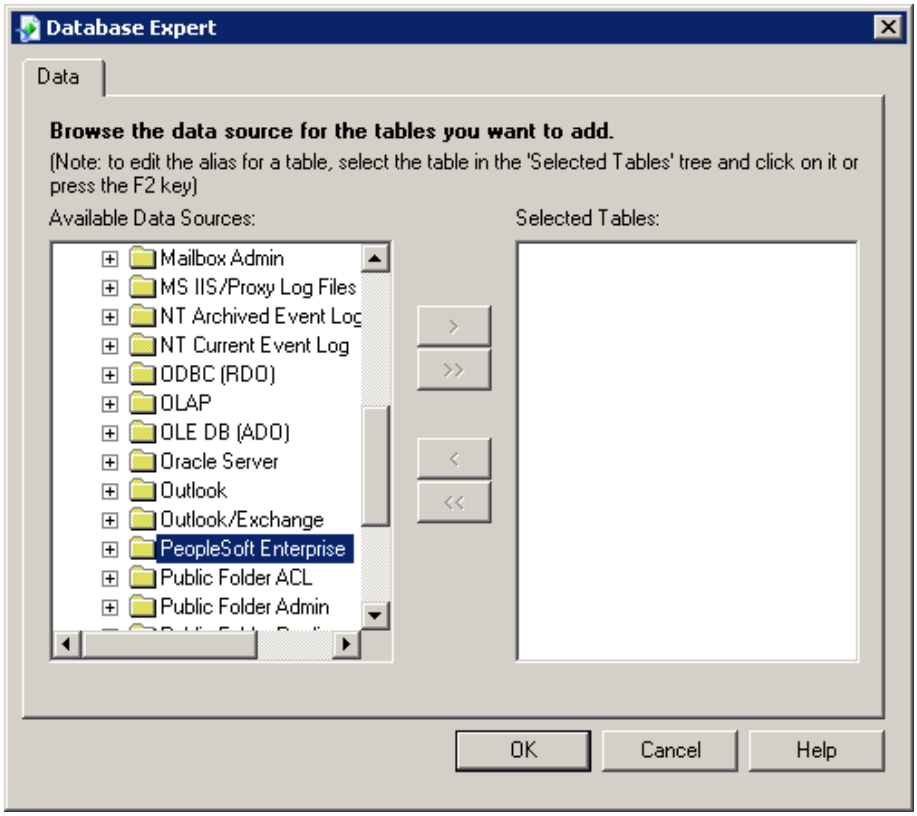
2. Select the Blank report link.

   The Database Expert dialog box appears.



Database Expert dialog box

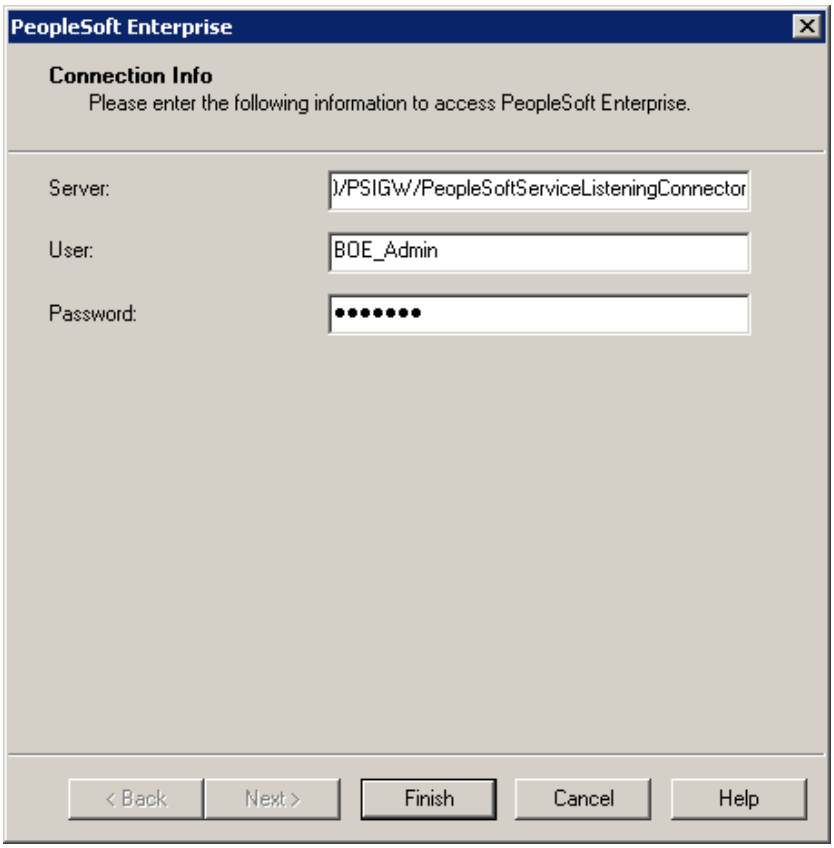
3. Expand Create New Connection in the Available Data Sources list, and then expand PeopleSoft Enterprise.



Selecting PeopleSoft Enterprise on the Database Expert

The Connection Info dialog box appears.

4. Enter the QAS endpoint URL for the Server and provide the User and Password.



Connection Info dialog box

5. Click Finish.

Task 15-4-23: Modifying the SAP BusinessObjects Enterprise XI 3.1 Chunk Size

Before you run any reports with SAP BusinessObjects Enterprise XI 3.1, Oracle recommends that you change the chunk size that BusinessObjects Enterprise uses to a larger value, in order to facilitate faster processing.

Note. This procedure includes changes to the system registry file. Exercise caution when making changes to the registry. It is a good idea to make a back up file before making changes.

To change the default chunk size on Microsoft Windows:

1. Open the Microsoft Windows registry and navigate to:

   HKEY_LOCAL_MACHINE\SOFTWARE\Software\Business Objects\Suite 12.0\Integration Kit for PeopleSoft Enterprise

2. Edit the registry key “Chunk Size” to change the value from the default, 1000, to 20000.
3. Restart all SAP BusinessObjects Enterprise XI 3.1 servers.

To change the default chunk size on UNIX:

1. Navigate to *BOE_HOME*/bobje/data/.bobj/registry/software/business objects/suite 12.0/integration kit for peoplesoft enterprise
2. Edit the .registry file.

Set Chunk Size as "Chunk Size"="20000", and save the file.

3. Restart all SAP BusinessObjects Enterprise XI 3.1 servers.

Task 15-4-24: Verifying the PeopleSoft to SAP BusinessObjects Enterprise XI 3.1 Integration

Use these tests to ensure that the various features of SAP BusinessObjects Enterprise XI 3.1 are functional:

Note. Prior to running your verification tests, you need to convert your Crystal Reports from Crystal 2008 format to Crystal XI format. See Converting Crystal Reports for details.

---

1. Schedule and run a Crystal Report.
   a. Log in to the PeopleSoft application as a user who has the authority to run report XRFWIN.
   b. Select PeopleTools, Process Scheduler, System Process Request.
   c. Select the Add New Value tab.
   d. Enter a new run control ID of BOETEST, and click the Add button.

      Click the Run button in the Process Request dialog box.
   e. Select an active process scheduler server.
   f. Select the check box next to the crystal report XRFWIN.
   g. Select *Web* for the type and *CR RPT* for the format.
   h. Click OK to run the report. It should generate a process instance id.
2. View Report output in InfoViewer.
   a. Using the Process Instance ID, ensure the process runs to completion in process monitor.
   b. Select Reporting Tools, Report Manager, and select the Administration tab.
   c. Search for the report using the process instance id generated in the previous step.
   d. Click the Details link next to the report, then the .RPT link to view the report in the SAP BusinessObjects Enterprise XI 3.1 report viewer.

Task 15-5: Migrating your SAP BusinessObjects Enterprise XI 3.1 Installation to a New Version of PeopleTools

You must complete several steps in order to ensure that your new version of PeopleSoft PeopleTools integrates properly with an SAP BusinessObjects Enterprise XI 3.1 installation.

Important! If you fail to perform these steps in the correct order, you could compromise the installation.

Note. You can also use this procedure if you need to delete a PeopleSoft domain from the SAP BusinessObjects Enterprise XI 3.1 CMC for any reason.

---

1. Delete all PeopleSoft Users from the SAP BusinessObjects Enterprise XI 3.1 server as follows:

   a. Login to the Central Management Console.
   b. Select USERS from the navigation drop-down list and click the GO button.
   c. Select the options next to all PeopleSoft Users (not administrator or guest) and delete them.
2. Delete Roles in the SAP BusinessObjects Enterprise XI 3.1 server:
   a. Login to the Central Management Console.
   b. Select the PeopleSoft Authentication tab.
   c. Delete All the roles.
   d. Click Update.
3. Delete the Domains:
   a. Delete All the Domains and click Update.
   b. Click LOGOFF.
   c. Log back in to the Central Management Console and verify all that the roles and domains are gone.
4. Stop the SAP BusinessObjects Enterprise XI 3.1 Web Server and all the SAP BusinessObjects Enterprise XI 3.1 services.
5. Uninstall the PeopleSoft Integration for SAP BusinessObjects Enterprise XI 3.1 from the server.

   This is the integration that was installed for the old version of PeopleSoft PeopleTools.
6. Install the PeopleSoft Integration for SAP BusinessObjects Enterprise XI 3.1 for the new version of PeopleSoft PeopleTools.
7. Run the verification steps in the task Installing SAP BusinessObjects Enterprise XI 3.1, Verifying the PeopleSoft to SAP BusinessObjects Enterprise XI 3.1 Integration.

Task 15-6: Administering and Using SAP BusinessObjects Enterprise XI 3.1

This section discusses:

- Understanding PeopleSoft Permission Lists, Roles, and Users Involved in PeopleSoft Integration with SAP BusinessObjects Enterprise XI 3.1
- Changing the Data Source of the SAP BusinessObjects Enterprise XI 3.1 Report Repository
- Returning to Crystal 2008 from SAP BusinessObjects Enterprise XI 3.1
- Enabling Logging in SAP BusinessObjects Enterprise XI 3.1
- Deploying Manually with Wdeploy Tool
- Deploying Manually Through IBM WebSphere Console
- Deploying Manually on Oracle WebLogic 10.3
- Configuring Microsoft Office 2010 to Read Crystal Reports

Understanding PeopleSoft Permission Lists, Roles, and Users Involved in PeopleSoft Integration with SAP BusinessObjects Enterprise XI 3.1

Certain PeopleSoft permission lists, roles, and users are necessary in order to have your PeopleSoft application integrate with SAP BusinessObjects Enterprise XI 3.1. To run SAP BusinessObjects Enterprise XI 3.1 the following need to be present in the PeopleSoft database and then referenced in the appropriate places (described in the installation instructions) in both the PeopleSoft application and SAP BusinessObjects Enterprise XI 3.1:

- PeopleSoft Permission Lists
- PeopleSoft Roles
- PeopleSoft Users IDs

The Permission Lists and Roles are added to the PeopleSoft database when you copy the CRTOBOE project from file and run the CRTOBOE Data Mover script. The PeopleSoft users must be created manually.

Note. You should use the objects (that is, permission list and roles) as delivered. Do not rename them, delete them or otherwise alter them. This will only complicate and possibly compromise your installation.

PeopleSoft Permission Lists:

The following Permission Lists are inserted into the PeopleSoft database when you copy the project CRTOBOE from file:

- PTPT2200

  This is the “QAS Access” permission list. It provides permission to a number of web services related to Query Access Services (QAS).

  This permission list is used only by the “QAS Admin” role. When the role is created, this association is already defined.

- PTPT2300

  This is the “BOE Viewing” permission list.

PeopleSoft Roles

The three roles listed here work hand-in-hand with the three PeopleSoft users that you need to create. The following Roles are inserted into the PeopleSoft database when you copy the project CRTOBOE from file:

- “QAS Admin”

  This role is associated with the QAS_Admin and BOE_Admin user IDs. This role (through the permission list associated with it) allows users associated with the role to make QAS web-service calls. Note that the name of this role *cannot* be changed, as it is hardcoded into the QAS web service implementation. Any PeopleSoft user ID that will run Crystal Reports using SAP BusinessObjects Enterprise XI 3.1 must have the QAS Admin role associated with it

- “BOE Admin”

  This role is associated with the BOE_Admin user ID (which is configured in the PeopleSoft BusinessObjects Enterprise PIA page).

- “BOE Viewing”

  This role is associated with the BOE_Viewing user ID (which is configured in the PeopleSoft BusinessObjects Enterprise PIA page).

PeopleSoft Users

You will have to create 3 PeopleSoft users in the PeopleSoft database. They work hand-in-hand with the three PeopleSoft roles described above. For ease of supportability we strongly suggest that you create the users with exactly the names specified. The users are:

- BOE_Admin

  This user is used:

  - to run the Crystal 2008 to Crystal XI report convert/publish utility
  - by Process Scheduler to run reports in SAP BusinessObjects Enterprise XI 3.1
  - to make QAS web service calls to the PeopleSoft application from BusinessObjects Enterprise. It is known only within the PeopleSoft application. SAP BusinessObjects Enterprise XI 3.1 is not aware of this user.

    This user is specified in the PeopleSoft BusinessObjects Enterprise PIA configuration page. The user will be created in SAP BusinessObjects Enterprise XI 3.1 automatically by specifying its corresponding role (that is, "BOE Admin") in that application. This user is considered a named user in BusinessObjects Enterprise. Additionally, this user must also be in the SAP BusinessObjects Enterprise XI 3.1 administrators group.

- BOE_Viewing

  PeopleSoft Report Manager logs in to SAP BusinessObjects Enterprise XI 3.1 InfoViewer as this user in order to permit viewing dynamic report output. This user is specified in the PeopleSoft BusinessObjects Enterprise XI 3.1 PIA configuration page.

  The user will be created automatically in SAP BusinessObjects Enterprise XI 3.1 by specifying its corresponding role (that is, "BOE Viewing") in that application.

  This user id is a concurrent user in SAP BusinessObjects Enterprise XI 3.1, which means that each time it logs into SAP BusinessObjects Enterprise XI 3.1 it will use a BOE concurrent access license.

  Please note that multiple end-users (that is, real people) accessing reports concurrently in the BusinessObjects Enterprise XI 3.1 InfoViewer via the PeopleSoft Report Manager will appear from the perspective of the BusinessObjects XI InfoViewer to be concurrent logins from the same user – BOE_Viewing.

Task 15-6-1: Changing the Data Source of the SAP BusinessObjects Enterprise XI 3.1 Report Repository

This section discusses:

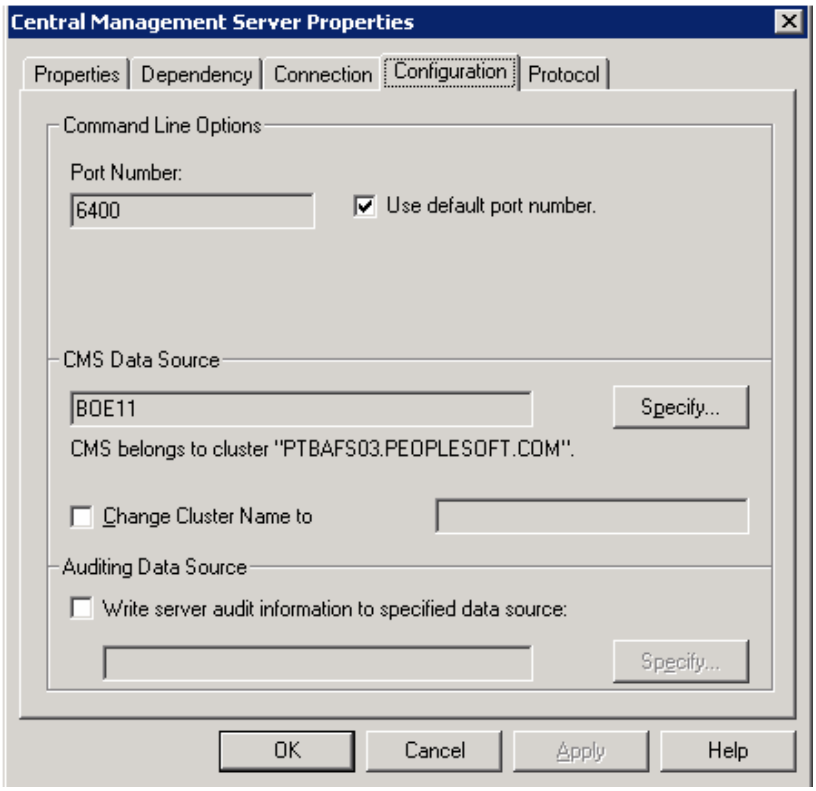
- Changing the Data Source on Windows
- Changing the Data Source on UNIX or Linux

Changing the Data Source on Windows

Use the steps in this section if you want to change the data source after you have completed the installation and integration.

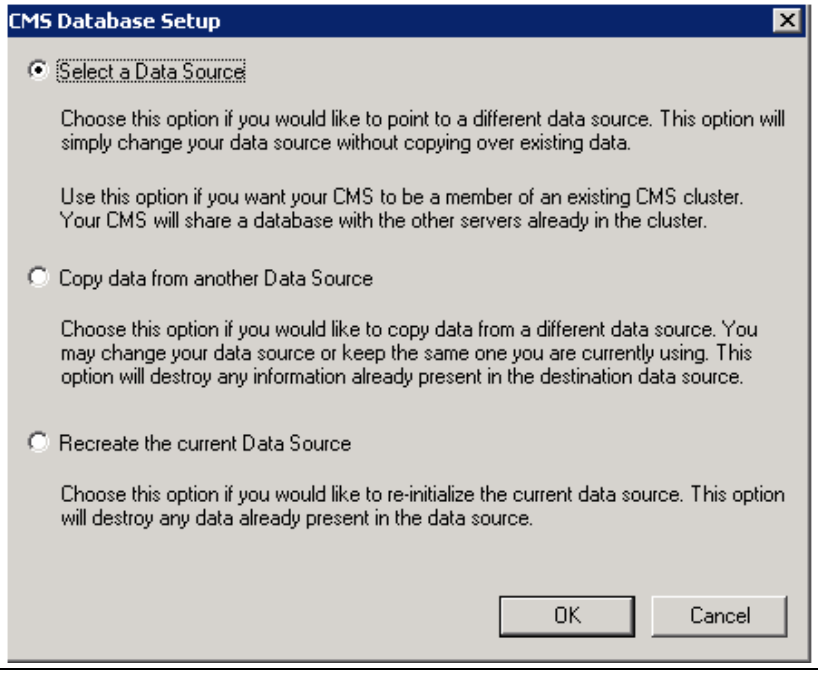
1. Select Start, Programs, Business Objects XI, Business Objects Enterprise, Central Configuration Manager.
2. Right-click the Central Management Server and choose the Stop option.
3. Right-click the Central Management Server and select Properties.
4. Select the Configuration tab.

5. Click the Specify button in the CMS Data Source area.



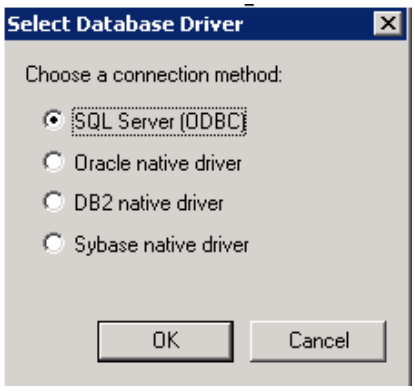
Central Management Server Properties dialog box: Configuration tab

6. Select the radio button Select a Data Source and click OK.



CMC Database Setup window

7. Specify whether you want to connect to the production CMS database through ODBC or through one of the native drivers, and then click OK.



Select Database Driver dialog box

- If you select ODBC, the Windows "Select Data Source" dialog box appears.

  Select the ODBC data source that corresponds to your CMS database; then click OK. If prompted, provide your database credentials and click OK.

- If you select a native driver, you are prompted for your database server name, user id and password.

8. Click OK.

   The SvcMgr dialog box notifies you when the CMS database setup is complete.

9. Start the Central Management Server.

Changing the Data Source on UNIX or Linux

Use the steps in this section if you want to change the data source after you have completed the installation and integration.

1. Use the script `ccm.sh` to stop the Central Management Server.
2. Run `cmsdbsetup.sh`.

   When prompted, enter the CMS name or press Enter to select the default one.

3. Type 6 in order to specify source CMS.
4. Select the type of database connection.
5. Enter the database server name, user ID and password.
6. The script notifies you when the setup is complete.

Task 15-6-2: Returning to Crystal 2008 from SAP BusinessObjects Enterprise XI 3.1

Use the instructions in this section if you need to switch your environment to run Crystal Reports using the SAP Crystal Reports 2008 runtime instead of the SAP BusinessObjects Enterprise XI 3.1 server.

To switch from using SAP BusinessObjects Enterprise XI 3.1 to Crystal Reports:

1. Run the DMS script boetocr.dms in *PS_HOME*\scripts.
2. Run the project BOETOCR in *PS_HOME*\projects.

Running this script and project will change your delivered Crystal process type back to use Crystal 2008.

Note. This will not change any process types that you created.

You cannot run any reports converted to SAP BusinessObjects Enterprise XI 3.1 format using Crystal Reports. You have to run your original Crystal reports.

Task 15-6-3: Enabling Logging in SAP BusinessObjects Enterprise XI 3.1

This section discusses:

- Enabling SAP BusinessObjects Enterprise XI 3.1 Server Logging
- Enabling Security Plug-in Logging
- Enabling SAP BusinessObjects Enterprise XI 3.1 Services Tracing

Enabling SAP BusinessObjects Enterprise XI 3.1 Server Logging

Each of the SAP BusinessObjects Enterprise XI 3.1 servers is designed to log messages to your operating system's standard system log.

Windows:

SAP BusinessObjects Enterprise XI 3.1 logs to the Event Log service. You can view the results with the Event Viewer (in the Application Log).

UNIX or Linux:

SAP BusinessObjects Enterprise XI 3.1 logs to the syslog daemon as a User application. Each server prepends its name and PID to any messages that it logs.

Each server also logs assert messages to the logging directory of your product installation. The programmatic information logged to these files is typically useful only to Business Objects support staff for advanced debugging purposes. The location of these log files depends upon your operating system:

- On Windows, the default logging directory is C:\Program Files\Business Objects\BusinessObjects Enterprise 12.0\Logging.
- On UNIX, the default logging directory is the *BOE_HOME*/bobje/logging directory of your installation.

Note. The log files are cleaned up automatically, so there will never be more than approximately 1 MB of logged data per server.

For more information on logging SAP BusinessObjects Enterprise XI 3.1 server activity consult the BusinessObjects Enterprise administration guide.

Enabling Security Plug-in Logging

The procedure to turn on security plug-in logging varies by operating system.

Note. Return the log mode to a value of 0 when you do not need logging. Performance will be impacted otherwise.

- *Windows:*

To turn on logging, edit the Windows registry.

```
HKLM\SOFTWARE\BusinessObjects\12.0\BusinessObjects Enterprise for PeopleSoft⇒
 Enterprise
Log Mode REG_SZ
```

a. Change the Log Mode value from *0* to *1*.

b. Restart all the BusinessObjects Enterprise services.

   This will then generate log files in the directory specified in Path Log. You may want to clean up that directory first, if logging had been turned on before.

- *UNIX or Linux:*

  To turn on logging you need to update the Log Mode setting in the registry file.

  The registry file is located at: *BOE_HOME*/bobje/data/.bobj/registry

  a. Open the file in a text editor and set the value of "Log Mode" to "1".

  b. Restart all the BusinessObjects Enterprise services. This will turn on the driver/security plug-in tracing.

Enabling SAP BusinessObjects Enterprise XI 3.1 Services Tracing

It is also possible to turn on tracing for the SAP BusinessObjects Enterprise XI 3.1 services. This involves updating the command line for each of the services and adding `-trace` at the end.

Remove the `-trace` from the command line after your testing is complete as it can cause performance issues with the servers because of the large number of log files created.

Windows

1. Log on to the Central Manager Console with an account with administrative privileges.
2. Select Servers.
3. Highlight the server you would like to enable tracing on and click the Stop button.
4. Double-click the server, add `-trace` to the command line parameters, and click the Start button.

Completing these steps will enable advanced logging on a Crystal Enterprise, Crystal Reports Server, or SAP BusinessObjects Enterprise XI 3.1 server. You can find the logs in the following directory:

BOE_HOME\\BusinessObjects Enterprise 12.0\Logging

UNIX or Linux:

1. Go to the *BOE_HOME*/bobje directory.
2. Open the file ccm.config for editing.
3. Add “-trace” at the end of the lines for those servers where you want to enable logging, and save the file.
4. Restart all servers.

You can find the log files in the following directory:

BOE_HOME/bobje/logging

Task 15-6-4: Deploying Manually with Wdeploy Tool

Use the wdeploy tool found in *BOE_HOME*\deployment to manually deploy the war files to the web server. On Microsoft Windows, the tool is wdeploy.bat. If you are running on UNIX or Linux, substitute wdeploy.sh in the following steps. If your web server is on IBM WebSphere, substitute the appropriate version, websphere6 or websphere7, for websphere<*version*> in the following steps.

To use manual deployment:

1. Go to *BOE_HOME*\deployment and locate the wdeploy configuration file corresponding to the web server that you installed.
2. Open the file in a text editor and make the changes detailed in the next steps.
3. If you are using Oracle WebLogic, the file is config.weblogic10.

   Update the following items:

   - as_admin_port: Administration port of the application server (for example *7001*).
   - as_admin_username: WebLogic administrator account username (for example *weblogic*).
   - as_admin_password: WebLogic administrator account password (for example *password*).
   - as_instance: The name of your WebLogic application server instance (for example *AdminServer*)
   - as_domain_dir: WebLogic domain directory (for example *C:\bea\weblogic10\user_projects\domains\base_domain*).
4. If you are using IBM WebSphere, the file is config.websphere<*version*>.

   Update the following items:

   - as_soap_port: SOAP port for application server administration. If not set, the default SOAP port will be used (for example *8880*).
   - as_admin_username: WebSphere administrator account username (for example *websphere*).
   - as_admin_password: WebSphere administrator account password (for example *password*).
   - as_instance: The name of your WebSphere application server instance (for example *server1*).
   - as_virtual_host: The virtual host to which the application must be bound (for example *default_host*).
   - as_admin_is_secure: Instructs wdeploy that WebSphere security is enabled (for example *true*).
   - as_dir: WebSphere installation directory (for example *"C:\Program Files\IBM\WebSphere\AppServer"*).
   - enforce_file_limit: Indicates to wdeploy whether or not the web application server may encounter issues loading applications that contain more than 65,535 files (for example *true*).
5. In a command prompt, go to *BOE_HOME*\deployment.
6. If you want to deploy all war files, use these commands:

   - For Oracle WebLogic:

     ```
     wdeploy.bat(sh) weblogic10 -Das_admin_password=<password> deployall
     ```

   - For IBM WebSphere:

     ```
     wdeploy.bat(sh) websphere<version> -Das_admin_password=<password> deployall
     ```
7. If you want to deploy one war file, use these commands:

- For Oracle WebLogic:

```
wdeploy.bat(sh) weblogic10 -Das_admin_password=<password> -DAPP=<Application⇒
 Name> deploy
```

- For IBM WebSphere:

```
wdeploy.bat(sh) websphere<version> -Das_admin_password=<password> -DAPP=⇒
<Application Name> deploy
```

8. If you want to undeploy all war files, use these commands:
   - For Oracle WebLogic:

```
wdeploy.bat(sh) weblogic10 -Das_admin_password=<password> undeployall
```

   - For IBM WebSphere:

```
wdeploy.bat(sh) websphere<version> -Das_admin_password=<password> undeployall
```

9. If you want to undeploy one war file, use these commands:
   - For Oracle WebLogic:

```
wdeploy.bat(sh) weblogic10 -Das_admin_password=<password> -DAPP=<Application⇒
 Name> undeploy
```

   - For IBM WebSphere:

```
wdeploy.bat(sh) websphere<version> -Das_admin_password=<password> -DAPP=⇒
<Application Name> undeploy
```

10. To review the logs for wdeploy, go to *BOE_HOME*\deployment\workdir.

Task 15-6-5: Deploying Manually Through IBM WebSphere Console

When using IBM WebSphere as the web server for SAP BusinessObjects Enterprise XI 3.1, you must deploy any web applications manually. The following table lists the SAP BusinessObjects Enterprise XI 3.1 web applications that must be deployed to the WebSphere Application server manually, along with the context roots for each:

Web Application Name	Context Root
AdminTools	/AdminTools
AnalyticalReporting	/AnalyticalReporting
bobjpsenterprise	See step 15
BusinessProcessBI	/BusinessProcessBI
CmcApp	/CmcApp
CmcAppActions	/CmcAppActions
CrystalReports	/CrystalReports
dswsbobje	/dswsbobje
InfoViewApp	/InfoViewApp
InfoViewAppActions	/InfoViewAppActions
OpenDocument	/OpenDocument

Web Application Name	Context Root
PartnerPlatformService	/PartnerPlatformService
PerformanceManagement	/PerformanceManagement
PlatformServices	/PlatformServices
PMC_Help	/PMC_Help
VoyagerClient	/VoyagerClient
XCelsius	/XCelsius

Before using the IBM WebSphere console, you must use the wdeploy tool to predeploy the web applications. To manually deploy web applications through the IBM WebSphere console:

1. Go to *BOE_HOME*\deployment and locate the wdeploy configuration file config.websphere6.
2. Open the file in a text editor, and update it as described in step 4 in the previous section, Deploying Manually with Wdeploy Tool.
3. Use the following command to pre-deploy the web applications (if you are running on UNIX or Linux, substitute wdeploy.sh):

   ```
   wdeploy.bat websphere6 predeployall -Das_admin_password=<password>
   ```

   The web applications are placed in *BOE_HOME*/deployment/workdir/websphere6/application.
4. Log on to the IBM WebSphere Application Server Administrative Console using this URL:

   http://*<machine_name>:<port>*/ibm/console
5. Expand Applications and then select Enterprise Applications.

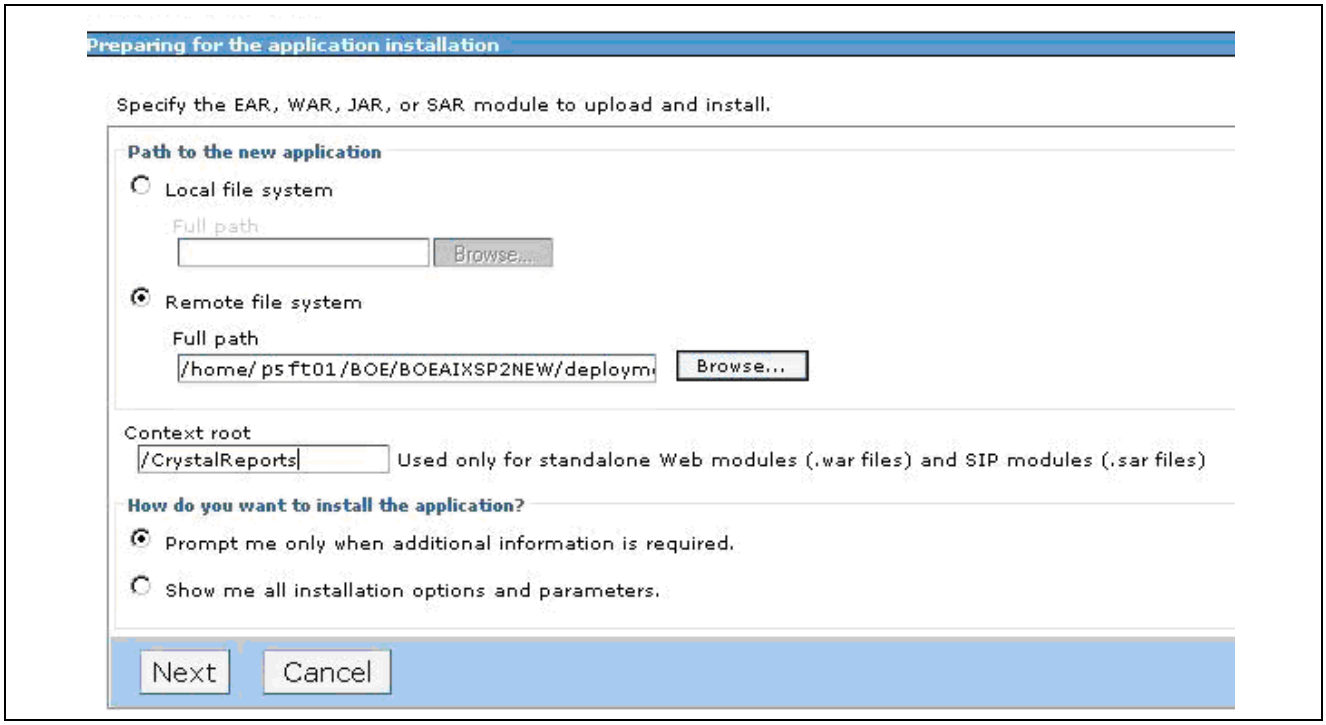
IBM WebSphere Integrated Solutions Console menu

6. Click Install, and then elect Remote File System.

7. Select the node cell that is being used and navigate to the location of the EAR file to deploy.

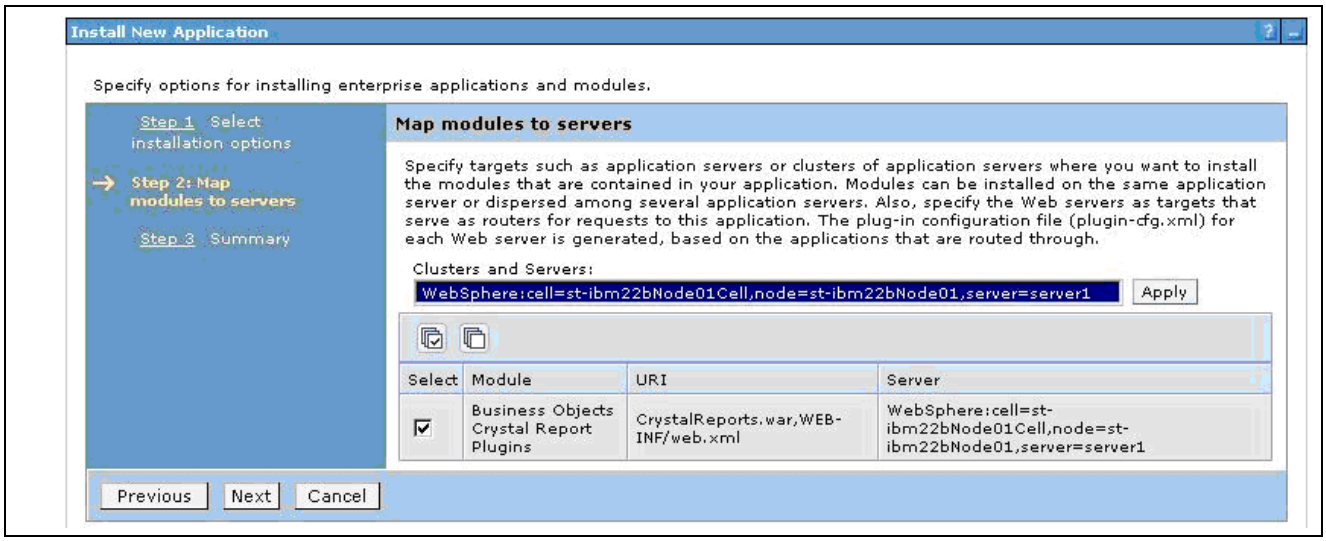
   The files are in *BOE_HOME*/deployment/workdir/websphere6/application.

8. Enter the context root for the web application from the table at the beginning of this section, and then click Next.



Specifying the context root for manual deployment

9. Accept the defaults and click Next.
10. Select the server to use and click Next.



Map modules to servers page in the IBM WebSphere administrative console

11. Click Finish at the summary page.
12. When the installation is complete, select Save directly to the Master.

13. Select the recently installed web application and click the Start button.

    Ensure that the web application starts successfully.
14. Repeat steps 4–13 for each web application in the table at the beginning of this section.
15. Use the instructions in the previous section to deploy bobjpsenterprise using the wdeploy tool.

Task 15-6-6: Deploying Manually on Oracle WebLogic 10.3

This section discusses:

- Determining Whether Manual Deployment is Required
- Deploying Web Applications Manually

Determining Whether Manual Deployment is Required

You only need to follow the instructions in this section if you are deploying PeopleSoft web applications on Oracle WebLogic 10.3, and if the deployment of a web application fails. See the earlier tasks in this chapter for more information on the following steps.

To determine whether manual deployment is necessary:

1. Install and configure an Oracle WebLogic 10.3 domain.
2. Configure a BOE database.
3. Install the BusinessObjects Enterprise XI 3.1 base installer.

   During the installation, select the option to deploy a pre-installed web application server at the step to select a web application server (the exact wording of the prompt varies depending upon the operating system).
4. After deployment verify whether fifteen web applications have been deployed, by checking the Oracle WebLogic console.
5. Install the PeopleSoft Integration Kit on the base installation.

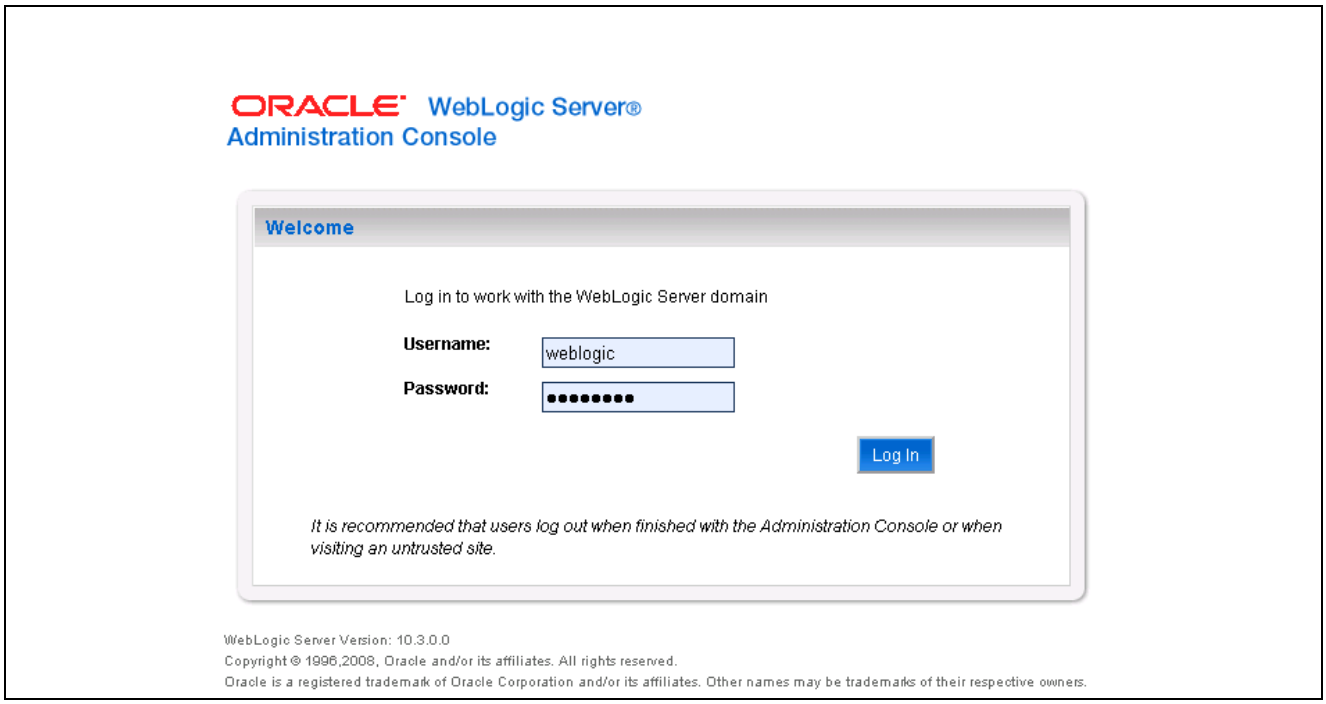
   During the installation, select the option to deploy a pre-installed web application server at the step to select a web application server (the exact wording of the prompt varies depending upon the operating system).
6. If any of the web applications, for example bobjpsenterprise, fails to deploy, use the following procedure to manually deploy the web application.

   If the web application deploys successfully, you do not need to carry out the manual deployment.

Deploying Web Applications Manually

If any web application deployment failed after carrying out the previous set of steps, use this procedure for manual deployment. To deploy manually:

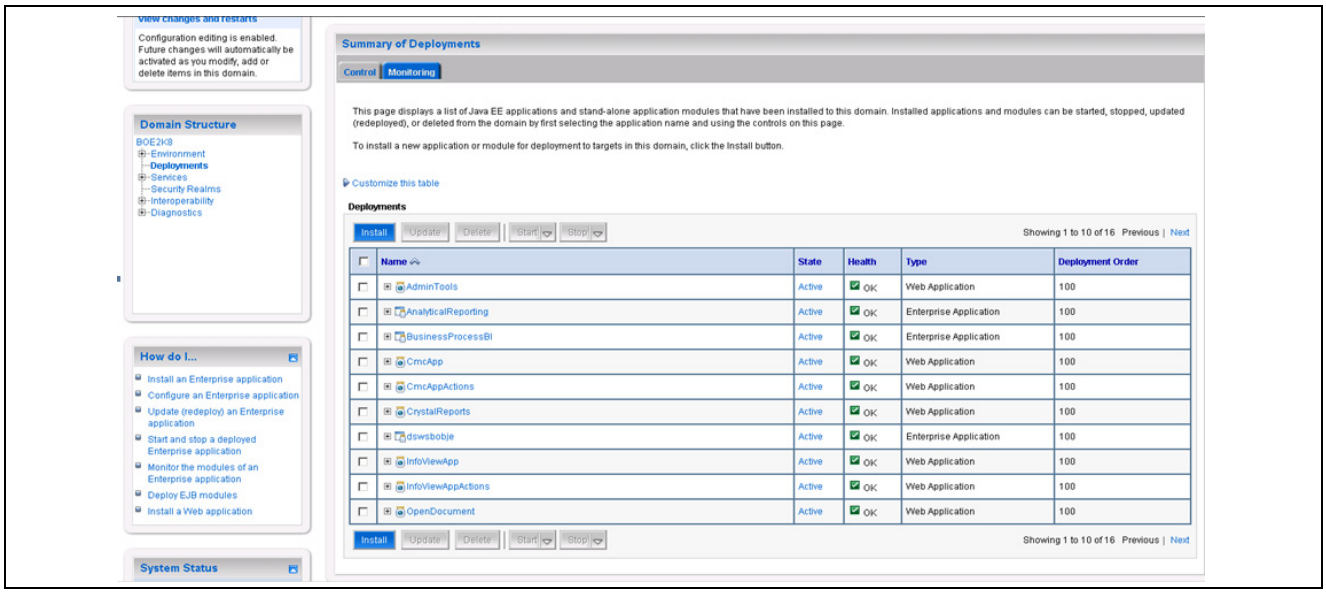
1. Log in to the Oracle WebLogic application server console with the username and password.



Oracle WebLogic Server Administration Console Log In window

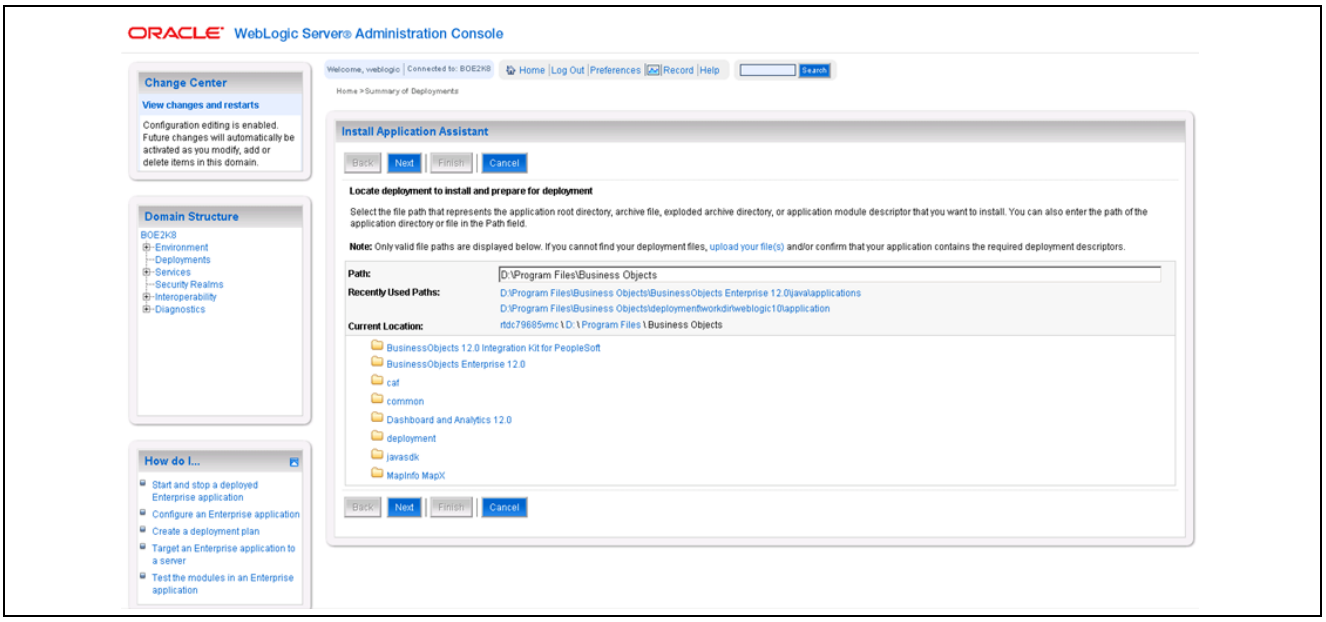
2. Select Domain Structure, Deployments from the menu on the left.

Note. For the sake of visibility, only a portion of the browser window is shown in these examples.



Summary of Deployments page on the Oracle WebLogic Administration Console

3. Click the Install button on the bottom of the page.
4. For Path, enter the following:



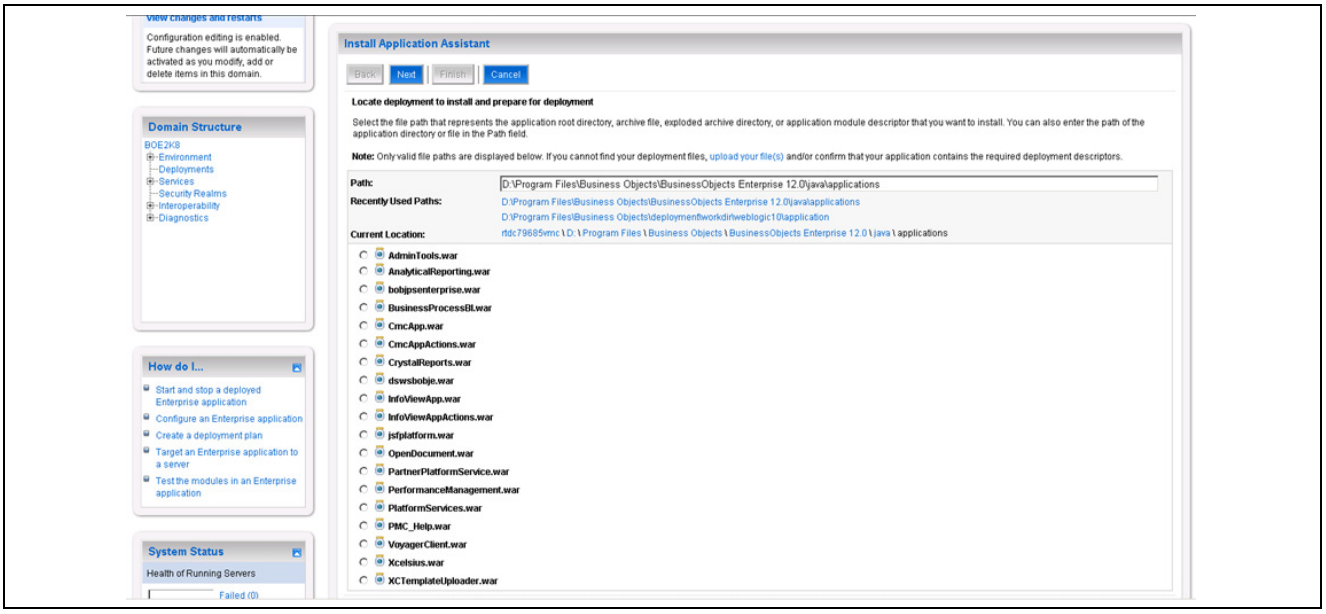
Install Application Assistant page

- On Microsoft Windows: *BOE_Install_Directory*\BusinessObjects Enterprise 12.0\java\applications.
- On Linux or UNIX: *BOE_Install_Root_Path*/bobje/enterprise120/java/applications.

5. Choose the application that you want to deploy from the Current Location list, for example bobjpsenterprise.war.

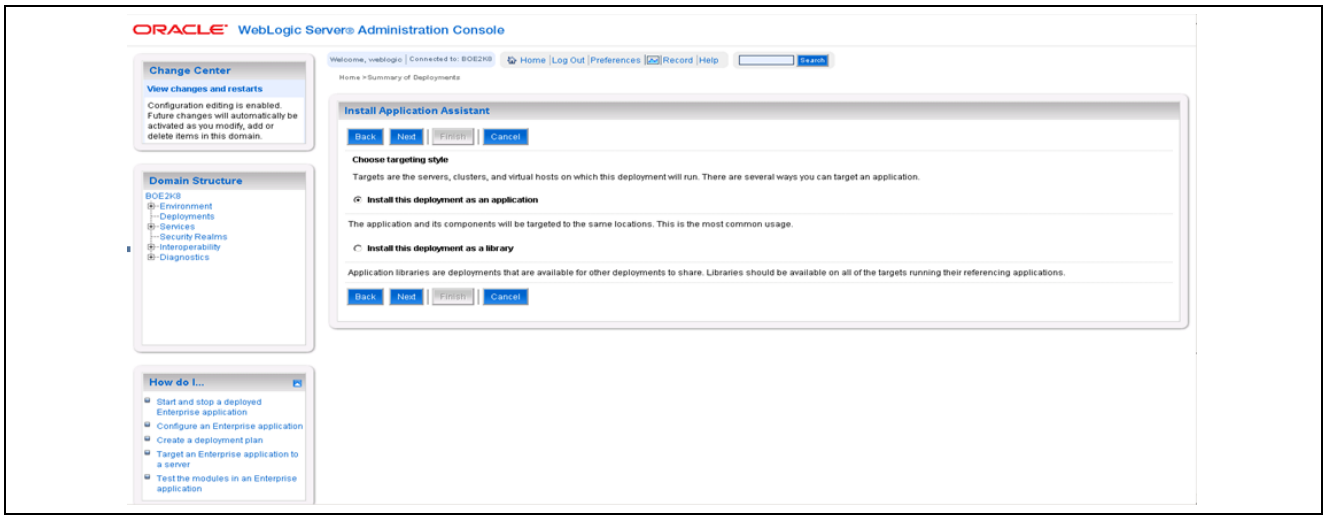
   In this example, on Microsoft Windows, the complete path is D:\Program Files\Business Objects\BusinessObjects Enterprise 12.0\java\applications\bobjpsenterprise.war.

   On Linux or UNIX, a sample path is /home/BOE_HOME/SLR103/bobje/enterprise120/java/applications.



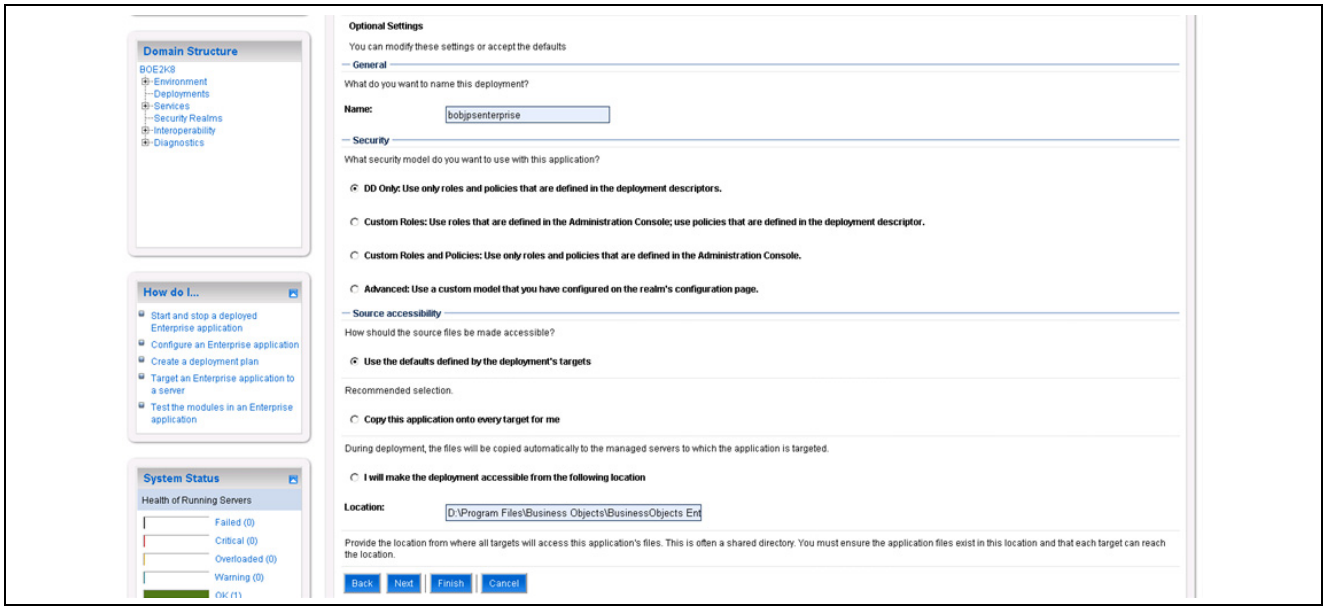
Install Application Assistant page with list of deployments

6. Click Next and then select Install this deployment as an application.



Selecting the targeting style on the Install Application Assistant page

7. Click Next and select the following options:



Choosing optional settings for deployment

- Under General: What do you want to name this deployment?

  Name: bobjspsenterprise
- Under Security: What security model do you want to use with this application?

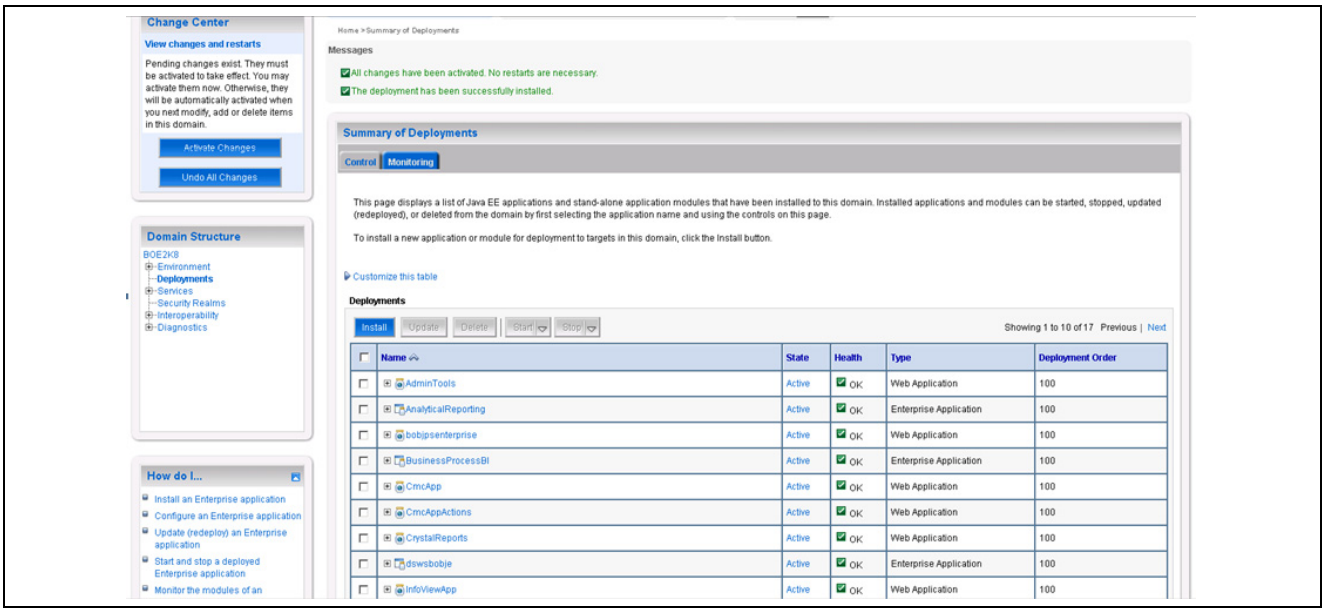
  DD Only: Use only roles and policies that are defined in the deployment descriptors.
- Under Source accessibility: How should the source files be made accessible?

  Use the defaults defined by the deployment's targets.

8. Click Finish.

   You see the following Deployment Complete messages:

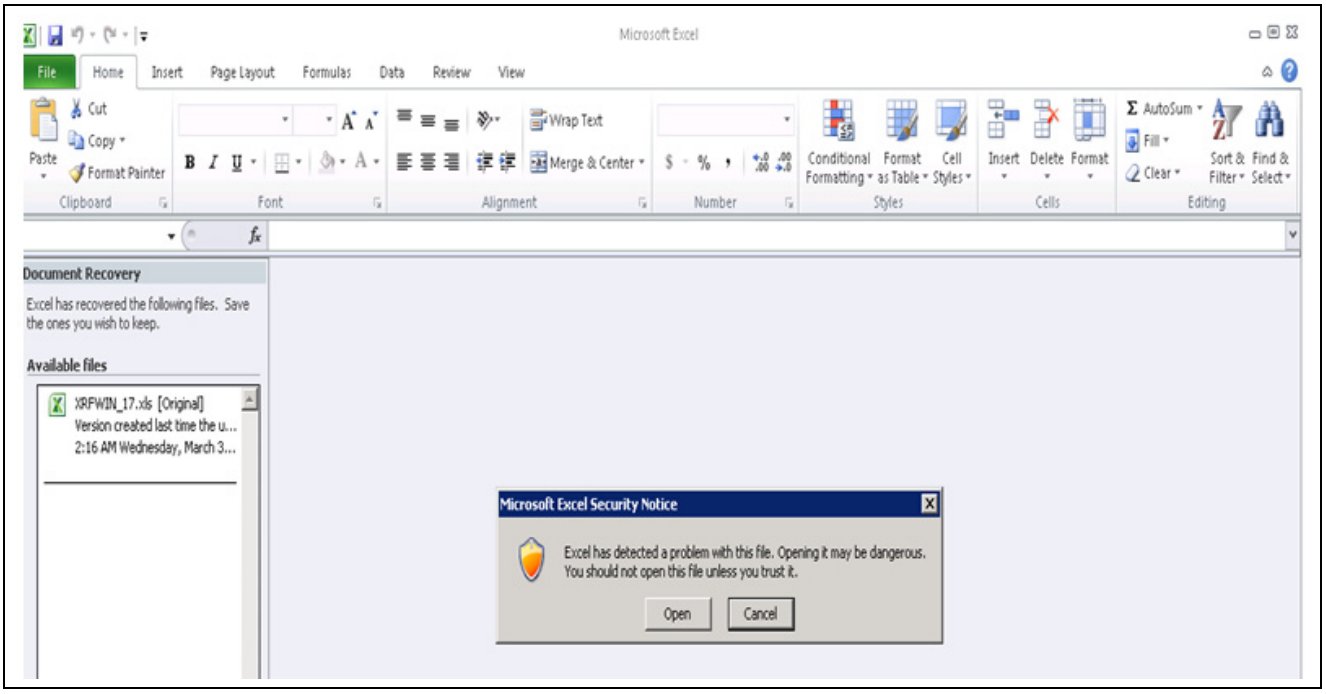
```
All changes have been activated. No restarts are necessary.
The deployment has been successfully installed.
```

Deployment Complete messages

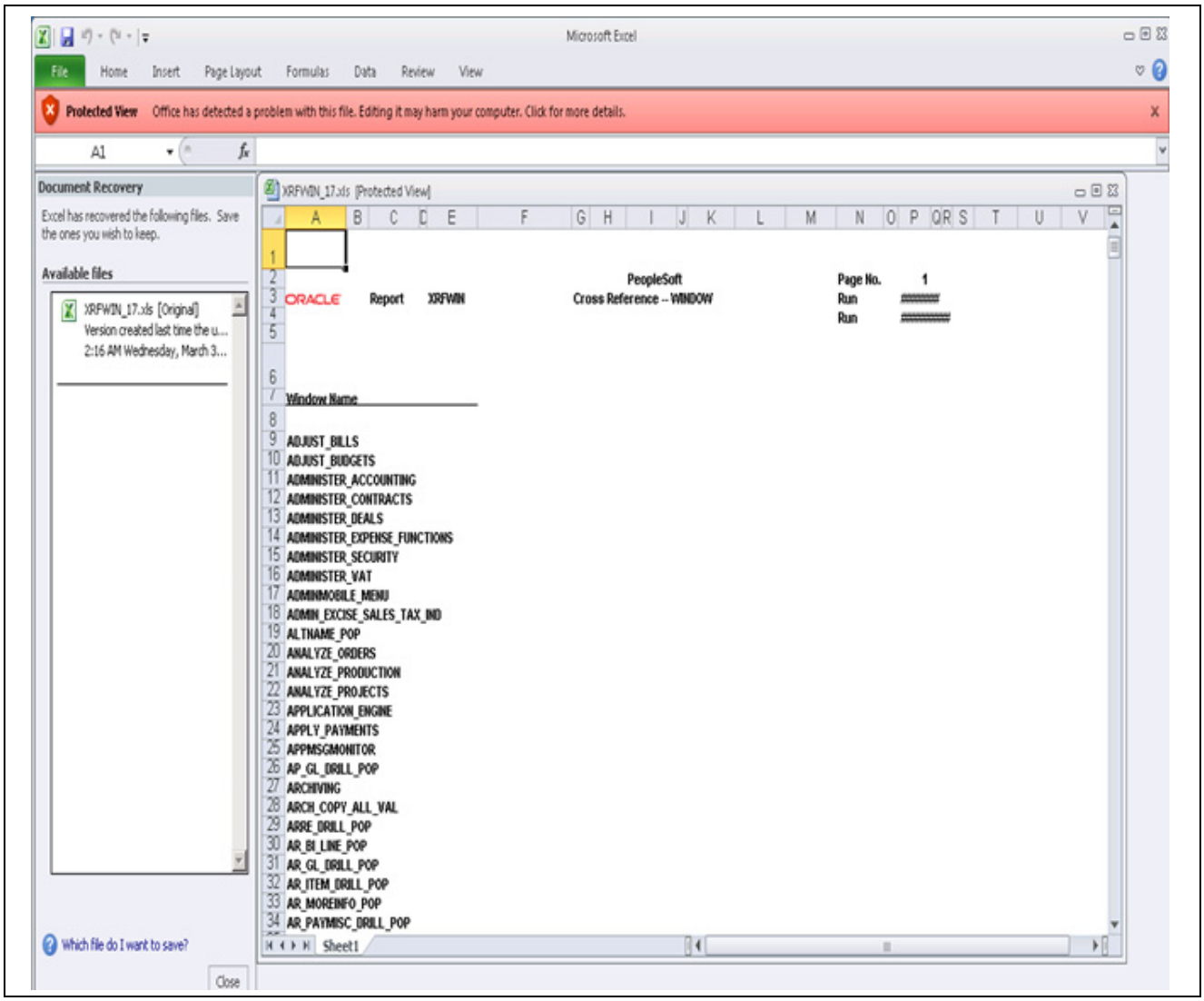
Task 15-6-7: Configuring Microsoft Office 2010 to Read Crystal Reports

When using Microsoft Excel 2010 or Microsoft Word 2010 to open a Crystal report created with SAP BusinessObjects Enterprise, the report may open in read-only mode, with the security message shown in this example: “Excel has detected a problem with this file. Opening it may be dangerous. You should not open this file unless you trust it.”



Microsoft Excel Security Notice message

After you click Open on the Microsoft Excel Security notice, you see the Protected View banner on the Microsoft Excel 2010 or Microsoft Word 2010 window, with this message: “Protected View. Office has detected a problem with this file. Editing it may harm your computer. Click for more details.”



Microsoft Excel 2010 window with Protected View banner

The information in this section applies to Crystal reports run with output formats .doc and .xls and viewed with Microsoft Word 2010 and Microsoft Excel 2010. In order to edit the report, disable the protected view and file blocking settings. For more information on Protected View, see the Microsoft Office support information.

See "View or modify Protected View settings in the Trust Center," Microsoft Office Support http://office.microsoft.com/en-us/excel-help/what-is-protected-view-HA010355931.aspx#BM5

See "How do I edit a blocked file?" Microsoft Office Support http://office.microsoft.com/en-us/excel-help /what-is-file-block-HA010355927.aspx#BM2

To change the Microsoft Office 2010 settings to disable Protected View and allow editing of the report files:

1. Access the Trust Center in Microsoft Excel 2010 or Microsoft Word 2010.
2. Select Protected View from the frame on the left.
3. Clear these check boxes:

- Enable Protected View for files that fails validation
- Enable Protected View for files originating from the Internet

4. Select File Block Settings in the Trust Center window.
5. Select Open selected file types in Protected View and allow editing.
6. In the File Type list, select the Open and Save options for the following:
   - Word 2007 and later Documents and Templates
   - Word 2003 Binary Documents and Templates
   - Excel 2007 and later Documents and Templates
   - Excel 2003 Binary Documents and Templates

Task 15-7: Removing the Integrated SAP BusinessObjects Enterprise XI 3.1 Installation

This section discusses:

- Uninstalling PeopleSoft for BusinessObjects Enterprise XI 3.1 on Windows
- Uninstalling SAP BusinessObjects Enterprise XI 3.1 on Windows
- Uninstalling PeopleSoft for BusinessObjects Enterprise XI 3.1 on UNIX or Linux
- Uninstalling SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux

Task 15-7-1: Uninstalling PeopleSoft for BusinessObjects Enterprise XI 3.1 on Windows

To uninstall the SAP BusinessObjects Enterprise XI 3.1 integration to PeopleSoft on Windows, you must first uninstall the PeopleSoft for BusinessObjects Enterprise XI 3.1 integration, then uninstall SAP BusinessObjects Enterprise XI 3.1.

To uninstall PeopleSoft for BusinessObjects Enterprise XI 3.1 on Windows:

1. Select Start, Settings, Control Panel.
2. Select Add/Remove Programs.
3. Select BusinessObjects XI Integration for PeopleSoft Enterprise.
4. Click Remove.

Task 15-7-2: Uninstalling SAP BusinessObjects Enterprise XI 3.1 on Windows

After removing the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft, use these steps to uninstall SAP BusinessObjects Enterprise XI 3.1:

Note. These instructions assume that Crystal Reports XI is not installed on the same machine as SAP BusinessObjects Enterprise XI 3.1.

---

1. Select Start, Settings, Control Panel, Add or Remove Programs.
2. Remove SAP BusinessObjects Enterprise XI 3.1.
3. Remove the following directories:
   - *BOE_HOME*\Business Objects, where *BOE_HOME* is the directory where you installed SAP BusinessObjects Enterprise XI 3.1. If you accepted the defaults during installation, this is C:\Program Files\Business Objects.
   - *BOE_HOME*\Common Files\Business Objects
4. If you have both SAP BusinessObjects Enterprise XI 3.1 and Crystal Reports installed on your system, you must also delete the Crystal Reports folders, and delete the Crystal Reports registry key, following a similar procedure to that described above.
5. Reboot your system.

Task 15-7-3: Uninstalling PeopleSoft for BusinessObjects Enterprise XI 3.1 on UNIX or Linux

To uninstall the SAP BusinessObjects Enterprise XI 3.1 integration to PeopleSoft on UNIX or Linux, you must first uninstall the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft, then uninstall SAP BusinessObjects Enterprise XI 3.1. To uninstall the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft on UNIX or Linux:

1. Run the following script, where <*BOE_HOME*> is the directory where you installed SAP BusinessObjects Enterprise XI 3.1:

   ```
   <BOE_HOME>/AddOrRemoveProducts.sh
   ```

2. Select *2* for BusinessObjects XI Integration for PeopleSoft Enterprise.
3. Enter the information that you specified when installing SAP BusinessObjects Enterprise XI 3.1:
   - Machine name — the computer where you installed SAP BusinessObjects Enterprise XI 3.1.
   - CMS port
   - CMS Administrator password
4. Press ENTER to begin the removal process.

Task 15-7-4: Uninstalling SAP BusinessObjects Enterprise XI 3.1 on UNIX or Linux

After removing the BusinessObjects Enterprise XI 3.1 Integration Kit for PeopleSoft, use these steps to uninstall SAP BusinessObjects Enterprise XI 3.1:

1. Run the following script:

   ```
   BOE_HOME/AddOrRemoveProducts.sh.
   ```

2. Select *1* for SAP BusinessObjects Enterprise XI 3.1.
3. Select *2*, for Uninstall product.

Task 15-8: Converting Crystal Reports

This section discusses:

- Selecting the Crystal Reports Conversion Method
- Converting Existing Crystal Reports to Crystal Reports 2008 Format
- Converting Existing Crystal Reports to Run with SAP BusinessObjects Enterprise XI 3.1

Selecting the Crystal Reports Conversion Method

This section includes information on converting from Crystal Reports to various formats. Your situation will fall into one of the following scenarios:

- *Scenario 1:*

  You are upgrading your PeopleSoft installation from a pre-PeopleSoft PeopleTools 8.50 or 8.51 environment to run on PeopleSoft PeopleTools 8.52 or higher and you do *not* plan to use SAP BusinessObjects Enterprise XI 3.1. You will use the Microsoft Windows-based Crystal Report 2008 instead.

  You will have to run a conversion program to convert your Crystal reports so that they can run on PeopleSoft PeopleTools 8.52.

  See Converting Existing Crystal Reports to Crystal Reports 2008 Format.

- *Scenario 2:*

  Your PeopleSoft installation is already running on PeopleSoft PeopleTools 8.52 or higher and you want to run your Crystal reports using SAP BusinessObjects Enterprise XI 3.1.

  You will have to convert your reports to enable them to run on SAP BusinessObjects Enterprise XI 3.1.

  See Converting Existing Crystal Reports to Run with SAP BusinessObjects Enterprise XI 3.1.

- *Scenario 3:*

  You are upgrading your PeopleSoft installation from PeopleSoft PeopleTools 8.49 or earlier to PeopleSoft PeopleTools 8.52 or higher and you plan to use SAP BusinessObjects Enterprise XI 3.1.

  You will have to run a conversion program that converts your Crystal Reports to the Crystal Reports format supported for PeopleSoft PeopleTools 8.50 or higher, and to enable them to run on SAP BusinessObjects Enterprise XI 3.1.

  See Converting Existing Crystal Reports to Run with SAP BusinessObjects Enterprise XI 3.1.

- *Scenario 4:*

  You are upgrading your PeopleSoft installation from PeopleSoft PeopleTools 8.50 or 8.51 to 8.52 and are already running your reports on SAP BusinessObjects Enterprise XI 3.1.

  No report conversion is necessary.

Task 15-8-1: Converting Existing Crystal Reports to Crystal Reports 2008 Format

This section discusses:

- Understanding the PeopleTools RPT Conversion Utility

- Converting RPT Files
- Repairing RPT Files

Understanding the PeopleTools RPT Conversion Utility

The PeopleTools RPT Conversion utility is a standalone program that converts your .rpt files from the format used in previous PeopleSoft releases to the format used for PeopleSoft PeopleTools 8.50 and higher. You only need to run this program if you are upgrading from previous versions of PeopleSoft PeopleTools. This section discusses how to:

- Convert .rpt files
- Repair .rpt files

Converting RPT Files

Before you run the PeopleTools RPT Conversion utility, you should move your report files to a specific directory. You can then point the conversion utility to that directory.

You should also back up your report files. If any problem occurs while you run this program, your report files may become corrupted.

To run the conversion:

1. Select Start, Programs, PeopleSoft 8.52, PeopleTools RPT Converter.

   Alternatively, run `pscvtrpt.exe` from *PS_HOME*\bin\client\winx86.

2. Accept the default directory or browse to select a new directory.

   The Selected Report directory default is the location of your Crystal Reports as specified in the Configuration Manager. If you wish to convert files in a different location, select the new directory.

3. Select the check box Convert RPT files in subdirectories.

   The database information is automatically removed from older reports that are converted. After the conversion, reports that were successfully converted appear in the Files Converted list box.

4. Select Convert.

   If you have not signed into the PeopleSoft database, you are prompted to do so. After you successfully sign into a database, you can see a progress window.

5. At the prompt "Successful conversion of *x* files. Skipped *x* files," click OK.

   When the conversion is complete, a Close button is enabled.

6. Select Close.

   Before closing, take note of any .rpt files that failed to convert. This is usually due to read-only access.

Repairing RPT Files

You can use the RPT Conversion utility when you are experiencing problems with a report that has already been converted as part of the upgrade procedure.

Note. Select the Run Verify Database option first. If the problem is still not resolved, select the Remove database info from current Crystal reports option.

To repair RPT files:

1. Select Start, Programs, PeopleSoft 8.52, PeopleTools RPT Converter.

2. Accept the default directory or browse to select a different directory.

   The Selected Report directory default is the location of your Crystal Reports as specified in the Configuration Manager. If you wish to repair files in a different location, select the new directory.

3. Select either the Run Verify Database or the Remove database info from current Crystal reports check box.

   The Run Verify Database option verifies whether the query information saved in the report is in sync with the query definition.

   When it is complete, reports that were current and had the database information removed appear in the Files Converted list box, with a * to the left of the report name.

4. Select Convert.

   A progress window appears.

5. At the prompt "Successful conversion of *x* files. Skipped *x* files," click OK.

   When the conversion is complete, a Close button is enabled.

6. Select Close.

   Before closing, take note of any .rpt files that failed. This is usually due to read-only access.

Task 15-8-2: Converting Existing Crystal Reports to Run with SAP BusinessObjects Enterprise XI 3.1

This section discusses:

- Understanding the Conversion to Crystal Reports 2008
- Preparing for Conversion of Existing Crystal Reports
- Converting Reports to the SAP BusinessObjects Enterprise/Crystal Reports Repository
- Publishing Reports to the SAP BusinessObjects Enterprise/Crystal Reports Repository
- Converting and Publishing Reports to the SAP BusinessObjects Enterprise/Crystal Reports Repository
- Verifying the Conversion and Publish
- Reviewing Common Conversion Errors and Warning Messages

Understanding the Conversion to Crystal Reports 2008

The PeopleTools RPT conversion utility `pscrconv.exe` is a program that converts your Crystal Reports .rpt files from the format that PeopleSoft software used in previous PeopleSoft PeopleTools releases to the PeopleSoft PeopleTools format for use with Crystal Reports 2008. This utility also publishes the converted Crystal Reports files by moving them into the BusinessObjects Enterprise Repository so that they can run in the PeopleSoft database.

Note. The PeopleTools RPT conversion utility is not intended to be run on reports with non-PeopleSoft data sources.

Overview of the Conversion and Publish Processes

There are two key processes:

- Converting report definition files from Crystal 9 to Crystal 2008 format

- Publishing Crystal 2008 report definition files into the BusinessObjects Enterprise XI 3.1 Report Repository

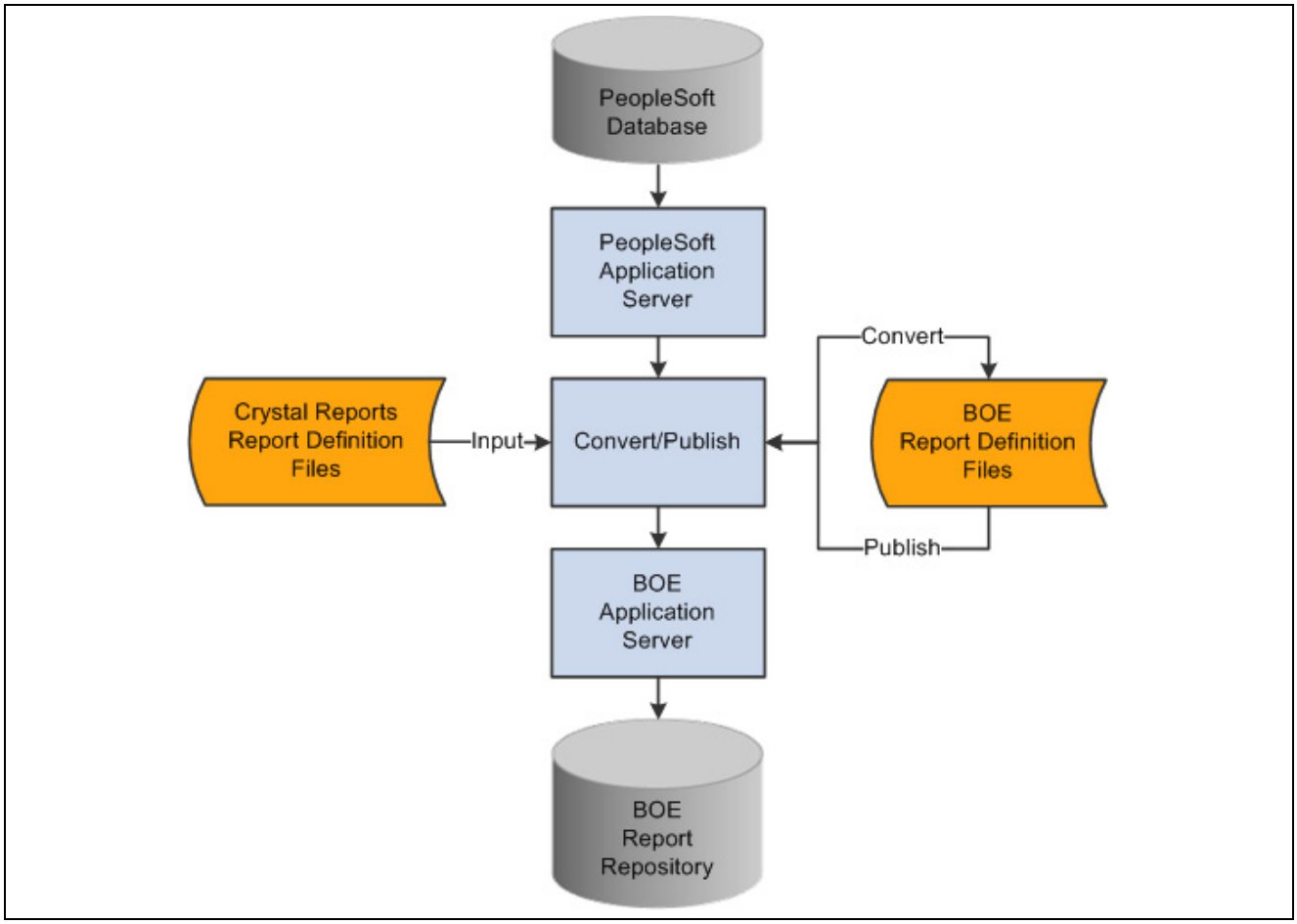
In order to run reports using SAP BusinessObjects Enterprise XI 3.1 through the PeopleSoft software, the Crystal Reports 2008 report definitions must reside in the BusinessObjects Enterprise XI 3.1 Report Repository.

You can perform each process individually or both together. Here are some examples that might make this clear:

- In a development environment you might run convert and publish together to populate your development environment.
- In a test environment you may want to run the conversion by itself, and then run the publish process multiple times in order to publish the same reports to different test environments.

The following diagram illustrates the process flow involved in the conversion and publishing process, moving from the PeopleSoft database to the BusinessObjects Enterprise report repository:

Note. In this flowchart, "BOE" refers to SAP BusinessObjects Enterprise XI 3.1, and "Crystal Reports" refers to Crystal Reports 2008.



PeopleSoft PeopleTools conversion or publish process

Understanding Report Conversion

The conversion process performs the following:

- Prompts the user for inputs:

  - PeopleSoft sign-on information
  - The action that they would like to take
  - Source folder with Crystal Reports 9 report definition files
  - Destination folder for Crystal Reports 2008 report definition files
- For each report to be converted in the source folder the program:
  - Reads a Crystal 9 report from a folder
  - Runs a Verify Database on that report
  - Removes database information from the report definition and verifies whether the query information saved in the reports is in sync with their query definitions.
  - For every field on the report the program determines the name by which QAS recognizes it.

    The program identifies all the possible field names that could be used in a report (as either a selected field, parameter field, expression field) and then provides the name QAS will use for those same fields.
  - Calls a Business Objects-supplied conversion routine to convert report definition contents from Crystal 9 format to Crystal 2008 format
  - Runs a Verify Database on the converted report definition

Understanding Report Publishing

Report publishing can be accomplished by:

- Publishing reports automatically after converting them
- Publishing reports in a separate execution of the program

If you are publishing Crystal 2008 report files for the first time to the BusinessObjects Enterprise XI 3.1 Report Repository for a PeopleSoft database, folders are created in the BusinessObjects Enterprise XI 3.1 Repository under the database name. Report definitions must be published for each PeopleSoft database for which you plan to run reports. Published report definitions cannot be shared across databases. SAP BusinessObjects Enterprise XI 3.1 security on these folders is set with full access granted to the BusinessObject Enterprise Administrative User (BOE_Admin) identified on the PeopleTools, Query Access Services, Configure, BusinessObject Enterprise page. Read access is granted to individual users.

The publish process:

- Requires login information for the administrative PeopleSoft user (user BOE_Admin)
- Requires as input the user for the source folder with Crystal 2008 reports
- Stores (publishes) the converted report in the BusinessObjects Enterprise XI 3.1 Report Repository
- Updates information in the PeopleSoft Report Manager so that the Report Manager is aware of the report definitions in the BusinessObjects Enterprise XI 3.1 Report Repository

---

Note. If you publish a report that has been previously published to the BusinessObjects Enterprise XI 3.1 Repository for a PeopleSoft database, the earlier version will be overwritten.

In order to successfully convert and publish you must have the following environment in place:

- A properly installed SAP BusinessObjects Enterprise XI 3.1 server
- A properly installed PeopleSoft application (database and application server)

- Integration between the PeopleSoft application and the SAP BusinessObjects Enterprise XI 3.1 server properly installed and configured
- A designated machine on which you will run the conversion program

See the PeopleSoft upgrade guide for your platform.

Preparing for Conversion of Existing Crystal Reports

Before running the conversion, there are several steps you must complete.

To prepare the conversion workstation:

1. Download and install the BusinessObjects Enterprise report migration file.

   Note. Make sure that you have the correct version of the file for your operating system and software versions.

   a. To download the conversion routine, follow the previous instructions for obtaining installation files.

      See Obtaining SAP BusinessObjects Enterprise and Crystal Reports Software.

   b. The file for the BusinessObjects Enterprise conversion is crpsenterprisemigratereport.exe. Copy this file into *PS_HOME*\bin\client\winx86 on the Microsoft Windows computer that will be used to run the conversion.

2. If the computer that you use for conversions is different from the computer hosting the SAP BusinessObjects Enterprise XI 3.1 server where you are publishing the reports:
   - Install the SAP BusinessObjects XI 3.1 Integration Kit for PeopleSoft on the computer.
   - Ensure that the machine name of the Microsoft Windows computer used for conversion can be pinged from the SAP BusinessObjects Enterprise XI 3.1 server box and vice versa. If not, add the full machine name and the IP address of the computer where conversions are run to the host file of the computer where SAP BusinessObjects Enterprise XI 3.1 is installed.

3. Confirm the operating system of the workstation.

   The conversion program must be run on a machine with one of the Microsoft Windows operating systems platforms that is supported for running SAP BusinessObjects Enterprise XI 3.1 on PeopleSoft PeopleTools 8.52.

   See My Oracle Support, Certifications.

4. Confirm access to the PeopleSoft application.

   The workstation must have connectivity to the PeopleSoft application (that is, you can log on to the application through the PeopleSoft logon page).

5. Confirm access to the SAP BusinessObjects Enterprise XI 3.1 application.

   The workstation must have connectivity to the SAP BusinessObjects Enterprise XI 3.1 application. Users can verify connectivity by logging in to the SAP BusinessObjects Enterprise XI 3.1 server Central Manangement Console (CMC) on the workstation.

   Note. When you log in to the CMC, select the Servers link and review the list of servers and their status. If the Web Intelligence Processing Server shows status as failed, delete the server from the list as it is not necessary in the integration between SAP BusinessObjects Enterprise XI 3.1 and PeopleSoft software.

See Confirming Access to the SAP BusinessObjects Enterprise XI 3.1 Administration and Central Management Console.

6. Confirm that the win32_x86 path is included in the PATH environment variable of the workstation.
7. Install PeopleSoft PeopleTools on the workstation.

   The way to install the conversion program on the conversion workstation is to simply install PeopleSoft PeopleTools on the workstation. PSCRCONV.EXE is one of the files installed on the machine.
8. Install Crystal Reports XI on the workstation.

   Install the latest version of Crystal Reports XI and any hotfixes. Crystal Reports XI will install certain dynamic link libraries that are required for the installation program.
9. Install the PeopleSoft ODBC driver by running psodbccrinst.exe.

   PSODBC provides connectivity between Crystal 9 or higher reports and the PeopleSoft application database.

   See "Setting Up the Install Workstation," Installing PeopleSoft ODBC Driver and Configuring the Crystal 2008 .NET Runtime.

To confirm the PeopleSoft Application environment:

1. Confirm the application version of the database and application version of the Crystal 9 Reports.

   The PeopleSoft database that you have must be associated with the Crystal 9 or higher reports that you want to convert. That is, the database must have the queries that the Crystal 9 or higher reports access. And the application version of the database must match the application version of the reports that you plan to convert.
2. Verify that the user that will convert the reports has Query access for all the reports that you are planning to convert.

   The simplest way to do this is to assign the PeopleSoft Administrator role to user BOE_Admin. That role allows the user access to run all queries. To assign this role to BOE_Admin:

   a. Log in to the PeopleSoft application in a browser and select PeopleTools, Security, User Profiles.
   b. Open the User Profile for BOE_Admin and select the Roles tab.
   c. If not already present in the list of Roles, add Role *PeopleSoft Administrator* to the roles assigned to BOE_Admin and save the page.

   Note. The PeopleSoft Administrator Role should be removed from BOE_Admin as soon as you are done converting reports to minimize security concerns.

   ---

   d. If you do not want to assign the PeopleSoft Administrator Role to user BOE_Admin, there are two options:

      Option one: Run the conversion by running the conversion program logged on as a PeopleSoft user who does have the PeopleSoft Administrator role assigned to it.

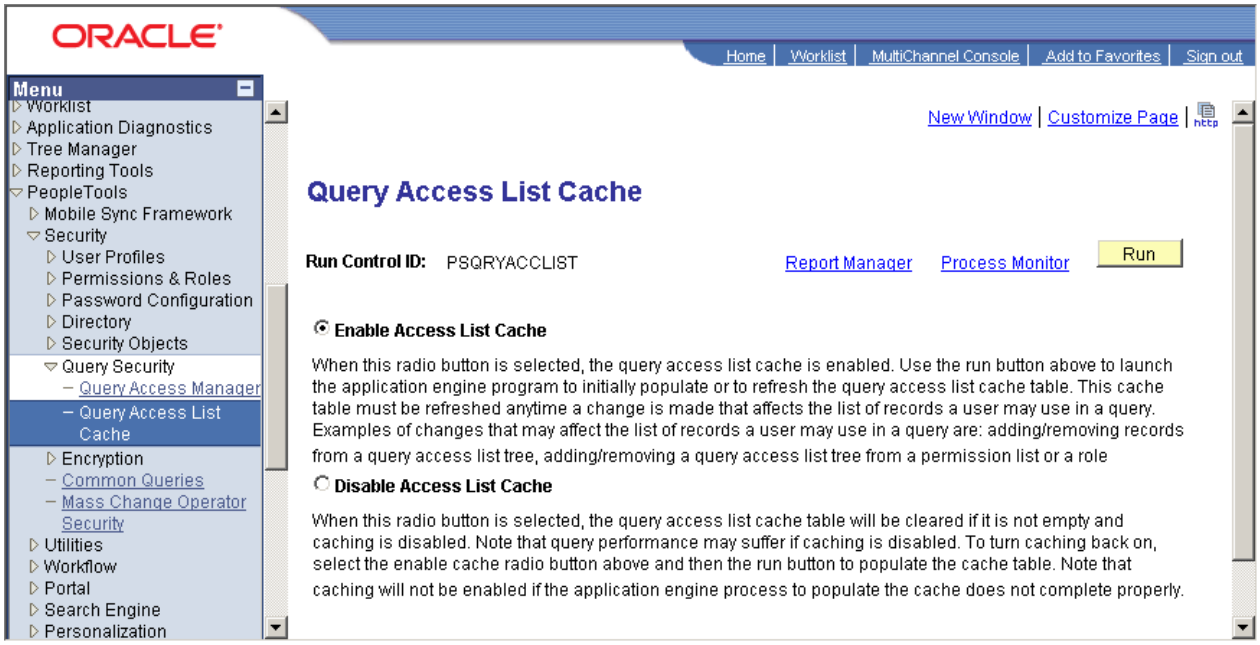
      Option two: Manually assign query security to user BOE_Admin such that BOE_Admin has security access to all queries used in Crystal reports. This can be time consuming and error prone, however.
3. Assign Administrator rights to user BOE_Admin in CMC, as follows:

   a. Log in to CMC and navigate to Home, Users and Groups.
   b. In Group Hierarchy, right-click *Domain*\BOE Admin group (where *Domain* is the domain you added in Authentication) and select Join Group.

c. Select the Administrators group as a destination group and click OK.

4. If you logged out, log in to the PeopleSoft application in a browser.
5. Run the process to update the Query Access List Cache as follows:

Note. When the Enable Access List Cache option is selected and roles of a user Profile or permission list of a role has been modified, which affect the Query Access List Cache, you must rerun the QRYACCLIST Application Engine process to properly update the cache. Otherwise, the Query Access List Cache is not up-to-date and will be switched off automatically.



Query Access List Cache page

a. Select PeopleTools, Security, Query Security, Query Access List Cache.

b. On the Query Access List Cache page, verify that the radio button Enable Access List Cache is selected.

c. Click the Run button to run the process.

6. Confirm the integrity of the PeopleSoft application database.

   Verify the integrity of the PeopleSoft application database by running sysaudit.sqr and sysaud01.sqr on the database. In particular, there should be no anomalies in the database as regards Query definitions (SysQuery-01 through SysQuery-26). .

   See *PeopleTools 8.52: Data Management PeopleBook.*

   If you are swapping the base language, also run swpaudit.sqr.

   See *PeopleTools 8.52: Global Technology PeopleBook.*

7. Confirm your SAP BusinessObjects Enterprise XI 3.1 environment and integration with the PeopleSoft system.

   The conversion program relies on having a properly installed and configured SAP BusinessObjects Enterprise XI 3.1 so that the converted report definitions can be inserted in the SAP BusinessObjects Enterprise XI 3.1 repository. There are no special steps in this section that are not part of the basic installation steps covered elsewhere in this installation guide.

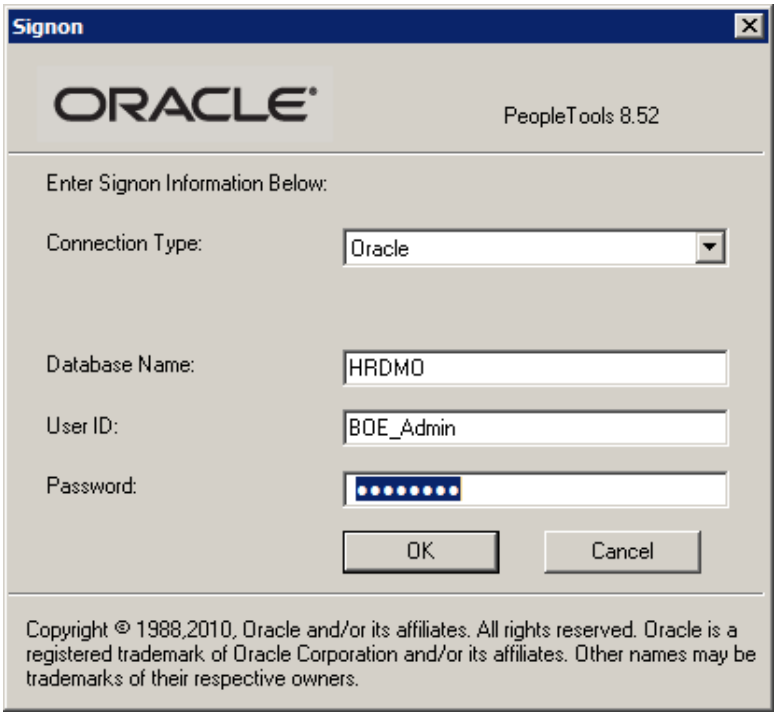
Converting Reports to the SAP BusinessObjects Enterprise/Crystal Reports Repository

To run the conversion:

1. Run `pscrconv.exe` from *PS_HOME*\bin\client\winx86 directory.
2. Sign into the PeopleSoft database, if you have not already done so.

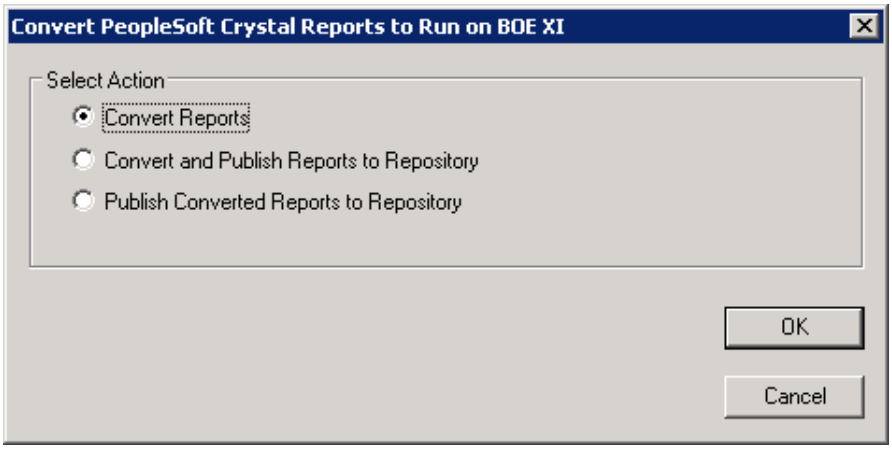
   Log in as user BOE_Admin as shown in this example:

   Ensure that you log into the correct database for the reports that you are converting. For example, do not sign into a Human Resources database if the reports were created against a Financials database.



Signon dialog box for Conversion Utility

3. Select Convert Reports on the Convert PeopleSoft Crystal Reports to Run on BOE XI dialog box, as shown in this example:



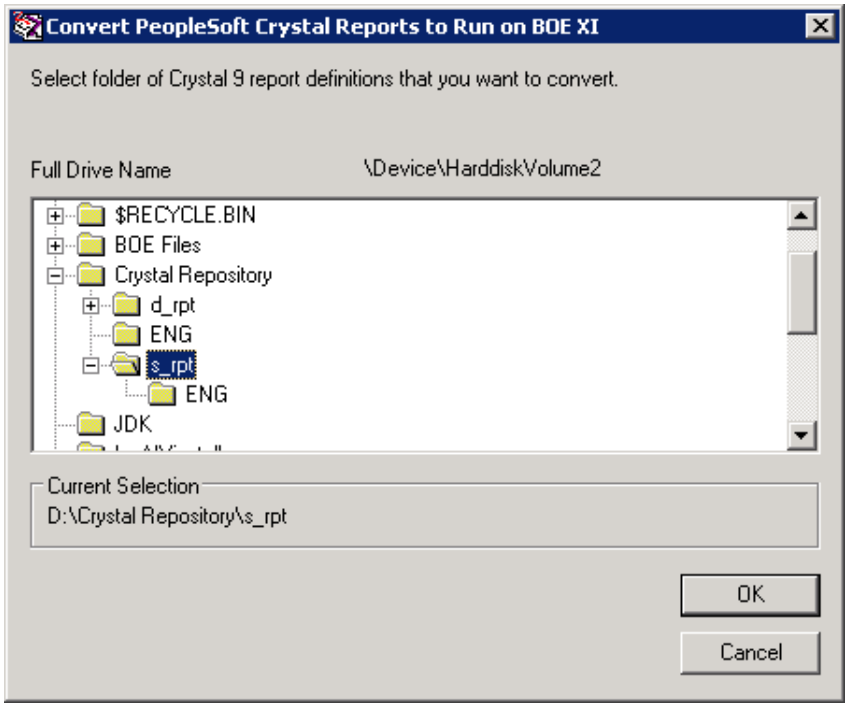
Selecting the convert option Convert PeopleSoft Crystal Reports to Run on BOE XI dialog box

Converting reports without publishing them to the SAP BusinessObjects Enterprise XI 3.1 report repository allows you to go from running Crystal Reports 9 report definitions to running Crystal Reports 2008 report definitions using Crystal Reports XI on a client machine. The converted reports will be stored in a directory that you specify a little later. Converting without publishing is useful in a demonstration environment where you wish to publish reports to a production or development environment at a later time.

4. Select a report input directory and click OK.

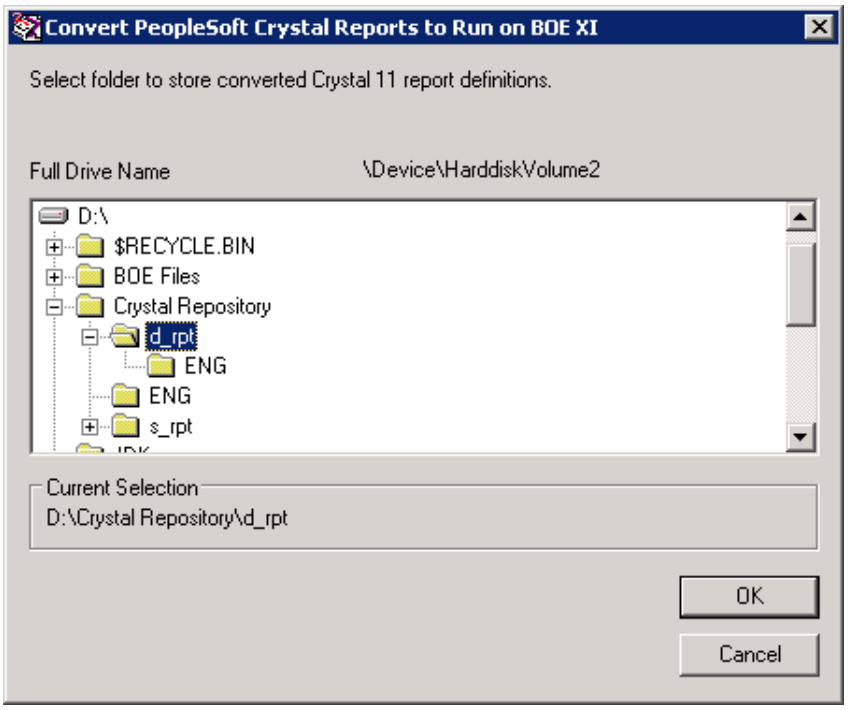
   The report input directory must contain a subdirectory that is identified by a language code; the Crystal report definitions to be converted reside in this subdirectory.

   For example, select D:\Crystal Repository\s_rpt if the reports to be converted are located in D:\Report Repository\s_rpt\ENG.



Specifying the input directory for the Crystal Reports definition conversion

5. Select a report output directory for the converted reports and click OK.



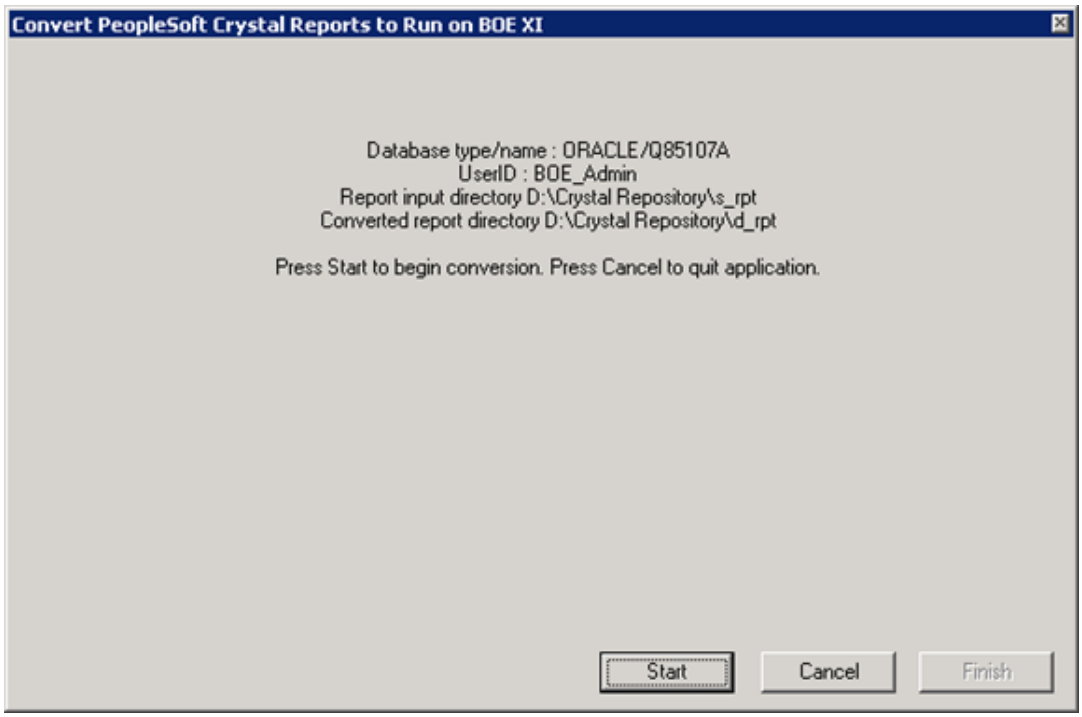
Specifying the output directory for the Crystal Reports definitions conversion

This can be any writable directory, however it cannot be a subdirectory of the report input directory. For example, if the reports to be converted are located in D:\Crystal Repository\s_rpt\ENG, the report output directory cannot be D:\Crystal Repository\s_rpt\NEW.

The conversion program will create an appropriate language subdirectory in which the converted reports will be placed. Therefore, if you want your converted reports to be placed in D:\Crystal Repository\d_rpt\ENG, enter D:\Crystal Repository\s_rpt as the report output directory.

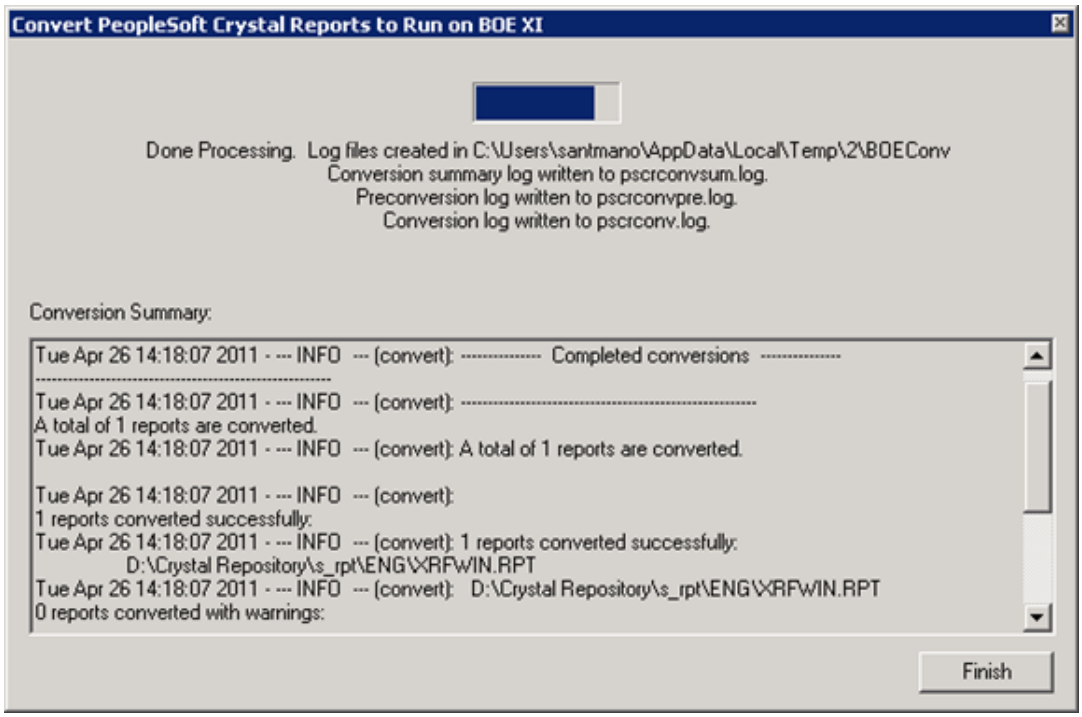
6. Review the information on the summary screen.

   The summary includes the database name, user ID, report input directory, and converted report directory. After validating the information, click the Start button to begin the process. Clicking Cancel will cause you to exit from the program.



Summary information for the Crystal Reports conversion

A window appears indicating that the conversion is processing. Once the process is complete, a summary details information about the execution. This information is also written to the *PS_HOME*\bin\client\winx86\pscrconvsum.log file.



Progress indicator for the Crystal Reports conversion

7. Click the Finish button.

8. After the report is published to the BOE Repository, right-click the published report in CMC and update the database configuration information.
9. Verify the conversion using the procedure given earlier.

   See Verifying the PeopleSoft to SAP BusinessObjects Enterprise XI 3.1 Integration.

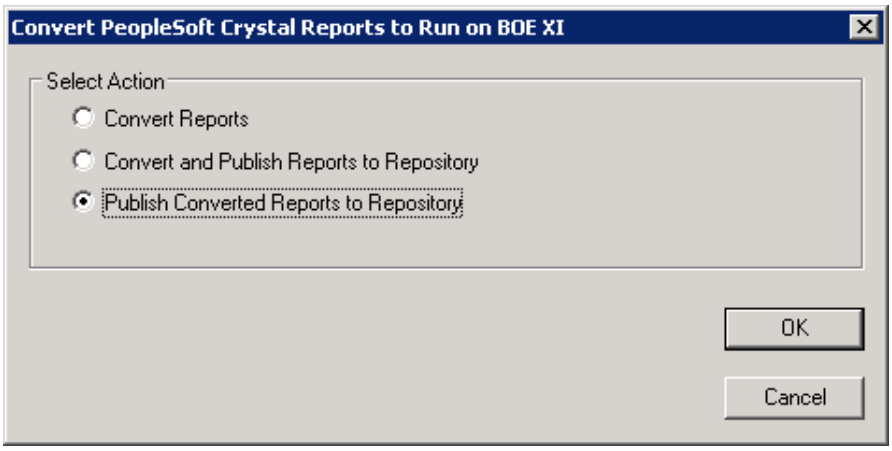
   The following section also gives information on verifying and troubleshooting the conversion process.

Publishing Reports to the SAP BusinessObjects Enterprise/Crystal Reports Repository

To publish converted reports:

1. Run `pscrconv.exe` from *PS_HOME*\bin\client\winx86 directory.
2. Sign into the PeopleSoft database, if you have not already done so.

   Log in as user BOE_Admin.
3. Select Publish Converted Reports to Repository on the Convert PeopleSoft Crystal Reports to Run on BOE XI dialog box, as shown in this example:

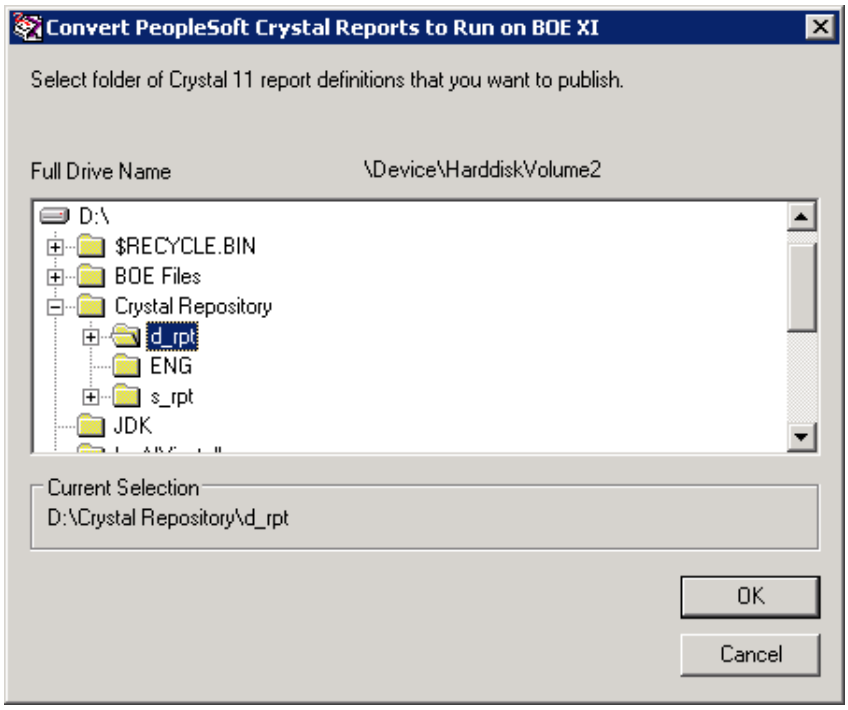


Selecting the publish option on the Convert PeopleSoft Crystal Reports to Run on BOE XI dialog box

   If you choose to Publish Reports to the repository, you are publishing to the Report Repository report definitions that have already been converted to Crystal Reports 2008 format

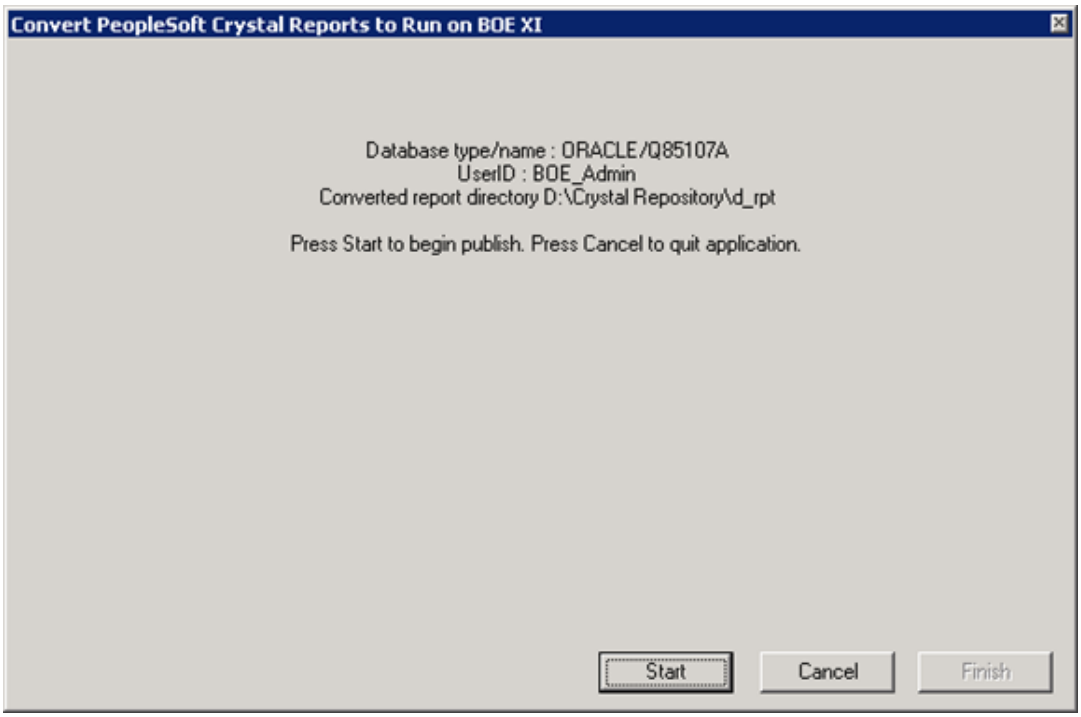
4. Select the Crystal Report definition that you want to publish, by navigating to the directory.

   In this example, the report directory is D:\Crystal Repository\d_rpt.



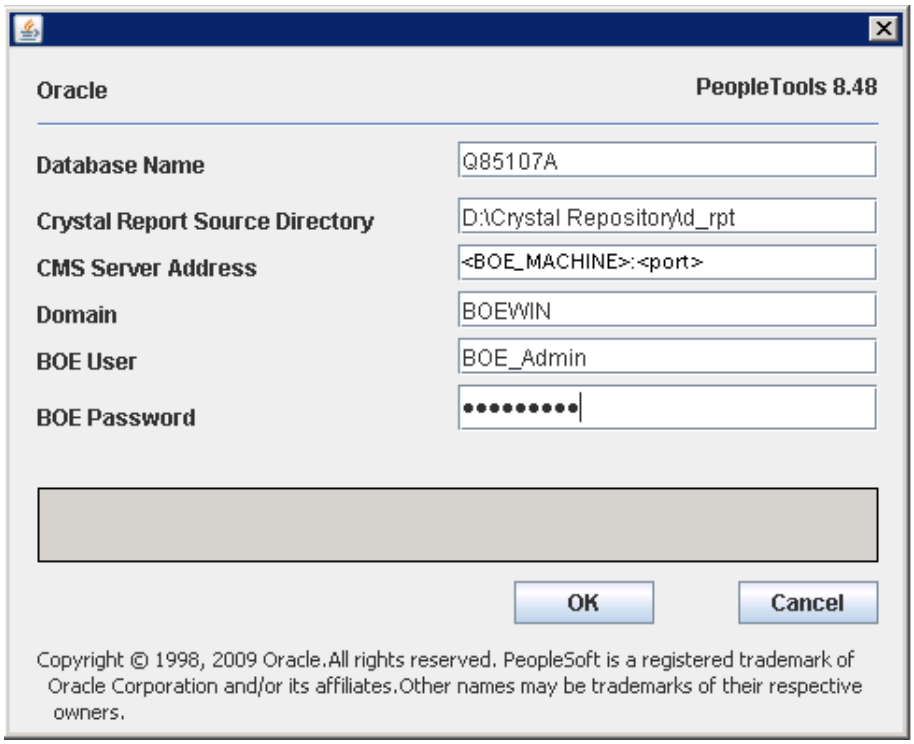
Selecting the directory containing Crystal Reports to publish

5. Validate all of the information before beginning the conversion.



Summary information for the Crystal Report publishing

6. Enter the following details (only if prompted and this dialog box appears) required for publishing the report to BusinessObjects Enterprise:

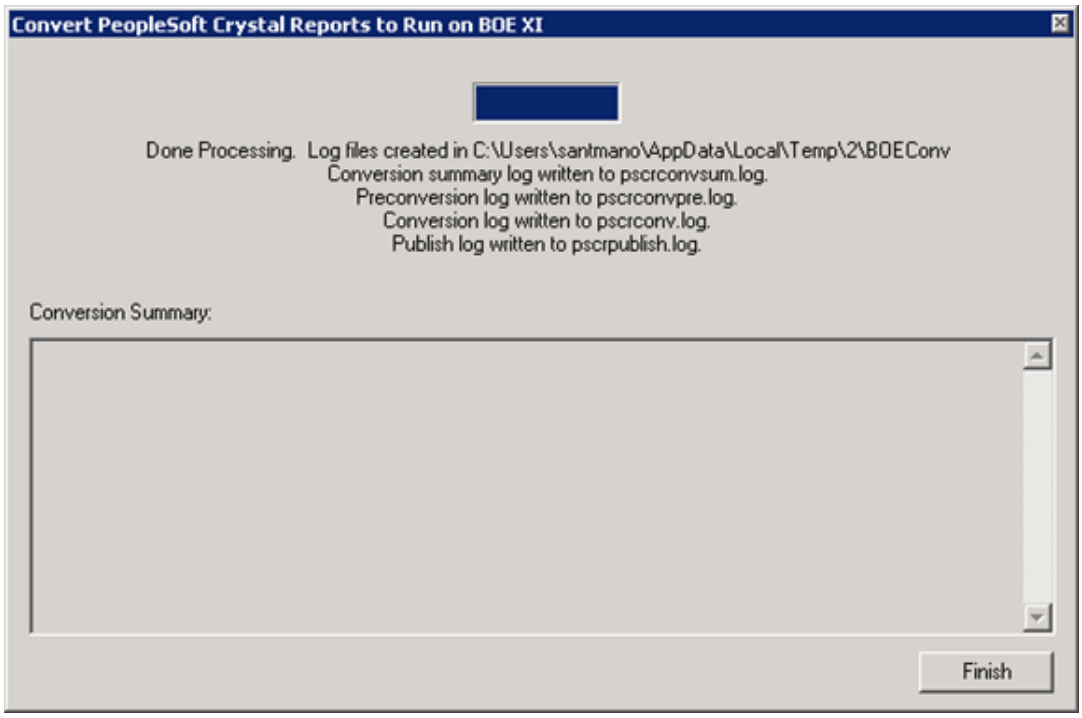


Entering BOE database and domain information

- Database Name: Enter the name of the database used for the PeopleSoft installation for which BOE integration is being configured, Q85107A in this example.
- Crystal Report Source Directory: Enter the location where the converted report has been saved for publishing, D:\Crystal Repository\d_rpt in this example.
- CMS Server Address: Enter the BOE CMS address, *<BOE_MACHINE>:<port>* in the example.
- Domain: Enter the BOE domain configured in the PeopleSoft application, BOEWIN in this example.
- BOE User/Password: Enter the administrator user (BOE_Admin in this example) and its password.

7. Click Finish.

   The following example shows the messages for a successful conversion:



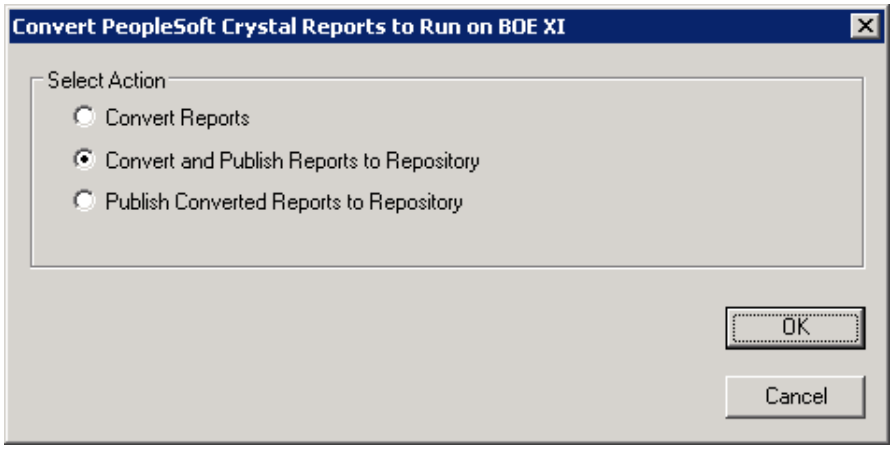
Process Complete messages

Converting and Publishing Reports to the SAP BusinessObjects Enterprise/Crystal Reports Repository

To convert and publish reports:

1. Run `pscrconv.exe` from *PS_HOME*\bin\client\winx86 directory.
2. Sign into the PeopleSoft database, if you have not already done so.

   Log in as user BOE_Admin.
3. Select the option Convert and Publish Reports to Repository, as shown in this example:



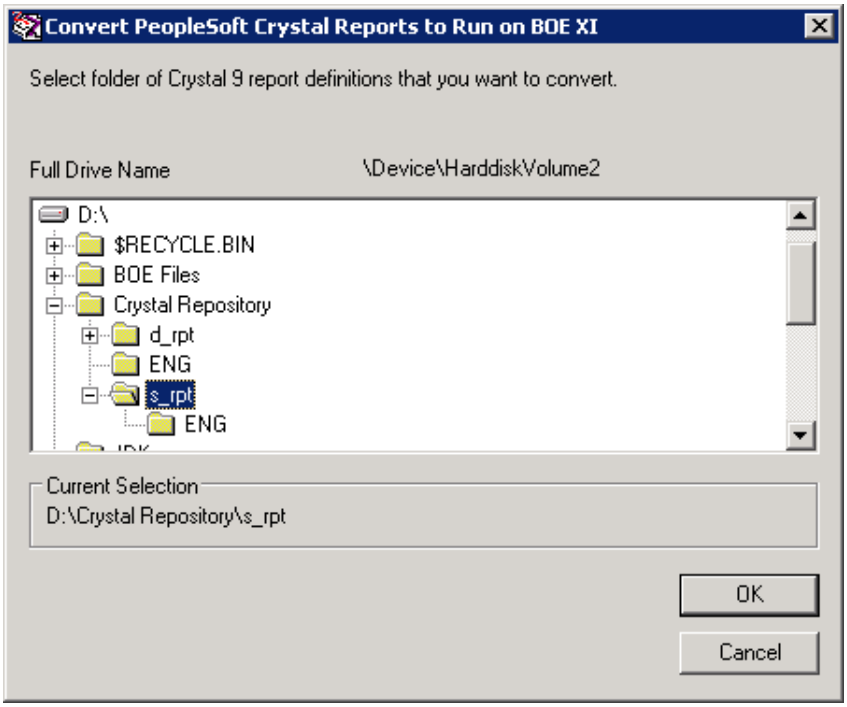
Selecting the convert and publish option on the Convert to PeopleSoft Crystal Reports to Run on BOE XI dialog box

Converting reports and publishing them to the SAP BusinessObjects Enterprise XI 3.1 report repository allows you to go from running Crystal Reports 9 report definitions to running Crystal Reports 2008 report definitions using SAP BusinessObjects Enterprise XI 3.1 with the PeopleSoft Process Scheduler.

4. Select the report input directory from where the Crystal report definition needs to be converted and click OK.

   The report input directory must contain a subdirectory that is identified by a language code; the reports to be converted reside in this subdirectory.

   For example, select D:\Crystal Repository\s_rpt if the reports to be converted are located in D:\Report Repository\s_rpt\ENG.

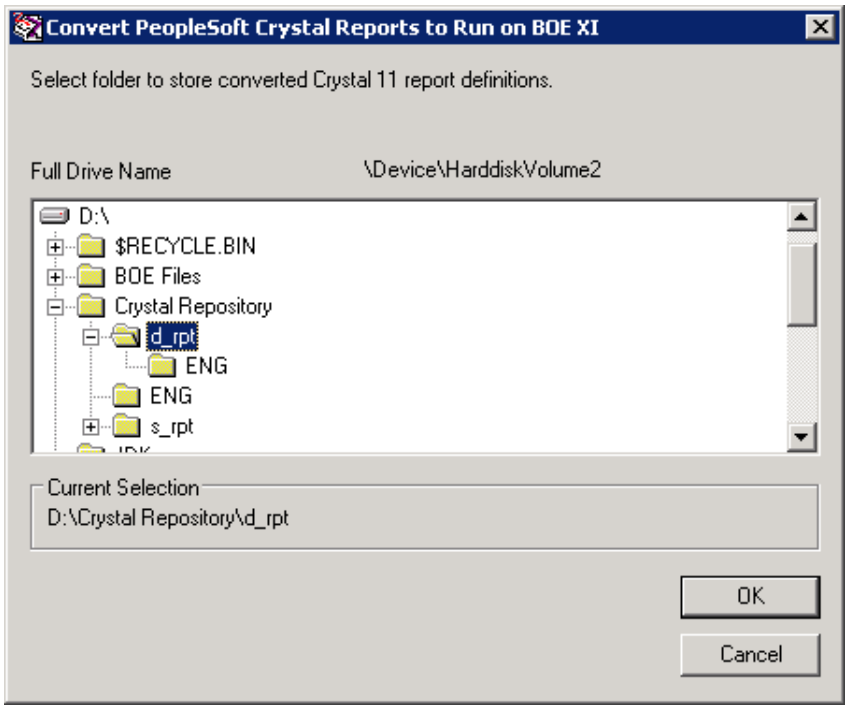


Selecting the Crystal Report input directory

5. Select a report output for the converted reports and click OK.

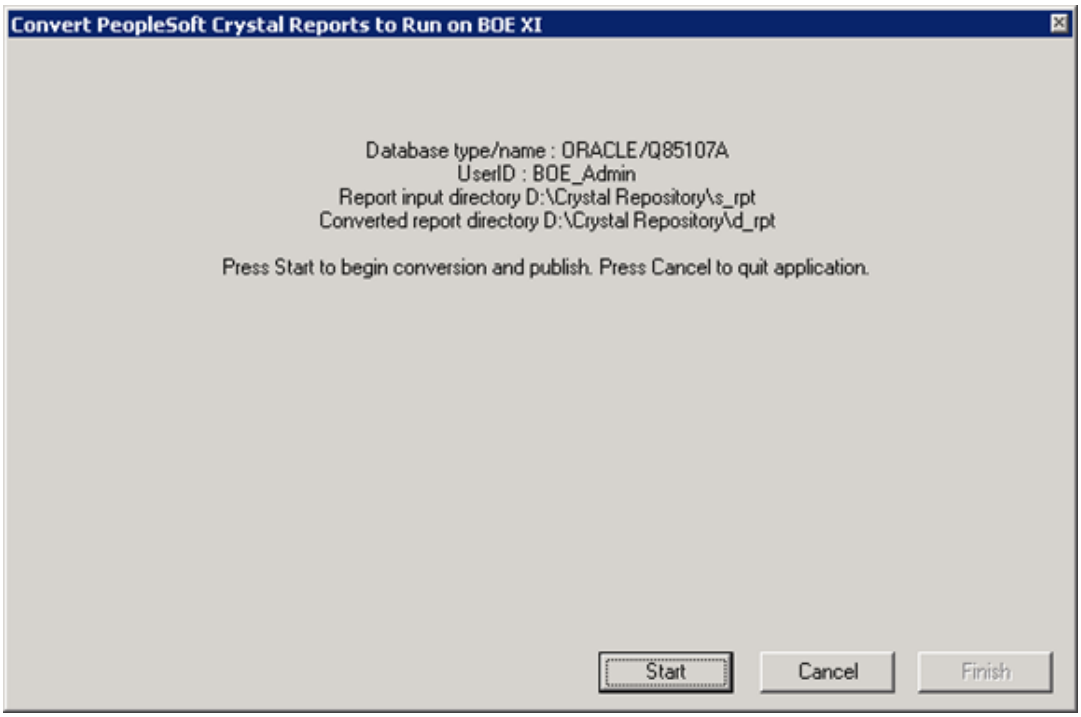
   This can be any writable directory; however it cannot be a subdirectory of the report input directory. For example, if the reports to be converted are located in D:\Crystal Repository\s_rpt\ENG, the report output directory cannot be D:\Crystal Repository\s_rpt\NEW.

   The conversion program will create an appropriate language subdirectory in which the converted reports will be placed. Therefore, if you want your converted reports to be placed in D:\Crystal Repository\d_rpt\ENG, enter D:\Crystal Repository\s_rpt as the report output directory.



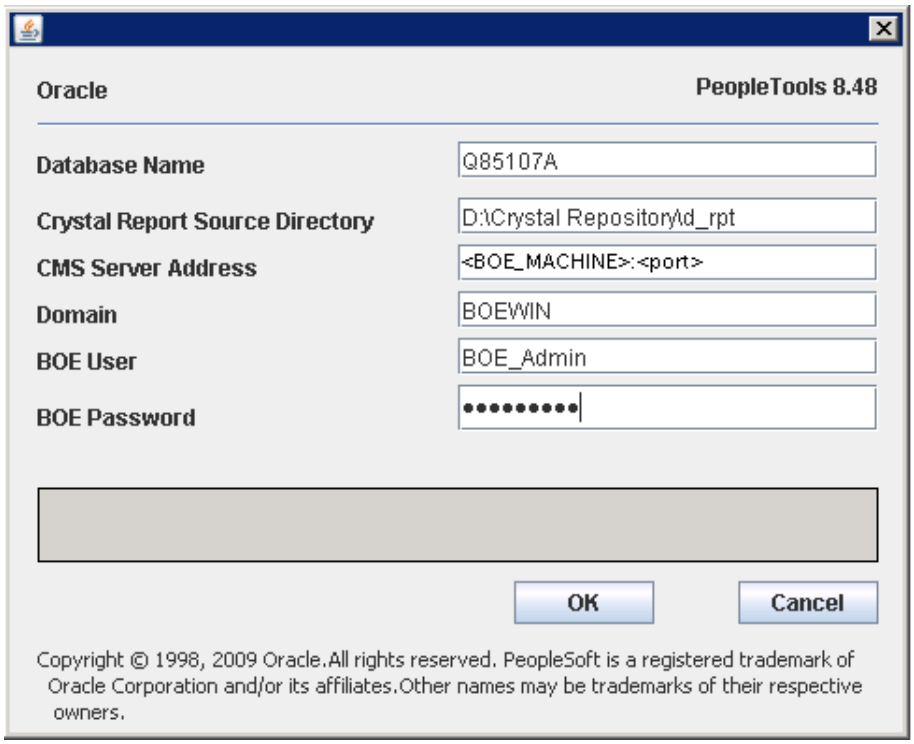
Selecting the Crystal Report output directory

6. Validate all the information before beginning the conversion as shown on this summary page:



Summary window for the Crystal Report conversion and publishing

7. Enter the following details (only if prompted and this dialog box appears) required for the publication, as shown in the example:



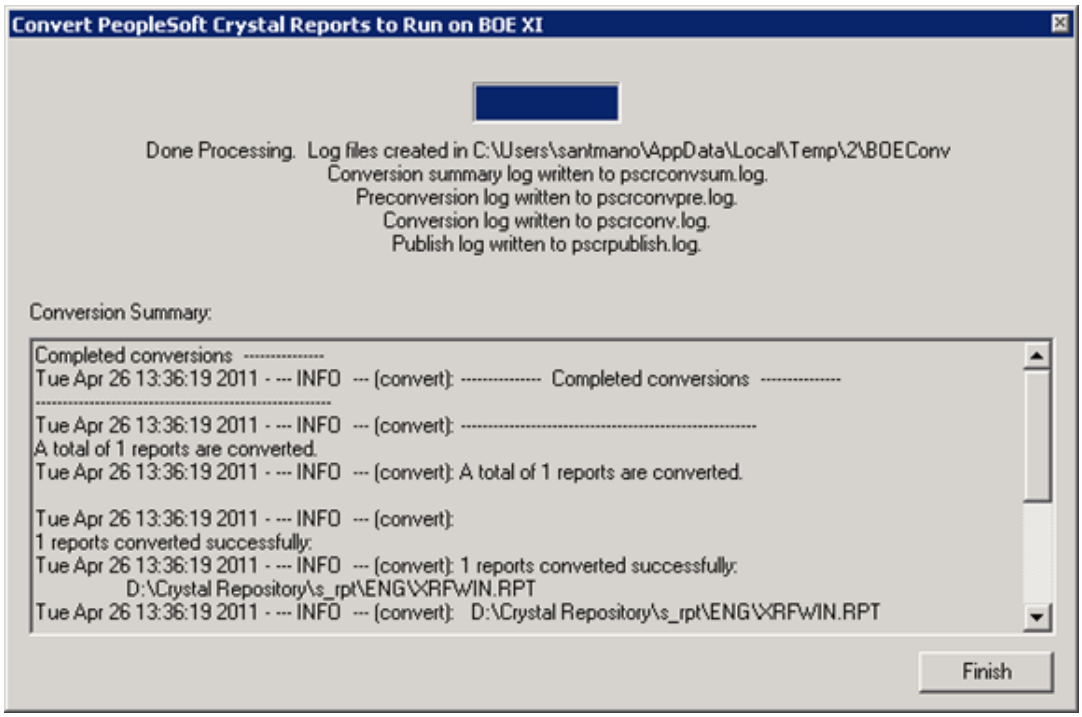
Entering BOE database and domain information

- Database Name:
- Crystal Report Source Directory:
- CMS Server Address:
- Domain:
- BOE User/Password

8. Click OK.

Done Publishing message

For a successful conversion, a window appears indicating that the conversion is processing. Once the process is complete, a summary details information about the execution. This information is also written to the *PS_HOME*\bin\client\winx86\pscrconvsum.log file.



Conversion Summary after processing completion

Verifying the Conversion and Publish

Use these steps to verify that your reports are converted properly:

1. Review the conversion logs.

   Two log files are generated every time the conversion is run.

   PSCRCONVSUM.LOG the summary log

   PSCRCONV.LOG the detailed log

   These files will be found under your TEMP directory:

   TEMP\boeconv.

   Note. These files will be overwritten each time you run the conversion program. If you want to save the logs from a previous run, rename them before you run the process.

   The log files will contain information about the conversion for all reports that you submitted for conversion in that execution of the conversion program.

   a. Review the Summary conversion log, PSCRCONVSUM.LOG.

      The fastest way is to search the summary log for “Error” and “Warn”. If no reports had error or warnings then the conversion was successful. If an error or warning condition is indicated on the summary log, proceed to the next step to check the detailed log.

      Here is a sample summary conversion log:

```
Completed conversions  ---------------
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): --------------- ⇒
 Completed conversions  ---------------
```



```
-------------------------------------------------------
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): ----------------------⇒
-----------------------------
A total of 13 reports are converted.
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): A total of 13 reports⇒
 are converted.

Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):
13 reports converted successfully:
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): 13 reports converted⇒
 successfully:
  C:\pt849801i1\CRW\ENG\XRFAPFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFAPFL.RPT
  C:\pt849801i1\CRW\ENG\XRFFLPC.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFFLPC.RPT
  C:\pt849801i1\CRW\ENG\XRFFLPN.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFFLPN.RPT
  C:\pt849801i1\CRW\ENG\XRFFLRC.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFFLRC.RPT
  C:\pt849801i1\CRW\ENG\XRFIELDS.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFIELDS.RPT
  C:\pt849801i1\CRW\ENG\XRFMENU.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFMENU.RPT
  C:\pt849801i1\CRW\ENG\XRFPANEL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFPANEL.RPT
  C:\pt849801i1\CRW\ENG\XRFPCFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFPCFL.RPT
  C:\pt849801i1\CRW\ENG\XRFPNPC.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFPNPC.RPT
  C:\pt849801i1\CRW\ENG\XRFRCFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFRCFL.RPT
  C:\pt849801i1\CRW\ENG\XRFRCPN.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFRCPN.RPT
  C:\pt849801i1\CRW\ENG\XRFWIN.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFWIN.RPT
  C:\pt849801i1\CRW\ENG\XRFWNFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt849801i1\CRW\ENG⇒
\XRFWNFL.RPT
```

```
0 reports converted with warnings:
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): 0 reports converted with⇒
 warnings:
0 reports failed to convert:
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): 0 reports failed to⇒
 convert:

Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):
-----------------------------------------------------
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert): -------------------------⇒
⇒
⇒
------------------------------
```

b. If necessary review the detailed conversion log, PSCRCONV.LOG

It is not necessary to perform this step if the summary conversion log indicates that all reports converted successfully.

The detailed log contains three types of messages:

```
INFO
WARN
ERROR
```

You need to eliminate all ERROR messages. The best policy is to understand why all WARN messages are generated and eliminate them if you can.

Here's a portion of the detailed log that illustrates a successfully converted report:

```
...
...
Converting the report "C:\pt849801i1\CRW\ENG\XRFAPFL.RPT".
Fri Jan 20 13:29:46 2006 - --- INFO  --- (convert): Converting the report "C:⇒
\pt849801i1\CRW\ENG\XRFAPFL.RPT".
Fri Jan 20 13:29:46 2006 - --- INFO  --- (verify ): Verifying the report⇒
 before conversion.
Fri Jan 20 13:29:46 2006 - --- INFO  --- (verify ): Successfully verified⇒
 the report.
Fri Jan 20 13:29:50 2006 - --- INFO  --- (convert): Successfully converted⇒
 report "C:\pt849801i1\CRW\ENG\XRFAPFL.RPT" to target "c:\cnew\ENG⇒
\XRFAPFL.RPT".
...
...
```

If a report has one or more ERROR messages associated with it, it failed conversion. If a report has only WARN and INFO messages associated with it, it passed conversion and will run. The WARN messages may indicate some changes you may want to make to the report definition.

See Reviewing Common Conversion Errors and Warning Messages.

2. Re-run the conversion on the altered reports

After you have made changes to address the ERRORs and WARNs, re-run the conversion program. You should exclude from this execution of the conversion program any reports that were successfully converted in prior executions.

3. Verify report publishing.

   To verify that the reports published properly, launch the BusinessObjects Enterprise XI 3.1 Admin Console (on Infoview) and locate the shared folder with the database name you used to publish. Ensure that the number of reports with the datetime of the Publish process matches the number of Crystal Reports XI report definition files that you wanted to publish.

4. Run the converted reports.

   For final verification that the reports you converted are correct, you should run the converted reports and compare their output to their unconverted (that is, Crystal 9) counterparts. You should compare them for equivalent layouts and equivalent data.

   To run the report in BusinessObjects Enterprise XI 3.1 InfoView:

   a. Log onto BusinessObjects Enterprise XI 3.1 Infoview with user BOE_Admin.
   b. Use search edit box at top to find the report that you want to run.
   c. In the search results choose the report.
   d. Enter report parameters, if any, and the report displays.

Reviewing Common Conversion Errors and Warning Messages

Here are some conversion errors that you may encounter as you convert your reports. For each we suggest possible ways to address the problem.

- ERROR — Failed to update the data source of table *[datasource(table name)]* to QUERY.*[query name]*

  For example:

```
Converting the report "C:\M\CRWFDM\ENG\FORA003-.RPT".
Fri Jan 13 18:10:00 2006 - --- INFO  --- (convert): Converting the report "C:\M⇒
\CRWFDM\ENG\FORA003-.RPT".
Fri Jan 13 18:10:00 2006 - --- INFO  --- (verify ): Verifying the report before⇒
 conversion.
Fri Jan 13 18:10:00 2006 - --- INFO  --- (verify ): Successfully verified the⇒
 report.
Fri Jan 13 18:10:01 2006 - --- ERROR --- (convert): Failed to update the data⇒
 source of table EB_EAB(EB_EAB_GEN0) to QUERY.EB_EAB.
```

  Things to check:

  - Does the offending query exist in the database?
  - Does the PeopleSoft user doing the conversion (that is, the PeopleSoft user that you provided to the conversion program) have security in the PeopleSoft database to access the query?

- WARN — Encountered a duplicate table *[table name]*. Skipping element.

  WARN — Encountered an element "field" within an invalid "table" element. Skipping element.

  For example:

```
Thu Jan 19 11:07:29 2006 - --- INFO  --- ( parse ): ------------------------------⇒
--------------------------
```

```
Thu Jan 19 11:07:29 2006 - --- INFO  --- ( parse ): ---------------  Reading⇒
 command file   ---------------
Thu Jan 19 11:07:29 2006 - --- INFO  --- ( parse ): ------------------------------⇒
--------------------------
Thu Jan 19 11:07:29 2006 - --- INFO  --- ( parse ): Parse commands from file⇒
 pscrconv.xml
Thu Jan 19 11:07:29 2006 - --- WARN  --- ( parse ): Encountered a duplicate⇒
 table WFA0001_AVERAGES_BY_BP_WL. Skipping element.
Thu Jan 19 11:07:29 2006 - --- WARN  --- ( parse ): Encountered an element⇒
 "field" within an invalid "table" element. Skipping element.
Thu Jan 19 11:07:29 2006 - --- WARN  --- ( parse ): Encountered an element⇒
 "field" within an invalid "table" element. Skipping element.
Thu Jan 19 11:07:29 2006 - --- WARN  --- ( parse ): Encountered an element⇒
 "field" within an invalid "table" element. Skipping element
```

These two warnings are often seen together. They can be generated when two reports being converted in the same execution of the conversion program use the same query.

There is no need to take action on these warnings.

APPENDIX A

Adding New Product Modules

This appendix discusses:

- Adding New Modules to PeopleSoft 8.4 Installations

Task A-1: Adding New Modules to PeopleSoft 8.4 Installations

This task explains how to add new application modules to an existing PeopleSoft installation. Follow this procedure if, for example, you already installed HRMS and now you need to install Time and Labor.

When you add new application modules to an existing installation, you may overwrite files that were included as part of a patch or fixes, or customizations that you applied. For example, suppose you customize a report that is updated in a subsequent PeopleSoft release. If you install the update into your current working directory, your customized report will be overwritten with the newly installed, updated report.

The PeopleSoft system does not currently provide an automated way to notify you before overwriting customized modules or patch files. You can make preparations to protect important files from being overwritten. For your customized modules, you need to maintain a backup of any customizations. It is also a good idea to make a copy of your *PS_HOME* directory before beginning this process, so that you can find and restore necessary patch files. Check My Oracle Support to identify any patches or fixes required for your installation.

See My Oracle Support, Patches & Updates.

To add new module(s) to PeopleSoft 8.4 installations:

1. Back up the database, file server, application server, Process Scheduler Server, and web server components of your current system.
2. Make sure you have the new license code that includes the new module(s). The new license code allows you to load the batch components for the new module(s).

   See "Using the PeopleSoft Installer," Obtaining License Codes.
3. Install the PeopleSoft Application software on the file server.
4. When prompted, enter the new license code for your applications.

   Initially, all installation options will be selected. You must deselect those programs you do not wish to install.
5. Launch Data Mover in bootstrap mode (sign in as the accessid and password).

   Data Mover is located in *PS_HOME*\bin\client\winx86\psdmt.exe.
6. Select File, Database Setup and choose your database type in the resulting dialog.
7. Select Next and select add new product.

8. Select Finish and a Data Mover script that updates the license code will be generated in Data Mover.
9. Select File, Run script and your database updates are complete.
10. Install software to your batch server.

    See "Setting Up Process Scheduler."
11. Reapply all code customizations if needed.

    Note. Remember to maintain backup copies of your customizations.

12. Compile and link COBOL.

    See “Installing and Compiling COBOL <on Windows or UNIX>”.
13. Verify that the appropriate Installation Records are selected.

    If they are not checked, check them and save the page. To open the page, select Setup <apptype>, Install, Installation Options, where <apptype> is HRMS, CRM, Financials/Supply, and so on. (For HRMS the navigation is Setup <apptype>, Install, Installation Table.)
14. Run the dddaudit, sysaudit, and sysaud01 SQR reports.

    If you are swapping the base language, also run swpaudit.sqr.

    See "Completing the Database Setup," Checking the Database.
15. Shut down all application servers.
16. Install software to your application server.

    See "Configuring the Application Server."
17. Restart all required application servers.
18. Shut down all web servers.
19. Install software to your web server.

    See "Setting Up the PeopleSoft Pure Internet Architecture."

APPENDIX B

Extracting DDL for PTSYS Database

This appendix discusses:

- Understanding the PTGENDDL.DMS Script
- Using the PTGENDDL.DMS Script

Understanding the PTGENDDL.DMS Script

You can customize and use the PTGENDDL.DMS sample script to extract the DDL (Data Definition Language) SQL statements to create a separate PTSYS database for the PeopleTools Performance Monitor. The script is found in the *PS_HOME*/scripts directory.

First use the PTDDL.SQL (or PTDDLU.SQL for Unicode) script to create the database and tablespaces for the PeopleTools Performance Monitor database. Then follow the directions in the following section to generate the PTSYS table and index DDL.

See Using the PTGENDDL.DMS Script.

When executed in bootstrap mode, the sample Data Mover script PTGENDDL.DMS will generate the DDL statements for both tables and indexes using default values (for ownerid and tablespaces) and store the DDL statements in the output file C:\TEMP\PTSYSDDL.SQL. The sample script is given in the following section, and includes information on prerequisites and instructions for using it for various scenarios.

See Also

Enterprise PeopleTools 8.52 PeopleBook: PeopleSoft Performance Monitor

Using the PTGENDDL.DMS Script

"Creating a Database, " Creating Data Mover Import Scripts

Task B-1: Using the PTGENDDL.DMS Script

Since most DB2 for z/OS customers edit scripts in order to change the delivered ownerid and tablespace names to local installation naming standards, several usage scenarios are included as comments within the PTGENDDL.DMS script.

The PTGENDDL.DMS sample script includes the following usage scenarios:

- *Usage_#1*: Extract from PTENGS.DB all tables and index DDL definitions using imbedded defaults. This is delivered as the default enabled commands

- *Usage_#2*: Extract from PTENGS.DB all tables and index DDL definitions and override default values with local installation names.
- *Usage_#3*: Extract from PTENGS.DB all table DDL definitions and override default values with local installation names.
- *Usage_#4*: Extract from PTENGS.DB all index DDL definitions and override defaults with local installation names.

Sample PTGENDDL.DMS script

```
-- ****************************************************************************
--  Confidentiality Information:
--
--  This module is the confidential and proprietary information of
--  PeopleSoft, Inc.; it is not to be copied, reproduced, or
--  transmitted in any form, by any means, in whole or in part,
--  nor is it to be used for any purpose other than that for which
--  it is expressly provided without the written permission of
--  PeopleSoft, Inc.
--
--  Copyright (c) 1988-2004 PeopleSoft, Inc. All Rights Reserved
-- ****************************************************************************
-- *
-- * Name:  PTGENDDL.DMS        Directory:      <$PS_HOME>/scripts/
-- * ====                       =========
-- *
-- *  Description:
-- *  -----------
-- *
-- *  o- DMS script for zOS customer to extract embedded DB2/zOS DDL
-- *      statements/info from "PTENGS.DB". This DDL statements will be
-- *     used to create a "PTSYS" database for PTools Performance Monitor.
-- *
-- *   ** NOTE1: DB2/zOS DBA’s typically edit/tailor "*DDL.SQL" files
-- *             to adhere to "local installation names" convention.
-- *             Read "USAGE_#" section below to generate this automatically.
-- *
-- *   ** NOTE2:  Used for "Tools Performance Monitor" installation,
-- *
-- *   Assumptions:
-- *   -----------
-- *   a) Datamover execution environment is assumed to be
-- *      "WINTEL" on a DB2/zOS database environment.
-- *
-- *   b) These instructions are for installing PTSYS for
-- *      PTools Performance Monitor
-- *
-- ****************************************************************************
-- *
-- *  Required Input:
-- *  --------------
```



```
-- *
-- *            <$PS_HOME>\data\PTENGS.DB  ==> PTSYS database name.
-- *
-- *          *** NOTE: $PS_HOME is the PTOOLS installation directory
-- *
-- *  Output(s):  ==> (using Usage_#1 script; as delivered)
-- *  ---------
-- *
-- *    C:\TEMP\PTGENDDL.LOG -> Datamover log output
-- *    C:\TEMP\PTSYSDDL.SQL -> DB2 DDL statements to create "PTSYS"
-- *
-- *
-- ****************************************************************************
-- *
-- *  INSTRUCTIONS:
-- *  ============
-- *
-- *   A. BEFORE EXECUTING THIS FILE, PERFORM THE FOLLOWING STEPS.
-- *
-- *     1)  Replace <$PS_HOME> with the valid directory value.
-- *
-- *     2)  IF YOU ARE USING SECONDARY AUTHORIZATION, CHANGE
-- *         'OWNER#ID' TO THE DATABASE OWNERID, ELSE CHANGE
-- *         'OWNER#ID' TO YOUR PEOPLESOFT ACCESS ID.
-- *
-- *     3)  CHANGE 'OBJ#OWNER' TO THE COMMON CREATOR ID (OBJECT OWNER).
-- *
-- *     4)  CHANGE THE DATABASE NAMES TO THE SITE SPECIFIC VALUES.
-- *
-- *     5)  IF NOT USING THE RECOMMENDED PEOPLESOFT TABLESPACE NAMES,
-- *         CHANGE THEM TO THE SITE SPECIFIC VALUES (see Usage_#2 example).
-- *
-- *     6)  CHANGE 'SET UNICODE OFF' TO 'SET UNICODE ON', IF IT IS
-- *         AN UNICODE DATABASE.
-- *
-- *   B. AFTER EXECUTING THIS FILE, PERFORM THE FOLLOWING STEPS.
-- *
-- *     1) Check the LOG file for successful execution.
-- *
-- *     2) Validate the "local installation values" have been generated.
-- *
-- *     3) Submit the DDL (via SPUFI/DSNTEP2, etc) to create the DB2 objects.
-- *
-- *
-- ****************************************************************************
--
--    Usage_#1:  Extract all DDL statements <using PSFT default values>
--
--                *NOTE: As delivered, both tables and index DDLs will be
--                       generated and stored in C:\TEMP\PTSYSDDL.SQL
```

```
--
-- ***************************************************************************

SET NO DATA;
SET NO SPACE;

SET LOG C:\TEMP\PTGENDDL.LOG;
SET INPUT <$PS_HOME>\data\PTENGS.DB;

SET DDL RECORD * INPUT OWNER AS OBJ#OWNER;
SET DDL INDEX  * INPUT OWNER AS OBJ#OWNER;
SET DDL UNIQUE INDEX * INPUT OWNER AS OBJ#OWNER;


SET DDL INDEX  * INPUT OWNER2 AS OBJ#OWNER;
SET DDL UNIQUE INDEX * INPUT OWNER2 AS OBJ#OWNER;

SET UNICODE OFF;
SET DBSPACE PSPTDMO.* AS PSPTSYS.*;
SET DBSPACE PSPTDMOT.* AS PSPTSYS.*;

SET OUTPUT C:\TEMP\PTSYSDDL.SQL1;
SET EXTRACT DDL;

IMPORT *;


-- ***************************************************************************
--
--  ADDITIONAL USAGE_#* examples for DB2/zOS DBA's to facilitate DDL editing
--
-- ***************************************************************************
--
--   Configurable values:
--   -------------------
--
-- set ddl table space   * input STOGROUP   as <TableSpace_Stogroup>;
-- set ddl index         * input STOGROUP   as <IndexSpace_Stogroup>;
-- set ddl unique index  * input STOGROUP   as <IndexSpace_Stogroup>;
--
-- set ddl record        * input OWNER AS <OBJ#OWNER>;
-- set ddl index         * input OWNER AS <OBJ#OWNER>;
-- set ddl unique index  * input OWNER AS <OBJ#OWNER>;
--
-- ***************************************************************************
--
--  Usage_#2:  Extract DDL statements <using customer configured values>
--
--  ..........................................................................
--
```



```
-- SET NO DATA;
-- SET NO SPACE;
--
-- SET LOG C:\TEMP\PTGENDDL.LOG;
-- SET INPUT <$PS_HOME>\data\PTENGS.DB;

--
-- SET DDL RECORD * INPUT OWNER AS cus#OWNER;
-- SET DDL INDEX  * INPUT OWNER AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER AS cus#OWNER;
--

-- SET DDL INDEX  * INPUT OWNER2 AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER2 AS cus#OWNER;
--
-- SET UNICODE OFF;
-- SET DBSPACE PSPTDMO.* AS cusTSYS.*;
-- SET DBSPACE PSPTDMOT.* AS cusTSYST.*;
--
-- SET OUTPUT C:\TEMP\PTSYSDDL.SQL2;
-- SET EXTRACT DDL;
--
-- SET DDL TABLE SPACE * INPUT STOGROUP AS     cusTD1SG;
-- SET DDL INDEX * INPUT STOGROUP AS           cusTX1SG;
-- SET DDL UNIQUE INDEX * INPUT STOGROUP AS    cusTX1SG;
--
-- IMPORT *;
--
--
-- ***************************************************************************
--
--  Usage_#3:  Extract DDL statements for TABLE-OBJECTS ONLY
--               using customer configured values (ie. cusXXX)
--
--  ..........................................................................
--
-- SET NO DATA;
-- SET NO INDEX;
-- SET NO SPACE;
--
-- SET LOG C:\TEMP\PTGENDDL.LOG;
-- SET INPUT <$PS_HOME>\data\PTENGS.DB;

--
-- SET DDL RECORD * INPUT OWNER AS cus#OWNER;
-- SET DDL INDEX  * INPUT OWNER AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER AS cus#OWNER;


-- SET DDL INDEX  * INPUT OWNER2 AS cus#OWNER;
```

```
-- SET DDL UNIQUE INDEX * INPUT OWNER2 AS cus#OWNER;
--
-- SET UNICODE OFF;
-- SET DBSPACE PSPTDMO.* AS cusTSYS.*;
-- SET DBSPACE PSPTDMOT.* AS cusTSYST.*;
--
-- SET OUTPUT C:\TEMP\PTSYSDDL.SQL3;
-- SET EXTRACT DDL;
--
-- SET DDL TABLE SPACE * INPUT STOGROUP AS     cusTD1SG;
-- SET DDL INDEX * INPUT STOGROUP AS           cusTX1SG;
-- SET DDL UNIQUE INDEX * INPUT STOGROUP AS    cusTX1SG;
--
-- IMPORT *;
--
--
-- ***************************************************************************
--
--  Usage_#4:  Extract DDL statements for INDEX-OBJECTS ONLY
--               using customer configured values.
--
--  ..........................................................................
--
-- SET NO RECORD;
-- SET NO SPACE;
--
-- SET LOG C:\TEMP\PTGENDDL.LOG;
-- SET INPUT <$PS_HOME>\data\PTENGS.DB;
--
-- SET DDL TABLE SPACE * INPUT STOGROUP AS     cusTD1SG;
-- SET DDL INDEX * INPUT STOGROUP AS           cusTX1SG;
-- SET DDL UNIQUE INDEX * INPUT STOGROUP AS    cusTX1SG;
--
-- SET DDL RECORD * INPUT OWNER AS cus#OWNER;
-- SET DDL INDEX  * INPUT OWNER AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER AS cus#OWNER;
--

-- SET DDL INDEX  * INPUT OWNER2 AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER2 AS cus#OWNER;
--
-- SET UNICODE OFF;
-- SET DBSPACE PSPTDMO.* AS cusTSYS.*;
-- SET DBSPACE PSPTDMOT.* AS cusTSYST.*;
--
-- SET OUTPUT C:\TEMP\PTSYSDDL.SQL4;
-- SET EXTRACT DDL;
--
-- IMPORT *;
--
```



```
--
```

PTGENDDL.DMS Sample Output

```
CREATE TABLE OBJ#OWNER.PS_ACCESS_GRP_LANG (ACCESS_GROUP CHAR(20) NOT
 NULL,
   LANGUAGE_CD CHAR(3) NOT NULL,
   DESCR CHAR(30) NOT NULL,
   DESCRLONG LONG VARCHAR) IN PSPTSYS.PSIMAGE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_ACCESS_GRP_LANG ON
 OBJ#OWNER.PS_ACCESS_GRP_LANG (ACCESS_GROUP,
   LANGUAGE_CD) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
 BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_ACCESS_GRP_TBL (ACCESS_GROUP CHAR(20) NOT
 NULL,
   DESCR CHAR(30) NOT NULL,
   DESCRLONG LONG VARCHAR) IN PSPTSYS.PTTBL
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_ACCESS_GRP_TBL ON
 OBJ#OWNER.PS_ACCESS_GRP_TBL (ACCESS_GROUP) USING STOGROUP PSSGIXPT
 PRIQTY 48 SECQTY 720 CLUSTER BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_APPL_TBL (AE_PRODUCT CHAR(2) NOT NULL,
   AE_APPL_ID CHAR(8) NOT NULL,
   AE_VERSION DECIMAL(5, 2) NOT NULL,
   DESCR CHAR(30) NOT NULL,
   AE_DATE_OVERRIDE CHAR(1) NOT NULL,
   ASOF_DT DATE,
   LAST_DTTM_UPDATE TIMESTAMP,
   OPRID CHAR(30) NOT NULL,
   AE_CACHE_RECNAME CHAR(15) NOT NULL,
   AE_SYMBOLICS_PROG CHAR(8) NOT NULL,
   AE_FILTER_PROG_1 CHAR(8) NOT NULL,
   AE_FILTER_PROG_2 CHAR(8) NOT NULL,
   AE_FILTER_PROG_3 CHAR(8) NOT NULL,
   AE_USE_PLATFORM CHAR(1) NOT NULL,
   AE_DEF_TRN_CTL CHAR(1) NOT NULL,
   MESSAGE_SET_NBR INTEGER NOT NULL,
   AE_DEBUG_MODE CHAR(1) NOT NULL,
   AE_TRACE CHAR(1) NOT NULL,
```



```
   AE_FORCE_COMMIT CHAR(1) NOT NULL,
   AE_FORCE_ABEND CHAR(1) NOT NULL,
   AE_COMMIT_MSG CHAR(1) NOT NULL,
   AE_DISABLE_RESTART CHAR(1) NOT NULL,
   AE_CHUNK_FACTOR SMALLINT NOT NULL,
   AE_CHUNK_METHOD CHAR(1) NOT NULL,
   AE_ADJ_DTTM TIMESTAMP) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_APPL_TBL ON
 OBJ#OWNER.PS_AE_APPL_TBL (AE_PRODUCT,
   AE_APPL_ID) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
 BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_APPL_TMP (AE_PRODUCT CHAR(2) NOT NULL,
   AE_APPL_ID CHAR(8) NOT NULL,
   AE_VERSION DECIMAL(5, 2) NOT NULL,
   DESCR CHAR(30) NOT NULL,
   AE_DATE_OVERRIDE CHAR(1) NOT NULL,
   ASOF_DT DATE,
   LAST_DTTM_UPDATE TIMESTAMP,
   OPRID CHAR(30) NOT NULL,
   AE_CACHE_RECNAME CHAR(15) NOT NULL,
   AE_SYMBOLICS_PROG CHAR(8) NOT NULL,
   AE_FILTER_PROG_1 CHAR(8) NOT NULL,
   AE_FILTER_PROG_2 CHAR(8) NOT NULL,
   AE_FILTER_PROG_3 CHAR(8) NOT NULL,
   AE_USE_PLATFORM CHAR(1) NOT NULL,
   AE_DEF_TRN_CTL CHAR(1) NOT NULL,
   MESSAGE_SET_NBR INTEGER NOT NULL,
   AE_DEBUG_MODE CHAR(1) NOT NULL,
   AE_TRACE CHAR(1) NOT NULL,
   AE_FORCE_COMMIT CHAR(1) NOT NULL,
   AE_FORCE_ABEND CHAR(1) NOT NULL,
   AE_COMMIT_MSG CHAR(1) NOT NULL,
   AE_DISABLE_RESTART CHAR(1) NOT NULL,
   AE_CHUNK_FACTOR SMALLINT NOT NULL,
   AE_CHUNK_METHOD CHAR(1) NOT NULL) IN PSPTSYS.PTWORK
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_APPL_TMP ON
 OBJ#OWNER.PS_AE_APPL_TMP (AE_PRODUCT,
   AE_APPL_ID) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
 BUFFERPOOL BP3 CLOSE NO
;
COMMIT
```



```
;
CREATE TABLE OBJ#OWNER.PS_AE_CV8_PAIR_TBL (FIELDNAME CHAR(18) NOT NULL
,
   FIELDNAME_TO CHAR(18) NOT NULL,
   AE_FROM_CHAR CHAR(1) NOT NULL,
   AE_TO_CHAR CHAR(1) NOT NULL) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_CV8_PAIR_TBL ON
 OBJ#OWNER.PS_AE_CV8_PAIR_TBL (FIELDNAME,
   FIELDNAME_TO,
   AE_FROM_CHAR) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
 BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_INTTEST_AET (PROCESS_INSTANCE DECIMAL(10)
 NOT NULL,
   AE_STEP CHAR(8) NOT NULL,
   AE_SECTION CHAR(8) NOT NULL,
   AE_INT_15 DECIMAL(15) NOT NULL,
   AE_INT_14 DECIMAL(14) NOT NULL,
   AE_INT_13 DECIMAL(13) NOT NULL,
   AE_INT_12 DECIMAL(12) NOT NULL,
   AE_INT_11 DECIMAL(11) NOT NULL,
   AE_INT_10 DECIMAL(10) NOT NULL,
   AE_INT_9 INTEGER NOT NULL,
   AE_INT_8 INTEGER NOT NULL,
   AE_INT_7 INTEGER NOT NULL,
   AE_INT_6 INTEGER NOT NULL,
   AE_INT_5 INTEGER NOT NULL,
   AE_INT_4 SMALLINT NOT NULL,
   AE_INT_3 SMALLINT NOT NULL,
   AE_INT_2 SMALLINT NOT NULL,
   AE_INT_1 SMALLINT NOT NULL) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_INTTEST_AET ON
 OBJ#OWNER.PS_AE_INTTEST_AET (PROCESS_INSTANCE) USING STOGROUP
 PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_OPTIONS (AE_CHUNK_SIZE INTEGER NOT NULL,
   AE_INS_SEL_LONGS CHAR(1) NOT NULL) IN PSPTSYS.PTAPPE
;
COMMIT
;
```

```
CREATE TABLE OBJ#OWNER.PS_AE_PTTSRPLC_AET (PROCESS_INSTANCE
 DECIMAL(10) NOT NULL,
   OPRID CHAR(30) NOT NULL,
   TS_SRCH_ID CHAR(30) NOT NULL,
   TS_SRCH_STATUS CHAR(1) NOT NULL,
   TS_RPLC_RDY CHAR(1) NOT NULL,
   LANGUAGE_CD CHAR(3) NOT NULL,
   BASE_LANGUAGE_CD CHAR(3) NOT NULL,
   BASELINE CHAR(1) NOT NULL,
   TS_RESULT_SEQ INTEGER NOT NULL,
   RECNAME CHAR(15) NOT NULL,
   RECNAME_TMP CHAR(15) NOT NULL,
   SQLTABLENAME CHAR(18) NOT NULL,
   TABLE_NAME CHAR(30) NOT NULL,
   RELLANGRECNAME CHAR(15) NOT NULL,
   TS_COMBINED CHAR(1) NOT NULL,
   FIELDNAME CHAR(18) NOT NULL,
   TS_RPLC CHAR(1) NOT NULL,
   TS_RPLC_TEXT CHAR(254) NOT NULL,
   FIELDTYPE SMALLINT NOT NULL,
   LENGTH SMALLINT NOT NULL,
   FIELDNAME0 CHAR(18) NOT NULL,
   TS_KEY_CHAR CHAR(50) NOT NULL,
   TS_KEY_NUMBER DECIMAL(10) NOT NULL,
   TS_KEY_DATE DATE,
   FLDFIELDTYPE SMALLINT NOT NULL,
   SQL_STMT_254 CHAR(254) NOT NULL,
   REFRESH CHAR(1) NOT NULL) IN PSPTSYS.PTTBL
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_PTTSRPLC_AET ON
 OBJ#OWNER.PS_AE_PTTSRPLC_AET (PROCESS_INSTANCE) USING STOGROUP
 PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
```


APPENDIX C

Installing and Configuring DB2 Connect

This appendix discusses:

- Understanding DB2 Connect
- Verifying Supported Versions
- Defining DB2 Connect Architecture
- Setting Up DDF on the Mainframe
- Configuring TCP/IP on the Client
- Configuring the DB2 Connect Gateway on Windows
- Binding DB2 Connect Packages for an EBCDIC Installation
- Binding DB2 Connect Packages for a Unicode Installation
- Setting DB2CodePage For A Unicode Database
- Setting Up the DB2 Connect Gateway on UNIX
- Confirming DB2 Connect/ODBC Settings
- Setting CLI/ODBC Trace with the Client Configuration Assistant

Understanding DB2 Connect

This appendix discusses installing and configuring DB2 Connect connectivity for z/OS. The points during the installation when you will need to perform these procedures are noted in the chapters where they apply. You will need to set up connectivity on the following locations:

- On the mainframe.
- On any application server (Windows or UNIX).
- On any Windows or UNIX Server acting as DB2 Connect gateway.
- On any dedicated Windows or UNIX batch server.
- On any Windows client that will be making a two-tier connection to the database; this is required for any clients that will be running COBOL or SQR batch processes locally, but not for clients that are connecting exclusively in three-tier and running all batch processes on the server.

This appendix describes specific environment variables and parameters that you'll need to set for each DB2 Connect component so that it will work optimally with PeopleSoft software. For the complete instructions on installing DB2 Connect, refer to the DB2 Connect product documentation.

See the DB2 Connect Product documentation.

Verifying Supported Versions

To use PeopleSoft 8.52 with DB2 Connect, verify the following release information:

- Consult the supported platform information on My Oracle Support to verify that Oracle supports the version of DB2 Connect that you intend to use with your particular release of DB2 for z/OS.
- Consult My Oracle Support also to verify that Oracle supports the particular release of UNIX or Windows on which you plan to install DB2 Connect.
- When configuring DB2 Connect on supported releases of either Windows or UNIX, no additional TCP/IP software is required.
- TCP/IP for z/OS is required on the mainframe.
- See My Oracle Support for the minimum required z/OS version for PeopleSoft PeopleTools 8.52.

See Also

My Oracle Support, Certifications

Defining DB2 Connect Architecture

This section discusses:

- Understanding DB2 Connect Architecture
- Using DB2 Connect Enterprise Edition
- Using DB2 Connect Personal Edition
- Defining PeopleSoft Three-Tier Configuration with DB2 Connect

Understanding DB2 Connect Architecture

DB2 Connect connects your client PeopleSoft applications to DB2's Distributed Data Facility (DDF) components on the mainframe. DB2 Connect performs the following tasks when connecting to DB2 for z/OS with DDF:

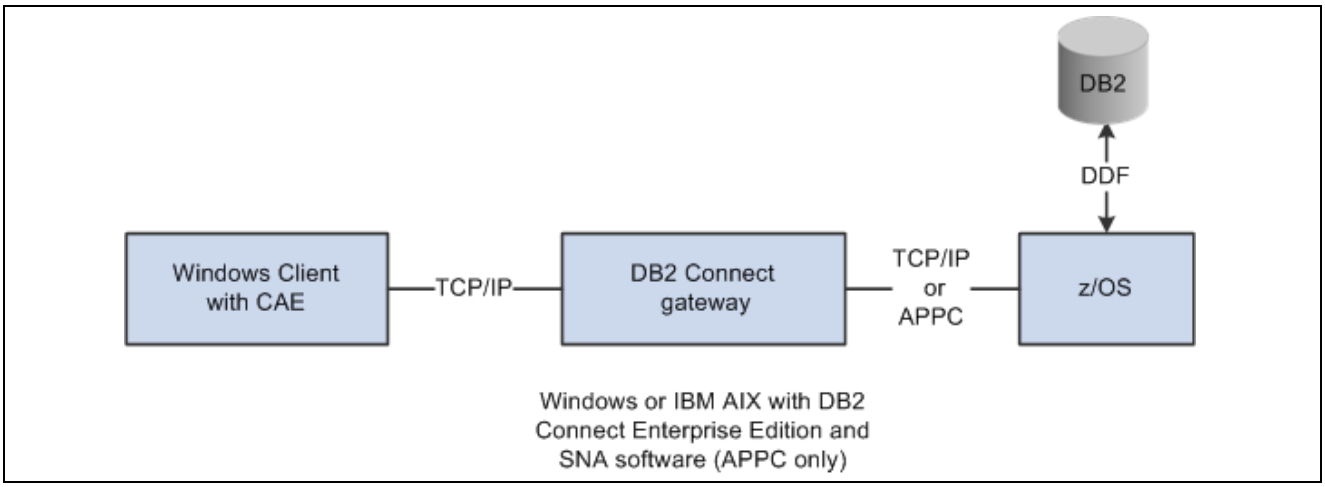
- Provides a control point for client connections.
- Performs the proper character conversions when receiving data from DB2.
- Responds to the connect requests from PeopleSoft client computers and creates corresponding TCP/IP conversations with DDF.
- Sends requests and replies between client computers and DDF.

IBM offers two different DB2 Connect products: DB2 Connect Enterprise Edition and DB2 Connect Personal Edition.

Using DB2 Connect Enterprise Edition

DB2 Connect Enterprise Edition requires a gateway machine; individual clients connect to the gateway machine using DB2 Connect CAE. The DB2 Connect gateway manages the TCP/IP conversation with the DDF on the mainframe. DB2 Connect Enterprise Edition can be used with either the PeopleSoft two-tier or three-tier architecture.

The DB2 Connect CAE (Client Application Enabler) component of DB2 Connect Enterprise Edition comes with the base product and must reside on each Windows client machine. It provides a logical connection between the PeopleSoft client and the DB2 Connect gateway machine. The router sends the PeopleSoft SQL requests by way of network protocol to the gateway, and then receives the result set in return. The following diagram shows the connections between the Windows client machine, the DB2 Connect gateway, and the mainframe:

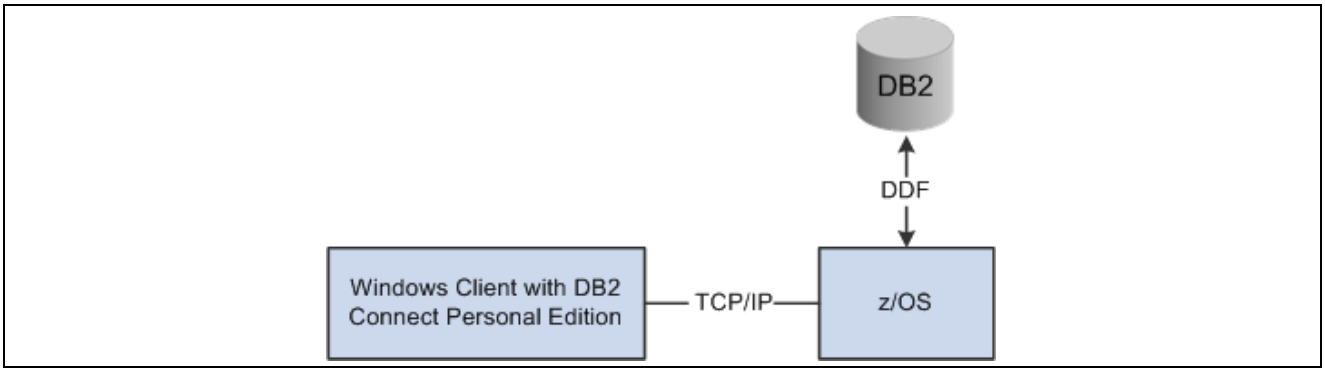


DB2 Connect Enterprise Edition architecture

The communication between the Windows client machine and the DB2 Connect gateway is accomplished using the TCP/IP protocol. The physical connection between the DB2 Connect gateway and the mainframe can be made by a Token Ring attachment, a bridged Token Ring attachment, Ethernet, FDDI, Escon Channels, or a leased-line or dial-up SDLC connection. This connectivity is a critical piece for performance such that it should be configured with a high-bandwidth and located very close to the mainframe.

Using DB2 Connect Personal Edition

DB2 Connect Personal Edition is installed on each client workstation and allows clients to connect directly to DB2 DDF. It does not require an intermediary DB2 Connect gateway to access your database. The following diagram illustrates the connection between DB2 Connect Personal Edition and the mainframe:



DB2 Connect Personal Edition architecture

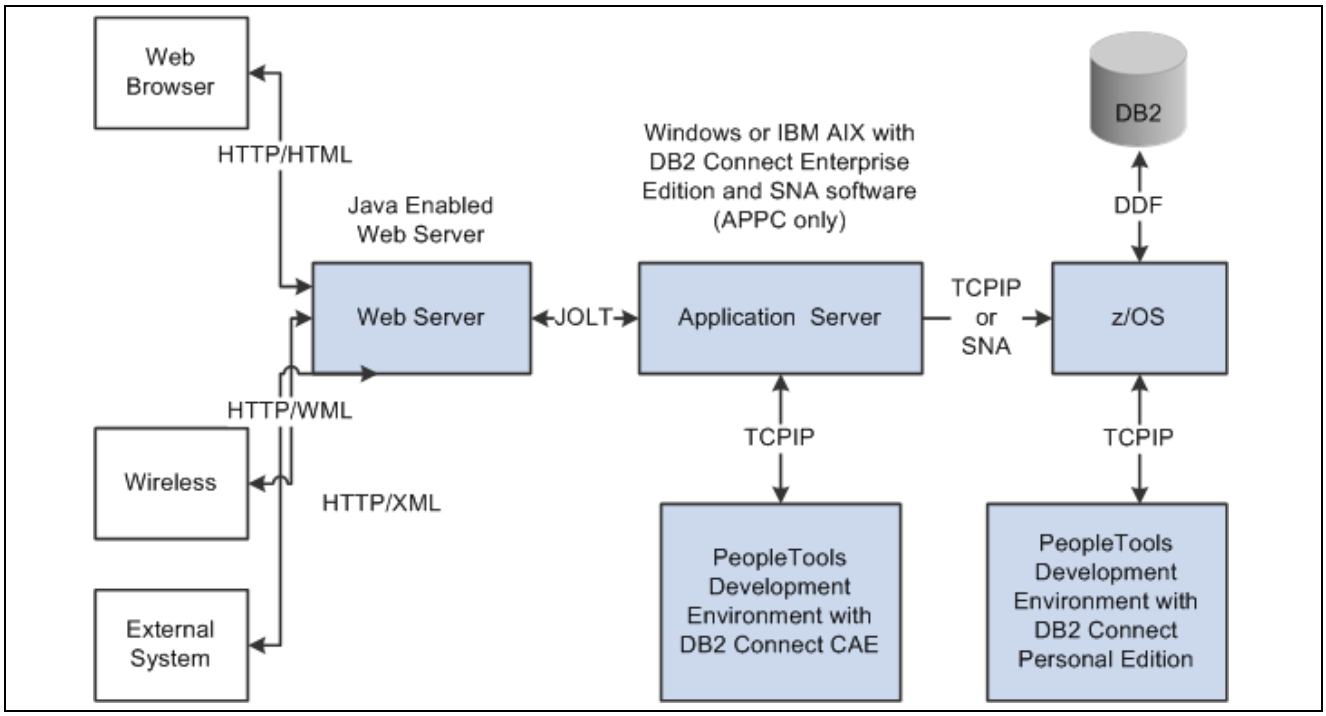
DB2 Connect Personal Edition allows direct TCP/IP connection to the host with no gateway requirement.

Defining PeopleSoft Three-Tier Configuration with DB2 Connect

The PeopleSoft application server processes all transactions requested by Windows clients and Web servers and sends SQL to the database server using DB2 Connect. The Oracle Tuxedo middleware product manages all these transactions in the application server. In addition to Tuxedo, the server hosting the PeopleSoft application server must be configured with DB2 Connect Enterprise Edition to establish connectivity to the database server.

On DB2 for z/OS, the application server can be configured either on Windows, IBM AIX, SUN Solaris or HP-UX. Since all SQL is handled in the application server, it is paramount for performance reasons that the application server machine be connected to the mainframe via Fast Ethernet, Escon channel attached, FDDI, or some comparable network connection that allows maximum through-put.

When connecting with the PeopleSoft three-tier, the individual client workstations do not require DB2 Connect CAE. No connectivity is required on the client machines for PeopleSoft three-tier connectivity; communication between client workstation and application server is handled via BEA Tuxedo. If clients have specifics needs to connect via two-tier (for example, to run Data Mover, client COBOL, perform upgrade steps), they will need to either install DB2 Connect Personal Edition for a direct connection to DDF on the mainframe, or install DB2 Connect CAE and connect to DDF via the DB2 Connect EE gateway. In either case, they will still be connecting via the DB2 Connect option but will not be using the PeopleSoft application server. The following diagram illustrates the difference in the interaction between the various servers when using DB2 Connection Enterprise Edition and a gateway machine, or using DB2 Connect Personal Edition.



Connecting through a gateway machine using DB2 Connection Enterprise Edition and connecting directly using DB2 Connect Personal Edition

Task C-1: Setting Up DDF on the Mainframe

DDF is one of the DB2 address spaces which allows applications running in a remote application requestor environment that supports IBM's Distributed Relational Database Architecture (DRDA) to access data in a DB2 for OS/390 subsystem. DDF and DB2 Connect communicate with each other using the TCP/IP protocol. The services DDF provides include:

- Receiving client requests from DB2 Connect.
- Performing the proper character conversions when receiving data from DB2.
- Forwarding requests to and receiving responses from DB2 for z/OS.
- Building response messages and returning them to DB2 Connect, which in turn forwards the response messages to the client.
- Managing the communication protocol (TCP/IP) and DB2 for z/OS interaction. This includes maintaining the DB2 for z/OS SQLCA and SQLDA data structures.
- Managing and recovering from exception conditions.

See *IBM's DB2 Administration Guide*

To set up DDF on the mainframe:

1. Use the Change Log Inventory Utility to update the BSDS. The SYSIN DD card should specify the following values:

```
DDF LOCATION=<location name>
LUNAME=<vtam appl id>
PASSWORD=<password>
```

2. Start DDF (-STA DDF).
3. When DB2 is started you should see the LU Name and port number for the DB2 for z/OS Distributed Data Facility (DDF). Look at the DDF startup messages in the system log and you should see information similar to the following:

```
DSNL004I %Z DDF START COMPLETE
LOCATION  DB2DSNZ
LU   NETA.DB2APPLZ
GENERICLU -NONE
DOMAIN    sysaoe.peoplesoft.com
TCPPORT   5070
RESPORT   5071
```

Task C-2: Configuring TCP/IP on the Client

Use the following procedure to configure TCP/IP on the client.

1. Obtain the host name or IP address of the z/OS server that you will be connecting to. You may need to contact your network administrator to obtain the IP address. You can test the IP address by attempting to ping it using the `ping` *`hostname`* command.

```
C:\ping mvsptown
PING mvsptown.peoplesoft.com: (207.135.44.20): 56 data bytes
64 bytes from 207.135.44.99: icmp_seq=0 ttl=56 time=10 ms
64 bytes from 207.135.44.99: icmp_seq=1 ttl=56 time=5 ms
64 bytes from 207.135.44.99: icmp_seq=2 ttl=56 time=9 ms
64 bytes from 207.135.44.99: icmp_seq=3 ttl=56 time=5 ms
```

You can also obtain the host's IP address by entering TSO NETSTAT HOME from the z/OS server.

2. Obtain the Port number to use to connect to target DB2 subsystem. The port number must be a unique value and can be obtained by looking in DB2MSTR at the DDF startup. The parameter TCPPORT identifies the port used for that DB2 subsystem. You may need to contact your database administrator for TCPPORT used by DDF at startup.
3. Catalog a TCP/IP Node.

Note. The TCPIP Node will automatically get cataloged when you create a Database Alias via the Client Configuration Assistant. In the previous release of the product, known as DDCS, the TCPIP Nodes had to be cataloged manually using the steps below. Manually cataloging the Nodes is no longer the only option. You may skip this step if using the Client Configuration Assistant. To see the Nodes that are currently cataloged, type the following line in Command Line Processor: `Db2 => list node directory`. You can also use the `uncatalog` *node* command to remove a node catalog.

You must add an entry to the client's node directory to describe the remote node. This entry specifies the node name, the hostname (or *ip_address*), and the port number. To catalog a TCP/IP node, perform the following steps from the Command Line Processor:

```
Db2 => catalog tcpip node node_name remote [hostname|ip_address] server [⇒
svcename|port_number]
```

For example, to catalog a remote server with the IP Name MVSPTOWN on the node called *DB2DSNT*, using the port number *5070*, enter the following:

```
Db2 => catalog tcpip node DB2DSNT remote MVSPTOWN server 5070
```

4. Catalog the Database.

Note. The Database will automatically get cataloged when you create a Database Alias via the Client Configuration Assistant. In the previous release of the product, known as DDCS, the Database had to be cataloged manually using the steps below. Manually cataloging the database is no longer the only option. You may also skip this step if using the Client Configuration Assistant. To see the Databases that are currently cataloged, enter the following line in Command Line Processor: `Db2 => list database directory`. You can also use the `uncatalog` *database* command to remove a database catalog.

---

5. Before a client application can access a remote database, the database must be cataloged on the TCPIP Node.

```
DB2 => catalog database database_name as database_alias at node node_name
For example, to catalog a remote database PT800T8 so that it has the alias ⇒
PT800T8, on the node DB2DSNT, enter the following commands:
DB2 => catalog database PT800T8 as PT800T8 at node DB2DSNT
```

6. Test connection to database. You can test the connection to the database using the following command:


```
Db2 => connect to database_alias user  userid using password
```

For example, to connect to database_alias PT800T8 using valid mainframe id PEOPLE1 and password PASSWRD1 then enter the following:

```
Db2 => connect to PT800T8 user PEOPLE1 using PASSWRD1
```

Authentication takes place on the DB2 server, so userid and password must be valid mainframe ids. If the connection is successful, you will get a message showing the name of the database to which you have connected. This step is synonymous to the TEST button in Client Configuration Assistant. You can now execute SQL statements against the database.

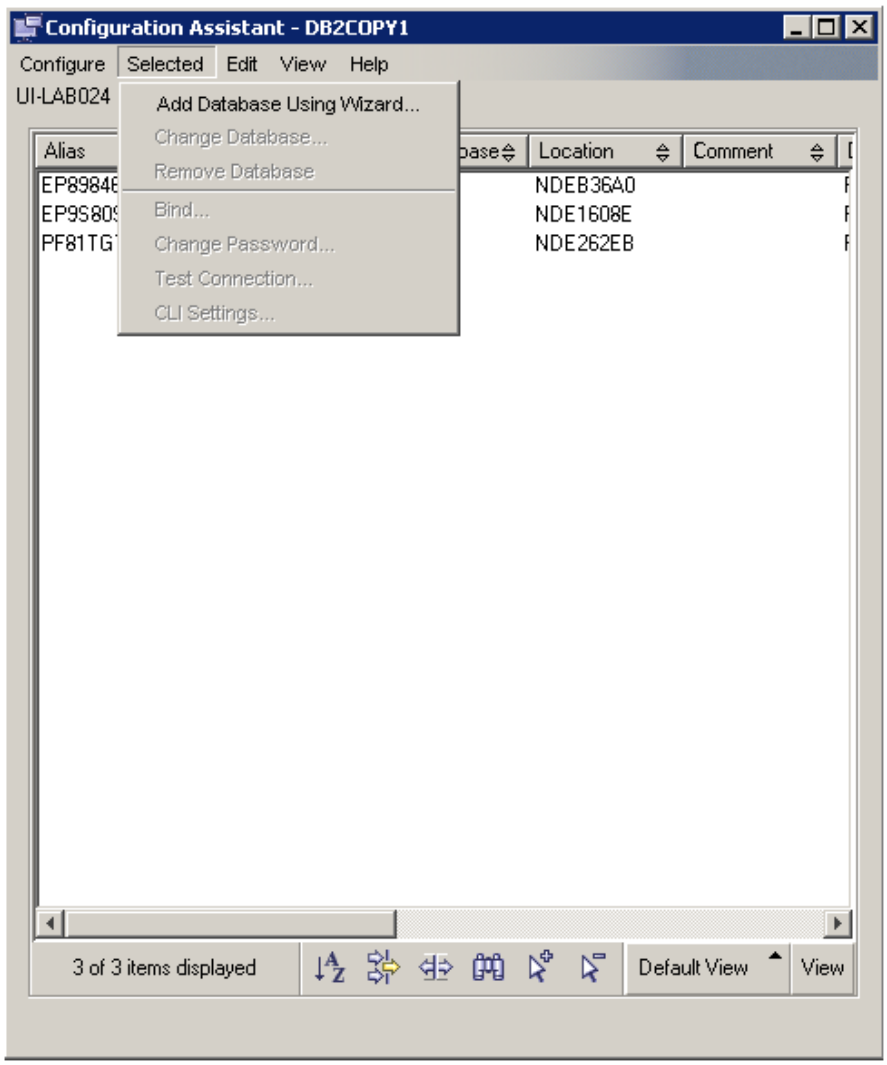
Task C-3: Configuring the DB2 Connect Gateway on Windows

To install the DB2 Connect Gateway to run properly with PeopleSoft applications, configure the DB2 Database in Client Configuration Assistant.

See *DB2 Connect Enterprise Edition Quick Beginnings manual.*

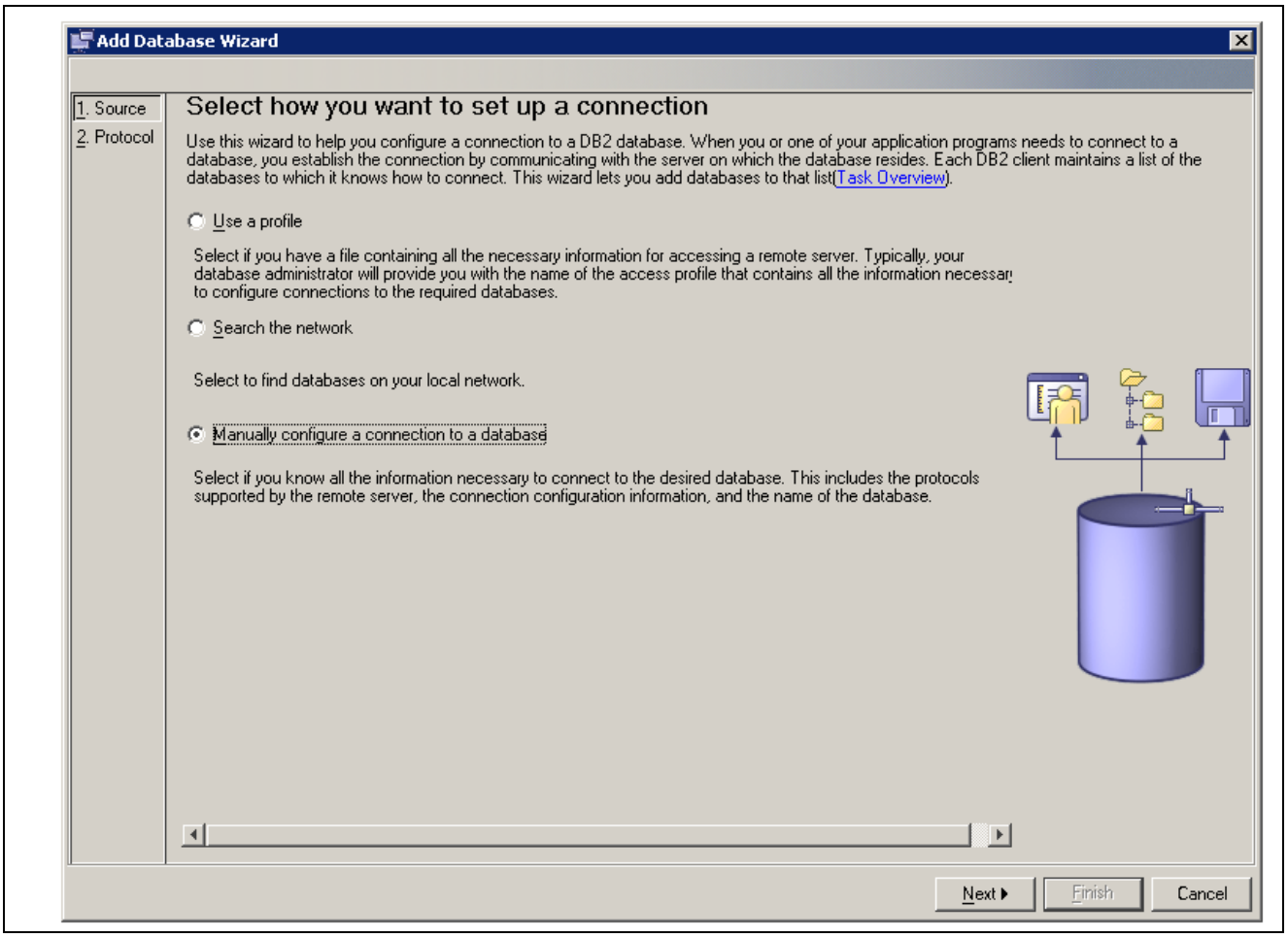
1. Open Configuration Assistant. On the Selected menu, select Add Database Using Wizard.

   The Add Database Wizard window opens.



Using the Selected menu on the Configuration Assistant window

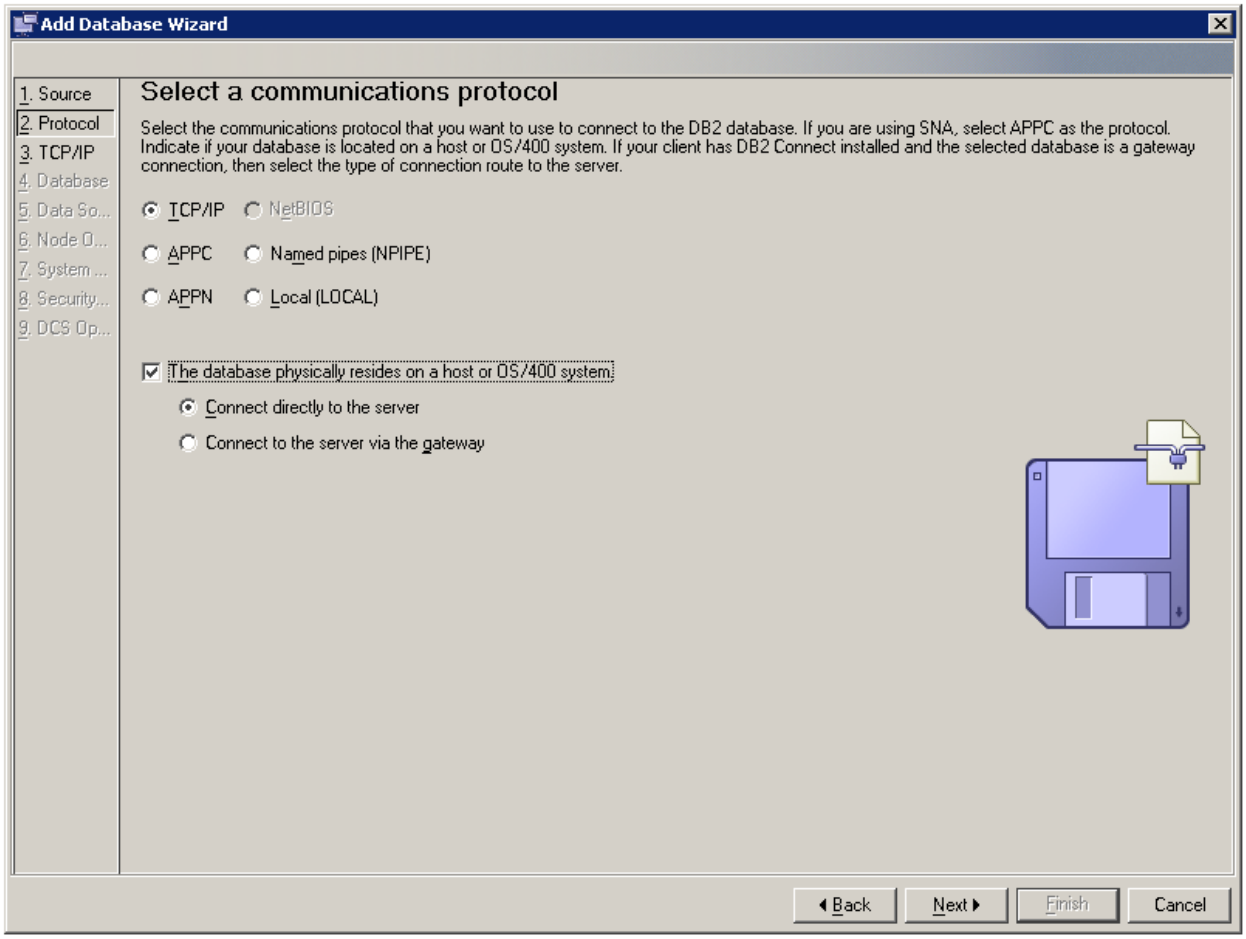
2. Select the radio button Manually configure a connection to a database, and then click Next to continue.



Selecting a connection method on the Add Database Wizard window

3. Select the radio button TCP/IP and select the check box labelled The database physically resides on a host or OS/400 system.

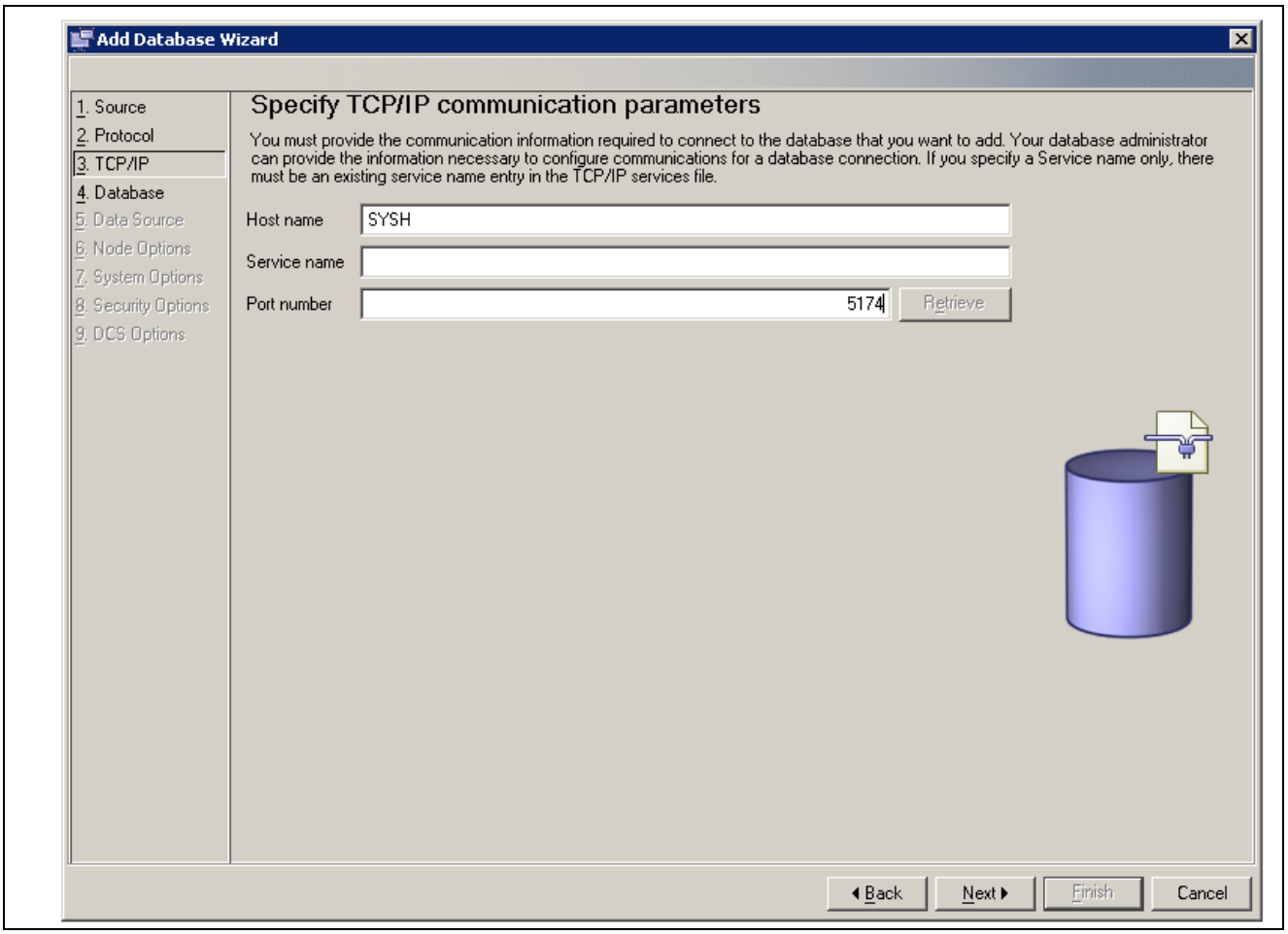
   The Connect directly to the server option is selected by default. Leave this option selected and click the Next button.



Selecting a communications protocol on the Add Database Wizard window

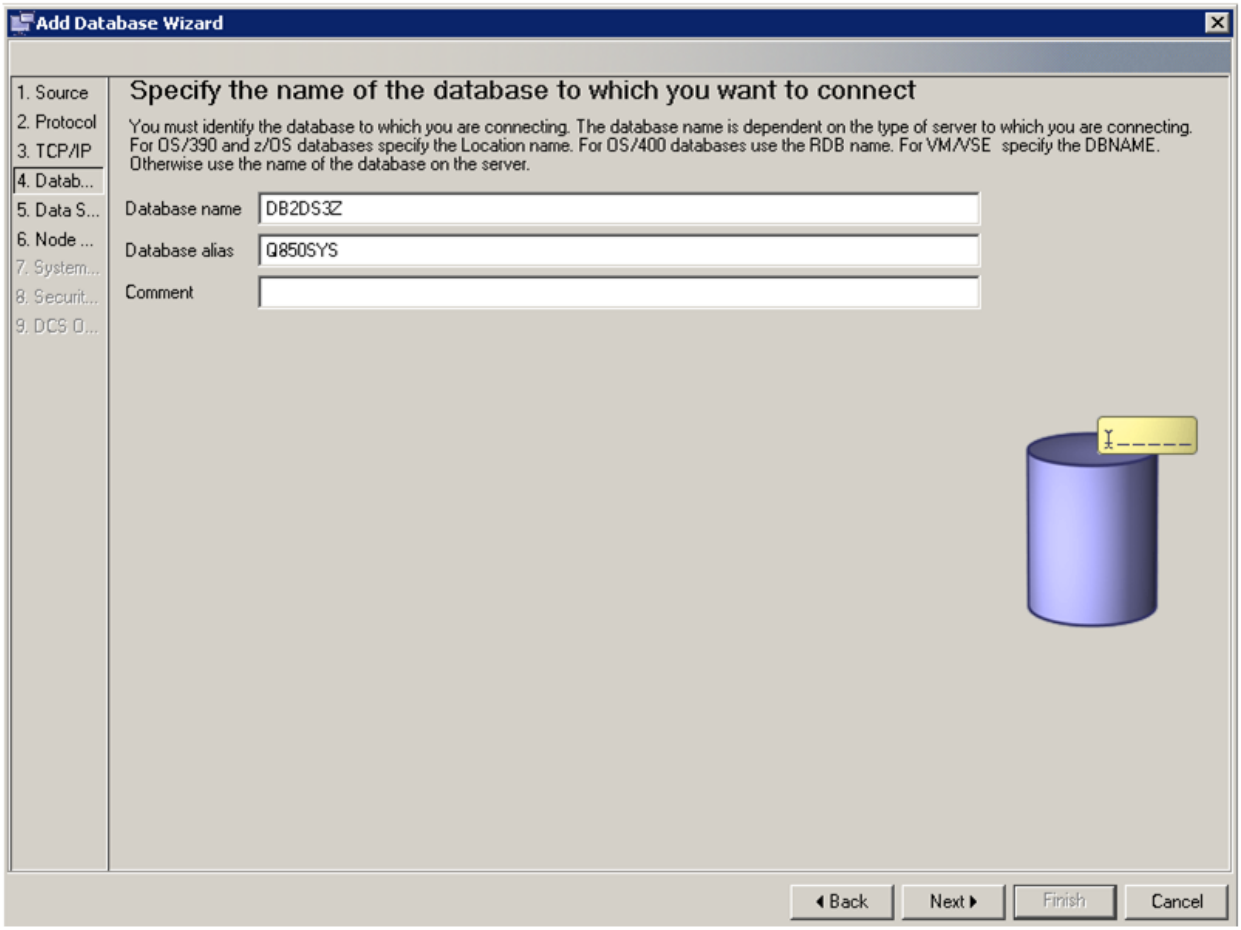
4. Enter either the DNS or IP address of your mainframe in the Host name field.

   For the Port number, use the TCPPORT used to start DDF for the DB2 subsystem that you want to connect to. You may need to consult your systems programmer for this value or you can look in the DB2MSTR log for the DB2 subsystem.



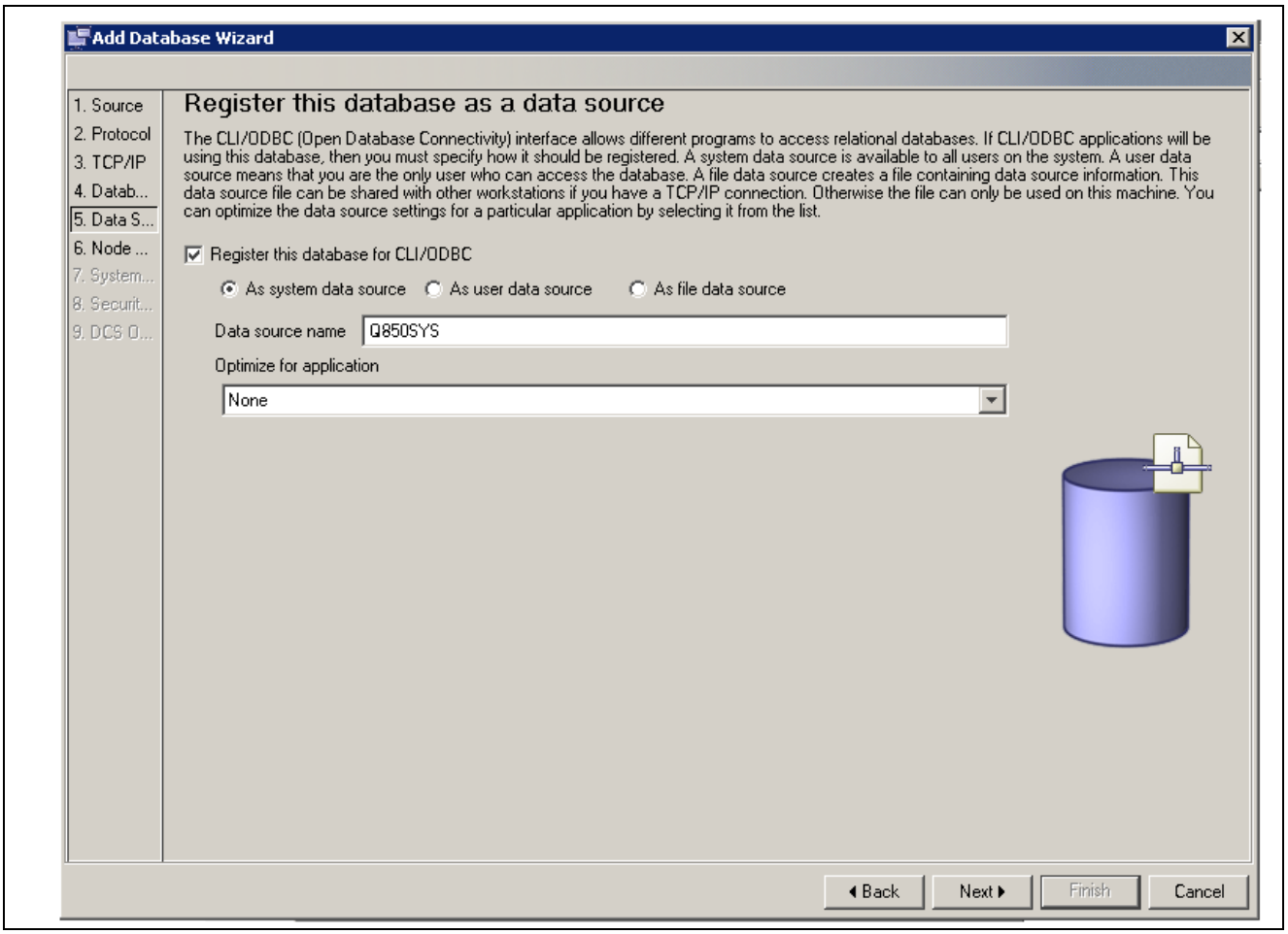
Specifying communication parameters on the Change Database Wizard window

5. Enter the database name defined in your LU in the Target database field in the entry box Database name. For Database alias, enter the name of the database. Click Next.



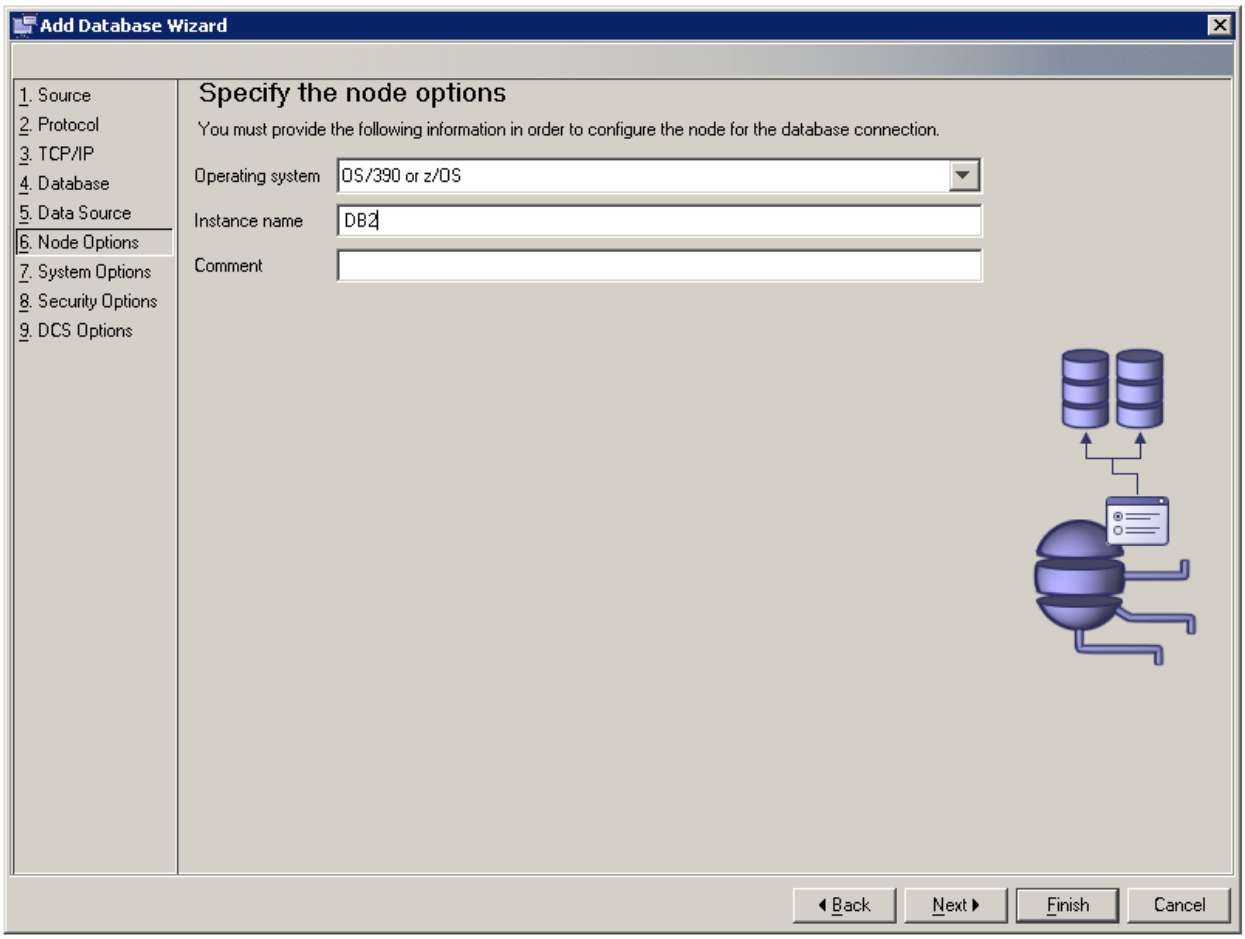
Specifying database parameters on the Change Database Wizard window

6. Verify that the check box Register this database for CLI/ODBC and the radio button As system data source are selected. Click Next.



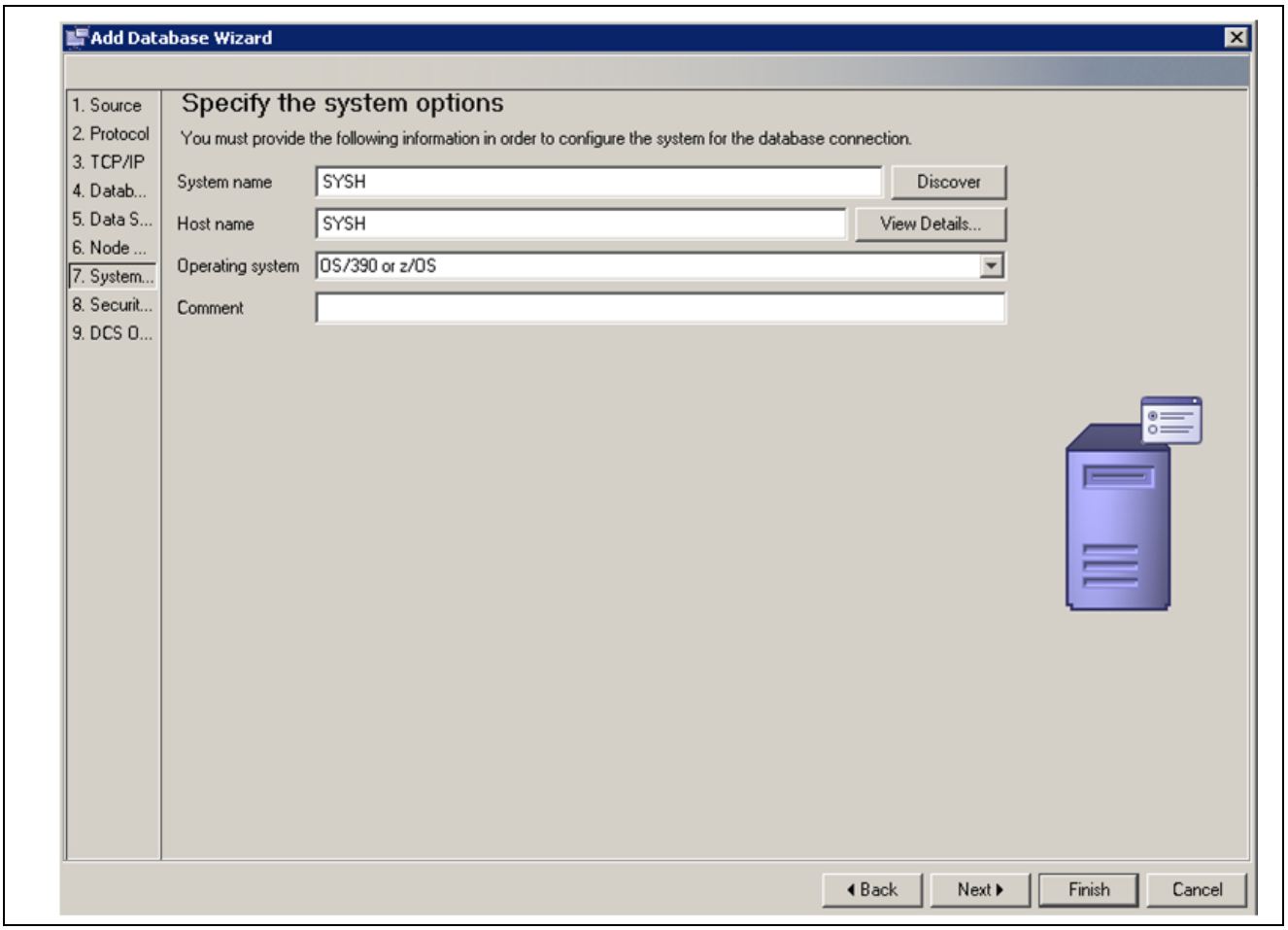
Registering the database on the Change Database Wizard window

7. Select *OS/390 or z/OS* in the Operating system drop-down list box, and then click Next.



Specifying the node options on the Change Database Wizard window

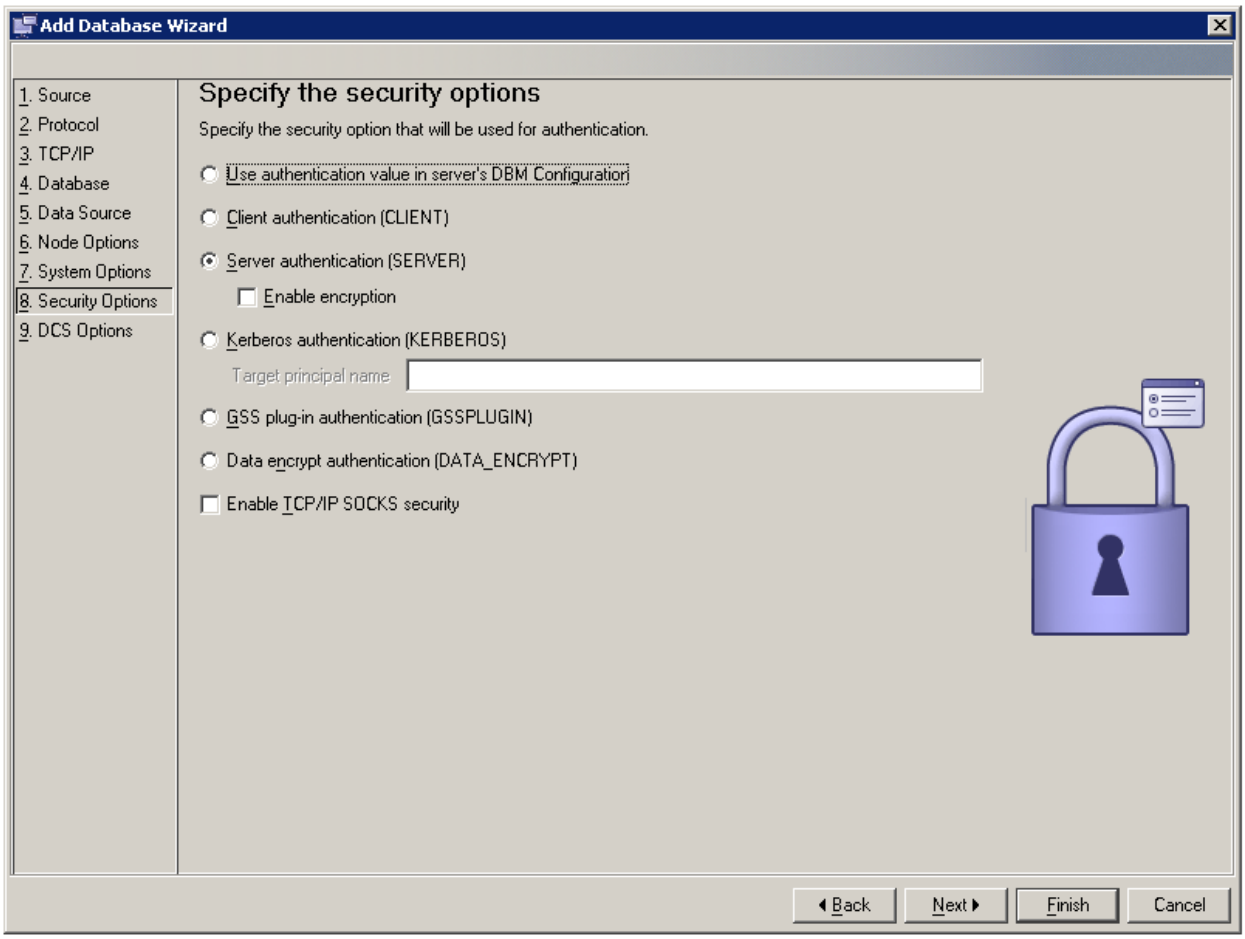
8. Verify that the information in the System name and Host name text boxes is correct. Click Next.



Verifying System name and Host name in the Change Database Wizard window

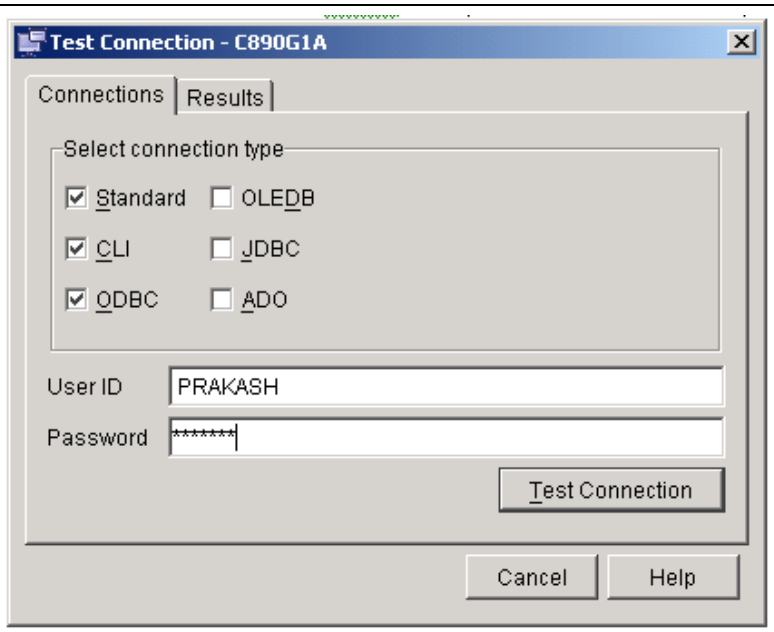
9. Make sure that the radio button Server authentication is selected and click Finish.

Note. No changes are required on the DCS Options page.



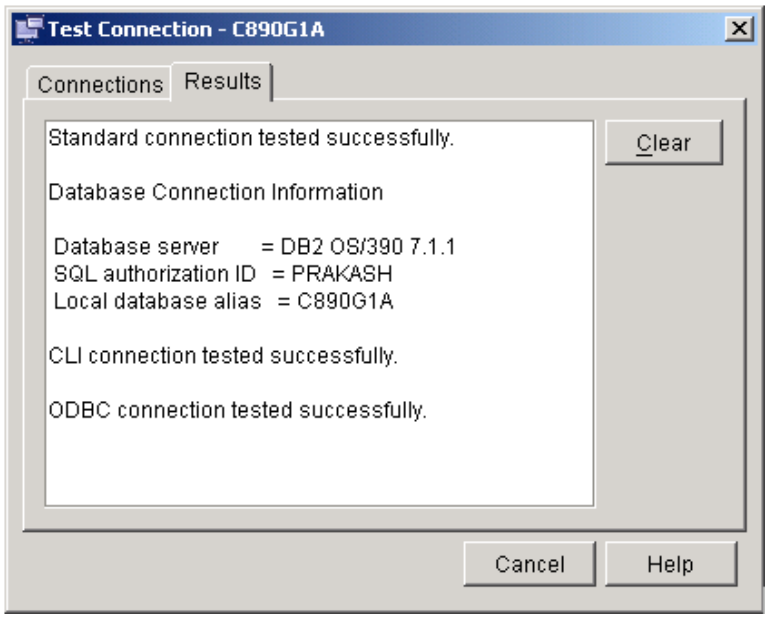
Specifying security options on the Change Database Wizard window

10. Enter User ID and Password and click Test Connection on the Test Connection dialog box.



Test Connection dialog box: Connections tab

Confirm that the connection test was successful by selecting the Results tab. You are now ready to use your entry to create or access a PeopleSoft database.



Test Connection dialog box: Results tab

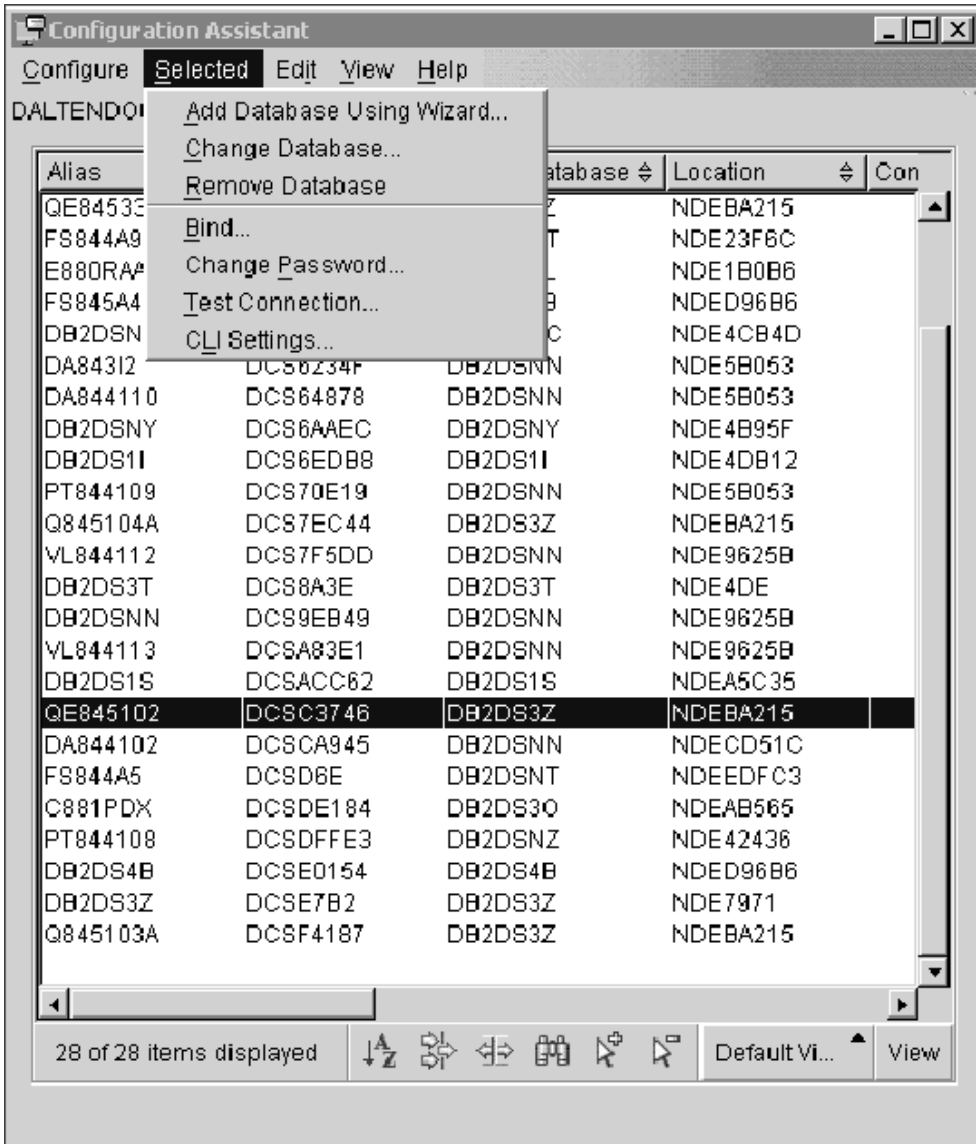
It may be necessary to bind the packages for DB2 Connect to the DRDA server for the first connection.

See "Binding DB2 Connect Packages for an EBCDIC Installation or Binding DB2 Connect Packages for an Unicode Installation."

Task C-4: Binding DB2 Connect Packages for an EBCDIC Installation

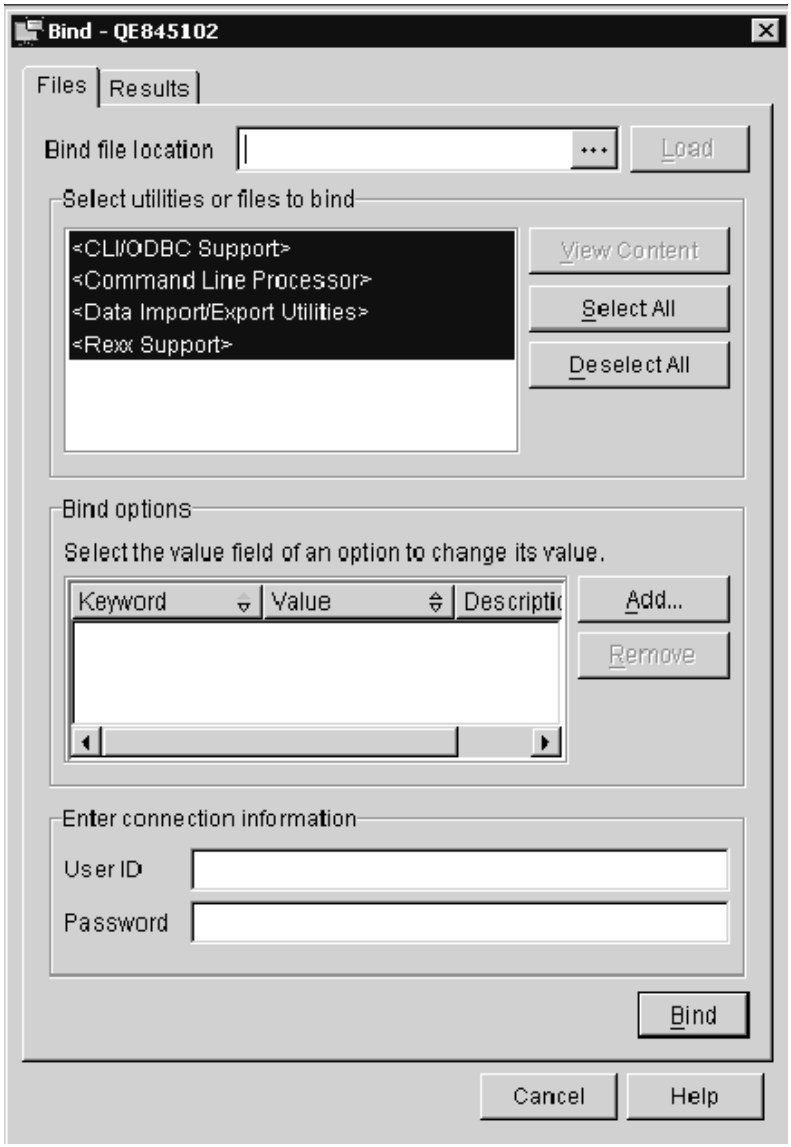
Use the instructions in this task if you have to bind the packages for DB2 Connect for a EBCDIC installation.

1. Open the Configuration Assistant. Highlight your database name and select Bind from the Selected. The Bind window appears.



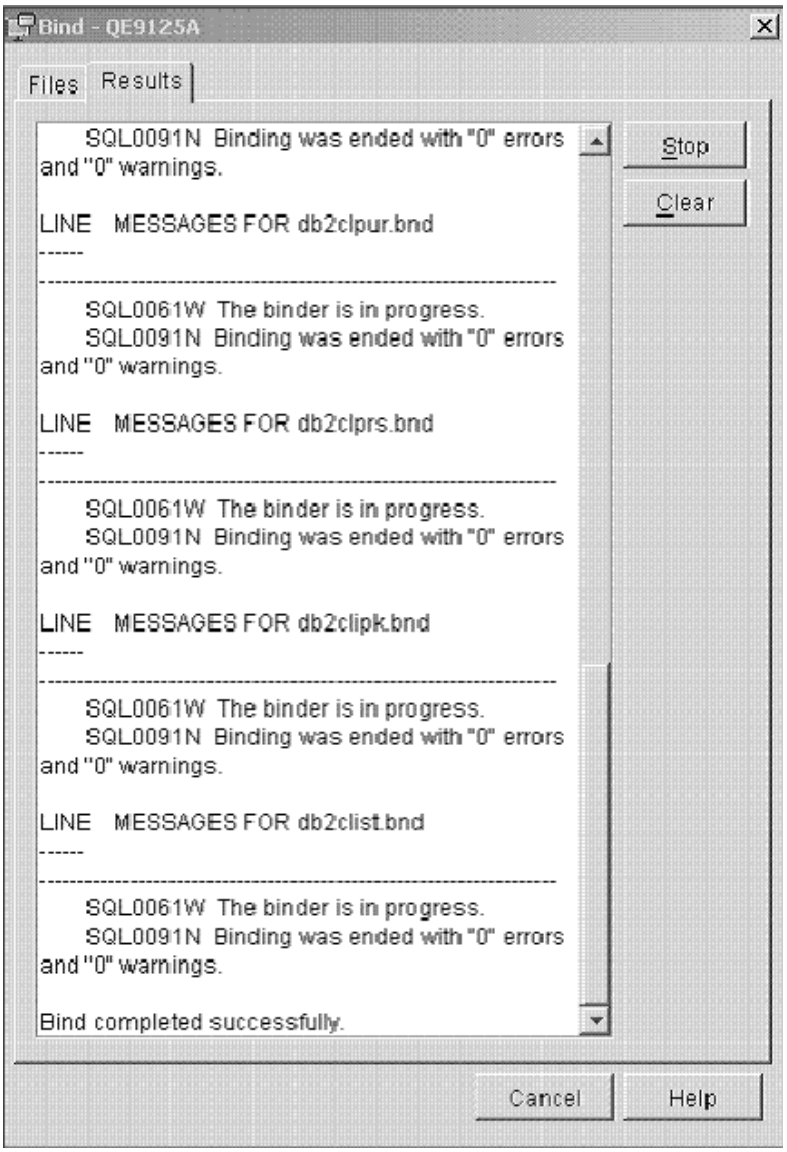
Selecting Bind on the Configuration Assistant window

2. Click Select All and enter your User ID and password.



Files tab on the Bind window

3. Scroll through the results. You should see 'Bind Completed Successfully' at the bottom.



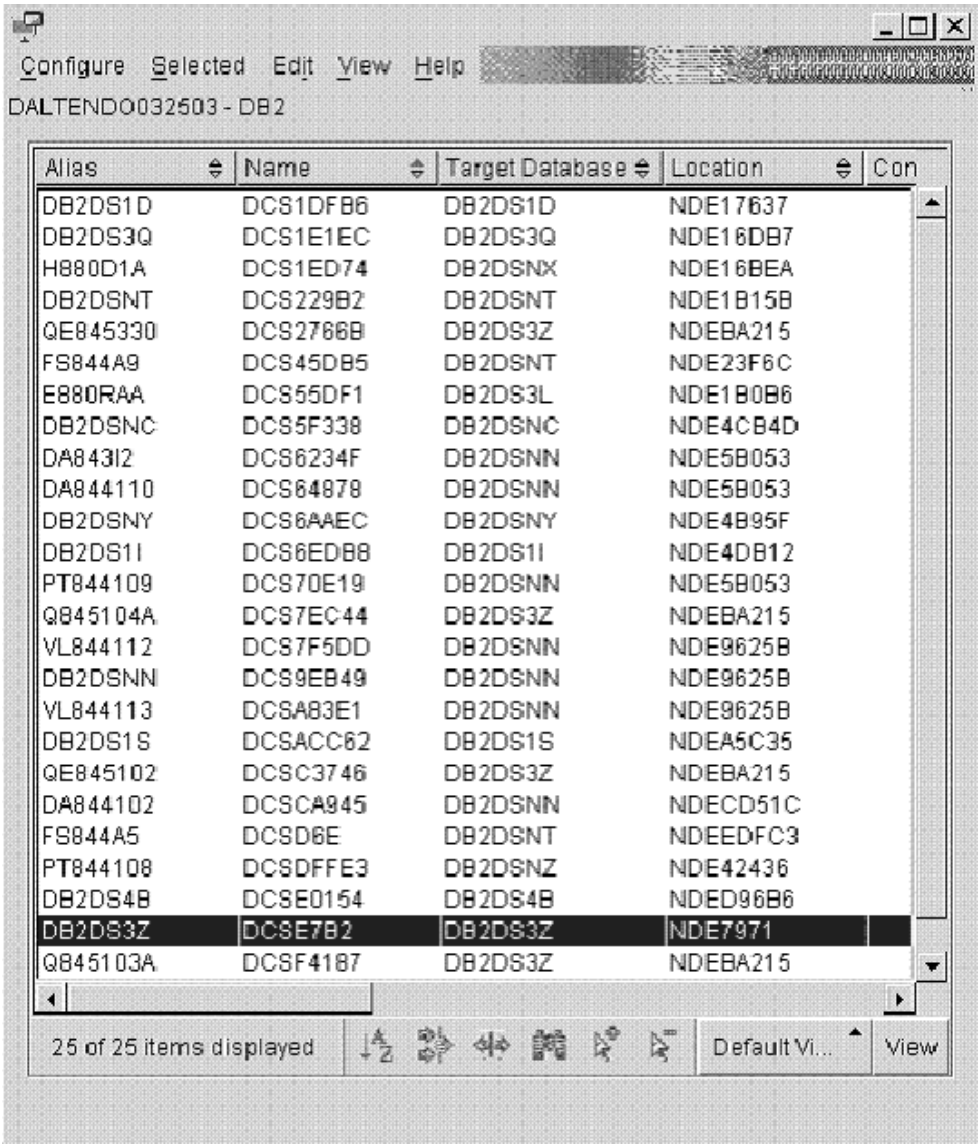
Results tab on the Bind window

Note. You may see some warning messages in the list indicating that some bind options are not valid for all .bnd files. The Configuration Assistant may attempt to bind some Connect packages that are actually specific to the use of DB2 for Linux, UNIX, or Windows and not DB2 for z/OS. *You can ignore these warning messages*.

Task C-5: Binding DB2 Connect Packages for a Unicode Installation

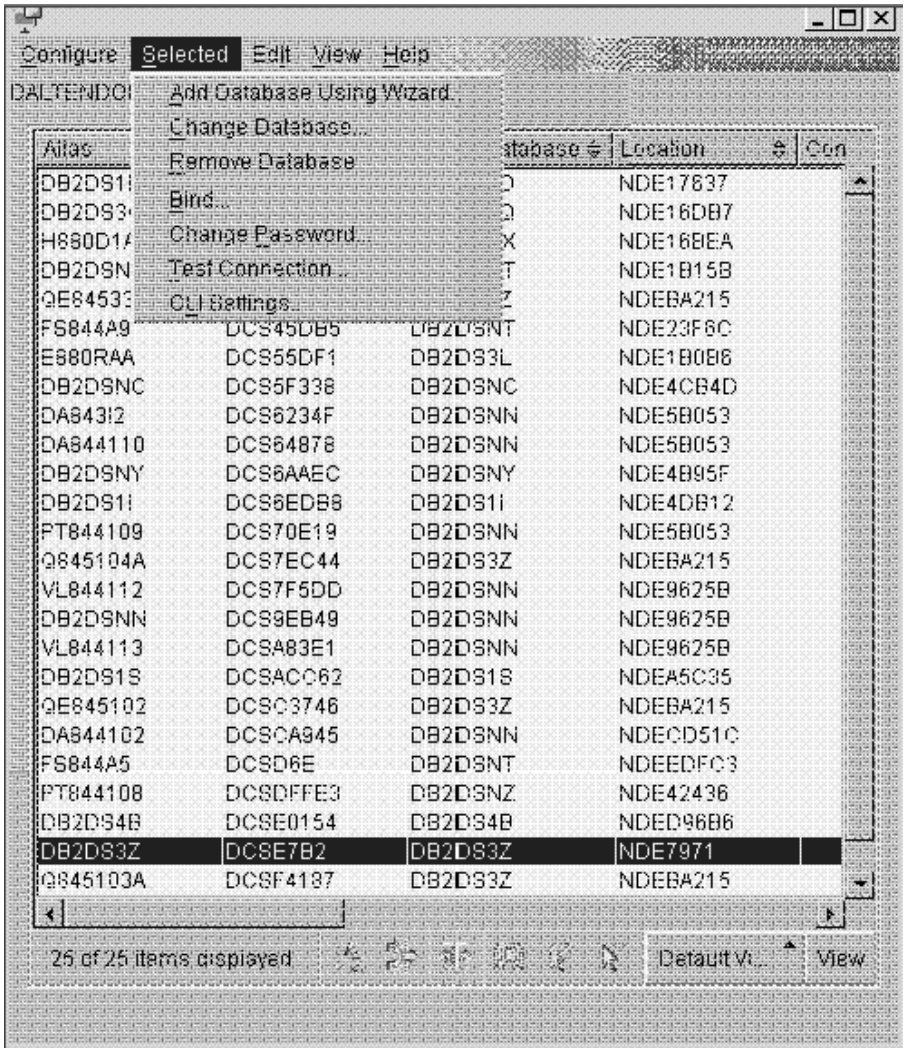
Use the instructions in this task if you have to bind the packages for DB2 Connect for a Unicode installation.

1. Open the Configuration Assistant.



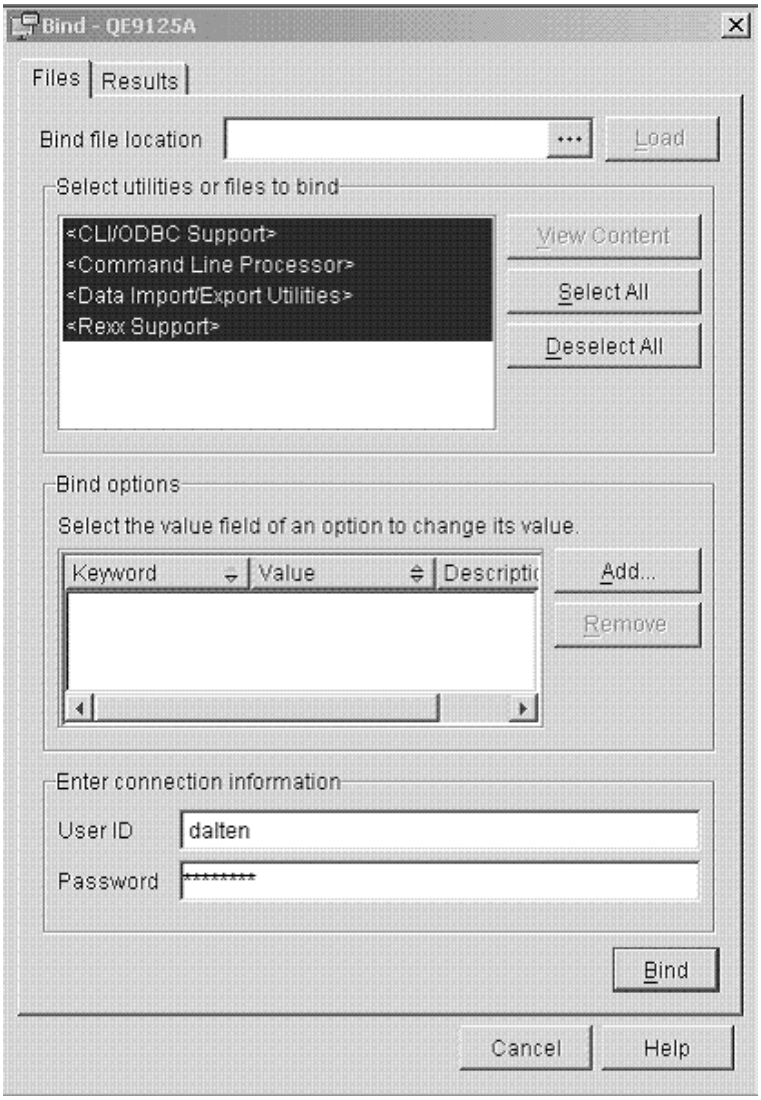
Configuration Assistant window

2. Highlight the database and on the Selected menu, select Bind.



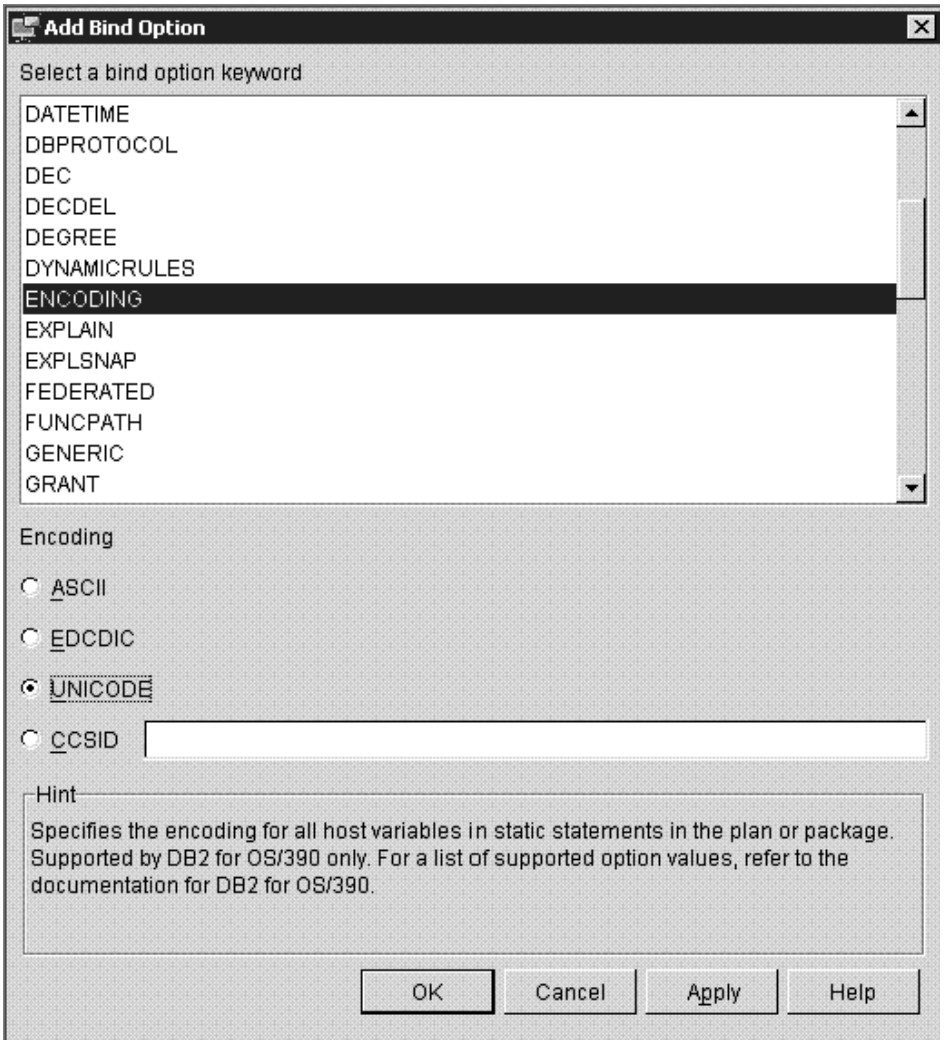
Selecting Bind on the Configuration Assistant

3. Enter a valid user ID and password. Click Select All and then click Add. The Add Bind Option window appears.



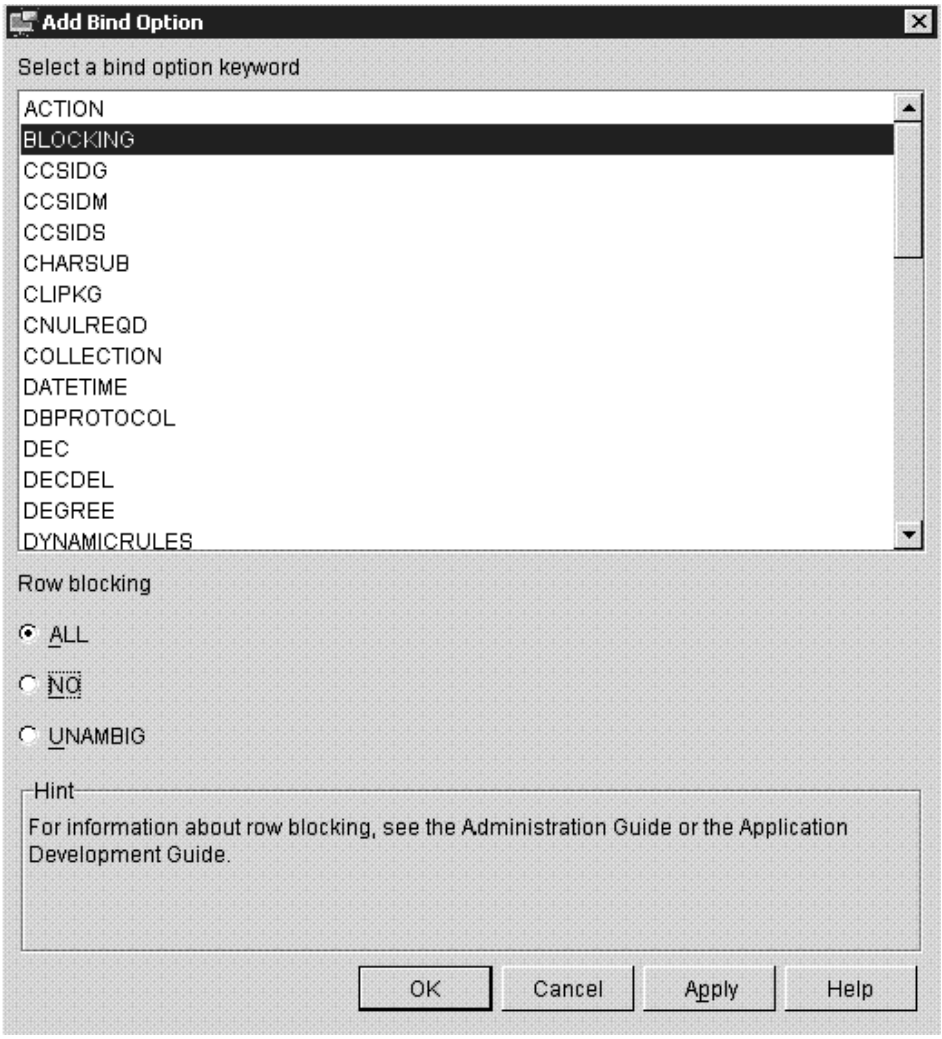
Files tab on the Bind window

4. Highlight *ENCODING* in the list, and select the UNICODE radio button in the Encoding area. Click Apply.



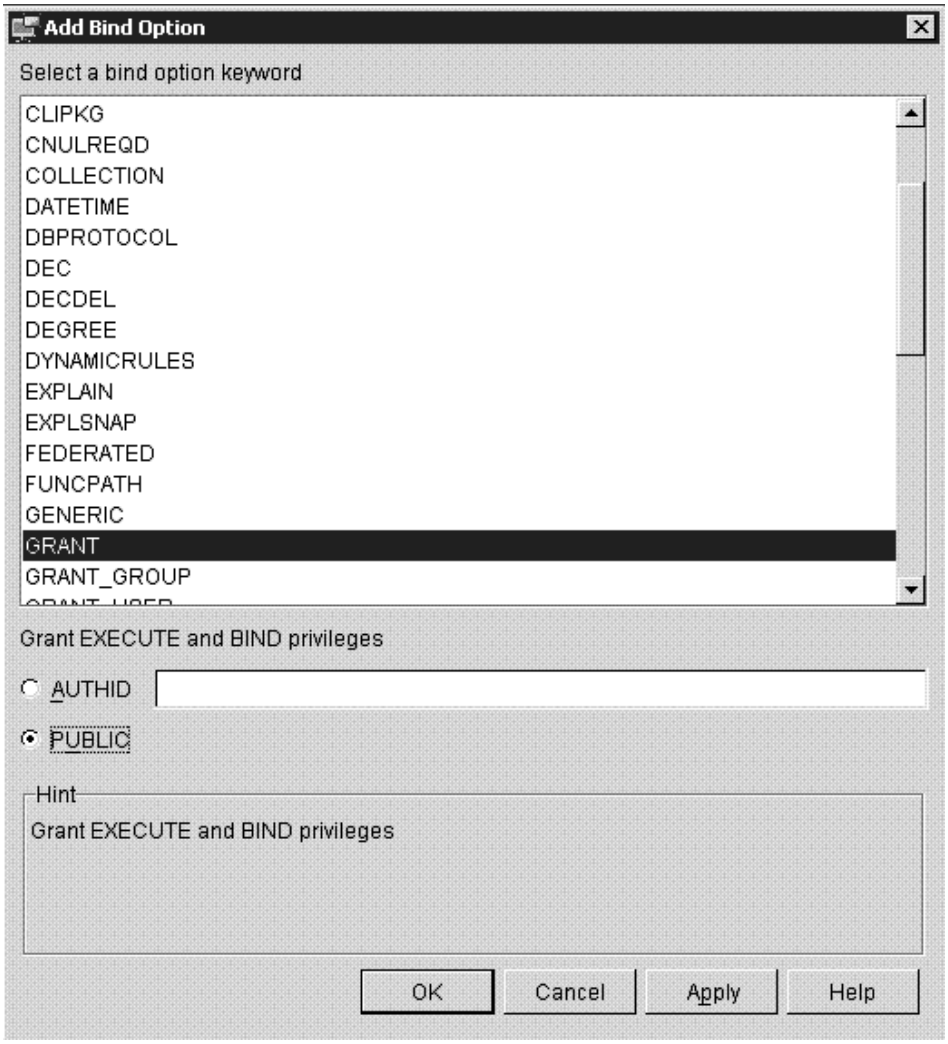
Specifying encoding on the Add Bind Option window

5. Highlight *BLOCKING* in the list, and select the ALL radio button in the Row blocking area. Click Apply.



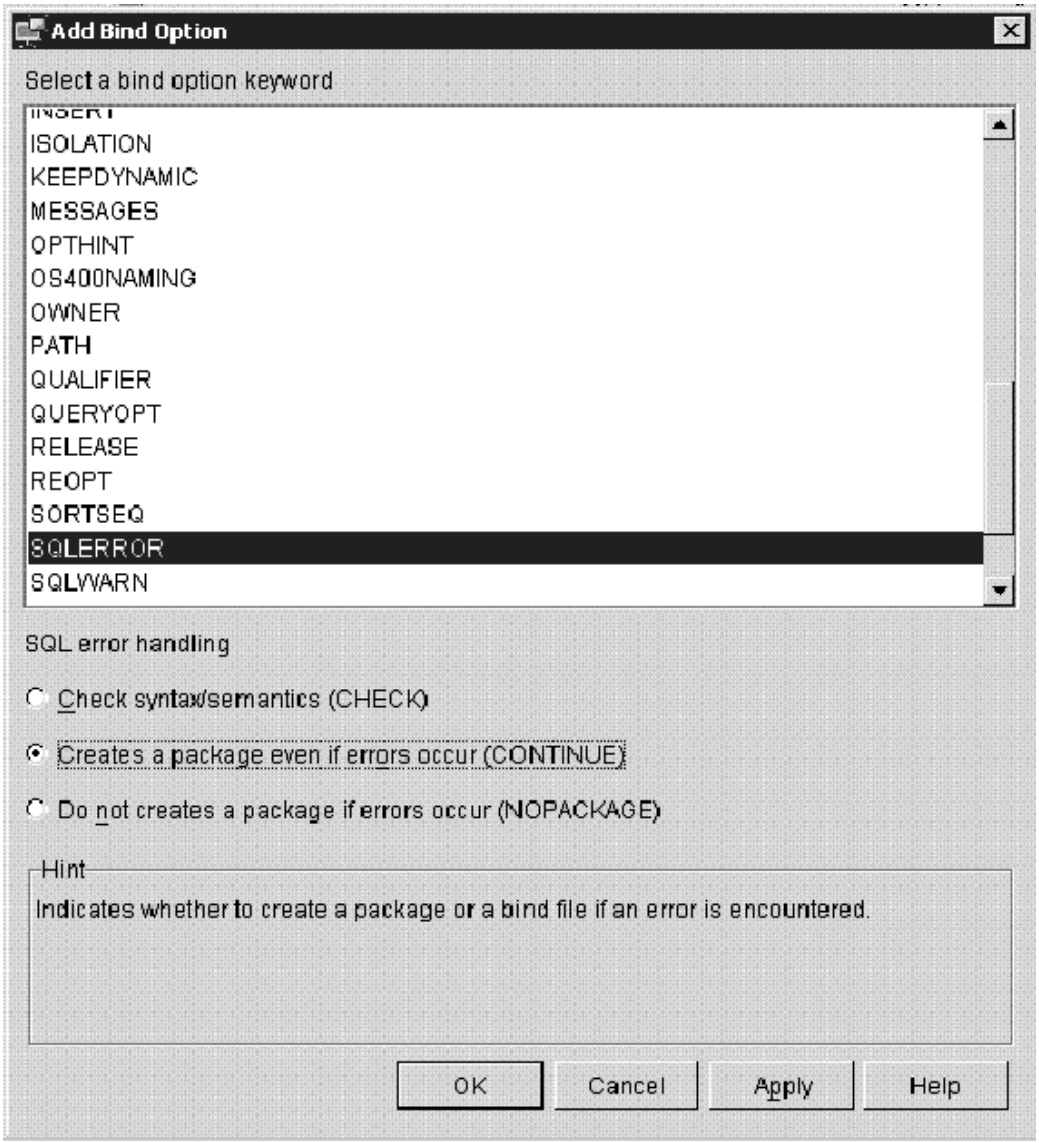
Specifying row blocking on the Add Bind Option window

6. Highlight *GRANT* from the list, and select the PUBLIC radio button from the Grant EXECUTE and BIND privileges area. Click Apply.



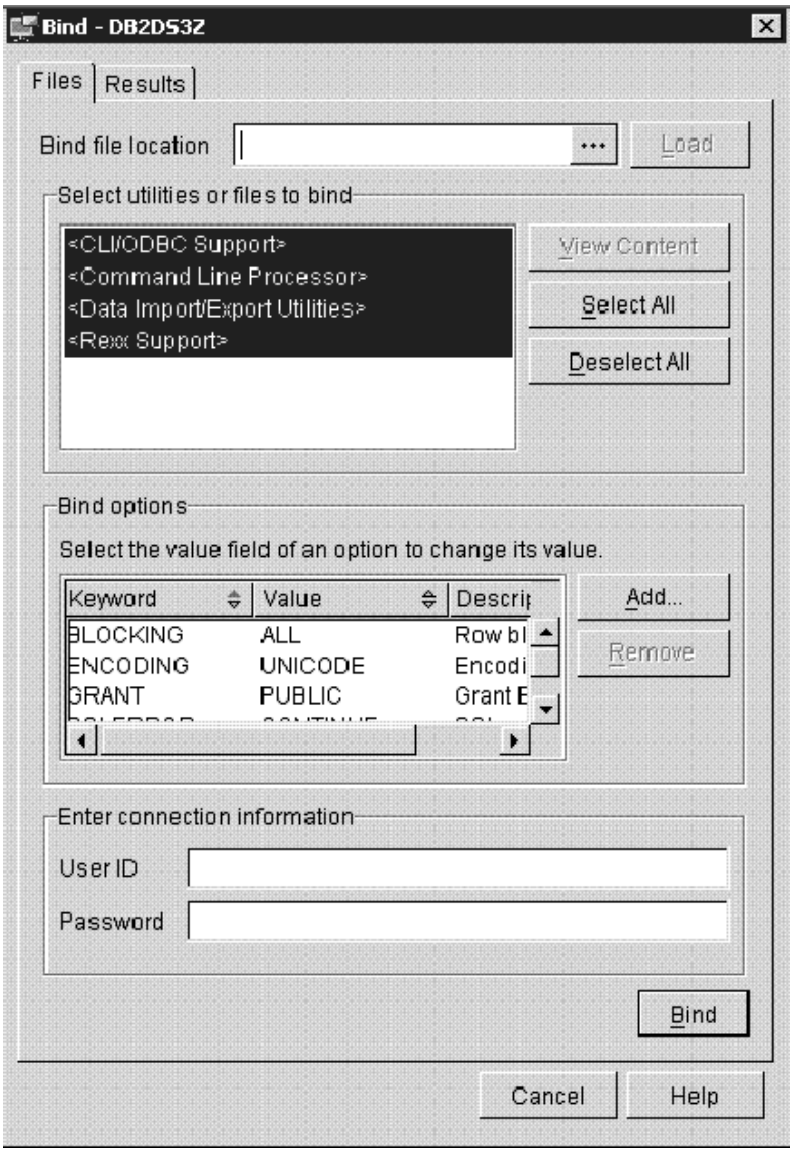
Specifying granting privileges on the Add Bind Option window

7. Highlight *SQLERROR* in the list, and select the Creates a package even if errors occur (CONTINUE) radio button. Click Apply, and then click OK to return to the Bind window.



Specifying SQL error handling on the Add Bind Option window

8. Verify that the Bind options list includes the options you added in the previous steps.

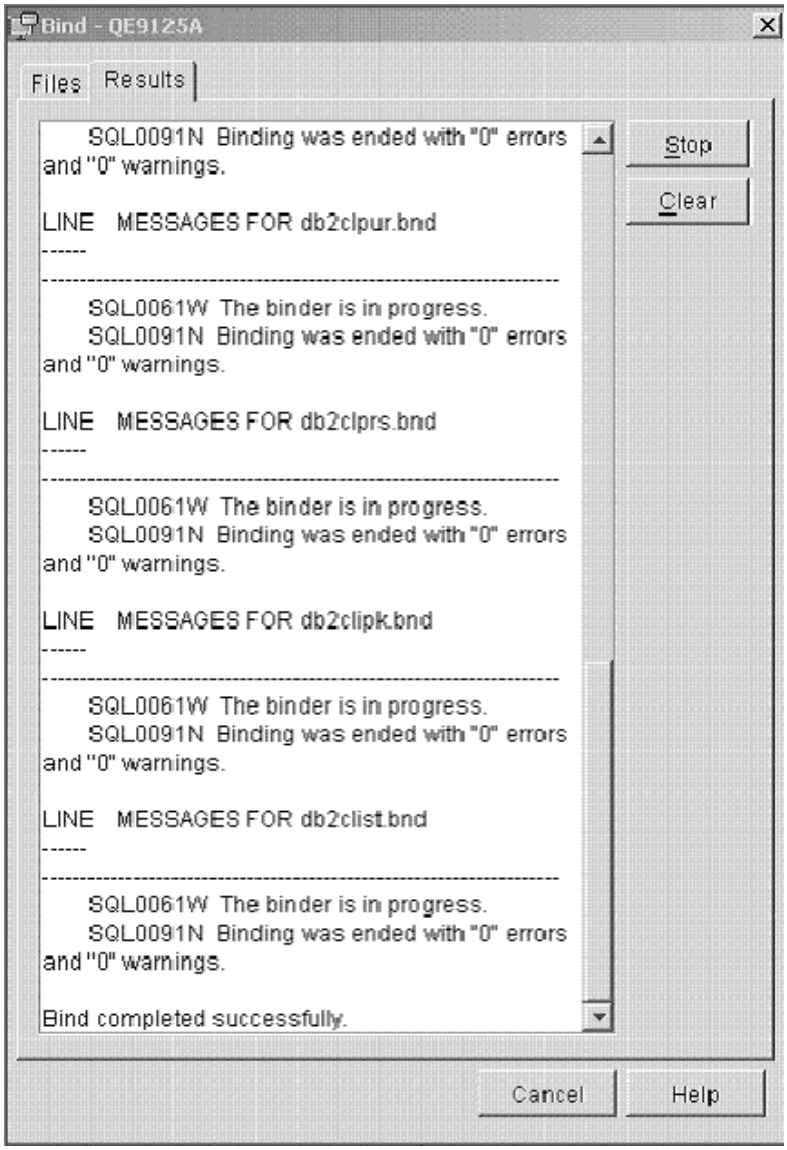


Verifying bind options on the Bind window

The Bind options area lists the following keywords and values:

Keyword	Value
ENCODING	UNICODE
BLOCKING	ALL
GRANT	PUBLIC
SQLERROR	CONTINUE

9. Add a user ID and password and click Bind to view the Results tab.



Verifying results on the Bind window

Note. You may see some warning messages in the list indicating that some bind options are not valid for all .bnd files. The Configuration Assistant may attempt to bind some Connect packages that are actually specific to the use of DB2 for Linux, UNIX, and Windows and not DB2 for z/OS. *You can ignore these warning messages.*

Task C-6: Setting DB2CodePage For A Unicode Database

Use these instructions to set DB2CodePage for a Unicode Database.

1. From a command prompt issue the db2set command as follows:

```
c:\apps\DB\DB2ODBC8\bin   db2set DB2CODEPAGE=1208
```

2. Issue the following command to verify that it has been set:


```
C:\Apps\DB\db2odbc8>db2set -all
```

You should see:

```
[i] DB2CODEPAGE=1208
```

Task C-7: Setting Up the DB2 Connect Gateway on UNIX

Use this task to set up the DB2 Connect Gateway on UNIX, as required for a UNIX application server or Process Scheduler.

1. The Client Configuration Assistant (CCA) helps you manage your database connections to remote servers. This is the preferred method to set up any Windows client to communicate with a server. You can use the Command Line Processor to set up DB2 clients on any platform and this will be the method used to configure DB2 Connect on the UNIX operating system.
2. If you are using TCP/IP to connect to the z/OS server and to catalog Nodes and Databases for a TCP/IP connection, the procedure is the same.

   See "Setting Up TCP/IP on the Client."
3. Test connection. From the UNIX command line type the following command:

   ```
   Db2 => connect to database_alias user userid using password
   ```

   For example:

   ```
   Db2 => connect to PT800T9 user PEOPLE1 using PASSWRD1
   ```
4. It may be necessary to bind the packages for DB2 Connect to the DRDA server for the first connection. The following is a sample bind of the DB2 Connect packages:

   ```
   Db2 => bind /usr/lpp/db2_05_00/bnd@ddcsmvs.lst action replace blocking all⇒
    grant public release commit sqlerror continue
   ```

Task C-8: Confirming DB2 Connect/ODBC Settings

DB2 Connect reads the DB2CLI.INI file in the \SQLLIB directory to obtain information at connection time. This file contains any overrides that are set via the Client Configuration Assistant when cataloguing the database. In past versions of PeopleSoft and DB2 Connect (formerly DDCS) there have been a number of DB2CLI.INI settings that have been recommended to improve performance.

Note. Use special care when you add settings to the DB2CLI.INI file. DB2 Connect will not inform you if a setting is misspelled; it just disregards the setting and uses the default.

We have made numerous changes to the PeopleSoft software to enable or disable DB2 Connect functionality at runtime that will result in improved performance. One example is the cursorhold setting. In PeopleSoft PeopleTools 8.50 and higher, we are completely controlling the cursorhold setting and we enable cursorhold for batch and disable it for PeopleSoft online activity. The following section lists the settings in the DB2CLI.INI file of special interest to PeopleSoft customers along with the Oracle recommendation:

- DEFERREDPREPARE — Defer Prepare chains together OPEN and PREPARE statements. This reduces network traffic which can have a significant impact in reducing response. DB2 Connect, by default, activates the Defer Prepare when creating new entries through Client Configuration Assistant.

  For PeopleSoft software: Use default setting (DEFERREDPREPARE=1) *It is the default setting – It is not necessary to add the setting to your DB2CLI.INI file.*

- CURSORHOLD — Cursor Hold determines at what point of the transaction to release a SQL cursor. Deactivating Cursor Hold releases cursors after a transaction has been committed. Programs within the PeopleSoft system control at what point a cursor needs to be released. The DB2 Connect default is Cursor Hold enabled.

  For PeopleSoft software: Use default setting (CURSORHOLD=1) *It is the default setting – It is not necessary to add the setting to your DB2CLI.INI file.*

- DISABLEKEYSETCURSOR — Support for Keyset cursors was introduced in DB2 Connect 6.1. PeopleTools testing has found a very high overhead in DB2 Connect when Keyset cursors are enabled. PeopleSoft PeopleTools uses forward cursors rather than Keyset cursors, so this extra overhead is not justified for PeopleSoft systems.

  For PeopleSoft software: Override the default setting by adding DISABLEKEYSETCURSOR=1 in DB2CLI.INI.

  Note. In a Keyset Cursor, the membership and order of rows in the result set are fixed at cursor-open time. Keyset cursors are controlled by a set of unique identifiers (keys) known as the Keyset. The keys are built from a set of columns that uniquely identify the rows in the result set. Changes to data values in non-Keyset columns (made by the cursor owner or committed by other users) are visible as the user scrolls through the cursor.

  Note. If a change disqualifies a row for membership or affects the order of a row, the row does not disappear or move unless the cursor is closed and reopened. Inserts to the database made outside the cursor are also not visible in the cursor unless the cursor is closed and reopened.

- DISABLEUNICODE — This is an undocumented DB2 Connect parameter. DB2 Connect will attempt to communicate with a DB2 z/OS database server via Unicode. If an Unicode conversion service has not been enabled on your mainframe, you will be unable to connect to the database. If ICONV is used for the Unicode conversion, IBM has documented cases in which data corruption has ocurred. For this reason, the PeopleSoft installation requires that the DISABLEUNICODE=1 parameter be used to suppress DB2 Connect from communicating in Unicode, and use ANSI instead. The default is enabled. The PeopleSoft installation requires adding DISABLEUNICODE=1 to the DB2CLI.INI file.

  Note. For a Unicode installation, do not add DISABLEUNICODE=1 to the DB2CLI.INI file.

Note. If you are using DB2 Connect with multiple DB2 platforms (z/OS, Linux, UNIX, or Windows), add this statement to the stanzas pertaining to each individual DB2 z/OS database configured in the DB2CLI.INI file. Do not add this parameter to any non-z/OS database configurations, and do not add it to the COMMON stanza. If you are connecting to DB2 z/OS databases exclusively, then you may add this parameter once in the DB2CLI.INI file, in the COMMON stanza.

- CLI/ODBC Trace settings — If you want to enable DB2 Connect Trace, you need to add the parameters for turning the trace *On* in the [Common] section only. Adding the trace information in a database-specific section will be ignored. So if you turn trace on for any database, the trace gets activated for every database that is catalogued on the workstation.

  These are the recommended settings for turning Trace on:

```
[COMMON]
TRACEFLUSH=1
TRACEPATHNAME=C:\TEMP\DB2TRACE\
TRACECOMM=1
TRACE=1   (trace=0 turns the trace OFF)
```

Note. The DB2CLI.INI file contains a section for each database you configure. For example, if you catalog database PT800T1 you will see a [PT800T1] section in the DB2CLI.INI. A convenient way to set an override for all databases is to add it to the [Common] section of the DB2CLI.INI. If you add the overrides to this section, you do not need to add the override for each database because the [Common] section applies to all databases. For example:

[Common]

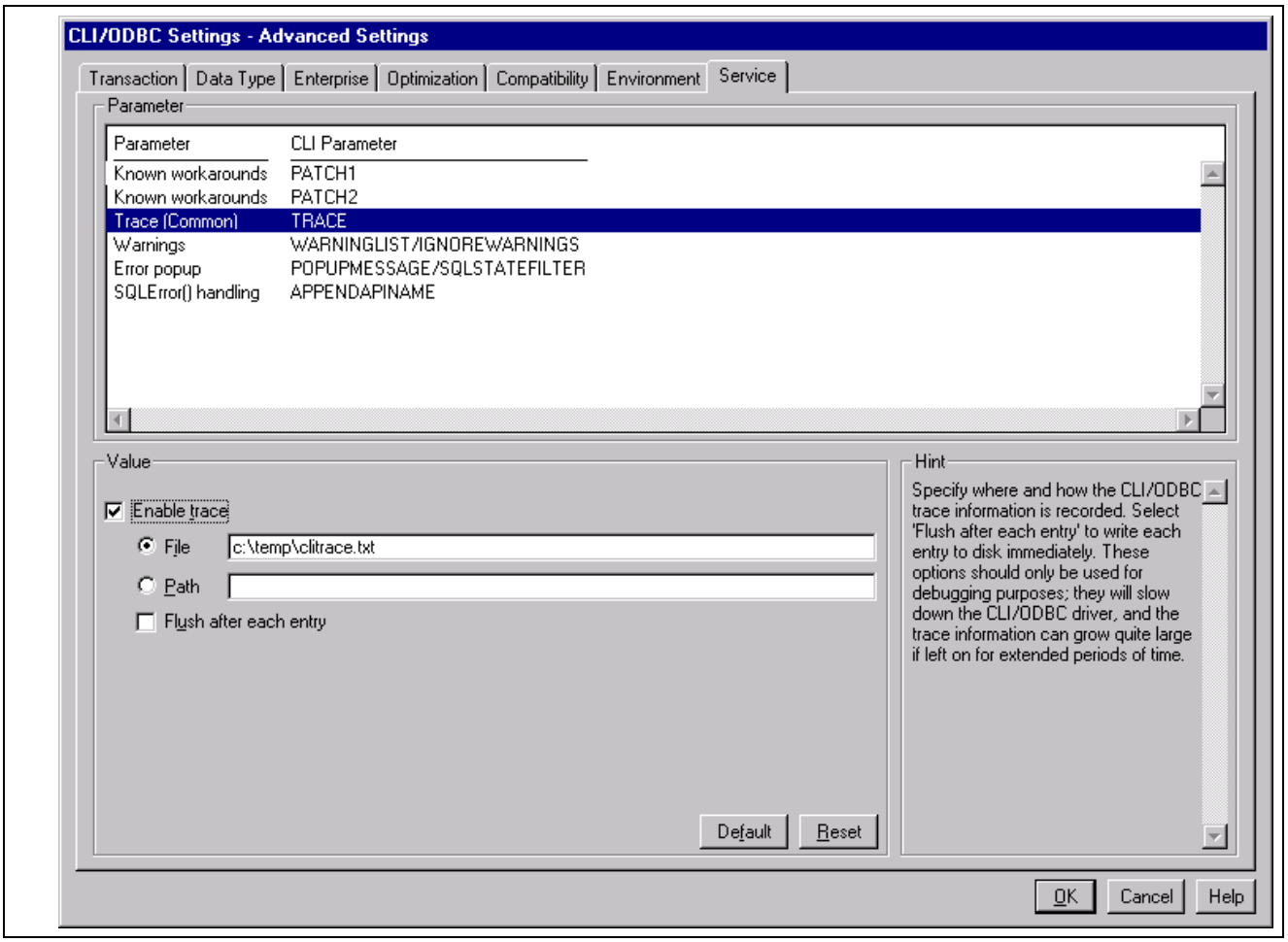
DISABLEKEYSETCURSOR=1

Task C-9: Setting CLI/ODBC Trace with the Client Configuration Assistant

The DB2 CLI/ODBC trace is a valuable tool for debugging conversations between client workstations and the DB2 for z/OS database server. The trace can be set via the DB2CLI.INI file directly (see the previous section) or via the Client Configuration Assistant. You now need to alter the database settings specific for use with the PeopleSoft database.

To set CLI/ODBC Trace with the Client Configuration Assistant:

1. From the Client Configuration Assistant panel, highlight the database entry you just added and click on the Properties button. This brings up the Database Properties panel.
2. Click on the Settings button. This will give you the DB2 Message box requesting you to connect to the data source.
3. Choose No. This will take you to the CLI/ODBC Settings panel.
4. Click on the Advanced button to open the Advanced Settings page.



CLI/ODBC Settings - Advanced Settings page: Service tab

5. From the Advanced Settings page, verify that you are on the Transaction tab. Select the Service tab and enable the trace.

   Select Trace in the Parameter list, select the Enable Trace option, and enter a path and filename in the “To” area to specify where the DB2 CLI/ODBC trace information is recorded, as shown in the example above.

6. Click OK to save your changes.
7. From here on, click OK until you return to the Client Configuration Assistant panel, and then close it.

APPENDIX D

Installing PeopleBooks

This appendix discusses:

- Understanding PeopleBooks
- Installing and Accessing PeopleBooks
- Configuring Context-Sensitive Help
- Using Oracle Secure Enterprise Search for Full-Text Searches
- Installing PeopleSoft Application PeopleBooks
- Migrating Previous Versions of PeopleBooks

Understanding PeopleBooks

PeopleBooks are the documentation delivered with PeopleSoft PeopleTools and every PeopleSoft application. This appendix describes how to install and configure PeopleBooks so that you can deploy the PeopleSoft documentation at your site.

There are three options for configuring PeopleBooks.

- *Hosted PeopleBooks:* Use PeopleBooks over the Internet with the Oracle PeopleSoft Enterprise Hosted PeopleBooks.
- *Full-text Search:* Requires installation of Oracle Secure Enterprise Search (SES).
- *Context-sensitive help:* Configure PeopleSoft PeopleTools to call PeopleBooks as context-sensitive help from both internet applications and Microsoft Windows-based programs. For instance, when a user clicks the Help link in a browser or presses F1 in Windows, the appropriate documentation appears.

Note. The F1 button calls PeopleBooks Help only for the PeopleTools Development Environment (the Windows-based client). If you press F1 while using the portal, you invoke the help for your current browser. For context-sensitive help in the portal, end users need to click the Help link to call PeopleBooks Help.

See Also

Oracle Documentation, Oracle Technology Network, http://www.oracle.com/technetwork/documentation/index.html

Task D-1: Installing and Accessing PeopleBooks

This section discusses:

- Prerequisites
- Accessing Oracle PeopleSoft Enterprise Hosted PeopleBooks
- Obtaining PeopleBooks and Installation Files from Oracle E-Delivery
- Installing the PeopleBooks Installation Software

Prerequisites

PeopleSoft PeopleTools 8.52 PeopleBooks are immediately available for use over the Internet at the Oracle Enterprise PeopleSoft Hosted PeopleBooks web site (http://www.oracle.com/pls/psft/homepage). The prerequisite for using this site is an Internet connection available to your server where PeopleSoft PeopleTools is installed. Alternatively, you can install PeopleSoft PeopleBooks to any file server, and for full-text capability, to any server hosting web server software.

Task D-1-1: Accessing Oracle PeopleSoft Enterprise Hosted PeopleBooks

Open a browser and enter the URL: http://www.oracle.com/pls/psft/homepage. Here you can see all the hosted PeopleBooks currently available. For the PeopleSoft PeopleTools 8.52 PeopleBooks, select the link for your product application.

You can configure your PeopleSoft server to use hosted PeopleBooks for context-sensitive help. Each page in your PeopleSoft applications includes a Help icon that, when clicked, opens a new browser window displaying help topics that discuss that page. To enable the Help link from application pages:

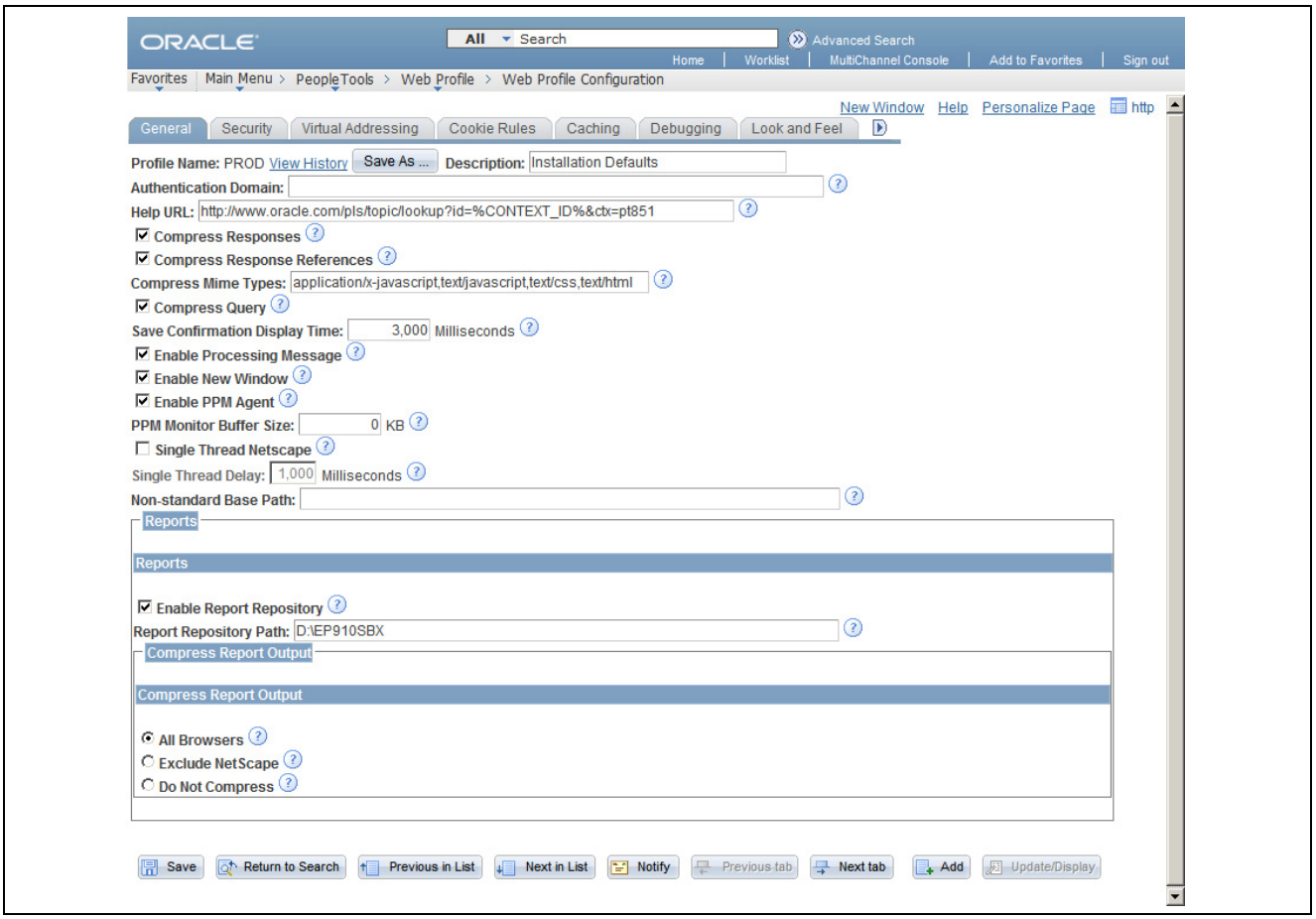
1. Log in to your PeopleSoft application in a browser.
2. Select PeopleTools, Web Profile, Web Profile Configuration.
3. Click Search and select the Profile Name you specified during your PeopleSoft Pure Internet Architecture installation, for example, PROD.
4. On the General page in the Help URL field, enter the URL for your product.

   The URLs are available on the Oracle PeopleSoft Enterprise Hosted PeopleBooks web page. Select the link View the simple steps to set up the context sensitive help.

   See "View the simple steps to set up the context sensitive help," Oracle PeopleSoft Enterprise Hosted PeopleBooks, http://download.oracle.com/docs/cd/E17566_01/epm91pbr0/eng/psbooks/EnablingtheHelpLinkfromApplicationPages.pdf

   This example uses the URL for PeopleTools 8.51 PeopleBooks:

   http://www.oracle.com/pls/topic/lookup?id=%CONTEXT_ID%&ctx=pt851



Web Profile Configuration General page with PeopleBooks URL

5. Save and exit the Web Profile Configuration page.
6. Restart the following servers:
   - If your PeopleSoft Pure Internet Architecture (PIA) is running on Oracle WebLogic, restart the PIA and admin web servers.
   - For IBM WebSphere, restart the PeopleSoft Pure Internet Architecture server.
   - If the Help link does not appear in the next step, it may be necessary to also stop and restart the application server.
7. Test the help functionality by clicking the Help icon on a PeopleSoft application page.

PeopleTools Application Designer also has context sensitive help available through the user's F1 key. To enable this help functionality, the PeopleTools Options must be configured to access the PeopleBooks Library as follows:

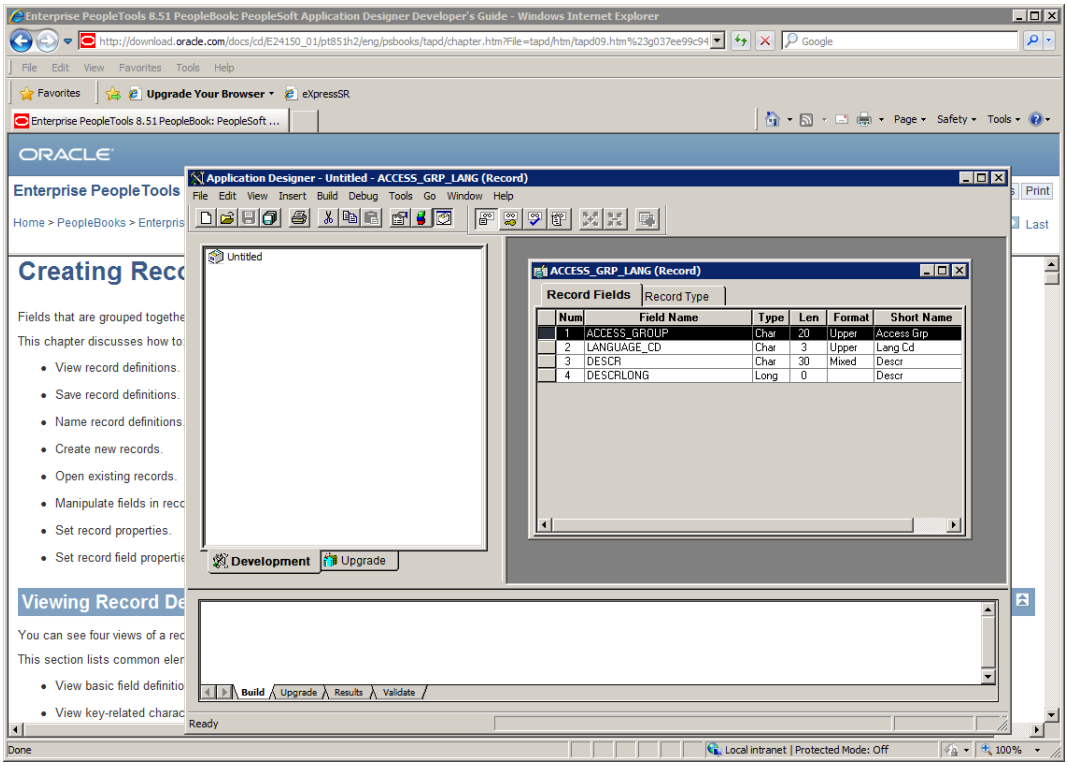
1. In your PeopleSoft application, navigate to the PeopleTools, Utilities, Administration, PeopleTools Options.
2. Scroll down to the Help Options group.
3. Enter the value for the F1 URL field. The URL should be similar to the following:

   http://www.oracle.com/pls/topic/lookup?id=%CONTEXT_ID%&ctx=pt851

Note. The correct URL for this field is available on the Oracle PeopleSoft Enterprise Hosted PeopleBooks web page. Select the link View the simple steps to set up the context sensitive help, and select the link for PeopleTools 8.52.

4. Save and exit the PeopleTools Options page.
5. Open Application Designer. Press F1 to display general information on using Application Designer.
6. For context sensitive help, open an object, such as a panel or PeopleCode, then press F1.

   This example shows the a browser with the documentation for creating a record, with Application Designer.



Application Designer with browser showing F1 Help

Task D-1-2: Obtaining PeopleBooks and Installation Files from Oracle E-Delivery

This section explains locating and using the installation files for PeopleBooks.

To obtain files for the PeopleBooks installation from Oracle, after logging in to Oracle E-Delivery, on the Media Search Pack page, select the *PeopleSoft Enterprise* media pack from the Select a Product Pack drop-down list. Download the zip files for PeopleSoft Enterprise 8.52 PeopleBooks.

Task D-1-3: Installing the PeopleBooks Installation Software

PeopleBooks can be installed directly to a Microsoft Windows, Linux or UNIX machine. In addition, PeopleBooks from prior PeopleSoft releases can be migrated into the new site.

To install the PeopleBooks software on a file server:

1. Go to the directory where you downloaded the PeopleBooks installation files.
2. Extract the contents of the zip file to your file server where you want the PeopleBooks to reside.

   After the extraction, there will be two folders: one with the sku number (for example pt852pbr1) and a utils folder.
3. To view PeopleBooks, simply open the folder with the sku number you extracted, then launch index.htm.
4. For full-text search, see the section below on configuring Oracle Secure Enterprise Search.

To install the PeopleBooks software on a web server:

1. Go to the directory where you downloaded the PeopleBooks installation files.
2. Extract the contents of the zip file to your web server root, where you want the PeopleBooks to reside.

   After the extraction, there will be two folders: one with the sku number (example pt852pbr1) and a folder named utils.
3. To view PeopleBooks, open a browser and navigate to an URL comprised of the web root of your server plus *sku_number*/index.htm

   For example, when the web root is http://myserver:5080, and *sku_number* is pt852pbr1, the URL for viewing is:

   http://myserver:5080/pt852pbr1/index.htm
4. For full-text search, see the section below on configuring Oracle Secure Enterprise Search.

See Also

Using Oracle Secure Enterprise Search for Full-Text Searches

Task D-2: Configuring Context-Sensitive Help

This section discusses:

- Enabling the Help Link from the Application Pages
- Enabling F1 Help

Task D-2-1: Enabling the Help Link from the Application Pages

Each page in your PeopleSoft applications includes a Help icon that, when clicked, opens a new browser window displaying help topics that discuss that page.

To enable the Help link from application pages:

1. In your PeopleSoft application, navigate to the PeopleTools, Web Profile, Web Profile Configuration page.
2. Click Search and select the Profile Name you specified during your PeopleSoft Pure Internet Architecture installation.
3. Specify the value for the Help URL field as follows:

   ```
   http://<host_name>:<port>/<document_folder>/f1search.htm?ContextID=%CONTEXT_⇒
   ID%&LangCD=%LANG_CD%
   ```


Note. If you do not want the Help icon to display in your applications, clear the Help URL field value.

For example, if your web server is called mywebserver, you are using port 5080, and your document_folder is htmldoc, the Help URL value would be:

```
http://mywebserver:5080/htmldoc/f1search.htm?ContextID=%CONTEXT_ID%&LangCD=⇒
%LANG_CD%
```

- Change <*host_name*> to reflect your installation.
- Enter the web server port for <*port*>.
- The value for <*document_folder*> is htmldoc. If you installed to a directory other than htmldoc, use that value for <*document_folder*>.
- The system resolves %CONTEXT_ID% to the page name from which you called help. The system resolves %LANG_CD% to the signon language of the user.

4. Save and exit the Web Profile Configuration page.
5. Before testing help functionality, purge the browser cache on the client and close all web browsers.

   Restart the application server and web server for PIA.
6. Test the help functionality by clicking the *Help* icon on a PeopleSoft application page.

Task D-2-2: Enabling F1 Help

This procedure describes how to enable F1 help for Application Designer, PeopleCode Editor, and other Microsoft Windows-based PeopleSoft programs.

To enable F1 help:

1. Sign on to your PeopleSoft application using your browser.
2. Select the PeopleTools, Utilities, Administration, PeopleTools Options page.
3. Enter the same URL as in the previous procedure (where <*host_name*>, <*port*>, and <*document_folder*> reflect your installation) into the F1 Help URL field:

   ```
   http://<host_name>:<port>/<document_folder>/f1search.htm?ContextID=%CONTEXT_⇒
   ID%&LangCD=%LANG_CD%
   ```

   For example:

   ```
   http://myserver:5080/htmldoc/f1search.htm?ContextID=%CONTEXT_ID%&LangCD=%LANG_⇒
   CD%
   ```
4. Save the page.

Task D-3: Using Oracle Secure Enterprise Search for Full-Text Searches

This section discusses:

- Understanding Oracle Secure Enterprise Search and PeopleBooks
- Prerequisites

- Crawling a Source to Generate Full-Text Search

Understanding Oracle Secure Enterprise Search and PeopleBooks

Using Oracle Secure Enterprise Search (SES) for full-text searches allows you to build full-text search for your PeopleBooks installation and perform advanced searches.

Prerequisites

Prior to implementing full text search with SES, you must first implement SES. Record the following information, as it will be required when configuring integration between SES and PeopleBooks:

- SES server host name, and the port on which SES is listening.

  For example, orases12.urcompany.com:7779
- SES administrator user ID and password, that is, the credentials you use to sign on to the SES administration console.
- PeopleBooks documentation URL

  For example: http://mywebserver:5080/htmldoc/index.htm

See Also

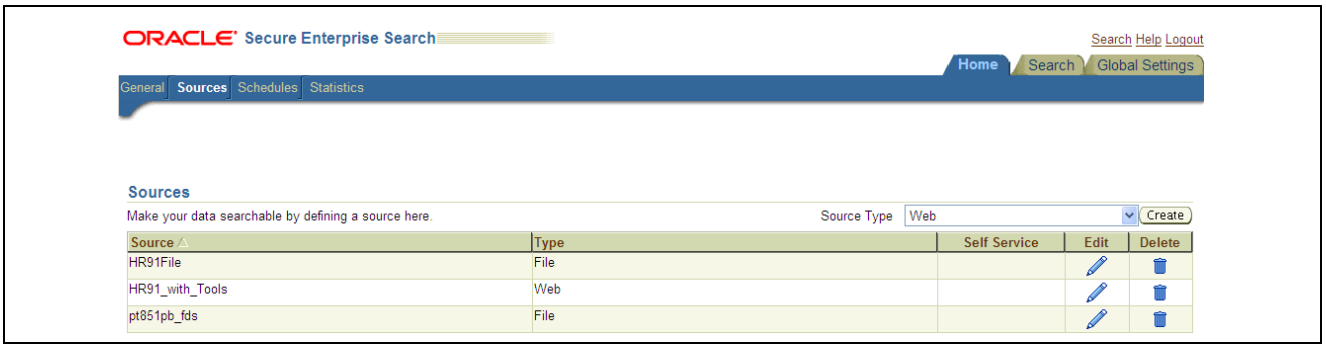
Oracle® Secure Enterprise Search Installation and Upgrade Guide 11g Release 1 (11.1.2.0.0) for <your operating system>

"Configuring Integration Between PeopleSoft PeopleTools and Oracle SES"

Task D-3-1: Crawling a Source to Generate Full-Text Search

To configure SES for full-text search:

1. Log in to your SES portal.
2. Select Sources at the top left.

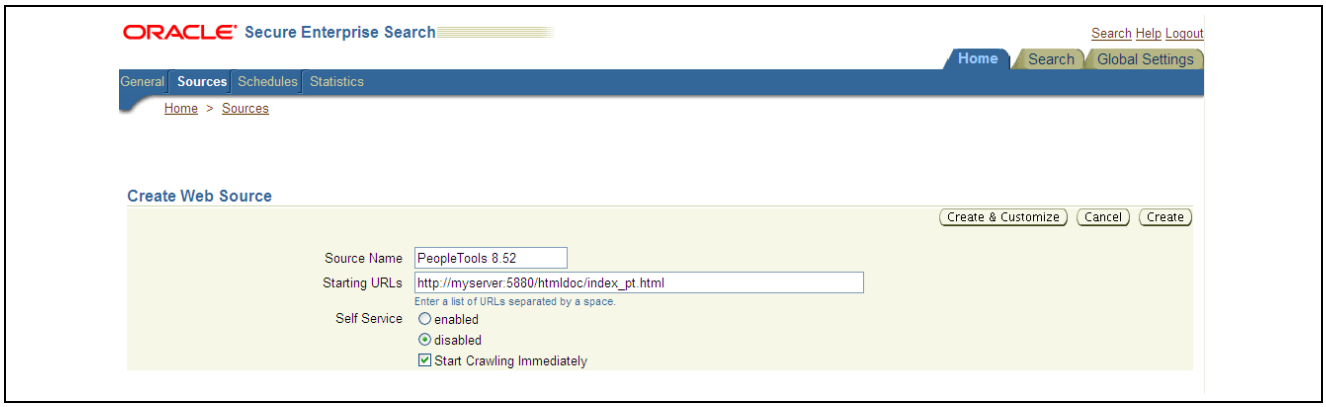


SES Sources page

3. Select the Source Type from the drop-down box, and click the Create button.

   Select Web or File as the Source Type, depending upon where your PeopleBooks are installed. In the example above, Web is selected.
4. Enter a value for Source Name.

This may be any name you like. In this example, the source name is PeopleTools 8.52.



Create Web Source page

5. If you selected Web as the Source Type:
   a. In the Starting URLs field, enter the URL for your PeopleBooks folder, followed by index_xxx.html.

      For example: http://myserver:zzzz/htmldoc/index_pt852pbr1.html where myserver is the host name, zzzz is the port number and index_pt852pbr1.html is the PeopleTools PeopleBook source file for SES to crawl.

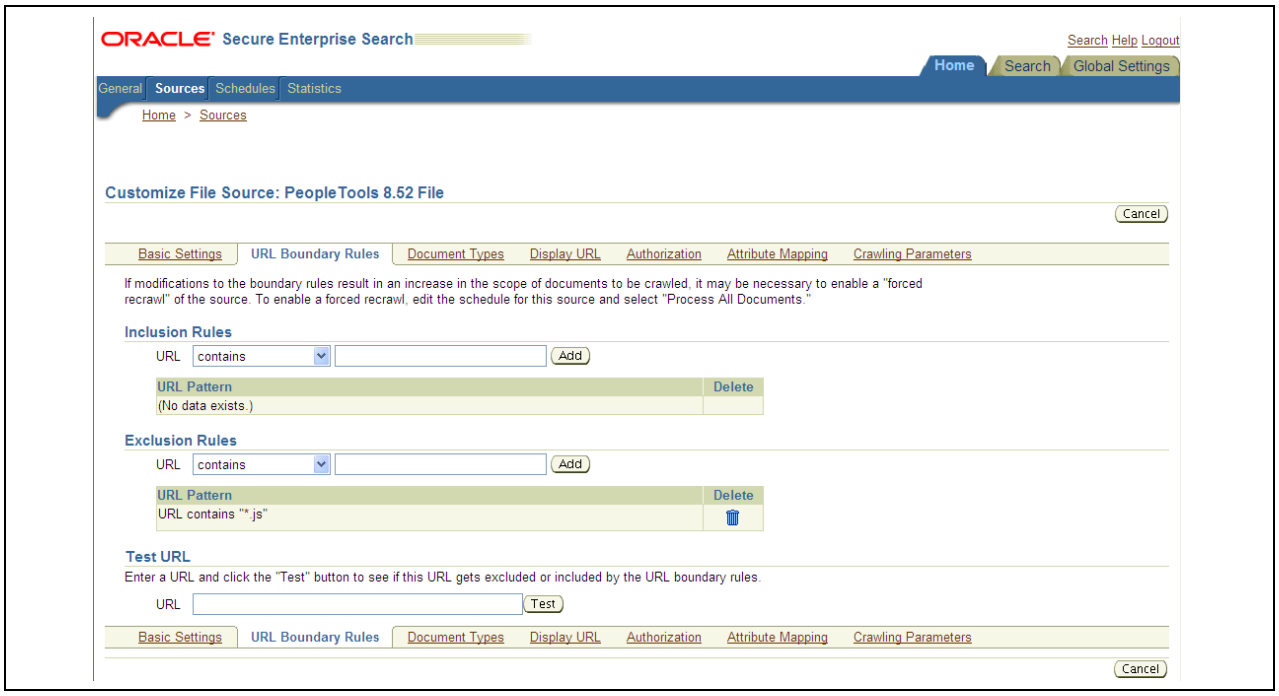
   b. Click the Create button.
6. If you selected File as the Source type:
   a. In the Starting URLs field, enter the path to the folder where your PeopleBooks are stored and include the eng folder.

      Use the format: file://localhost/*FullPathToDocumentFolder*/eng.

      For example, file://localhost/home/admin/htmldoc/eng.

   b. Click the Create & Customize button.
   c. On the Customize File Source page, select the URL Boundary Rules tab. Under Exclusion rules, enter the value "*.js" to exclude URLs containing this value.
   d. Click the Add button.

      This example shows the Customize File Source page after adding "*.js":



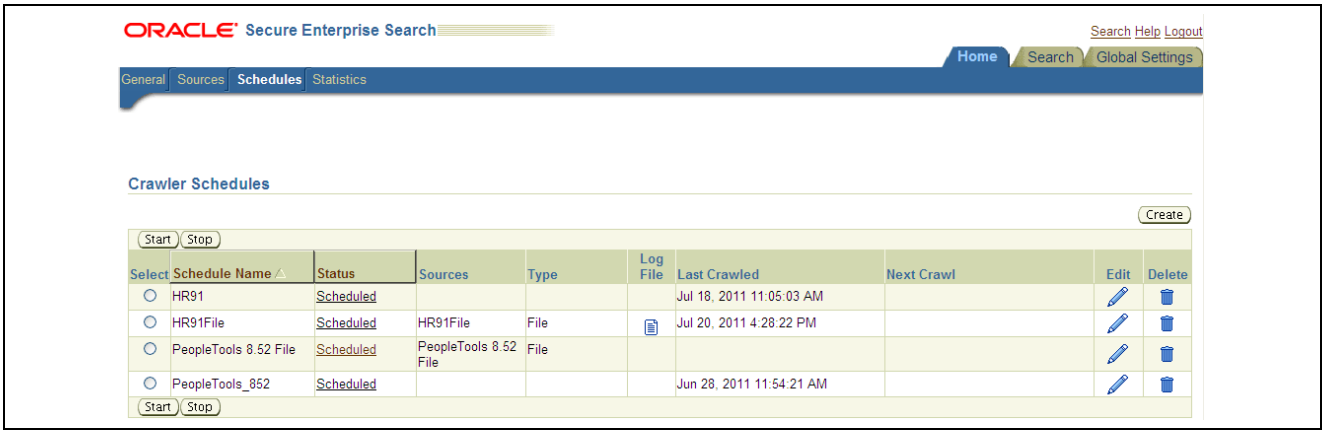
Customize Files Source page

e. Select the Display URL tab. Set the File and Display URLs according to your file server requirements.

   See the Oracle Secure Enterprise Search Online Help for further information (click the Help link on this page for more information).

7. Select Schedules at the top left.

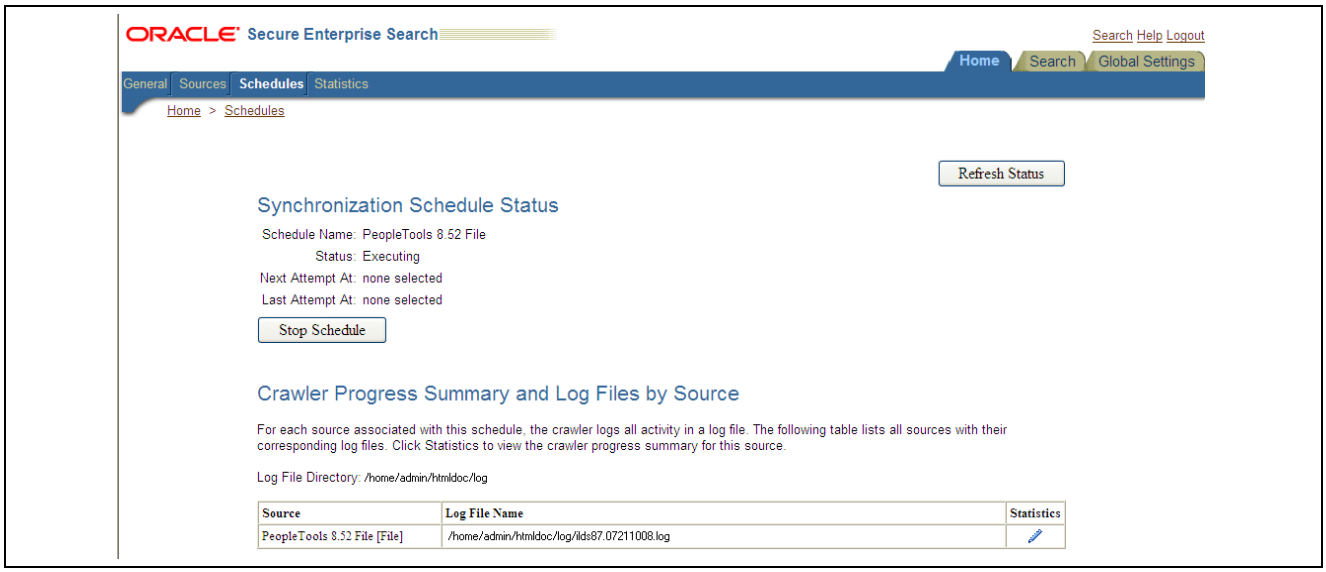
8. Locate your Index name in the Schedule Name column, then click the corresponding link in the Status column.



Crawler Schedules page

9. On the Synchronization Schedule Status page, click the Refresh Status button to monitor job progress.

   To see detailed information, click the Statistics icon when it appears in the log file table, as shown below.



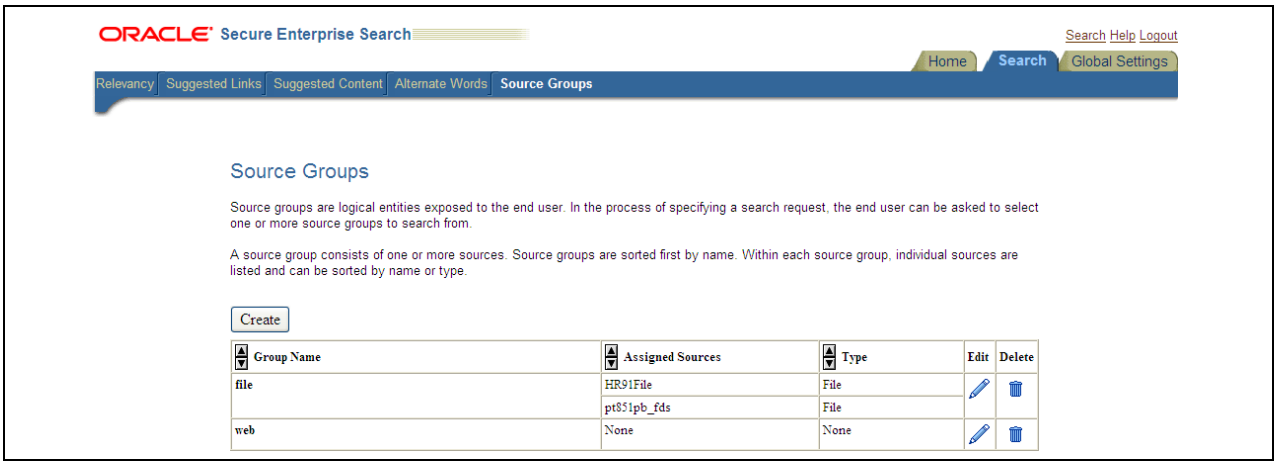
Synchronization Schedule Status page

10. (Optional) To create a Source Group:

    You have the option to create a Source Group containing the PeopleTools PeopleBooks index. Search groups allow the user to select which index(es) to search.

    a. Click the Search tab at the top right of the Synchronization Schedule Status page.

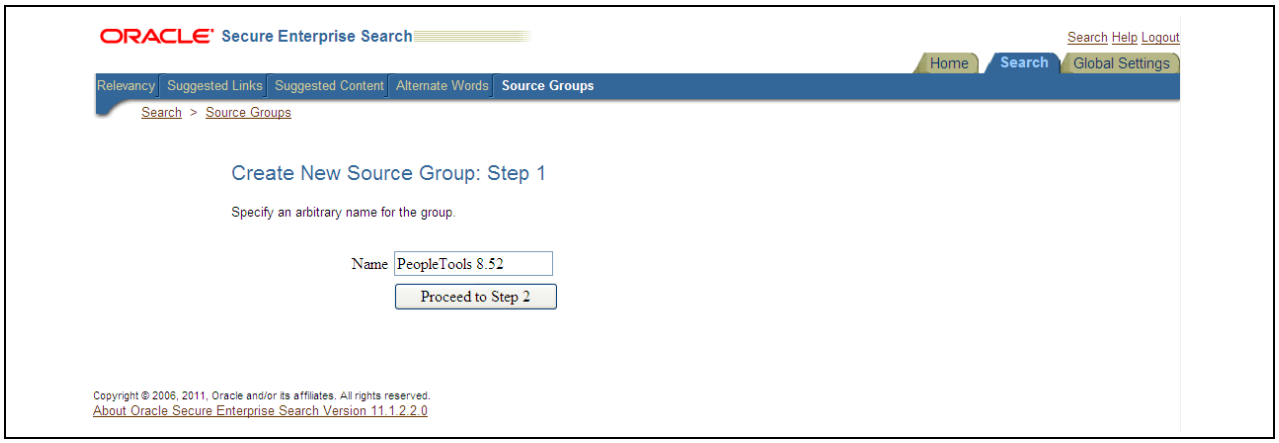
    b. Select Source Groups at the top left, and click Create.



Source Groups page

    c. Enter a meaningful name to represent the index group, especially if it will contain your PeopleSoft PeopleTools and later, some PeopleSoft Application indexes.

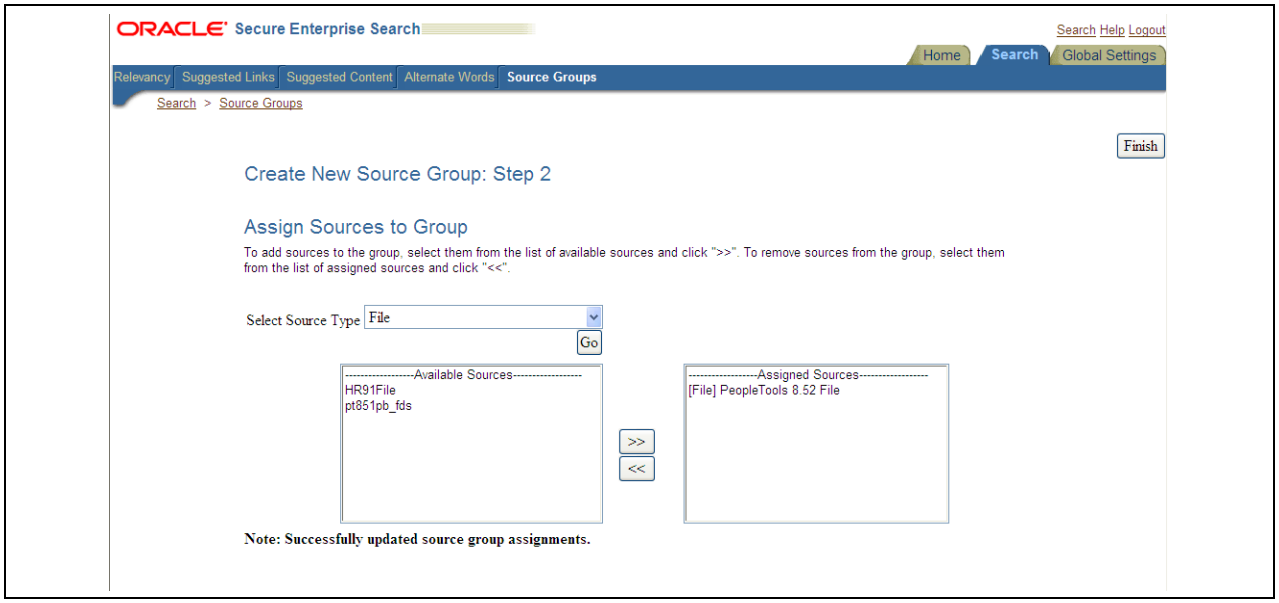
    This name will be visible by end users. Click Proceed to Step 2.



Create New Source Group: Step 1 page

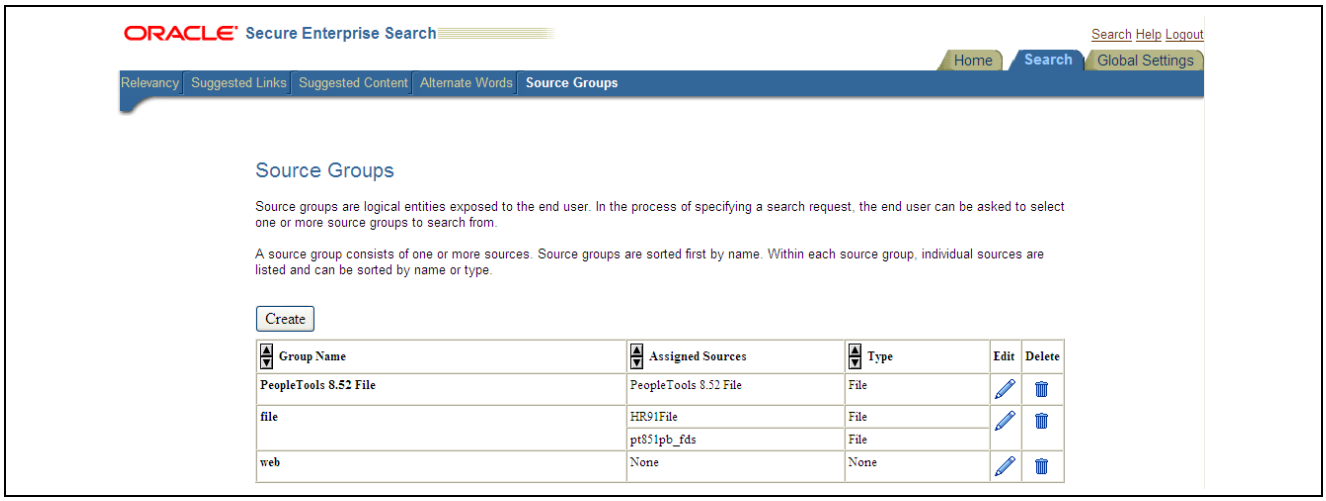
d. Confirm that the source type selected is correct (web or file).

e. From the Available Sources column, highlight the index you just created, then click the double right arrow between the two columns to move the index to the Assigned Sources column.



Create New Source Group: Step 2 page

11. Click the Finish button and it will return you to the list of index names.



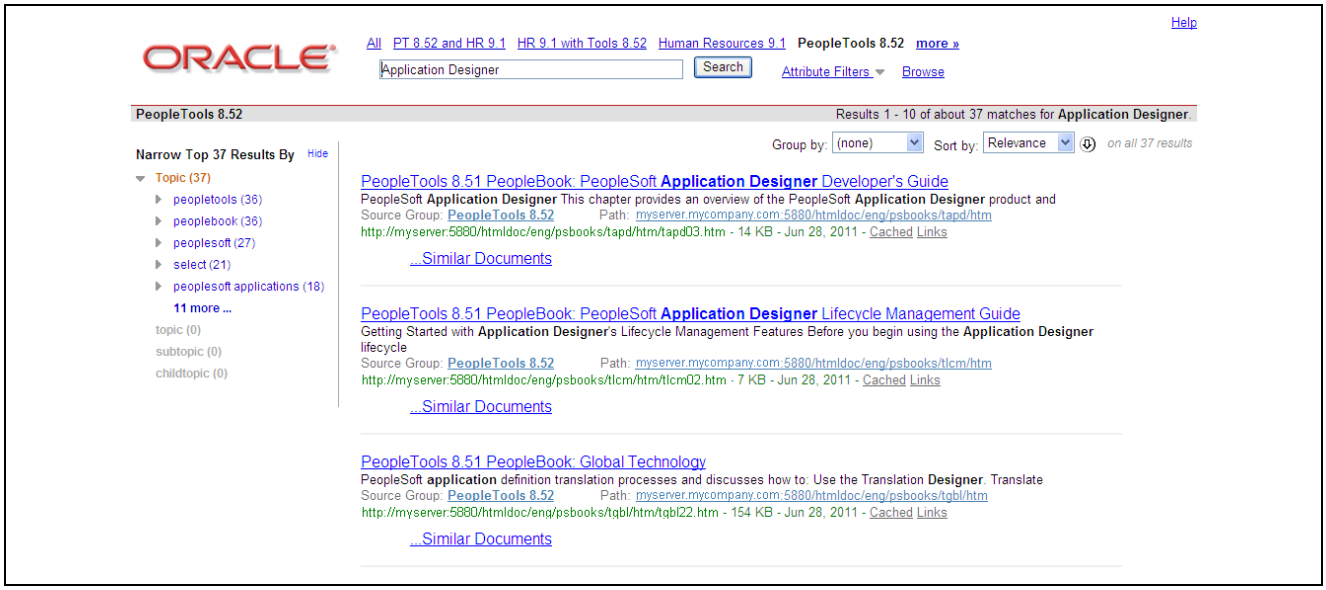
Source Groups page with new group

12. To test the search index, click the Search link, not tab, at the top right of the screen.

    Click the name of the Search Source group you created (if applicable) and note the resulting URL, which will serve as the search home for PeopleBooks.

13. Test the index by entering some criteria in the search box and clicking the Search button.

    In this example, the Search Source “PeopleTools 8.52” is selected and displays results for search criteria “Application Designer”.



Search results

14. If your PeopleBooks reside on a web server, modify the *document_folder*/js/common.js file as follows:

    Locate the line `var searchPageURL = " ";` in the Search Page Settings section and insert the URL of the search home for PeopleBooks determined in step 12 above. This example shows the Search Page Settings section before modification:

```
/////////////////   Search Page  Settings     ////////////////
var searchPageURL = "";
```

This example shows the Search Page Setting section after modification:

```
/////////////////   Search Page  Settings     /////////////////
var searchPageURL = "http://myserver:7778/search/query/search?search.timezone=⇒
420&search_startnum=&search_endnum=&num=10&search_dupid=&exttimeout=false&act⇒
ProfID=0&group=MB+pt852pbr1&q=&search_p_main_operator=all&search_p_atname=&adn=⇒
&search_p_op=equal&search_p_val=&search_p_atname=&adn=&search_p_op=⇒
equals&search_p_val=";
```

Task D-4: Installing PeopleSoft Application PeopleBooks

This section discusses:

- Understanding Installing PeopleSoft Application PeopleBooks
- Merging PeopleSoft Application PeopleBooks with PeopleSoft PeopleTools PeopleBooks
- Installing the PeopleSoft Application PeopleBooks to its Own Folder
- Creating Full-Text Searches for Custom Documentation

Understanding Installing PeopleSoft Application PeopleBooks

This section describes two options available for installing Application PeopleBooks:

- Merge PeopleSoft Application PeopleBooks with PeopleTools PeopleBooks.

  This option allows the application to perform context sensitive search against multiple PeopleBooks with one URL (for example, PeopleSoft PeopleTools 8.52 and Human Capital Management 9.1).

- Install PeopleSoft Application PeopleBooks to their own folder.

  This option allows the application to perform context sensitive search against only one PeopleBook (for example: Human Capital Management 9.1).

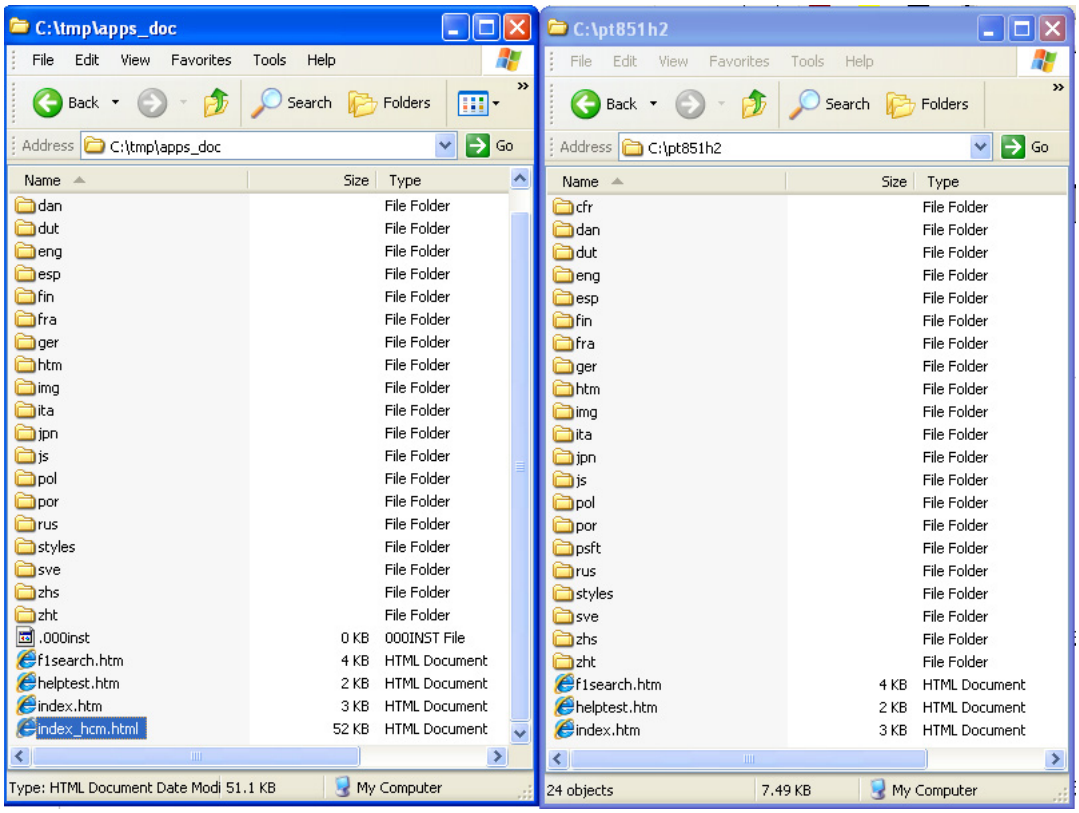
Task D-4-1: Merging PeopleSoft Application PeopleBooks with PeopleSoft PeopleTools PeopleBooks

Merging the Contents of pt_doc with apps_doc

In these instructions, we refer to the documents folder where the PeopleSoft PeopleTools PeopleBooks are installed as *pt_doc*, and assume its full text search index has already been generated.

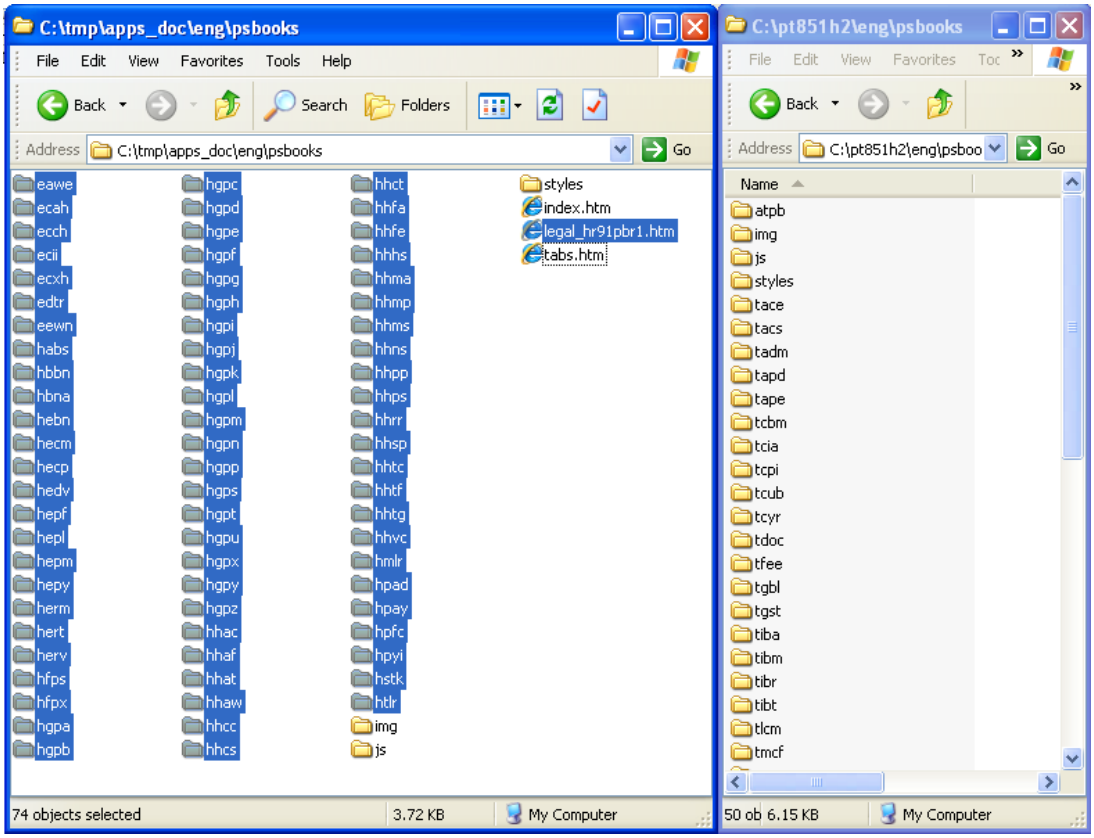
1. Extract the contents of the PeopleSoft Application PeopleBooks zip file to a folder separate from your PeopleSoft PeopleTools documents folder, referred to here as *apps_doc*.
2. In the *apps_doc* folder, search for all files named index*.*.

   In this example, the *apps_doc* folder is C:\tmp\apps_doc and the *pt_doc* folder is C:\pt851h2.



Contents of apps_doc and pt_doc folders

3. Copy <*apps_doc*>/index_<*xxxxx*>.html to *pt_doc/*, where <*xxxxx*> represents the sku for the PeopleSoft Application books you are installing, for example index_hcm92pbr1.html for Human Capital Management PeopleBooks.
4. For backup purposes, copy *pt_doc*/eng/psbooks/js/booklist.js to *pt_doc*/eng/psbooks/js/booklist.js.bak.
5. Open the *apps_doc*/eng/psbooks folder.



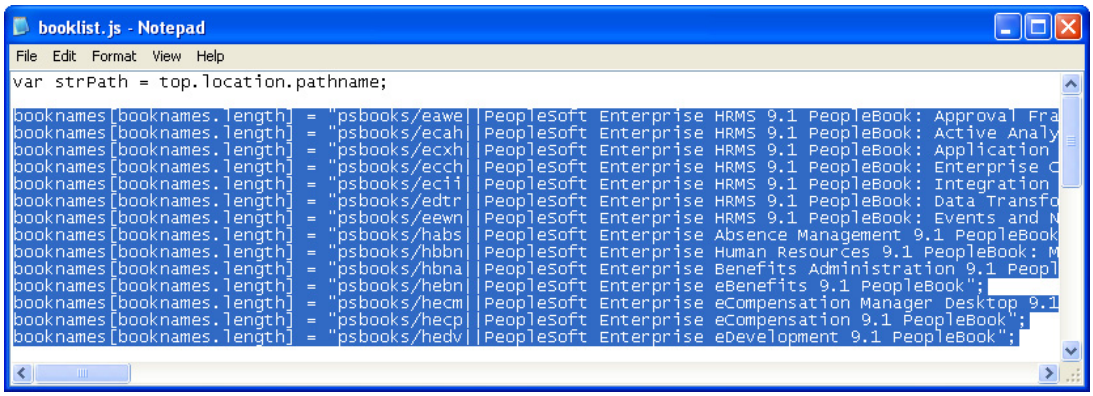
File list in apps_doc folder

Carefully copy everything from this location to *pt_doc*/eng/psbooks, except for the following:

- img folder
- js folder
- styles folder
- index.htm
- tabs.htm

6. Open *apps_doc*/eng/psbooks/js/booklist.js.

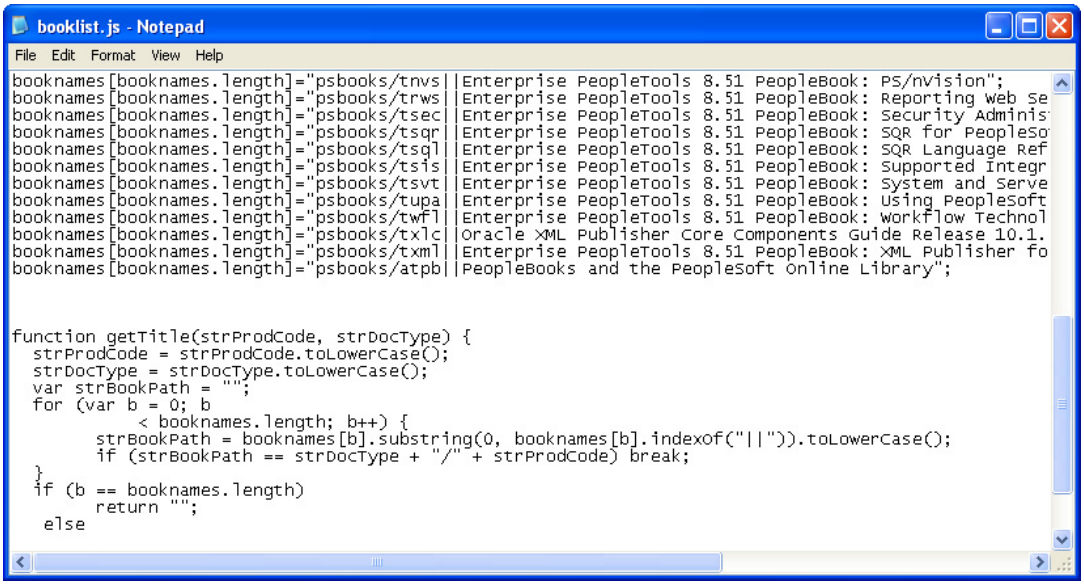
   Except for the line containing “atpb”, copy all the lines that begin with “booknames[booknames.length] =”.



Contents of booklist.js under apps_doc folder

7. Open *pt_doc*/eng/psbooks/js/booklist.js.

   Locate the last line in the file containing “booknames[booknames.length] =”. Position the cursor at the beginning of the *next* line and paste all the lines copied in the previous step. Save the file.



Contents of booklist.js under pt_doc folder

8. Open *apps_doc*/eng/psbooks/js/helplist.js.

   Copy all the lines in the file.

9. Open *pt_doc*/eng/psbooks/js/helplist.js.

   Paste all the lines copied in the previous step. Save the file.

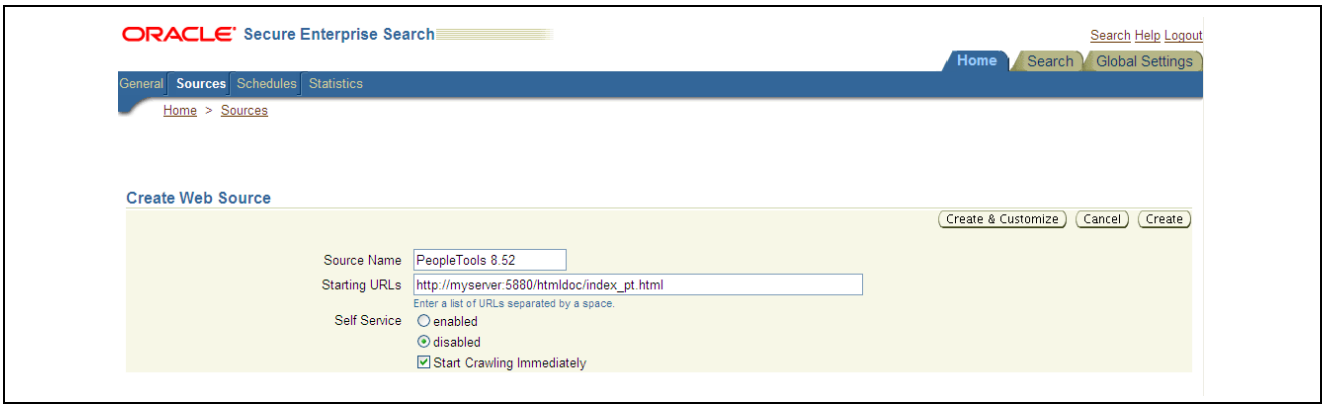
10. If you have not already done so, generate an index for PeopleTools PeopleBooks index using the instructions in the previous section Crawling a Source to Generate Full-Text Search Index, if you want to group it with your Application PeopleBooks Index.

Generating Full-text Search for the New Index

To generate full-text search for the PeopleSoft Application PeopleBooks:

1. Log in to the SES portal.
2. Select the Sources link at the top left, and then select the Source Type, Web or File.
3. Enter a value for the Source Name.

   This may be any name you like. In this example of the Create Web Source page, the Source Name is PeopleTools 8.52.



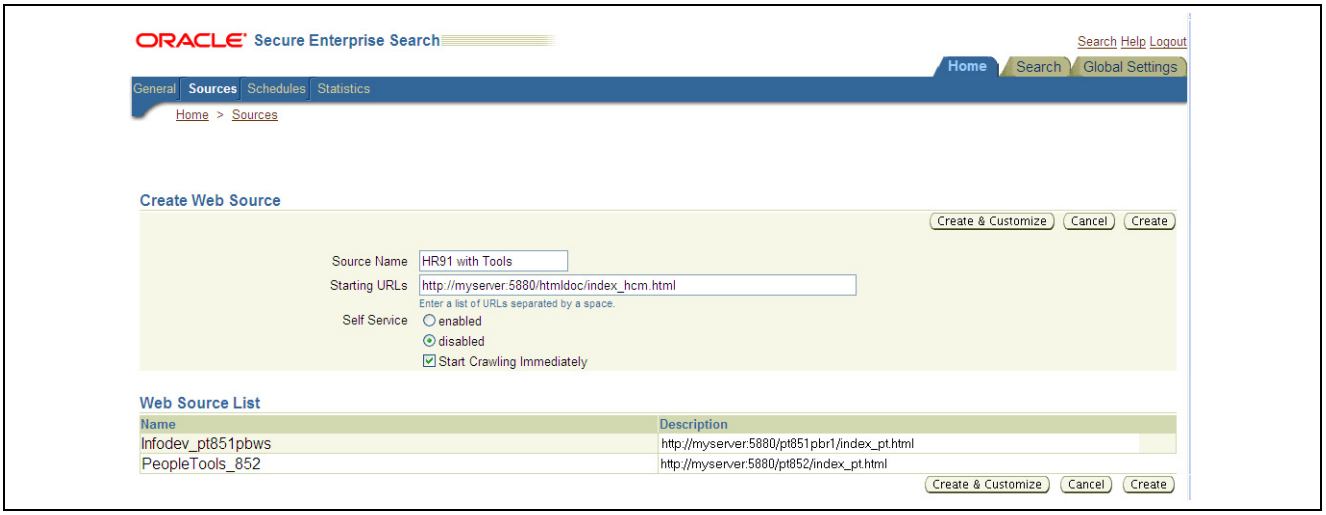
Create Web Source page

4. If you select Web Source Type, enter the starting URL field for SES to crawl using this format:

   http://<*myserver*>:<*zzzz*>/<*htmldoc*>/index_<*app_index*>.html

   where <*myserver*> is the host name, <*zzzz*> is the port number, <*htmldoc*> is the name of your documents folder, and <*app_index*> refers to the applications index_xxx.html file located in the pt_doc folder.

   Click the Create button.

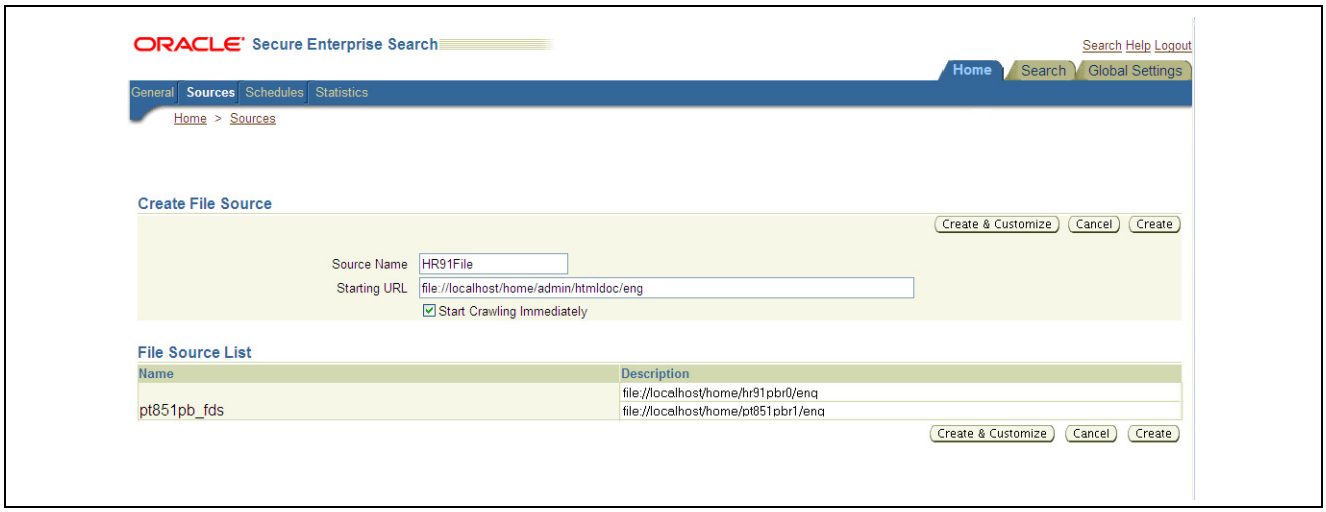


Create Web Source page for PeopleSoft Application PeopleBooks

5. If you select File Source Type, enter the starting URL field for SES to crawl using this format:

   file://localhost/*FullPathToDocumentsFolder*/eng

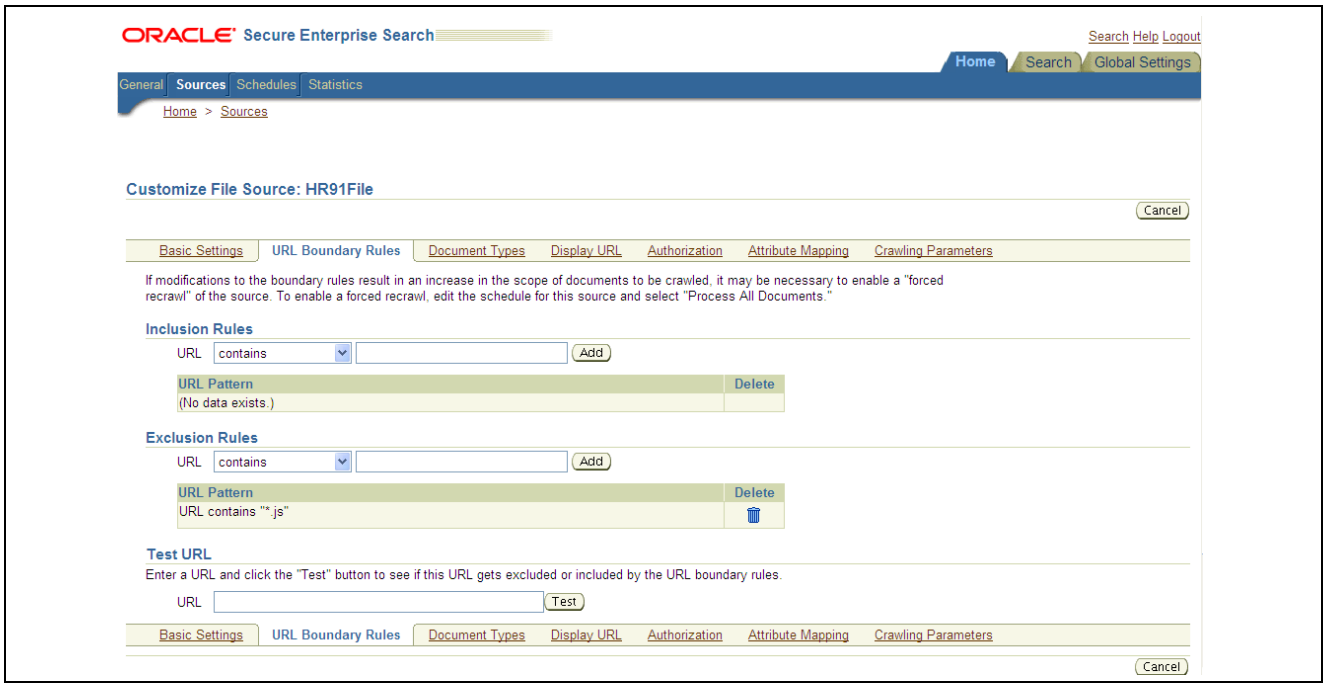
   In this example, *FullPathToDocumentsFolder* is /home/admin/htmldoc. Click the Create and Customize button.



Create File Source page for PeopleSoft Application PeopleBooks

6. For File Source Type only, on the Customize File Source page, click the URL Boundary Rules tab.

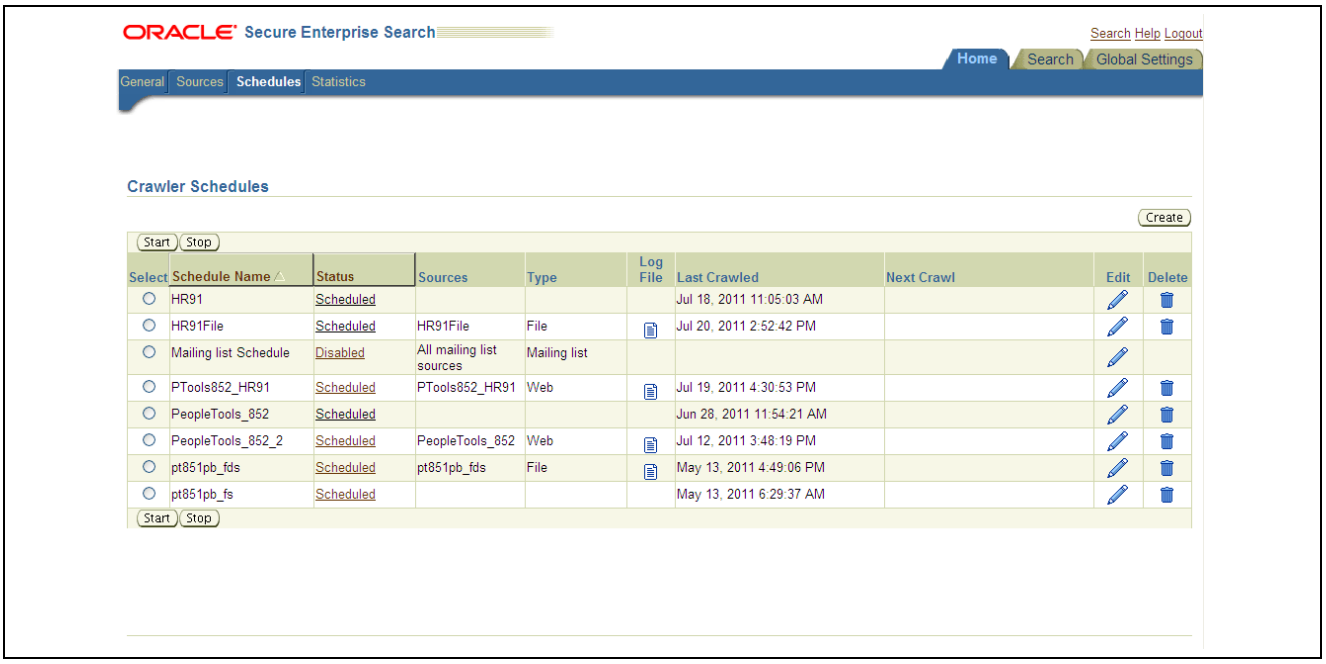
   Under Exclusion rules, enter the value "*.js" to exclude URLs containing this value. Click the Add button.



Customize File Source page for PeopleSoft Application PeopleBooks

7. Select Schedules at the top left.

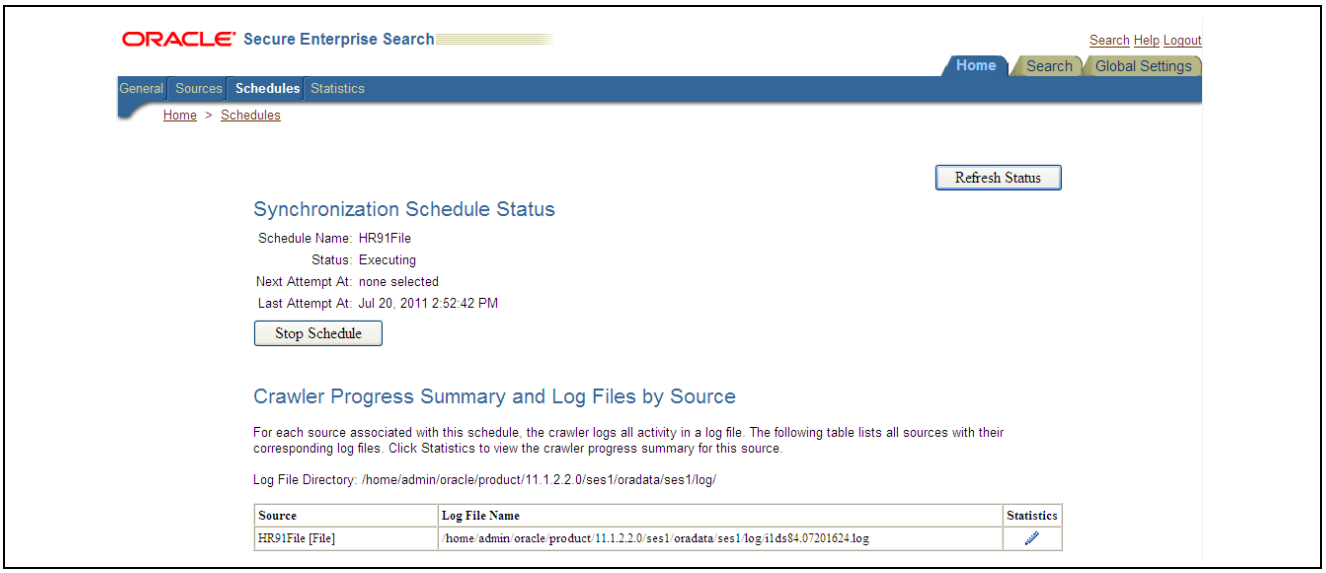
   Locate your index name in the Schedule Name column, for example HR91, then click the corresponding link, Scheduled in this example, in the Status column.



Crawler Schedules page

8. On the Synchronization Schedule Status screen, click the Refresh Status button to monitor job progress.

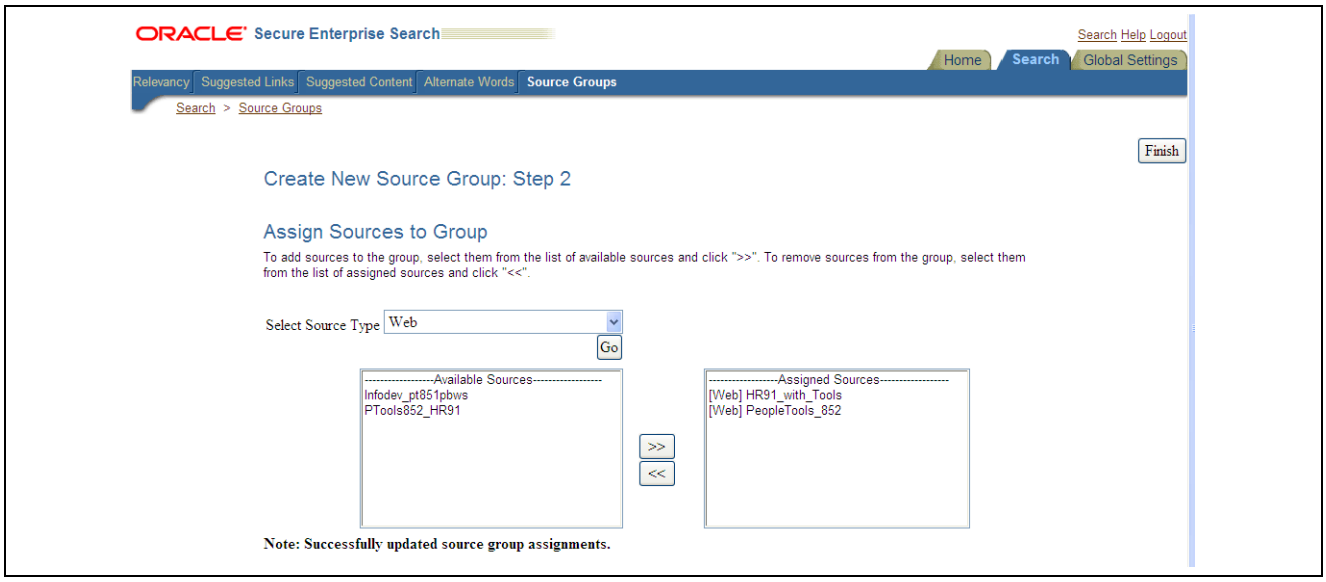
   To see detailed information, click the Statistics tool when it appears in the log file table, as shown in this example.



Synchronization Schedule Status page for HR91

9. (Optional) You have the option to group the new applications index with the PeopleTools PeopleBooks index and/or other indexes.

   To create a new source group:



Create New Source Group: Step 2 page

a. Click the Search tab at the top right of the screen.

b. Select Source Groups. Click Create.

c. Enter a name to represent the index for both your PeopleTools and your Application indexes; it will be visible by end users. Click Proceed to Step 2.

d. Confirm that the source type selected is appropriate (web or file). From the Available Sources column, highlight the index you just created, then click the double right arrow between the two columns to move the index to the Assigned Sources column.

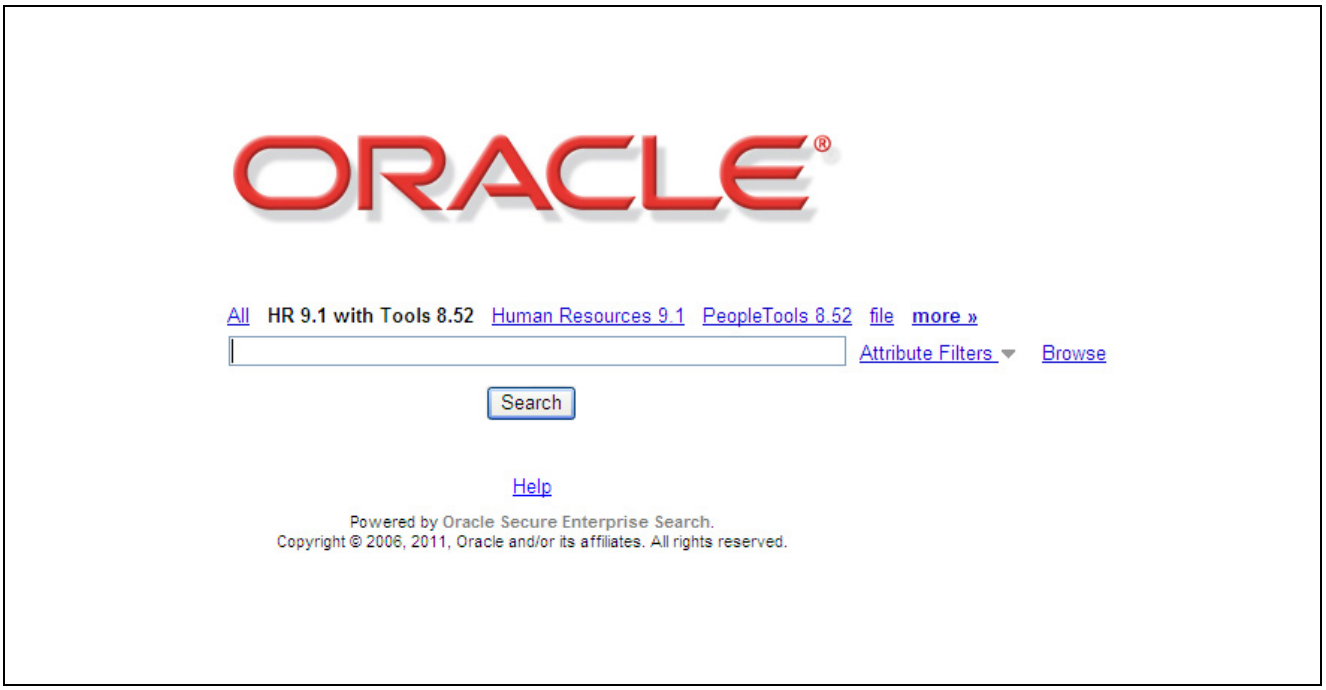
e. Highlight the name of the PeopleTools SES index and move it from the Available Sources column to the Assigned Sources column as well.

f. Click the Finish button and it will return you to the list of source group names.

10. To test the search index, click the Search link, not tab, at the top right of the screen.

    Note the URL, as this will be the search home URL for PeopleBooks. Also note that the name you entered for the Source Group in the last step appears in the screen as a search source.

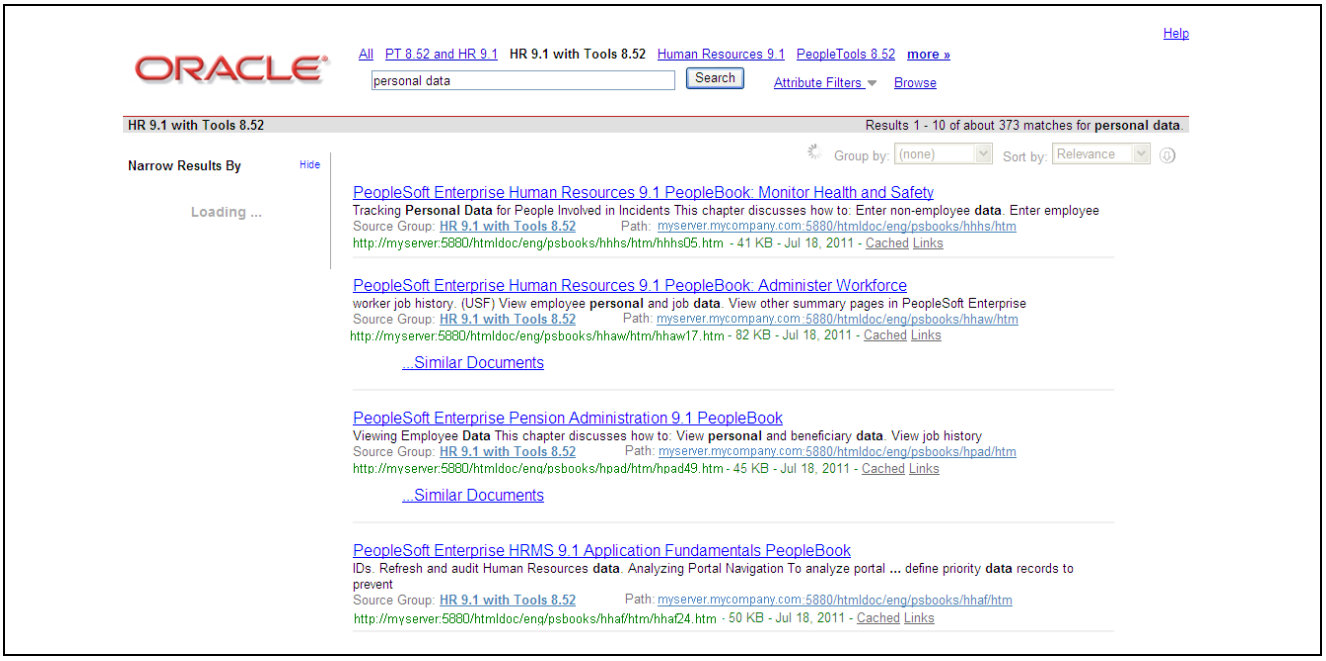
    Click the name of the search source to access your new index.



Search page for Merged PeopleBooks

11. In the example below, the Search Source “HR 9.1 with Tools 8.52” is selected and displays results for search criteria “personal data”.

    Note the option to select “All”, “HR 9.1 with Tools 8.52”, “Human Resources 9.1”, and “PeopleTools 8.52” as Search Sources. These options allow you to expand or restrict the scope of indexes scanned for results.



Search results for Merged PeopleBooks

Task D-4-2: Installing the PeopleSoft Application PeopleBooks to its Own Folder

If you elect to install each PeopleBook to its own document folder, simply extract each PeopleBooks zip file to a unique folder under the web root of your server, or a shared location on a file server.

Generate search, if desired, as indicated in the section of this appendix titled Crawling a Source to Generate Full Text Search Index. In the example below, the Search Source has defaulted to “All”. You have the option to select “All”, “Human Resources 9.1” and “PeopleTools 8.52” as Search Sources. These options allow you to expand or restrict the scope of indexes scanned for results

Search page for PeopleSoft Application PeopleBooks

Task D-4-3: Creating Full-Text Searches for Custom Documentation

You can use the same instructions given above to create full-text search indexes against custom documentation. Keep the following in mind:

- Web Source Type

  Before configuring SES, you will need to generate an index file containing a list of all the html documents in your site that you would like SES to crawl. By viewing htmldoc/index_pt.html or htmldoc/index_xxx.html from an application PeopleBooks, you can see the format and sequence of what SES expects. For assistance with custom documentation, please request to speak with an Oracle Consultant.

- File Source Type

  Enter the lowest level root folder from which SES should begin scanning for html documents. In our examples above, the majority of html documents in PeopleBooks are stored in the English language folder (htmldoc/eng). Identify the appropriate folder for your installation to specify in SES.

Task D-5: Migrating Previous Versions of PeopleBooks

This section discusses:

- Understanding PeopleBook Migration
- Generating Lists of HTML Files Using HTMLListGenerator.jar (Optional)
- Copying HTML Content Files into the Target Web Site
- Merging Entries from booklist.js and helplist.js
- Generating a Full-Text Search Index Using SES (Optional)

Understanding PeopleBook Migration

To migrate documentation that resides in an existing PeopleBooks website (PSOL or ODLA structure), use the following procedure. The process consists of four basic steps:

1. Generate a list of HTML files using HTMLListGenerator.jar.
2. Copy HTML content files into target web site.
3. Merge entries from booklist.js and helplist.js files.
4. Generate full search index using Oracle Secure Enterprise Search (SES).

The existing PeopleBooks from the PSOL or ODLA structure are referred to here as *legacy_doc* and the new folder is referred to as the *target_doc*.

Note. Consult the PeopleSoft PeopleTools installation guides for earlier releases for more information on these PeopleBooks structures.

Task D-5-1: Generating Lists of HTML Files Using HTMLListGenerator.jar (Optional)

Carry out the instructions in this section if you intend to build a full-text search index for your migrated documents; otherwise, skip to the next section, Copying HTML Content Files into Target Web Site.

The installation files for your PeopleSoft PeopleTools 8.52 PeopleBooks contains a folder named utils. HTMLListGenerator.jar, located inside the utils folder, will create a specially formatted file you can use with SES to build a full-text search index for migrated PeopleBooks.

The output from HTMLListGenerator.jar will be named index_*xxx*.html, where *xxx* is a name you assign according to the content you migrate. For example, if you migrate PeopleSoft Human Capital Management 9.0, you would name the file index_hcm90.html.

To view the options and usage (arguments) for HTMLListGenerator.jar, run the utility with the “-h” or “-H” option. For example:

```
java -jar HTMLListGenerator.jar -h

HTMLListGenerator:Generate list of HTML files for SES web crawler

Usage:java -jar HTMLListGenerator.jar -h [-I include] [-E exclude] [-L linkfrmt] [-⇒
o outfile] [-t title] PATH
```



```
Generate a list of HTML links for all documents in PATH and use -I option
to designate file names with a regular expression.

Options:
  -h         : Print this help message.
  -I include : Regular expression to designate included file names.
               default :^[a-z]{4,6}[0-9]{2}\.htm[l]?$|^legal[^\/]*\.htm[l]?$|.+⇒
\.pdf$
  -E exclude : Regular expression to exclude file names. No default value.
  -L linkfrmt: Output format for link elements.
               default :    <a href="%s"> </a><br/>
  -o outfile : Output file-- stdout is used if this option is not specified.
  -t title   : Title text for this file.
               default :"PeopleBooks"


Examples:

  java -jar PeopleBooksUtils4User.jar .
     Generate list of documents that reside in current directory and
     decendants; print to standard output. Default regular expression
     for included documents.
     "^[a-z]{4,6}[0-9]{2}\.htm[l]?$|^legal[^\/]*\.htm[l]?$|.+\.pdf$" is used.

  java -jar PeopleBooksUtils4User.jar -o pt852pbr0/index_pt852pbr0.html pt852pbr0
     Generate list of documents that reside in pt852pbr0 directory and
     decendants. Output is saved in pt852pbr0/index_pt852pbr0.html.
     Default regular expression to include document
     "^[a-z]{4,6}[0-9]{2}\.htm[l]?$|^legal[^\/]*\.htm[l]?$|.+\.pdf$" is used.
```

To use HTMLListGenerator.jar:

1. From the PeopleTools 8.52 PeopleBooks installation folder, extract the contents of the utils folder into a temporary location.
2. Change directory to the parent directory of your source, or *legacy_doc* folder. Copy the contents of the utils folder to the current directory, including any subdirectories.
3. At a command prompt from the web root folder, execute the following command:

   `java -jar HTMLListGenerator.jar` *`arguments`*

Use the following format for the HTMLListGenerator utility, unless your site has a specific need to modify the default regular expression:

`java -jar HTMLListGenerator.jar  -o` *`target_folder`*`/index_xxx` *`target_folder`*

The default regular expression is:

`^[a-z]{4,6}[0-9]{2}\.htm[l]?$|^legal[^\/]*\.htm[l]?$|.+\.pdf$`

This will retrieve the following files and add them to the index:

- Files beginning with four to six lowercase letters followed by two digit numbers, then the extensions ".htm" or ".html"

- Files beginning with “legal” and ending with “.htm” or “.html”
- Files ending with “.pdf”

You can concatenate additional regular expressions to include files using “|” (the pipe symbol) with the -I option. For example to add files that start with “help_” and end with “.html”, modify the regular expression as follows:

```
$ java -jar HTMLListGenerator.jar -I "^[a-z]{4,6}[0-9]{2}\.htm[l]?$|^legal[^\/]*⇒
\.htm[l]?$|.+\.pdf$|help_.+\.html" -o index_xxx.html
```

After successfully executing the HTMLListGenerator utility, you will have an index_*xxx*.html in your *target_doc* that was built for all the content.

Task D-5-2: Copying HTML Content Files into the Target Web Site

Open the *legacy_doc*/eng/psbooks folder.

Carefully copy everything from this location to *target_doc*/eng/psbooks, except for the following:

- img folder
- js folder
- styles folder
- index.htm
- tabs.htm

Task D-5-3: Merging Entries from booklist.js and helplist.js

To merge entries from booklist.js and helplist.js:

1. For backup purposes, copy *target_doc*/eng/psbooks/js/booklist.js to *target_doc*/eng/psbooks/js /booklist.js.bak.
2. Open *legacy_doc*/eng/psbooks/js/booklist.js.
3. Except for the line containing “atpb”, copy all the lines that begin with “booknames[booknames.length] =”.
4. Open *target_doc*/eng/psbooks/js/booklist.js.
5. Locate the last line in the file containing “booknames[booknames.length] =”.

   Position the cursor at the beginning of the next line and paste all the lines copied in the previous step. Save the file.
6. Open *legacy_doc*/eng/psbooks/js/helplist.js.
7. Copy all the lines in the file.
8. Open *target_doc*/eng/psbooks/js/helplist.js.
9. Paste all the lines copied in the previous step. Save the file.

Task D-5-4: Generating a Full-Text Search Index Using SES (Optional)

If you wish to build a full text search index against your migrated content, copy the file generated in the previous section, Generating Lists of HTML Files Using HTMLListGenerator.jar (Optional), to your *target_doc*/ folder, and follow instructions for "Generating Full-text Search for the New Index" under the section Merging PeopleSoft Application PeopleBooks with PeopleSoft PeopleTools PeopleBooks earlier in this appendix.

APPENDIX E

Installing Software for PS/nVision Drilldowns

This appendix discusses:

- Understanding PS/nVision DrillDown Add-ins
- Installing the DrillToPIA Add-In
- Installing the nVisionDrill Add-In
- Installing the nVisionDrill Add-Ins for Multi-Language Installations
- Setting Up PeopleSoft Integration Broker for Using Web Service Capability with nVisionDrill Add-in

Understanding PS/nVision DrillDown Add-ins

When you use PS/nVision to view reports, you can use the DrillDown feature to select a cell in your report and expand it according to criteria contained in a special DrillDown layout.

See *PeopleTools 8.52: PS/nVision PeopleBook,* "Using DrillDown."

To use the PS/nVision DrillDown feature with Microsoft Excel reports, you need to install one of the following add-ins, as described in this appendix:

Note. DrillToPIA and nVisionDrill VSTO add-ins do not coexist. You can use only one add-in at a time.

- DrillToPIA add-in
- nVisionDrill VSTO add-in (Visual Studio tools for Microsoft Office SE Runtime).

See *PeopleTools 8.52: PS/nVision PeopleBook,* "Running PS/nVision Report on the Web."

Here is the way the two drilldown add-ins work with the supported version of Microsoft Excel 2007:

If the nVisionDrill VSTO add-in was installed, the nVisionDrill add-in runs and the nVisionDrill VSTO drilldown menu is available when Microsoft Excel opens.

Optionally, you can disable the nVisionDrill VSTO add-in and run the DrillToPIA add-in.

Note. To disable the nVisionDrill VSTO add-in and use the DrillToPIA add-in, access the Add-Ins dialog box and select the DrillToPIA check box. This selection replaces the nVisionDrill VSTO add-in with the DrillToPIA add-in, and the DrillToPIA drilldown menu appears until you reinstall the nVisionDrill VSTO add-in.

To reinstall the nVisionDrill VSTO, double-click the setup.exe file and select the Repair option.

Task E-1: Installing the DrillToPIA Add-In

This section discusses:

- Understanding Drilldown with DrillToPIA Add-in
- Installing the DrillToPIA Add-in on the Microsoft Excel Environment

Understanding Drilldown with DrillToPIA Add-in

DrillDowns are run on the PS/nVision report server – like Report Requests and Report Books – and are accessible through Report Manager. You can also select to run the DrillDown using the output type of *Window*, which automatically delivers the results to a new browser window. A copy of the results will also be accessible through Report Manager.

You can drill down on individual cells within the report by selecting the cell and using Drill from the nVisionDrill menu for a Microsoft Excel report.

Note. A drilldown result report inherits the output format of its parent report. So, if the parent instance is in Excel format, then the drilldown result is in Excel format.

DrillDown in a web browser does not include the AutoDrill, Drill-to-Query, and Drill-to-Panel options.

Task E-1-1: Installing the DrillToPIA Add-in on the Microsoft Excel Environment

To drill down on Microsoft Excel reports, the Microsoft Visual Basic Application (VBA) add-in DrillToPIA.xla file needs to be installed on the Microsoft Excel environment. This file is stored in the *PS_HOME*\Excel directory on the Application Server. Your System Administrator needs to distribute a copy of this file to all users who need to drill down on Microsoft Excel reports on the Web.

Note. If a non-English version of Microsoft Excel is used, translated versions of DrillToPIA.xla can be found in the <*PS_HOME*>\Excel\<*Language*> directory on the Application Server.

In Apple Macintosh systems, PS/nVision DrillToPIA add-in launches Microsoft Internet Explorer for the drilldown page when drilling is performed on a Microsoft Excel report, regardless of the browser from which the original report is opened.

To install the add-in DrillToPIA.xla file into the Microsoft Excel environment:

1. Copy the *PS_HOME*\Excel\DrillToPIA.xla file, and paste it into the Excel add-in directory.

   If Microsoft Office is installed in the directory *MS_OFFICE*, the Excel add-ins directory is *MS_OFFICE*\Office\Library.
2. Launch Microsoft Excel and select Tools, Add-ins from Excel toolbar.
3. Select the DrillToPIA option in the Add-ins dialog box.

   The nVisionDrill menu appears in the Excel menu bar.

Note. To remove the add-in from the Excel menu, clear the DrillToPIA option from the Add-Ins dialog box.

Task E-2: Installing the nVisionDrill Add-In

This section discusses:

- Understanding PS/nVision DrillDown using Web Services
- Understanding Security for DrillDown Using nVisionDrill VSTO Add-in
- Installing the nVisionDrill Add-in for Microsoft Excel 2007

Understanding PS/nVision DrillDown using Web Services

Starting with PeopleSoft PeopleTools 8.50 and later, you are able to use the web service capability when drilling from summarized to detailed PS/nVision reports using the nVisionDrill VSTO add-in.

To enable DrillDown to use web services, you must install these software items on the machine where drilldown is performed:

- Microsoft Excel 2007
- Visual Studio Tools for Microsoft Office SE Runtime (VSTO add-in)
- Microsoft Office 2007 Primary Interop Assemblies
- nVisionDrill add-in

In addition, take note of the following requirements:

- You must set up and configure Integration Broker to use the nVision Drilldown feature as a web service.

  See Setting Up Integration Broker for Using Web Service Capability with nVisionDrill Add-in.
- The web servers should be SSL enabled.

  This is because all the web service calls happen through secure channels.

  When you create the SSL-enabled web server domain, you need to provide the optional parameter Authentication Token Domain with the appropriate domain name.

Note. The new nVisionDrill VSTO add-in is mainly designed for remote standalone file drilldown (where the end user doesn't have access to the PeopleSoft Pure Internet Architecture system). For all other purposes and Web drilldown, the nVision users are still encouraged to use the DrillToPIA add-in.

Understanding Security for DrillDown Using nVisionDrill VSTO Add-in

The nVisionDrill VSTO Add-in allows users to perform drilldown without having to access the PeopleSoft Pure Internet Architecture pages. This necessitates that the end users of nVisionDrill must sign in to the PeopleSoft system to be able to submit the drilldown process and access the subreports. The users of nVisionDrill VSTO add-in will be prompted to enter a user ID and password for the first time. This user ID and password are validated. If the users have access, they are taken to the menu with the list of DrillDown layouts for further drilldown operation.

When the users attempt another drilldown using the same parent report instance which is already open, the system does not prompt for the credentials, and the credentials of the first login are re-used. But for each new report instance or new drilldown report instance, the credentials must be entered again.

Note. All web service calls between the Microsoft Excel and PeopleSoft applications are SSL-enabled.

Task E-2-1: Installing the nVisionDrill Add-in for Microsoft Excel 2007

To install the nVisionDrill VSTO add-in on for Microsoft Excel 2007:

1. Go to *PS_HOME*\setup\nVisionDrill.
2. Run the nVisionDrillSetup.msi file.

   If all required software items have been installed, the nVisionDrill add-in installation will run to success.

   If any of the items, for example, Visual Studio 2005 SE Runtime vstor.exe or Microsoft Office 2007 PIA o2007pia.msi, are not installed on the machine, the add-in installer displays an appropriate message that asks you to run the corresponding executable. If necessary, you can find the files vstor.exe and o2007pia.msi in *PS_HOME*\setup\nVisionDrill.
3. Ensure that the web server domain's SSL Root certificate is installed on the machine where the nVisionDrill VSTO add-in is installed.

   The Root Certificate should be installed correctly on the default browser of the machine. For example, on Microsoft Internet Explorer 8 the SSL Root Certificate should be installed under Trusted Root Certification Authorities.

Task E-3: Installing the nVisionDrill Add-Ins for Multi-Language Installations

If you have a multi-language installation, first install NVisionDrillSetup.msi for English, as described above, and then install the NVisionDrillSetup_*xxx*.msi for the desired languages, where the extension *xxx* is the three-letter language code.

See *PeopleTools 8.52: Global Technology PeopleBook,* "Translating PeopleSoft Applications."

Task E-4: Setting Up PeopleSoft Integration Broker for Using Web Service Capability with nVisionDrill Add-in

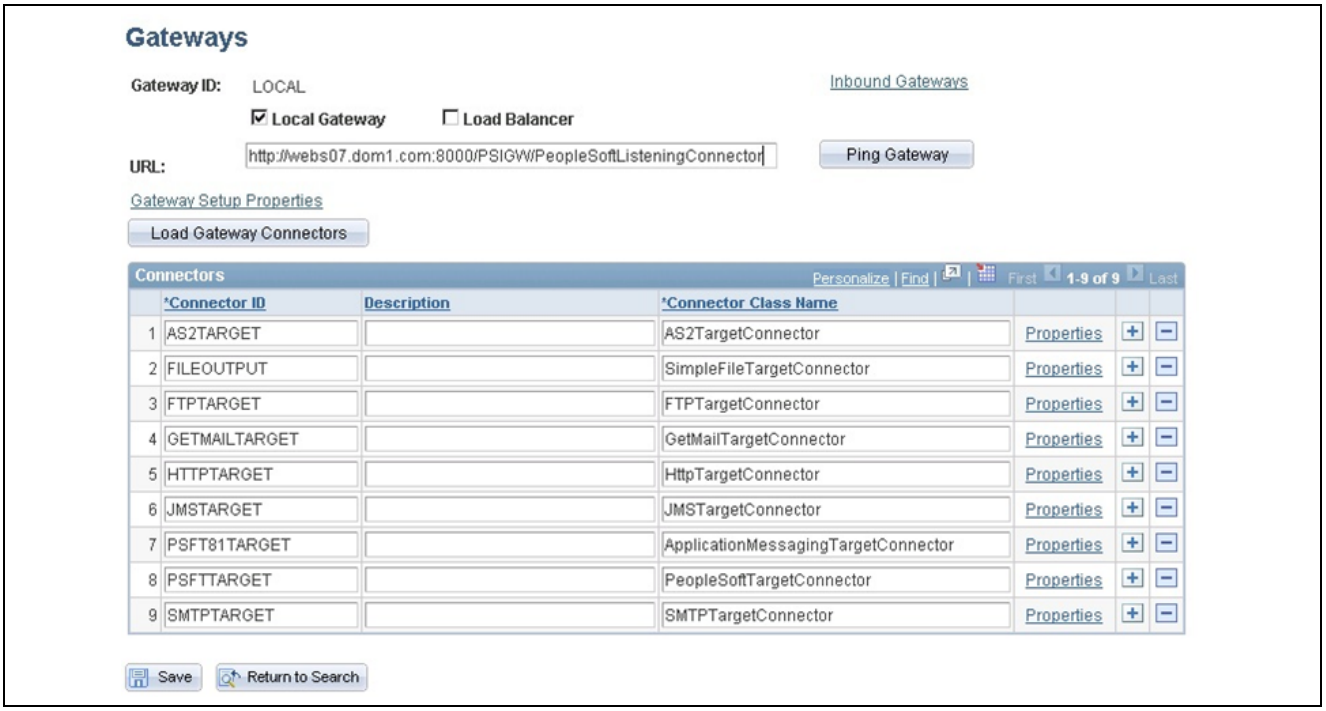
To set up Integration Broker for using web service capability with PS/nVision DrillDown:

1. Select PeopleTools, Integration Broker, Configuration, Gateways.
2. Select the Integration Gateway ID for which the Local Gateway is enabled from the search results.

   An enabled Local Gateway is marked as 'Y' in the search results.
3. In the URL field, enter the following value, where <machine_name> is the Web server machine name, including the domain name, and <port> is the HTTP port number of the PeopleSoft web server:

   http://<*machine_name*>:<*port*>/PSIGW/PeopleSoftListeningConnector

This example shows the Integration Broker Gateways page with the URL http://webs07.dom1.com:8000/PSIGW/PeopleSoftListeningConnector, where webs07.dom1.com is the combined machine name and domain name, and 8000 is the HTTP port:



Integration Broker Gateways page

4. Click Ping Gateway.

   A message appears saying “Gateway URL has changed. Existing connector information will be cleared”. Click OK on this message.

   You should see a message with the status ACTIVE, indicating a successful connection. Close this message.

5. On the Gateways page, click the Load Gateway Connectors button to load the list of connectors, and then click Save.

   If the ping is unsuccessful, check the Web server URL entered, and also make sure Pub/Sub servers are enabled in the Application Server configuration.

6. Select PeopleTools, Integration Broker, Service Operations Monitor, Administration, Domain Status.

7. Purge the unnecessary domains and enable the required domain.

   You should be able to see at least three dispatchers under Dispatcher Status. This is required for running asynchronous requests through Integration Broker.

Note. PeopleSoft Integration Broker must process all nVision web service requests that are sent from nVisionDrill VSTO add-in, so the Local PeopleSoft Node of PeopleSoft Integration Broker gateway must include at least three dispatchers.

---

8. Select PeopleTools, Integration Broker, Configuration, Gateways.

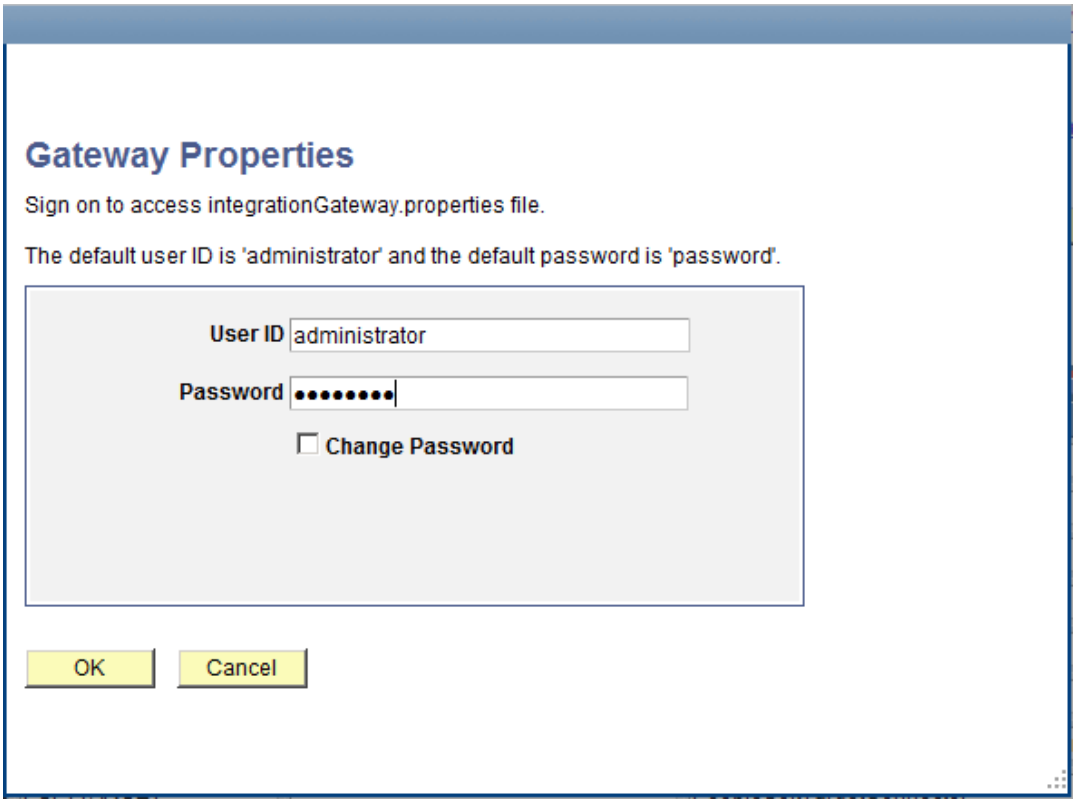
   Select the same Integration Gateway ID that you chose in step 1.

9. On the Gateways page, select the link Gateway Setup Properties.

   The Gateways Properties page appears.

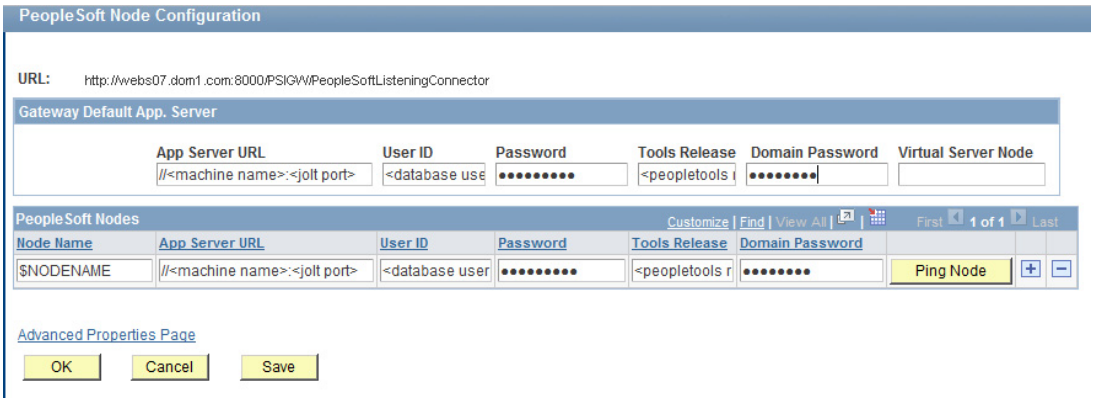
10. Enter the Integration Gateway administrator user ID and password.

    The default values are administrator and password, as shown in this example.



Gateway Properties sign on page

11. Add a new node in the PeopleSoft Node Configuration page.



PeopleSoft Node Configuration page

Node Name: Enter the name of the active default node.

This example uses $NODENAME.

To find the active default node, navigate to Integration Broker, Integration Setup, Nodes. Do a search, and choose the node for which the Local Node value is ’1’ and the Default Local Node value is ’Y’.

Enter the following values to complete the page:

Note. The following information can be retrieved by pressing CTRL+J on the PeopleSoft Node Configuration page.

- App Server URL: Enter the application server machine name and the Jolt port.
- User ID: Enter PeopleSoft user ID
- Password: Enter the password for the PeopleSoft user ID specified in the User ID field.
- Tools Release: Provide the exact PeopleSoft PeopleTools release that your application server is using.

12. Click Save.
13. Click Ping Node to be sure the node is accessible, and then exit.

    See *PeopleTools 8.52: Integration Broker Administration PeopleBook.*

APPENDIX F

Installing Web Application Deployment Tools

This appendix discusses:

- Prerequisites
- Installing the Web Application Deployment Tools on WebLogic in GUI Mode
- Installing the Web Application Deployment Tools on WebSphere in GUI Mode
- Installing the Web Application Deployment Tools on WebLogic in Console Mode
- Installing the Web Application Deployment Tools on IBM WebSphere in Console Mode
- Testing and Troubleshooting the Web Application Deployment

Prerequisites

This appendix includes instructions for installing the Web Application Deployment tools on Oracle WebLogic and IBM WebSphere. Complete the instructions for the web server you selected when you carried out the PeopleSoft PeopleTools installation. Typically, you would choose GUI mode for Microsoft Windows platforms and console mode for UNIX or Linux platforms.

Consult the product-specific installation guide for your product application to determine whether Web Application Deployment tools are required.

Before you install the Web Application Deployment tools, confirm that you have completed the following requirements.

If you use Oracle WebLogic as your web server, you must fulfill these requirements:

- Java 6 must be installed and working properly. Your PATH environment variable must include an entry for Java 6 (for example, <java6>/bin). If you do not install Java 6 the deployment will fail due to the absence of a Java compiler.
- You must install the PeopleSoft web server during the PeopleSoft PeopleTools installation.
- Oracle WebLogic 10.3.4 must be installed.

If you use IBM WebSphere as your web server, you must fulfill these requirements:

- Java 6 or above must be installed and working properly. You can use the Java software that is supplied with the PeopleSoft PeopleTools installation.
- You must install the PeopleSoft web server during the PeopleSoft PeopleTools installation.
- The IBM WebSphere 7.0.0.15 software must be installed and the web server must be up and running when you carry out the Web Application Deployment tools installation.

- If you are running on UNIX or Linux, run the Web Application Deployment install with a user who owns IBM WebSphere, and who owns *PS_HOME*. Here are two examples:
  - If IBM WebSphere is owned by "root" and group "system", the Web Application Deployment install must be run with "root" and group "system."
  - If WebSphere is owned by user "wsadmin" and group "wsadmin", then the Web Application Deployment install must be run with wsadmin and wsadmin as the user and group.

See Also

"Installing Web Server Products"

"Using the PeopleSoft Installer"

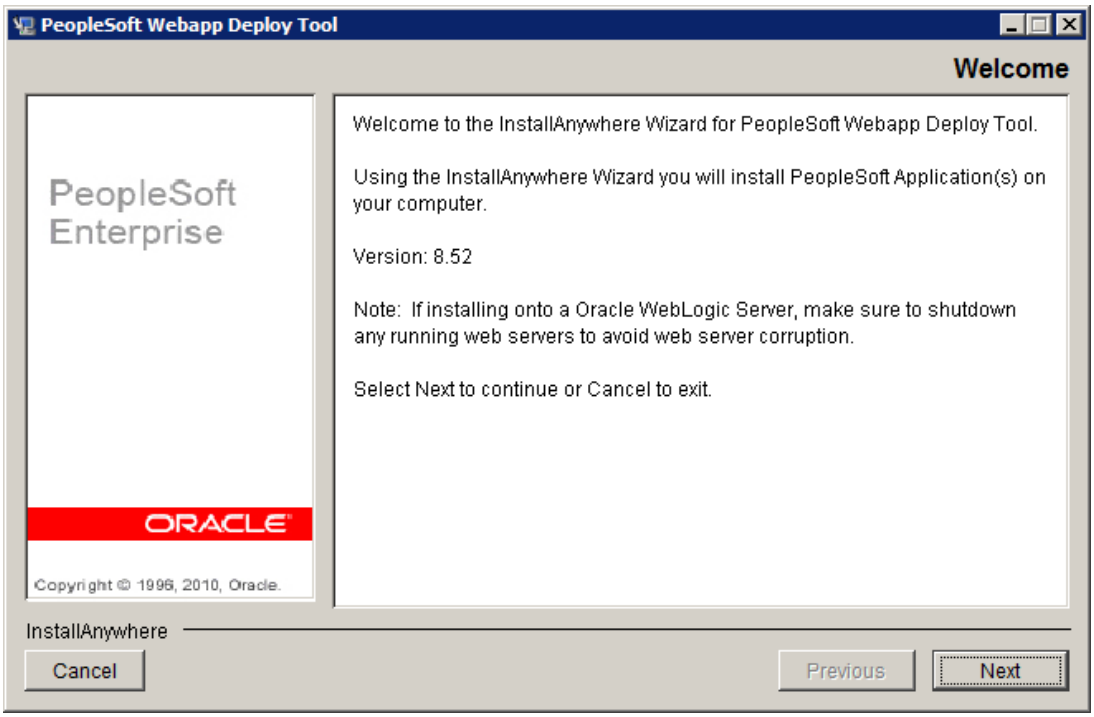
PeopleTools 8.52: System and Server Administration PeopleBook

Task F-1: Installing the Web Application Deployment Tools on WebLogic in GUI Mode

Use these instructions to install the Web Application Deployment Tools on Oracle WebLogic in GUI mode.

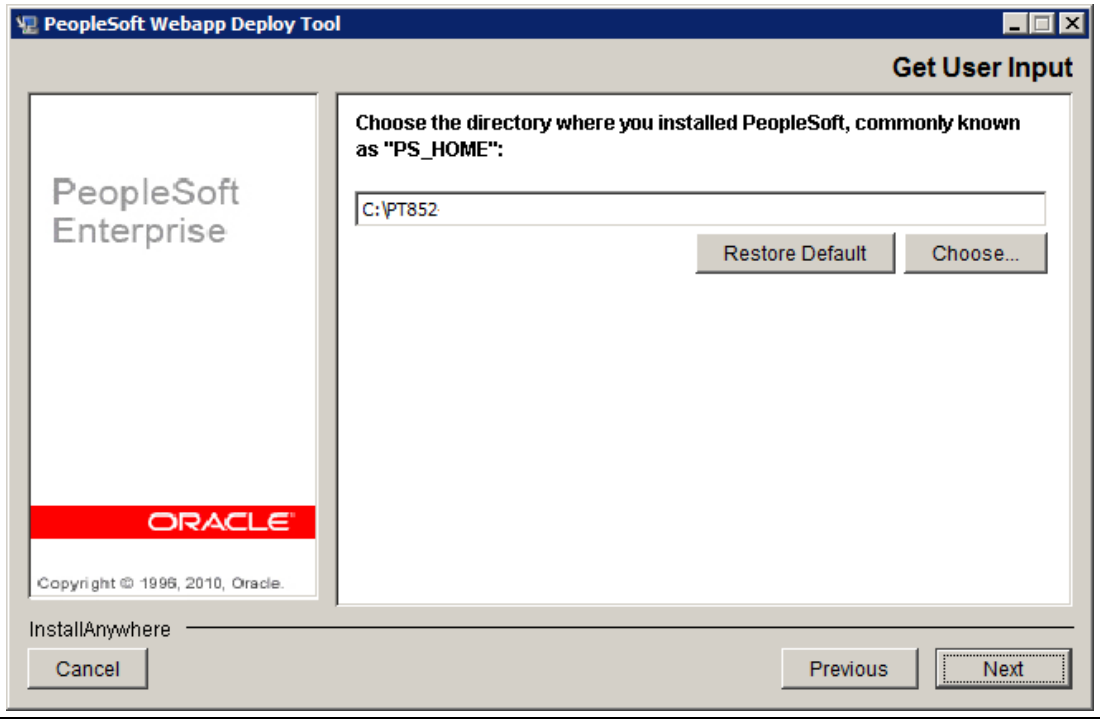
1. Copy the required Web Applications (EAR) files to *PS_HOME*/setup/PsMpWebAppDeployInstall/archive.
2. Navigate to *PS_HOME*/setup/PsMpWebAppDeployInstall.
3. Double-click on setup.bat.
4. Click Next on the Welcome window.

   The window displays the PeopleSoft PeopleTools version, which is 8.52 in this example, and includes the note: “If installing onto a Oracle WebLogic Server, make sure to shutdown any running web servers to avoid web server corruption.”



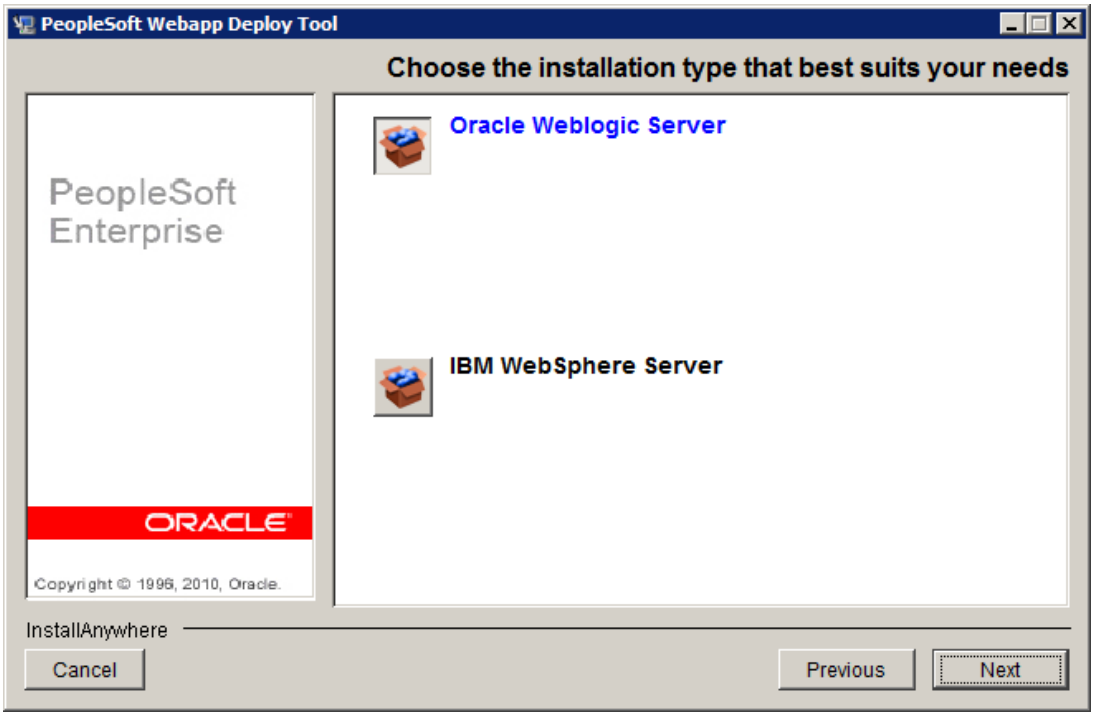
PeopleSoft Webapp Deploy Tool Welcome window

5. Enter the same *PS_HOME* directory that you specified when you ran the PeopleSoft PeopleTools Installer. In this example, PS_HOME is C:\PT852.



Entering PS_HOME for the PeopleSoft Webapp Deploy Tool installation

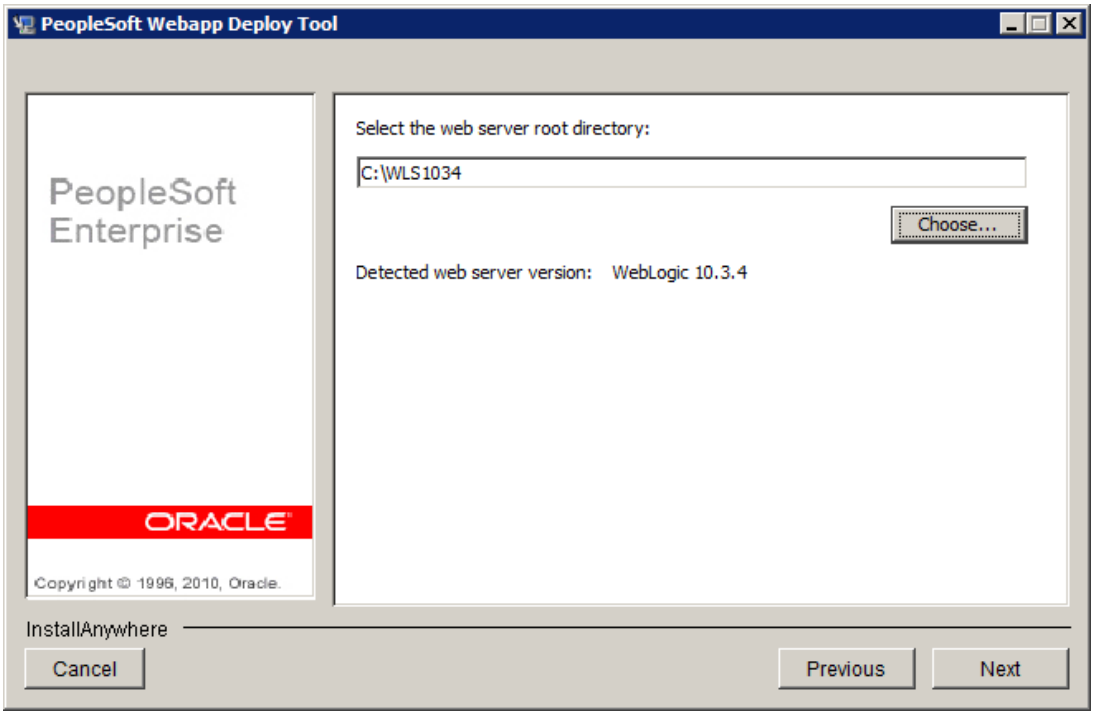
6. Select Oracle Weblogic Server and click Next.



Selecting Oracle Weblogic Server for the PeopleSoft Webapp Deploy Tool installation

7. Specify the root directory where you installed Oracle WebLogic, and click Next.

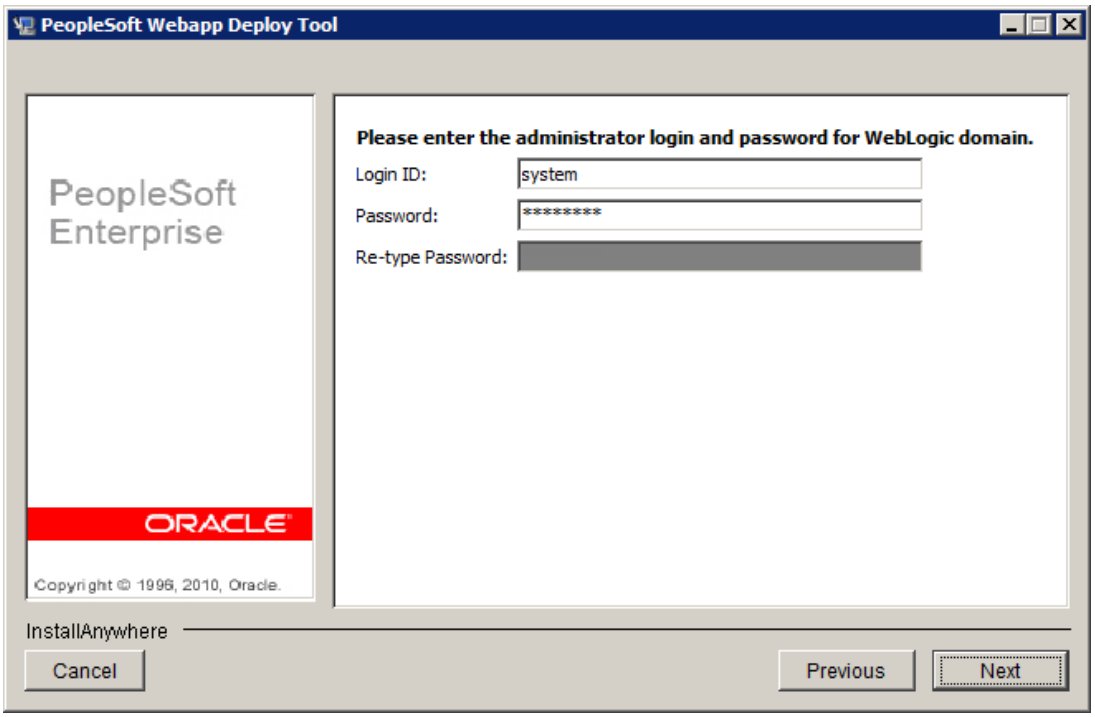
   In this example, the web server root directory for Oracle WebLogic 10.3.4 is C:\WLS1034.



Specifying the Oracle WebLogic root directory for the PeopleSoft Webapp Deploy Tool installation

8. Enter the login ID and password for the new web server domain that you are creating, and then click Next to continue.

Note. The default login ID is system, and the default password is Passw0rd (with a capital "P" and zero rather than the letter "o"). The password must be at least 8 alphanumeric characters with at least one number or special character.

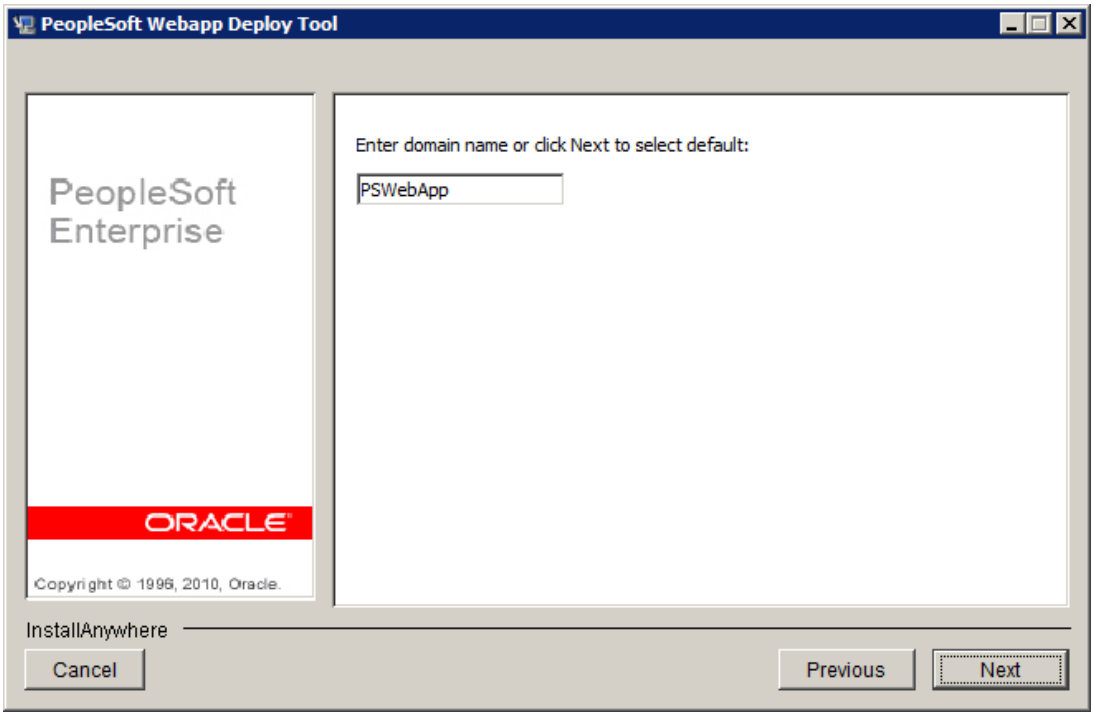


Entering the WebLogic domain administrator login and password for the PeopleSoft Webapp Deploy Tool installation

9. Enter a name for the Web Application Deploy domain, or accept the default name, PSWebApp, as shown in this example.

   Use a fully qualified domain name, and do not use an IP address. Click Next to continue.

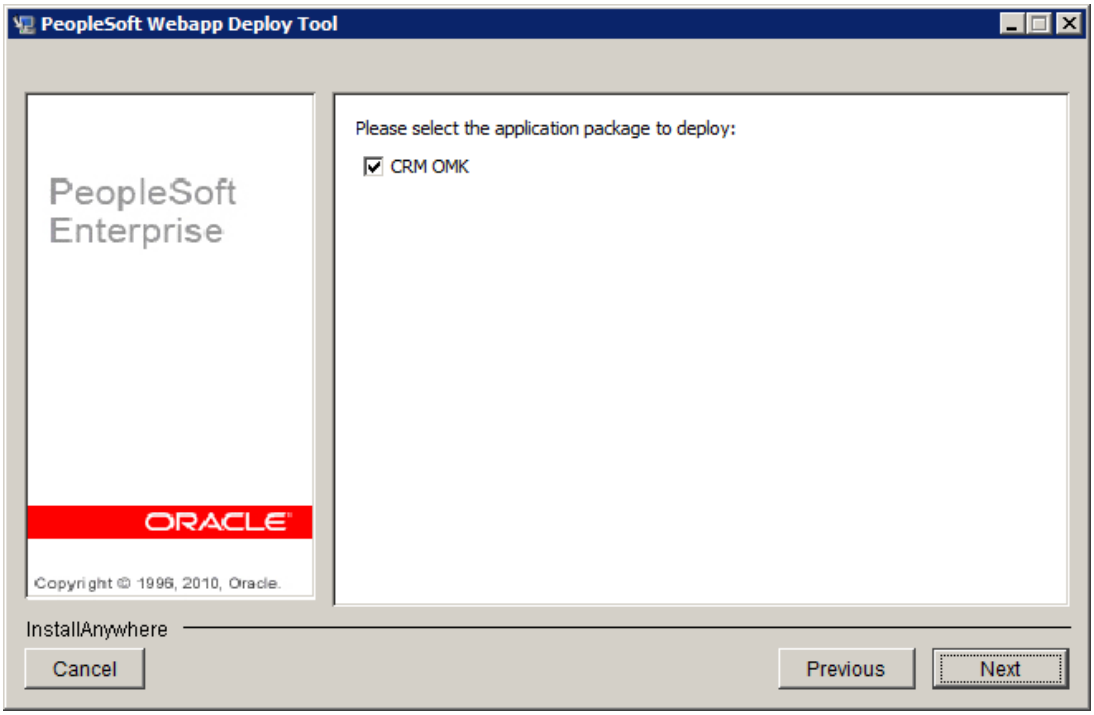
Important! The domain that you create for the Web Application Deploy cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.



Entering domain name for the PeopleSoft Webapp Deploy Tool installation

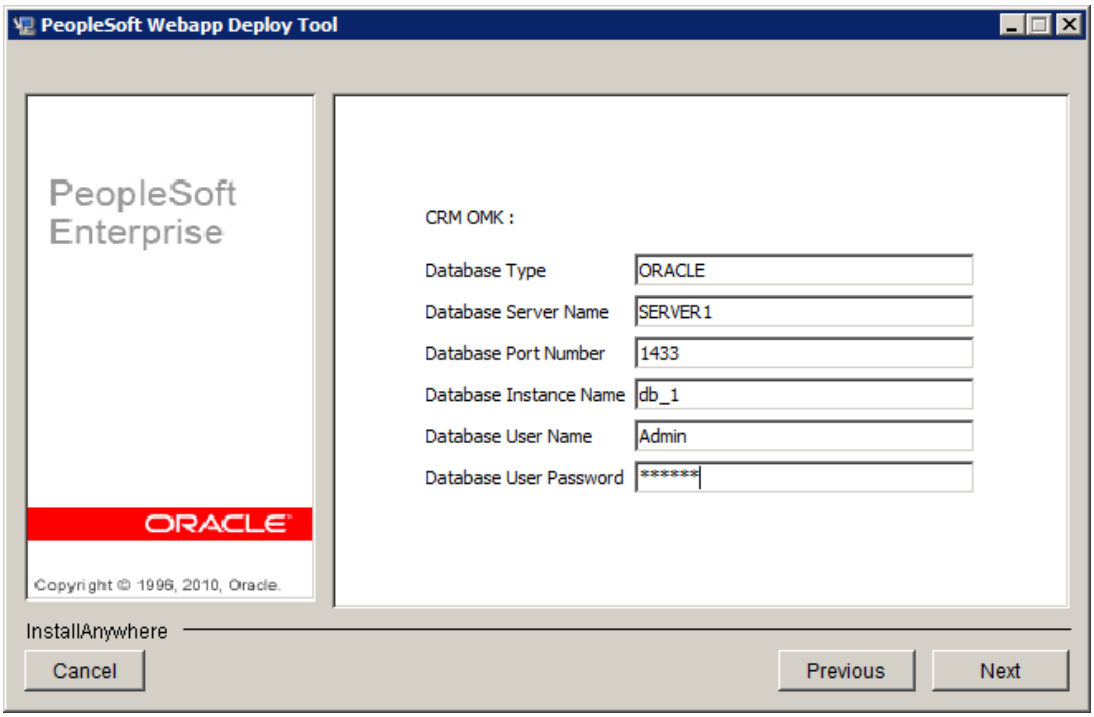
10. The next window lists all of the available application packages (EAR files).

    Select the packages you want to install. *You must select at least one application package from the list.*



Selecting application packages for the PeopleSoft Webapp Deploy Tool installation

11. If the application(s) you selected in step 10 requires additional information, a window appears with entry fields for the required information.

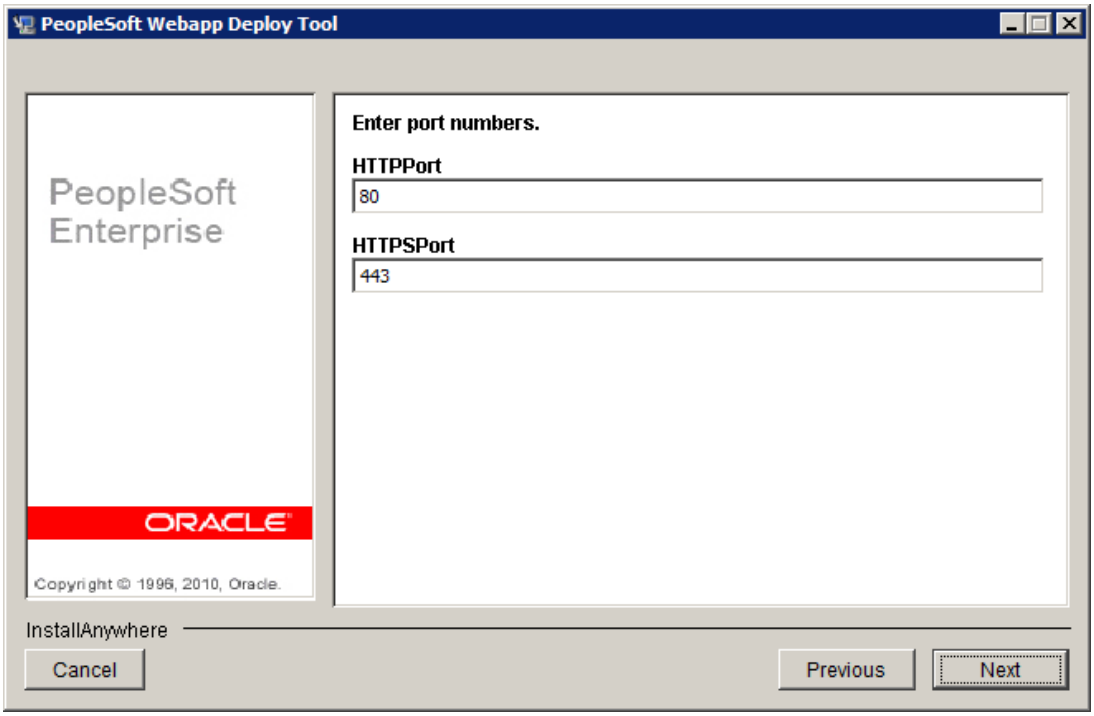


Specifying application information for the PeopleSoft Webapp Deploy Tool installation

The information required for the application in this example includes:

- Database Type
- Database Server Name
- Database Port Number
- Database Instance Name
- Database User Name
- Database User Password

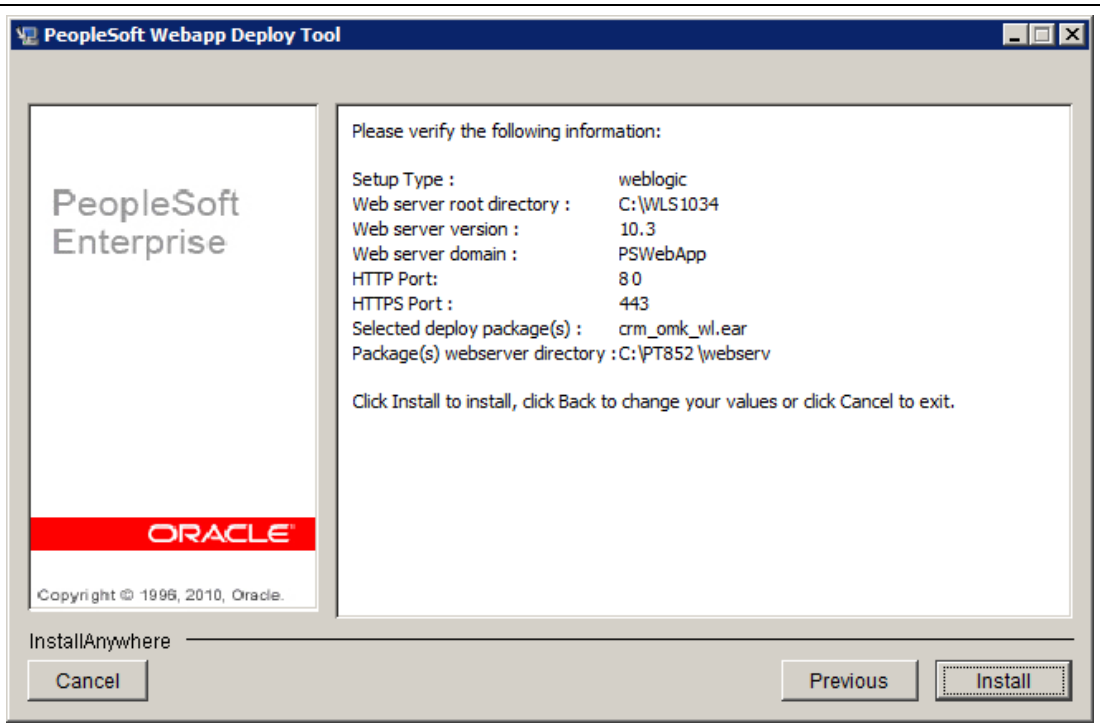
12. Enter HTTP and HTTPS port numbers. Click Next to continue.



Entering port numbers for the PeopleSoft Webapp Deploy Tool installation

13. Verify your installation information, such as web server information, HTTP and HTTPS port, and application deployment package, on the summary screen that appears.

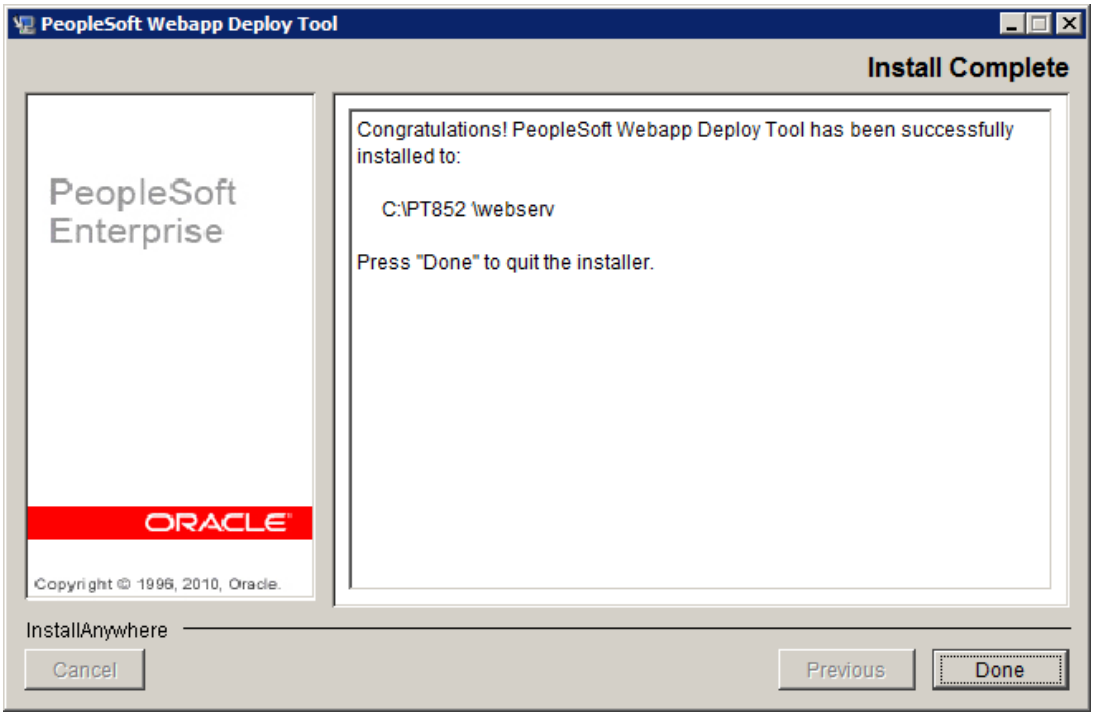
    Click Install to begin the installation, Previous to go back to make changes on an earlier window, or Cancel to exit the installation.



Verifying installation information for the PeopleSoft Webapp Deploy Tool installation

14. A confirmation screen appears, which displays the installation location, C:\PT852\webserv in this example, when the installation completes.

    Click Done to exit.



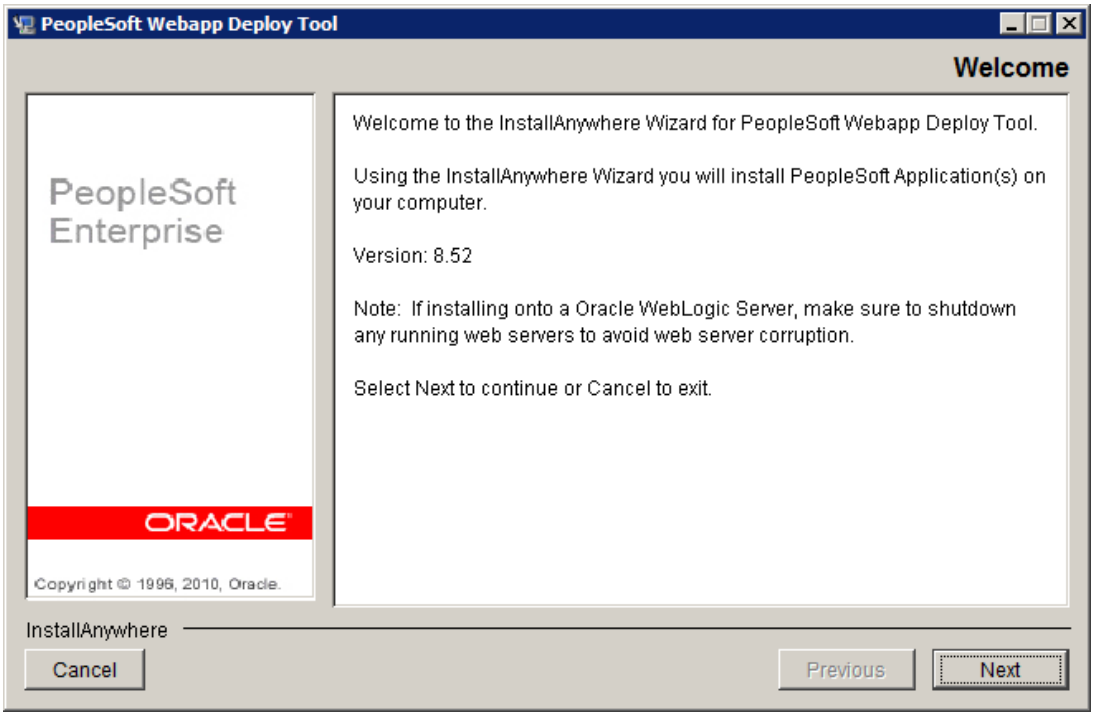
PeopleSoft Webapp Deploy Tool Install Complete window

Task F-2: Installing the Web Application Deployment Tools on WebSphere in GUI Mode

Use these instructions to install the Web Application Deployment Tools on WebSphere in GUI mode.

1. Copy the required Web Applications (EAR) files to *PS_HOME*\setup\PsMpWebAppDeployInstall\archive.
2. Start WebSphere on the server on which you plan to deploy the Web Application Deployment tools.
   a. Select Start, Programs, IBM WebSphere, Application Server Network Deployment V7.0, Profiles,<*profile_name*>, First steps.
   b. Select the link Start the server.
3. Navigate to *PS_HOME*\setup\PsMpWebAppDeployInstall.
4. Double-click on setup.bat.
5. Click Next on the Welcome window.

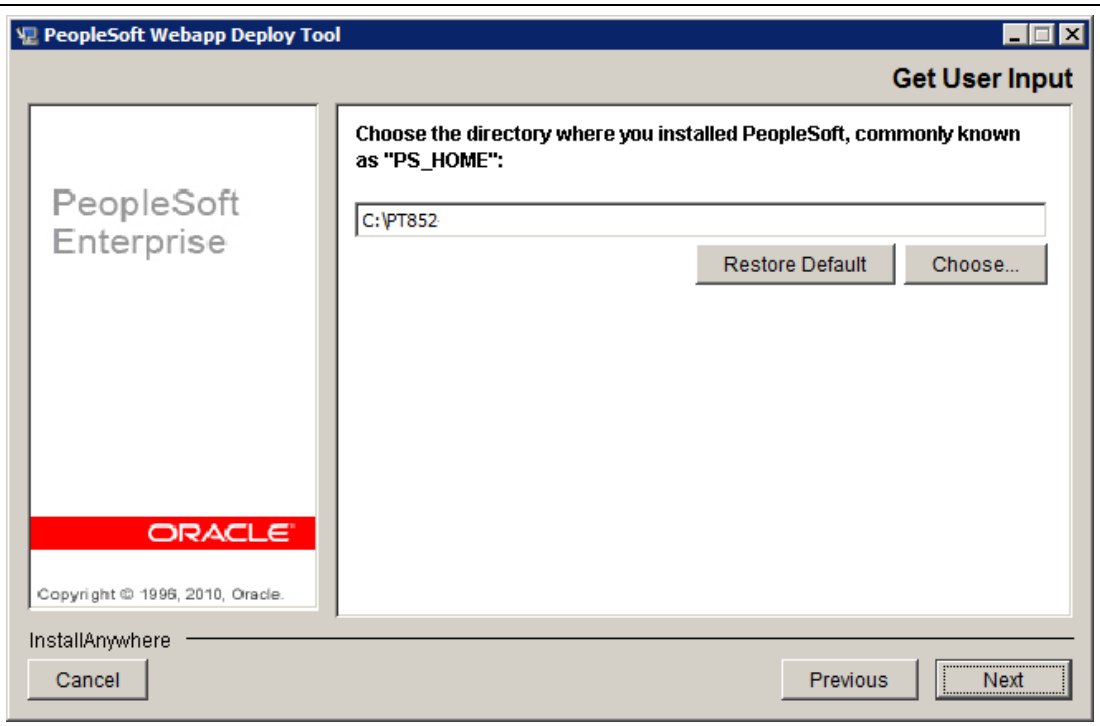
   The window includes the PeopleSoft PeopleTools version number, which is 8.52 in this example, and this message: “If installing onto a Oracle WebLogic Server, make sure to shutdown any running web servers to avoid web server corruption.”



PeopleSoft Webapp Deploy Tool Welcome window

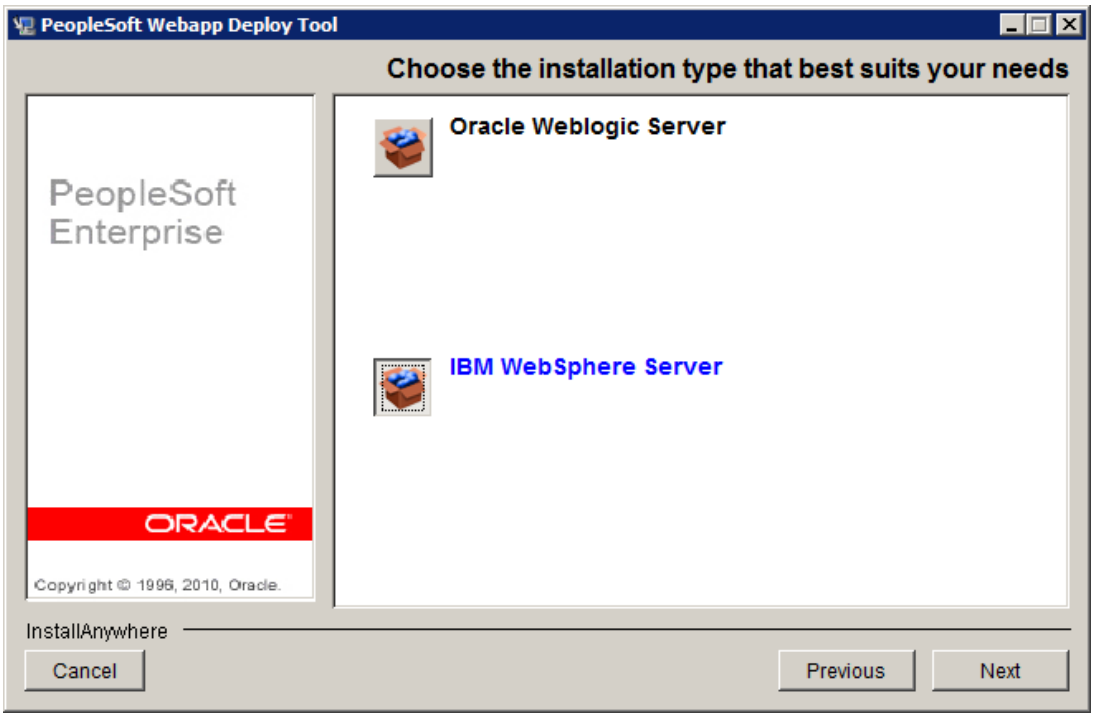
6. Enter the same *PS_HOME* directory that you specified when you ran the PeopleSoft PeopleTools Installer and then click Next.

   In this example, PS_HOME is C:\PT852.



Entering PS_HOME on the PeopleSoft Webapp Deploy Tool window

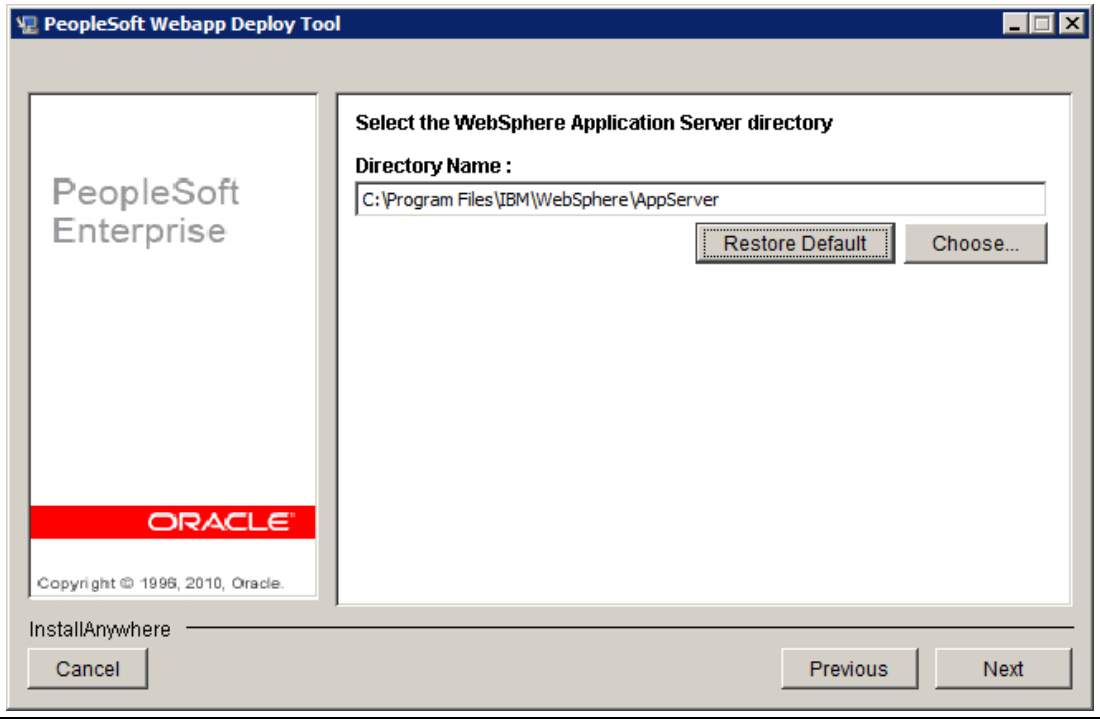
7. Select IBM WebSphere Server and click Next.



Selecting IBM WebSphere on the PeopleSoft Webapp Deploy Tool window

8. Specify the root directory where you installed the IBM WebSphere Application server.

   In this example, the root directory is C:\Program Files\IBM\WebSphere\AppServer.



Specifying the WebSphere Application Server directory on the PeopleSoft Webapp Deploy window

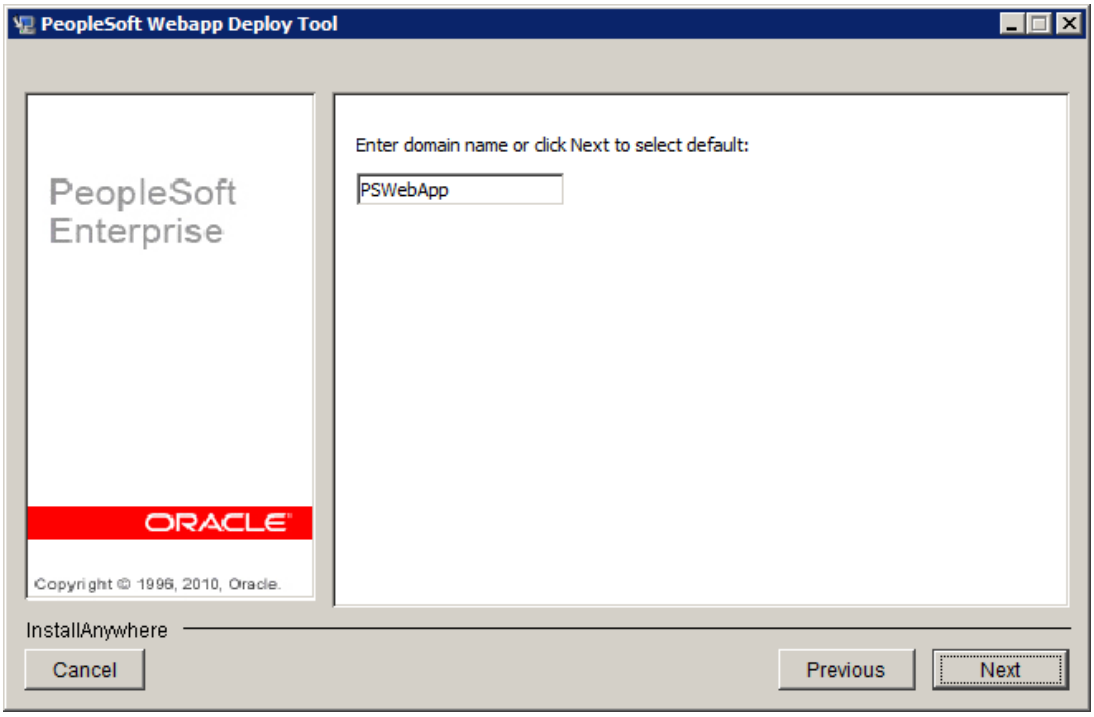
Note. If the web server on which you are installing the Web Application Deployment tools is not up and running, you receive an error message at this point instructing you to start your web server.

See *PeopleTools 8.52: System and Server Administration PeopleBook.*

9. Enter a name for the Web Application Deploy domain, or accept the default name, PSWebApp, as in this example.

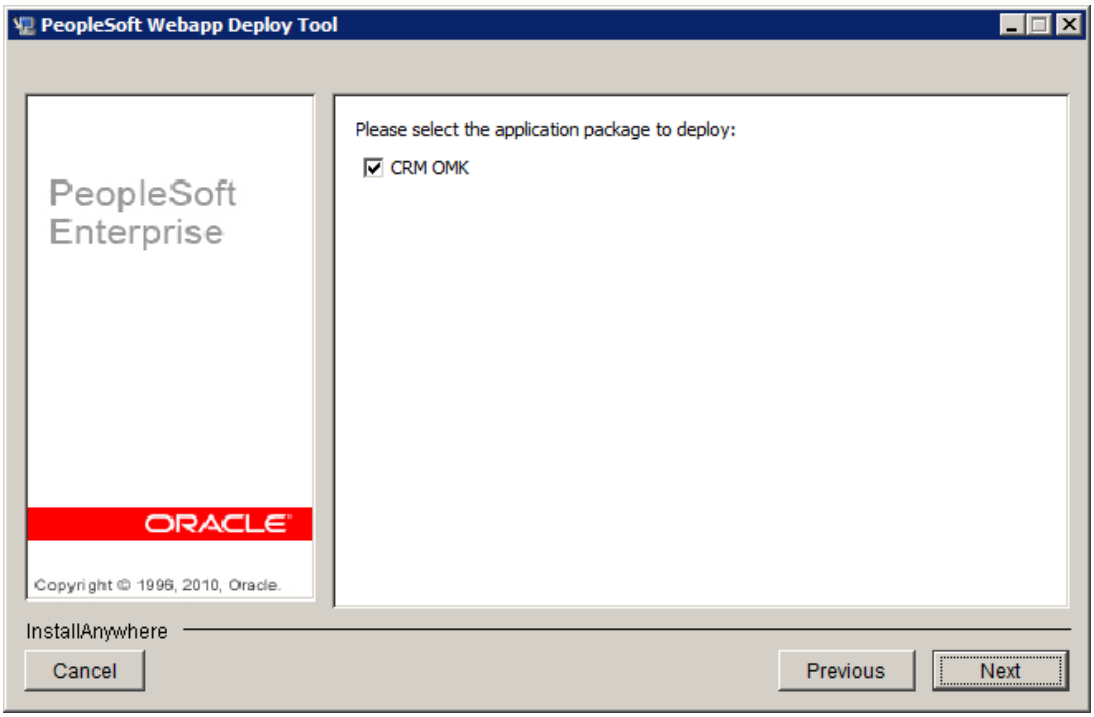
   Use a fully qualified domain name, and do not use an IP address. Click Next to continue.

   Important! The domain that you create for the Web Application Deploy cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.



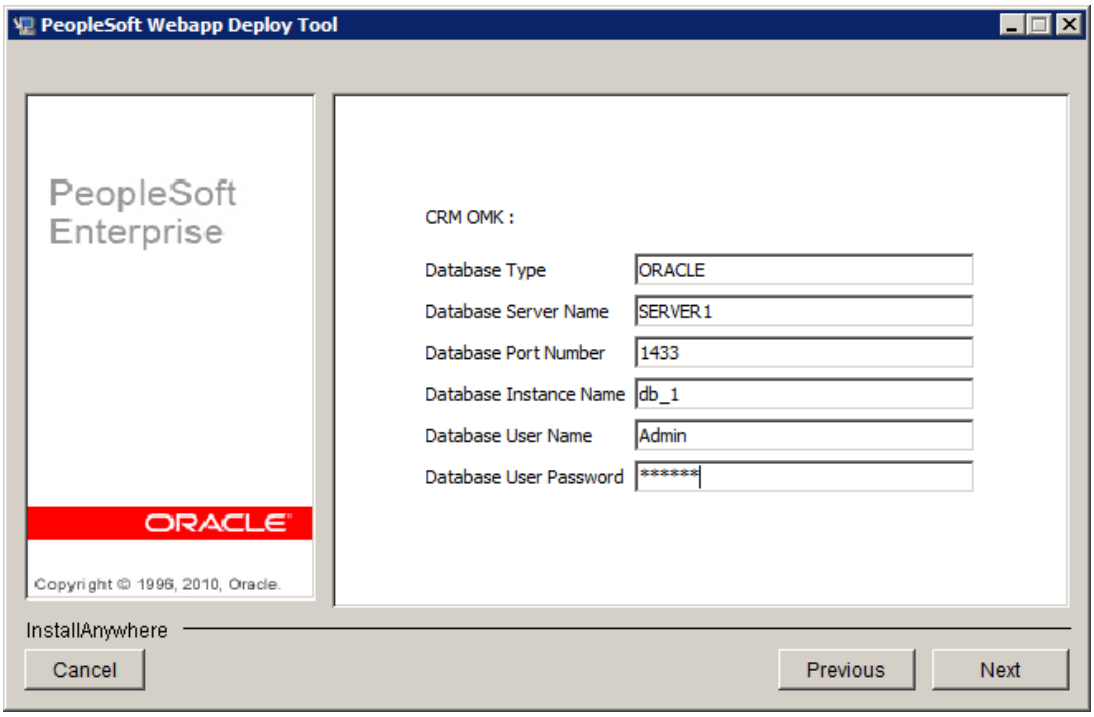
Entering the domain name on the PeopleSoft Webapp Deploy Tool window

10. The next window lists all of the available application packages (EAR files). Select the packages you want to install. *You must select at least one application package from this list.*



Selecting the application package to deploy on the PeopleSoft Webapp Deploy Tool window

11. If the application(s) you selected in the previous step requires additional information, a window appears with entry fields for the required information.



Specifying application information on the PeopleSoft Webapp Deploy Tool window

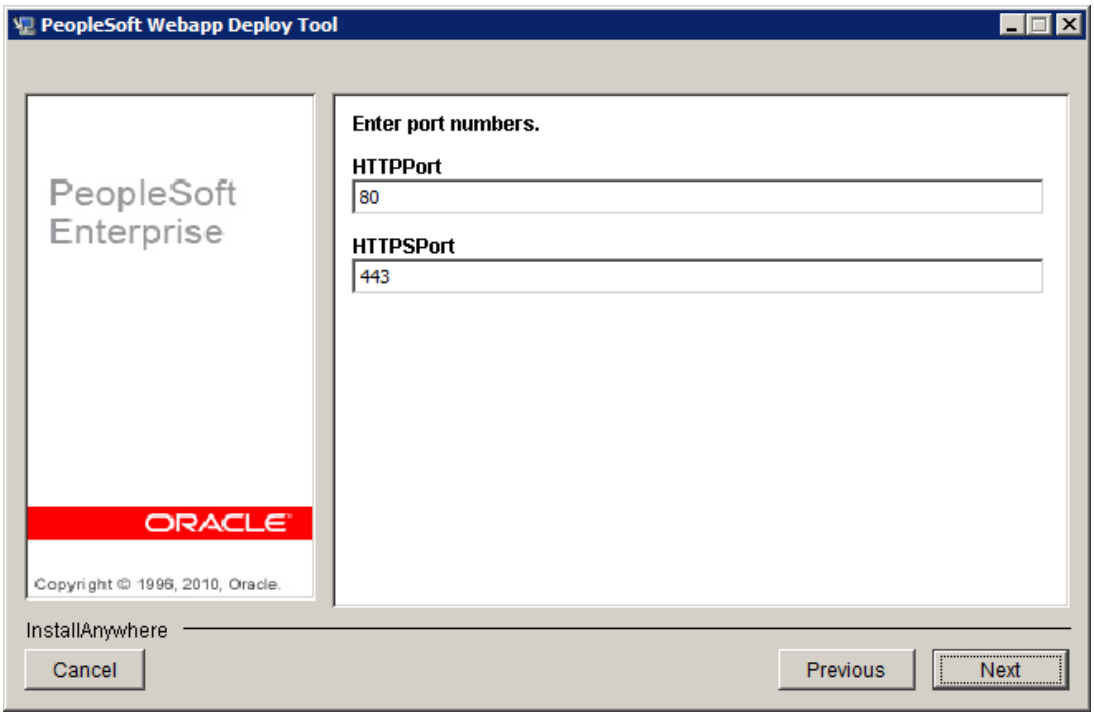
In this example, the required information includes:

- Database Type

- Database Server Name
- Database Port Number
- Database Instance Name
- Database User Name
- Database User Password

12. Enter HTTP and HTTPS port numbers, and then click Next to continue.

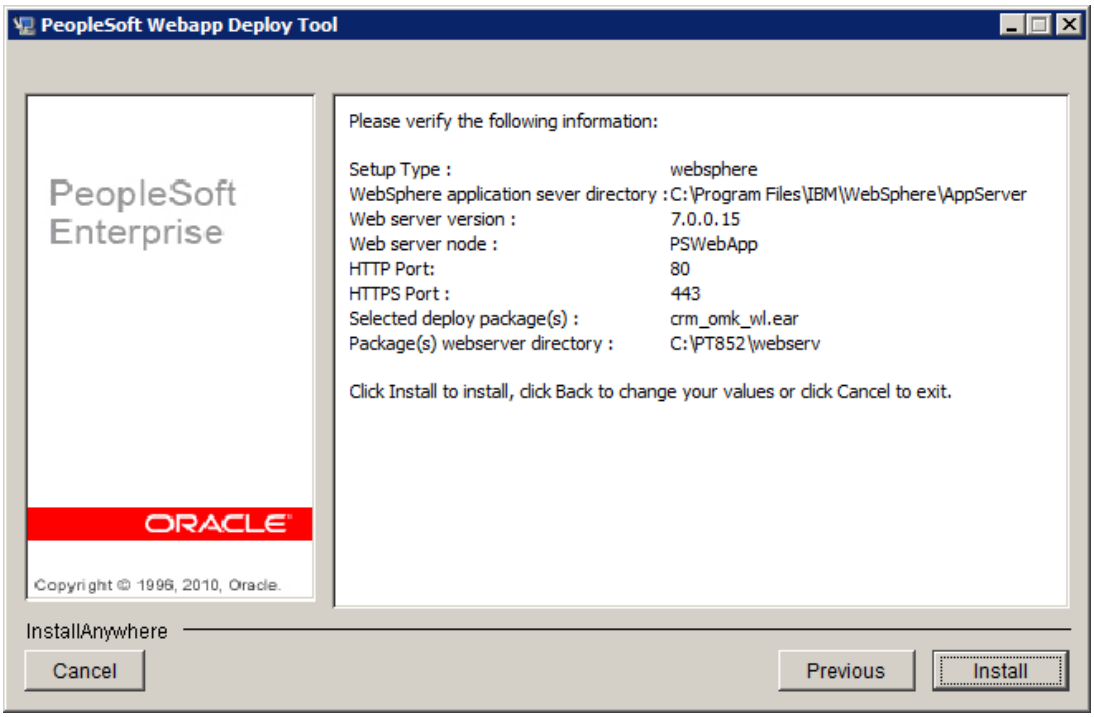
    This example shows the default port numbers for HTTP = 80 and HTTPS = 443.



Entering port numbers on the PeopleSoft Webapp Deploy window

13. Verify your installation information, such as the web server information, HTTP and HTTPS port numbers, and deployment packages, on the summary screen that appears.

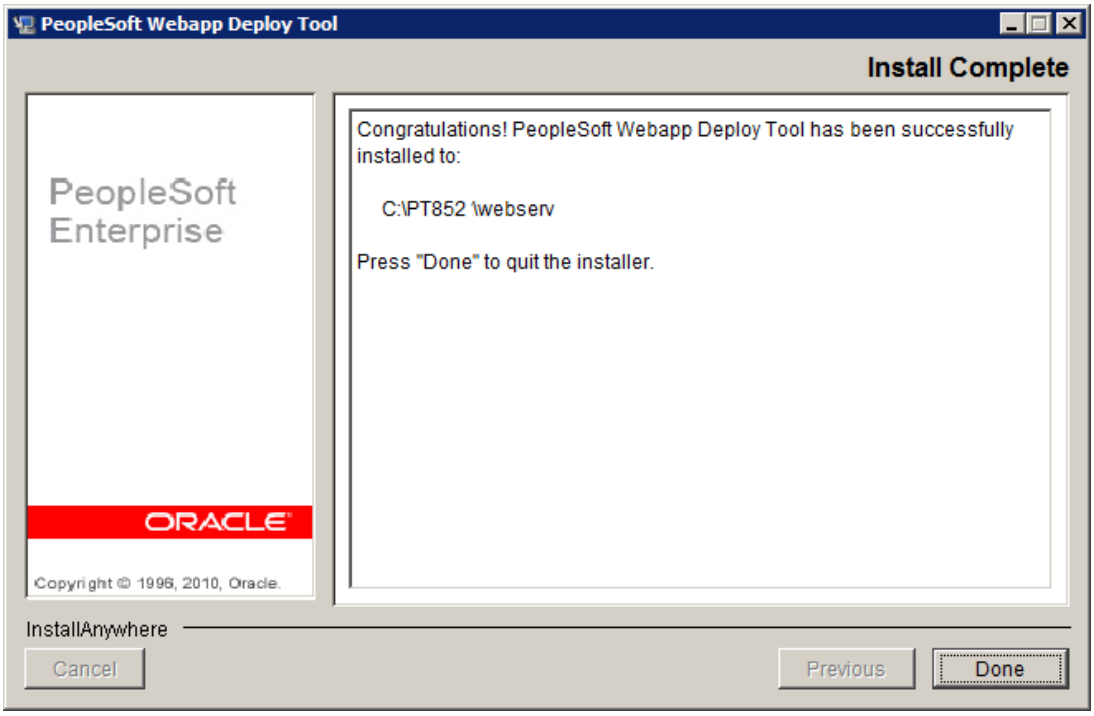
    Click Install to begin the installation, Previous to go back to make changes on an earlier window, or Cancel to exit the installation.



Verifying installation information on the PeopleSoft Webapp Deploy Tool window

A window appears with a progress indicator.

14. A confirmation screen appears when the installation completes, which includes the installation directory, C:\PT852\webserv in this example. Click Done to exit.



PeopleSoft Webapp Deploy Tools Install Complete window

Task F-3: Installing the Web Application Deployment Tools on WebLogic in Console Mode

Use these instructions to install the Web Application Deployment Tools on Oracle WebLogic in console mode.

Note. The console mode installation is typically used on UNIX platforms.

1. Copy the required Web Applications (EAR) files to *PS_HOME*/setup/PsMpWebAppDeployInstall/archive.
2. Set up the PeopleSoft environment by going to *PS_HOME* and running the following command:

   ```
   ../psconfig.sh
   ```

3. To run the installer, go to *PS_HOME*/setup/PsMpWebAppDeployInstall, and run the following command:

   ```
   setup.sh -tempdir <temporary_directory> -javahome <java_directory>
   ```

   Use the optional flag `-javahome <javahome>` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path.

4. You see a welcome message. Enter *1* to continue.

   ```
   Welcome to the InstallShield Wizard for PeopleSoft Webapp Deploy Tool.

   Using the InstallShield Wizard you will deploy PeopleSoft Application(s) on⇒
    your computer.
   Note: If installing onto a Oracle WebLogic Server, make sure to shutdown any⇒
    running web servers to avoid web server corruption.

   Select Next to continue or Cancel to exit.

   Press 1 for Next, 3 to Cancel or 5 to Redisplay [1]
   ```

5. Choose the *PS_HOME* directory that you specified when you installed PeopleSoft PeopleTools. Enter *1* to continue.

   ```
   Choose the directory where you installed PeopleSoft, commonly known as "PS_⇒
   HOME":

   Please specify a directory name or press Enter [/opt/PS_HOME]

   Press 1 for Next, 2 for Previous, 3 to Cancel or 5 to Redisplay [1]
   ```

6. Enter *1* to select Oracle WebLogic Server, at the following prompt, and then enter *1* to continue.

   ```
   Choose the setup type that best suits your needs.
     ->1- Oracle WebLogic Server
       2- IBM WebSphere Server
   To select an item enter its number, or 0 when you are finished: [0]
   Press 1 for Next, 2 for Previous, 3 to Cancel or 5 to Redisplay [1]
   ```

7. Enter the directory where you installed Oracle WebLogic, and press ENTER to continue at the following prompt.


```
Select the web server root directory:
Please specify a directory name or press ENTER [/opt/bea_ps]
```

Note. You receive an error message if the correct Oracle WebLogic version is not found in the directory you enter.

8. Enter a name for the Web Application Deploy domain, or accept the default name. Use a fully qualified domain name, and do not use an IP address.

```
Enter domain name or click Next to select default:

[PSWebApp]
```

Important! The domain that you create for the Web Application Deploy cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.

9. Enter the administrator login and password for your Oracle WebLogic domain, and press ENTER to continue.

Note. The default login ID is system, and the default password is Passw0rd (with a capital "P" and zero rather than the letter "o"). The password must be at least 8 alphanumeric characters with at least one number or special character.

```
Please enter the administrator login and password for WebLogic domain.

Login ID:

    [system]

Password:

    [password]

Re-type Password:

    [password]
```

10. The next prompt lists all of the available application packages (EAR files). Enter the numbers beside the packages you want to install. *You must select at least one application package from this list.*

```
Please select the application package to deploy:

  ->1- CRM Package
    2- Financial Package

To select an item enter its number, or 0 when you are finished [0]:
```

11. Select the type of domain to create—single server, multi server, or distributed managed server.

See "Setting Up the PeopleSoft Pure Internet Architecture in Console Mode," Installing the PeopleSoft Pure Internet Architecture in Console Mode.

```
Please select the configuration to install.

  ->1- Single Server Domain
    2- Multi Server Domain
    3- Distributed Managed Server
To select an item enter its number, or 0 when you are finished: [0]
```

- *Single Server Domain*

  This configuration is intended for single user or very small scale, non-production environments.

- *Multi-Server Domain*

  This configuration is intended for a production environment.

- *Distributed Managed Server*

  This option is an extension of the Multi-Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

12. If the application(s) you selected in step 10 requires additional information, supply the necessary information at the next prompt. For example:

```
CRM OMK :

Database Type
    [ORACLE]

Database Server Name
    [SERVER1]

Database Port Number
    [1431]

Database Instance Name
    [db_1]

Database User Name
    [Admin]

Database User Password
    []
```

13. Enter HTTP and HTTPS port numbers.

```
Enter port numbers.

HTTP Port :  [80] 80

HTTPS Port :  [443] 443
```


14. Verify your installation information on the next prompt and press ENTER to begin the installation. An indicator shows your installation progress.

```
Please verify the following information:

Setup Type : weblogic

Web server root directory : /opt/bea_ps

Web server version :10.3.4

Web server domain : PSWebApp

HTTP Port : 80

HTTPS Port : 443

Selected deploy package(s) : CRM Package.ear

Package(s) webserver directory : /opt/PS_HOME/webserv
```

15. After the installation is complete, you must deploy the Web Application Deploy tools. Use the following commands:

```
cd <PS_HOME>/webserv/<domain_name>
startPSWEBAPPS.sh
```

For *domain_name*, use the name you entered in step 8. The default is PsWebApp.

Note. You can choose to deploy at a later time using the same commands.

Task F-4: Installing the Web Application Deployment Tools on IBM WebSphere in Console Mode

Use these instructions to install the Web Application Deployment Tools on IBM WebSphere in console mode.

Note. The console mode installation is typically used on UNIX platforms.

1. Copy the required Web Applications (EAR) files to *PS_HOME*/setup/PsMpWebAppDeployInstall/archive.
2. Set up the PeopleSoft environment by going to *PS_HOME* and using the following command:

```
../psconfig.sh
```

3. Start IBM WebSphere on the server on which you plan to deploy the Web Application Deployment tools.

   Navigate to the bin directory under the directory where you installed IBM WebSphere, *WAS_HOME*. Use the following commands:

```
cd WAS_HOME/bin
startServer.sh server_name
```


4. To run the installer, go to *PS_HOME*/setup/PsMpWebAppDeployInstall and run the following command:

   ```
   setup.sh -javahome <java_directory>
   ```

   Use the optional flag `-javahome <java_directory>` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path.

5. You see a Welcome message. Enter *1* to continue.

   ```
   Welcome to the InstallShield Wizard for PeopleSoft Webapp Deploy Tool.
   Using the InstallShield Wizard you will deploy PeopleSoft Application(s) onyour⇒
    computer.

   Note: If installing onto a Oracle WebLogic Server, make sure to shutdown any⇒
    running web servers to avoid web server corruption.

   Select Next to continue or Cancel to exit.

   Press 1 for Next, 3 to Cancel or 5 to Redisplay [1]
   ```

6. Choose the same *PS_HOME* directory that you specified when you ran the PeopleSoft PeopleTools Installer.

   ```
   Choose the directory where you installed PeopleSoft, commonly known as "PS_⇒
   HOME":

   Please specify a directory name or press Enter [/opt/PS_HOME]
   ```

7. Enter *2*, to select the IBM WebSphere Server, at the following prompt:

   ```
   Choose the setup type that best suits your needs.

     ->1- Oracle WebLogic Server
       2- IBM WebSphere Server

   To select an item enter its number, or 0 when you are finished: [0]
   ```

8. Enter the root directory where you installed IBM WebSphere at the following prompt, and press ENTER to continue:

   ```
   Select the WebSphere Server directory:

   Directory Name:

   Please specify a directory name or press Enter [/opt/webserv]
   ```

   Note. If the web server on which you are installing the Web Application Deployment tools is not up and running, you receive an error message at this point instructing you to start your web server.

   See *PeopleTools 8.52: System and Server Administration PeopleBook.*

9. At the next prompts, enter a cell name, node name, and server name.

10. Enter a name for the Web Application Deploy domain, or accept the default name, PsWebApp. Use a fully qualified domain name, and do not use an IP address. Press *1* to continue.


```
Enter domain name or click Next to select default:

    [PSWebApp]
```

Important! The domain that you create for the Web Application Deploy cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.

---

11. The next prompt lists all of the available application packages (EAR files). Enter the number corresponding to the packages you want to install. *You must select at least one application package from this list.*

```
Please select the application package to deploy:

  ->1-  CRM Package
    2-  Financial Package

To select an item enter its number, or 0 when you are finished [0]:
```

12. If the application(s) you selected in the previous step requires additional information, supply the necessary information at the next prompt. For example:

```
CRM OMK :

Database Type
    [ORACLE]

Database Server Name
    [SERVER1]

Database Port Number
    [1431]

Database Instance Name
    [db_1]

Database User Name
    [Admin]

Database User Password
    []
```

13. Enter HTTP and HTTPS port numbers at the following prompt. Press *1* to continue.

```
Enter port numbers.

HTTP Port: [80] 80

HTTPS Port: [443] 443
```

14. Verify your installation information at the next prompt and press ENTER to begin the installation. An indicator shows your installation progress.

15. A confirmation screen appears when the installation completes. Click Finish to exit the install shield wizard.
16. After the installation is complete, you must stop and start the IBM WebSphere server. Use the following commands:

```
cd WAS_HOME/bin
../stopServer.sh <server_name>
../startServer.sh <server_name>
```

For <server_name>, use the name of the IBM WebSphere server you used in step 3.

Task F-5: Testing and Troubleshooting the Web Application Deployment

Check the log file for any problems encountered during installation. The log file is saved in the following location:

<PIA_HOME>/webserv/piainstall*<domain_name>*.log

If you need to start or stop Oracle WebLogic or IBM WebSphere, use the commands given in the chapter on installing the PeopleSoft Pure Internet Architecture.

See "Setting Up the PeopleSoft Pure Internet Architecture (in GUI Mode or Console Mode)," Testing the PeopleSoft Pure Internet Architecture Installation.

APPENDIX G

Setting Up a Unicode Database

This appendix discusses:

- Prerequisites
- Defining Conversion Pages for Unicode Conversion Services
- Fulfilling Connectivity Requirements

Prerequisites

PeopleSoft PeopleTools 8.52 Unicode support for the z/OS operating system requires the following:

- DB2 for z/OS V8.1 (minimum) in New Function Mode
- IBM z/OS 1.6 (minimum)
- Search on My Oracle Support for a list of mandatory APARs and PTFs.

  See "Important PTFs for PeopleSoft on DB2 for z/OS," My Oracle Support.
- Review the hardware and software requirements and recommendations for running Unicode on DB2 z/OS.

  See Enterprise PeopleTools 8.52 Hardware and Software Requirements, Defining DB2 for z/OS Support.

Task G-1: Defining Conversion Pages for Unicode Conversion Services

The following conversion images must be defined to successfully operate a PeopleSoft Unicode database:

- CCSID 367 (7-bit ASCII) <-> ASCII & EBCDIC System CCSID(s)
- CCSID 1208 (UTF-8) <-> ASCII & EBCDIC System CCSID(s)
- CCSID 1200 (UTF-16) <-> ASCII & EBCDIC System CCSID(s)
- Client CCSID(s) <-> Unicode CCSIDs (367, 1208, 1200)
- CCSID 367 <-> CCSID 1047
- CCSID 1200 <-> CCSID 1047
- CCSID 1208 <-> CCSID 1047

Task G-2: Fulfilling Connectivity Requirements

Set DB2CodePage to 1208 for Unicode databases as follows:

1. From a command prompt issue the db2set command:

   ```
   c:\apps\DB\DB2ODBC8\bin   db2set DB2CODEPAGE=1208
   ```

2. Issue the following command to verify that it has been set:

   ```
   C:\Apps\DB\db2odbc8>db2set -all
   ```

   Sample output:

   ```
   [e] DB2PATH=C:\Apps\DB\db2odbc8
   [i] DB2INSTPROF=c:\Apps\DB\db2odbc8
   [i] DB2CODEPAGE=1208
   ```

APPENDIX H

Using the PeopleSoft Tablespace DDL Automation Assistance Tool

This appendix discusses:

- Understanding the PeopleSoft Tablespace DDL Automation Assistance Tool
- Understanding PSTAAT Workstation Requirements
- Understanding the PSTAAT Graphical User Interface
- Understanding the Various PSTAAT Input and Output Files
- Using PSTAAT to Create TBDDL and IXDDL
- Using PSTAAT to Customize DDL
- Using PSTAAT to Reassign Temporary Tables to Additional Tablespaces
- Using PSTAAT to Isolate Other Tables to Individual Tablespaces
- Using PSTAAT to Convert EBCDIC DDL to Unicode DDL
- Using PSTAAT to Install PeopleSoft Databases

Understanding the PeopleSoft Tablespace DDL Automation Assistance Tool

The PeopleSoft Tablespace DDL Automation Assistance tool (PSTAAT) is a DDL script parsing utility intended to assist you in customizing your PeopleSoft PeopleTools and Application DDL. The utility provides greater flexibility in allowing you to override the supported PeopleSoft PeopleTools DDL parameters for DB2 for z/OS so that they more closely fit your shop standards, and to better optimize the mapping of tables among tablespaces and databases.

Note. The use of PSTAAT to customize the installation DDL is optional. You may elect not to use PSTAAT and complete the installation of your database as documented in the chapter, "Creating a Database." The next several sections describe the basic functions of this utility. Be sure to review the final section, Using PSTAAT to Install PeopleSoft Databases, before attempting to use PSTAAT for the first time.

PSTAAT serves the following functions:

- Generates the TBDDL and IXDDL scripts for the *traditional* installation.

  PSTAAT is capable of dynamically creating the default TBDDL and IXDDL scripts. Note that the TBDDL and IXDDL scripts created by PSTAAT will be identical to those found with your installation files. You are free to optimize either set of scripts with PSTAAT.

See "Creating a Database."

- Optimizes DDL for installation.

  PSTAAT may be used to parse and rewrite the default *XX*DDL, TBDDL, and IXDDL scripts to more optimally distribute the PeopleSoft PeopleTools and Applications objects among additional tablespaces and databases. It provides basic override capability of certain tablespace DDL parameters, and allows you to control the number of tables created per tablespace, and the number of tablespaces created per database.

- PSTAAT can be used to isolate Application Engine temporary tables intended to be used with the %UpdateStats metaSQL function to individual tablespaces.

- Converts EBCDIC DDL data types to Unicode DDL data types.

  PSTAAT may be used to “convert” EBCDIC DDL data types to those data types required to create a PeopleSoft Unicode database. Note that this is simply one step in a multi-step process when converting an EBCDIC PeopleSoft environment to Unicode. Complete instructions for converting an EBCDIC PeopleSoft environment to Unicode are beyond the scope of this manual. For more details, consult the white paper titled Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS.

  See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS," My Oracle Support, (search for the article title).

Understanding PSTAAT Workstation Requirements

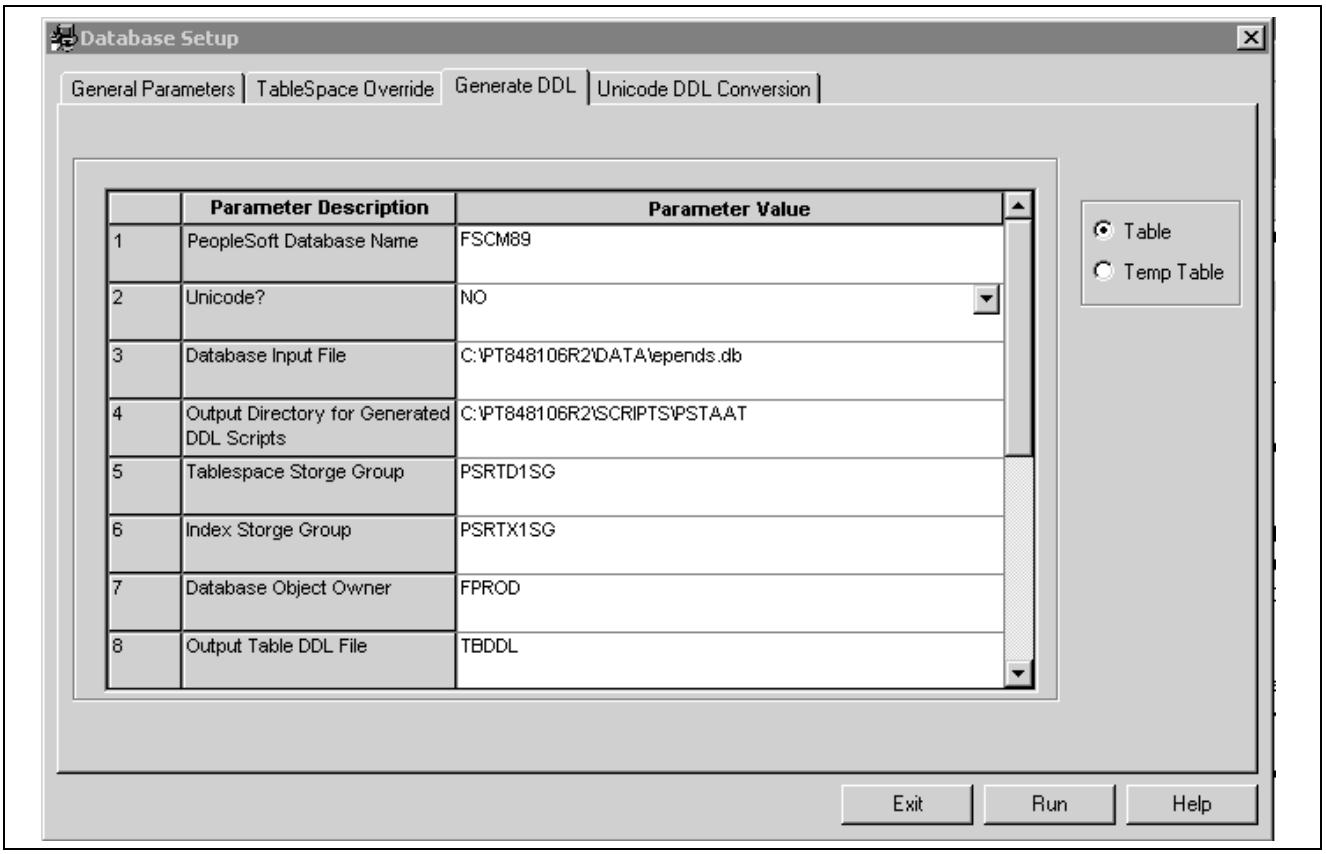
PSTAAT is a C++ Microsoft Windows application. It automatically invokes both Data Mover and Application Designer in command line mode depending on the particular functionality that is being used.

- PSTAAT must run from a PeopleSoft PeopleTools Install Workstation, or traditional Windows-based development client. For more details regarding the requirements of such a workstation, review the chapter titled The PeopleTools Development Environment in the Enterprise PeopleTools Hardware and Software Requirements guide.
- Both Data Mover and Application Designer require DB2 Connect, and thus it must also be installed on the client workstation from which you intend to run PSTAAT. See the appendix “Installing and Configuring DB2 Connect,” for more details regarding the installation and configuration of DB2 Connect.
- The PeopleSoft PeopleTools Installer will place the PSTAAT executable file in the *PS_HOME*\bin\client\winx86 directory of the PeopleSoft PeopleTools Install Workstation, file server, or Windows-based two-tier development client.

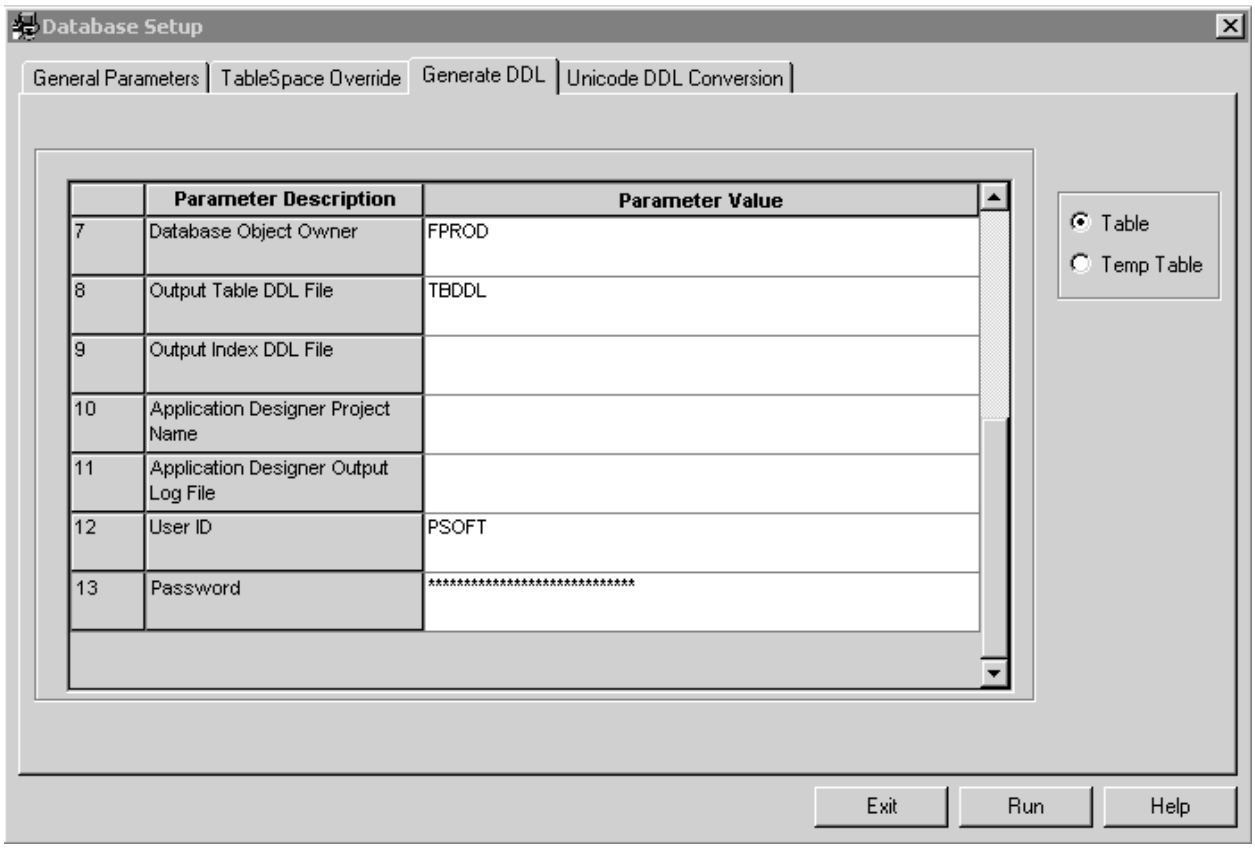
Understanding the PSTAAT Graphical User Interface

This section describes the tabs found on the PSTAAT graphical user interface (GUI) and the input expected for each text box.

Generate DDL tab:



Database Setup page: Generate DDL tab (1 of 2)



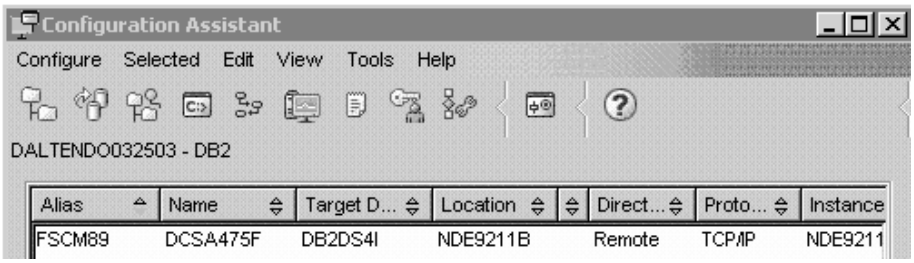
Database Setup page: Generate DDL tab (2 of 2)

Table and Temp Table radio buttons

Enable the Temp Table radio button to generate a DDL script for the creation of Application Engine temporary tables and indexes. Enable the Table radio button to generate a DDL script for the creation of all other table and index types.

(1) PeopleSoft Database Name

This is the logical database name of the PeopleSoft database to be created. It *must* match the alias cataloged in DB2 Connect as shown in the Configuration Assistant (see figure below).



Configuration Assistant page

(2) Unicode?

Indicates whether PSTAAT should create DDL with EBCDIC or Unicode data types.

(3) Database Input File

Name of the database input file located in *PS_HOME*\data.

(4) Output Directory for Generated DDL Scripts

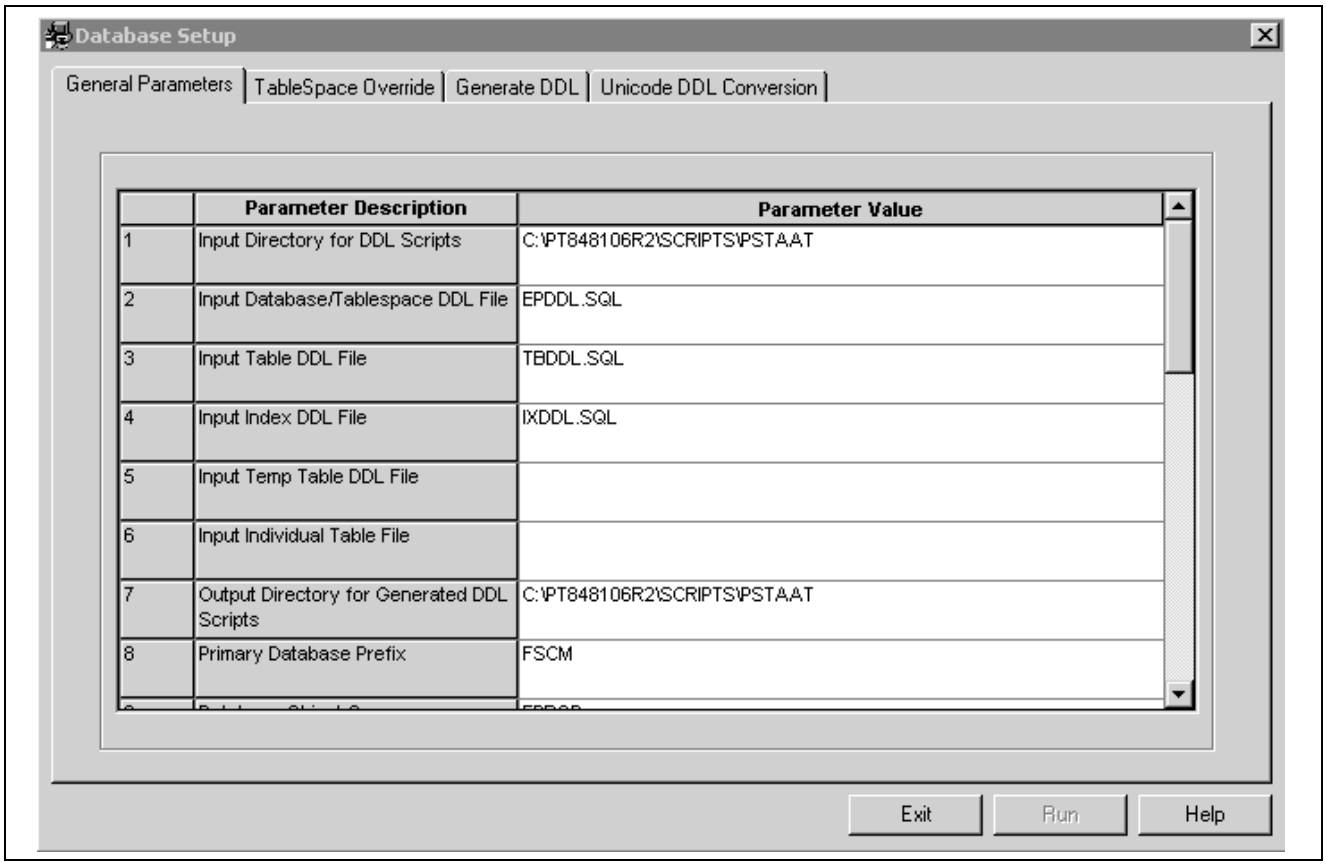
Specify a folder on the workstation where PSTAAT will store the generated DDL scripts.

Note. The path must already exist—PSTAAT will not create it for you.

(5) Tablespace Storage Group	Storage group to be used for tablespace data sets
(6) Index Storage Group	Storage group to be used for Index data sets.
(7) Database Object Owner	The name of the table owner ID as previously determined from the "Preparing for Installation" chapter. This value qualifies all tables as belonging to the logical PeopleSoft database. This value will be stored in the Creator field of SYSIBM.SYSTABLES.
(8) Output Table DDL File	Name of the output file that contains DDL to create all tables. (TBDDL.SQL)
(9) Output Index DDL File	Name of the output file that contains DDL to create all indexes. (IXDDL.SQL)
(10) Application Designer Project Name	Name of PeopleSoft PeopleTools project that contains the temporary table record definitions. This is only used when creating temporary table DDL. See Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces.
(11) Application Designer Output Log File	Application Designer log file. This is only used when creating Application Engine temporary table DDL. See Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces.
(12) User ID	The userid specified must either be a valid mainframe ID such as the database Access ID, or a PeopleSoft user ID depending on which of the Table/Temp Table radio buttons has been enabled. Recall from the section titled Understanding PSTAAT Workstation Requirements, that PSTAAT invokes Data Mover and Application Designer, which in turn make connections to the DB2 z/OS database server through DB2 Connect. When creating the TBDDL.SQL and IXDDL.SQL, the Table radio button must be enabled. PSTAAT will invoke Data Mover in bootstrap mode to extract the default table and index DDL, thus this ID must be a valid mainframe ID such as the Access ID because it will be validated by your security software package (RACF, Top Secret, and so on). When creating temporary table DDL with the Generate DDL tab, the Temp Table radio button must be enabled. In this case, PSTAAT will invoke Application Designer through a command line, thus the ID passed will be validated by PeopleSoft security. This id must be a valid PeopleSoft user id such as VP1 or PS.
(13) Password	This is the password that matches the ID supplied for input parameter 12 (above).

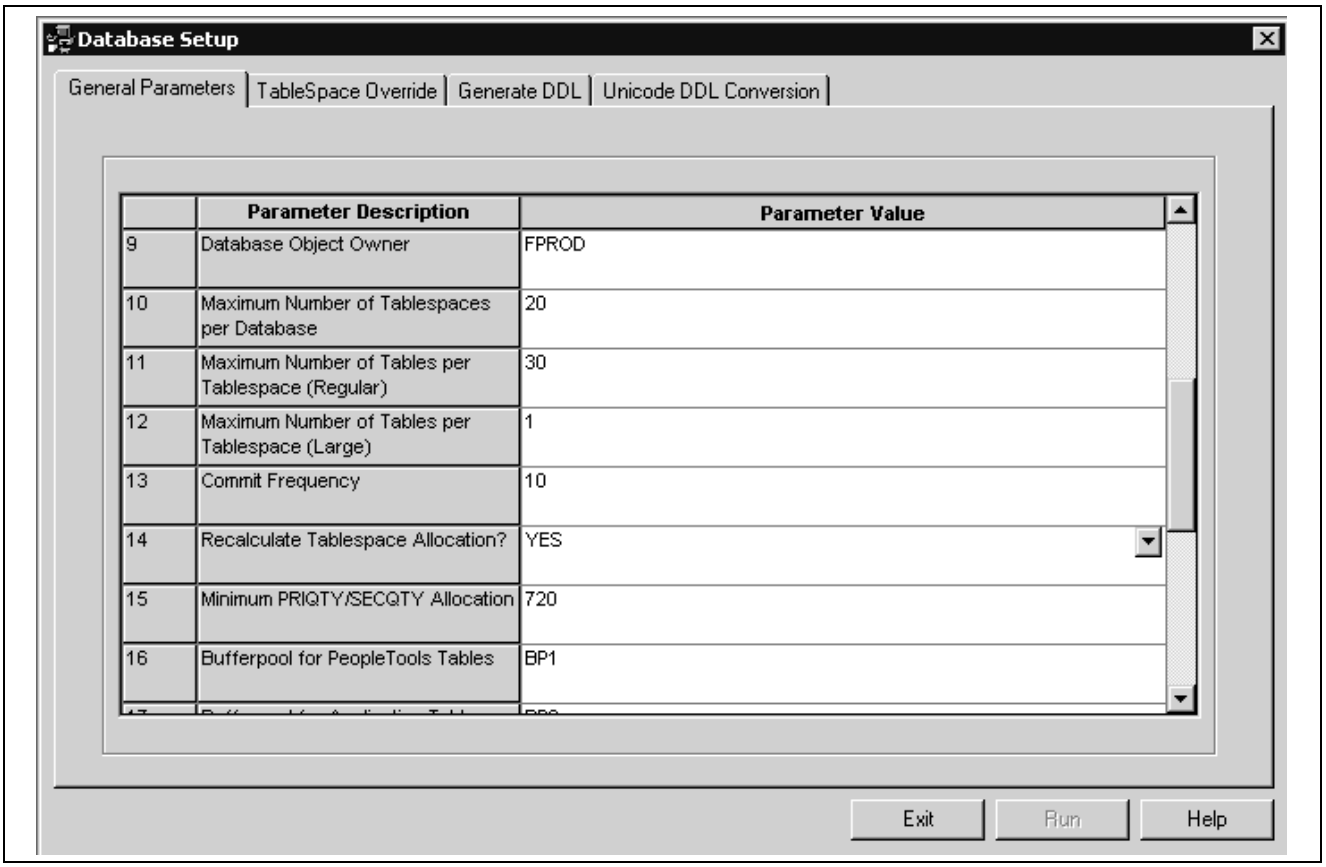
General Parameters Tab:

PSTAAT is a text parsing and DDL generation utility. It requires input files such as the default TBDDL.SQL and IXDDL.SQL scripts to operate. PSTAAT parses the text of the original files to create new versions of each script using the input supplied for the parameters below to override default values.

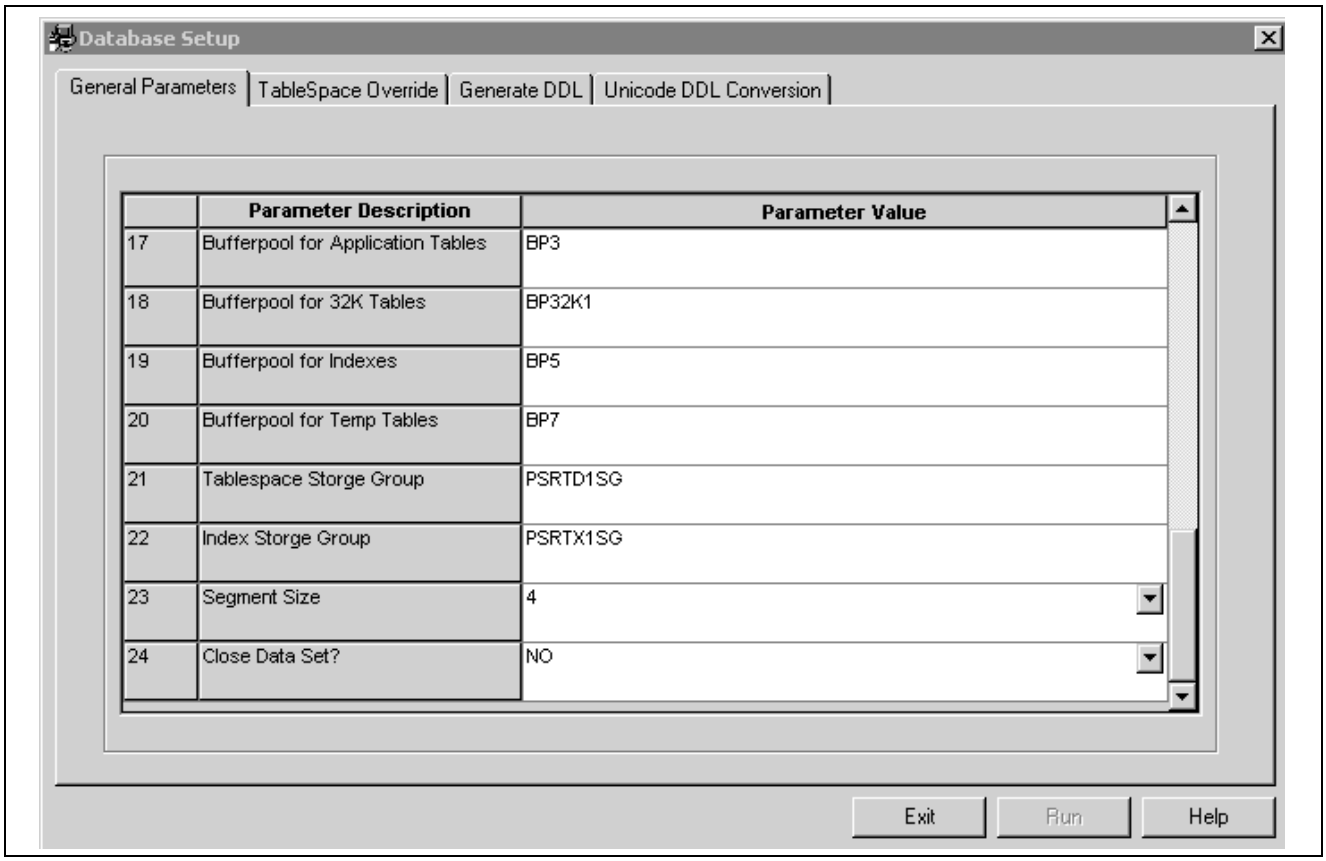


	Parameter Description	Parameter Value
1	Input Directory for DDL Scripts	C:\PT848106R2\SCRIPTS\PSTAAT
2	Input Database/Tablespace DDL File	EPDDL.SQL
3	Input Table DDL File	TBDDL.SQL
4	Input Index DDL File	IXDDL.SQL
5	Input Temp Table DDL File	
6	Input Individual Table File	
7	Output Directory for Generated DDL Scripts	C:\PT848106R2\SCRIPTS\PSTAAT
8	Primary Database Prefix	FSCM

Database Setup page: General Parameters tab (1 of 3)



Database Setup page: General Parameters tab (2 of 3)



Database Setup page: General Parameters tab (3 of 3)

(1) Input Directory for DDL Scripts Enter the path that contains the mandatory DDL input files. (See input parameters 2-6 below.) Note that a value for this Input text box is also required to use the Unicode DDL Conversion Tab.

(2) Input Database/Tablespace DDL File The name of the default database, tablespace, and stogroup DDL file for the traditional installation path. (The *XX*DDL.SQL script.)

(3) Input Table DDL File A TBDDL.SQL DDL script such as one that was created by the Generate DDL tab or delivered with the installation.

(4) Input Index DDL File An IXDDL.SQL DDL script such as one that was created by the Generate DDL tab or delivered with the installation.

(5) Input Temp Table DDL File Temporary table DDL script as generated by Application Designer.

(6) Input Individual Table File Input file of non-temporary PeopleSoft PeopleTools and Application tables for which the %UpdateStats metaSQL function is called.

(7) Output Directory for Generated DDL Scripts Enter the path where you would like PSTAAT to write the newly generated output DDL scripts. Note that a value for this Input text box is also required to use the Unicode DDL Conversion Tab.

(8) Primary Database Prefix Prefix to be used as the constant portion of the naming convention for the individual databases (DBDs) that comprise the “logical” PeopleSoft database. PSTAAT will use the prefix entered here as the first part of the database naming convention. It will generate an ascending sequence for the remainder

	of the eight characters to be used for the DB2 z/OS database name. We recommend a primary database prefix of five characters or less.
(9) Database Object Owner	Enter the 'owner' id that will qualify each of the objects in the logical PeopleSoft database. This is the name previously determined from the "Preparing for Installation" chapter. It will be the value stored in the Creator field of SYSIBM.SYSTABLES.
(10) Maximum Number of Tablespaces per Database	Enter the maximum number of tablespaces that you want PSTAAT to allocate per database.
(11) Maximum Number of Tables per Tablespace (Regular)	Enter the maximum number of tables that you want PSTAAT to allocate per tablespace.
(12) Maximum Number of Tables per Tablespace (Large)	Enter the desired maximum number of tables per tablespace for those tables assigned to the *XX*LARGE tablespaces by default. These have been identified as high growth tables. An input value of one (1) would segregate each of the tables delivered in these tablespaces to its own tablespace.
(13) Commit Frequency	An explicit commit is issued after each table and index is created in the default DDL scripts. It is possible to vary the commit frequency between tables and indexes with this input parameter. A commit frequency of 10, for example, will indicate that PSTAAT should force an explicit commit after approximately every ten DDL statements.
(14) Recalculate Tablespace Allocation	Indicates whether you want PSTAAT to recalculate the Primary and Secondary space allocations for tablespaces, or use the defaults as indicated in the *XX*DDL script. For more details regarding the algorithm used to recalculate PRI and SEC space allocation, see the section titled Using PSTAAT to Customize DDL; Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation.
(15) Minimum PRIQTY/SECQTY Allocation	Allows you to specify a minimum Primary and Secondary space allocation for tablespaces when allowing PSTAAT to recalculate the Primary and Secondary allocations. See the section titled Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation for more details regarding the manner in which PSTAAT uses this input parameter.
(16) Bufferpool for PeopleTools Tables	PSTAAT will allocate PeopleSoft PeopleTools tables to this bufferpool.
(17) Bufferpool for Application Tables	PSTAAT will allocate Application tables to this bufferpool.
(18) Bufferpool for 32K Tables	Indicate the particular 32K bufferpool to be used for tables automatically allocated to 32K bufferpools.
(19) Bufferpool for Indexes	PSTAAT will allocate index data sets to this bufferpool.
(20) Bufferpool for Temp Tables	PSTAAT will allocate Temporary Tables to this bufferpool.
(21) Tablespace Storage Group	Stogroup to be used for tablespaces. **Note.** All tablespaces will be created using this stogroup. PSTAAT is not capable of assigning multiple tablespace stogroups.

(22) Index Storage Group Stogroup to be used for indexes.

Note. All indexes will be created using this stogroup. PSTAAT is not capable of assigning multiple index stogroups.

(23) Segment Size Select a default segment size to be used for all tablespaces.

(24) Close Data Set? Default close rule for VSAM data sets.

Note. All tablespaces will use this close rule.

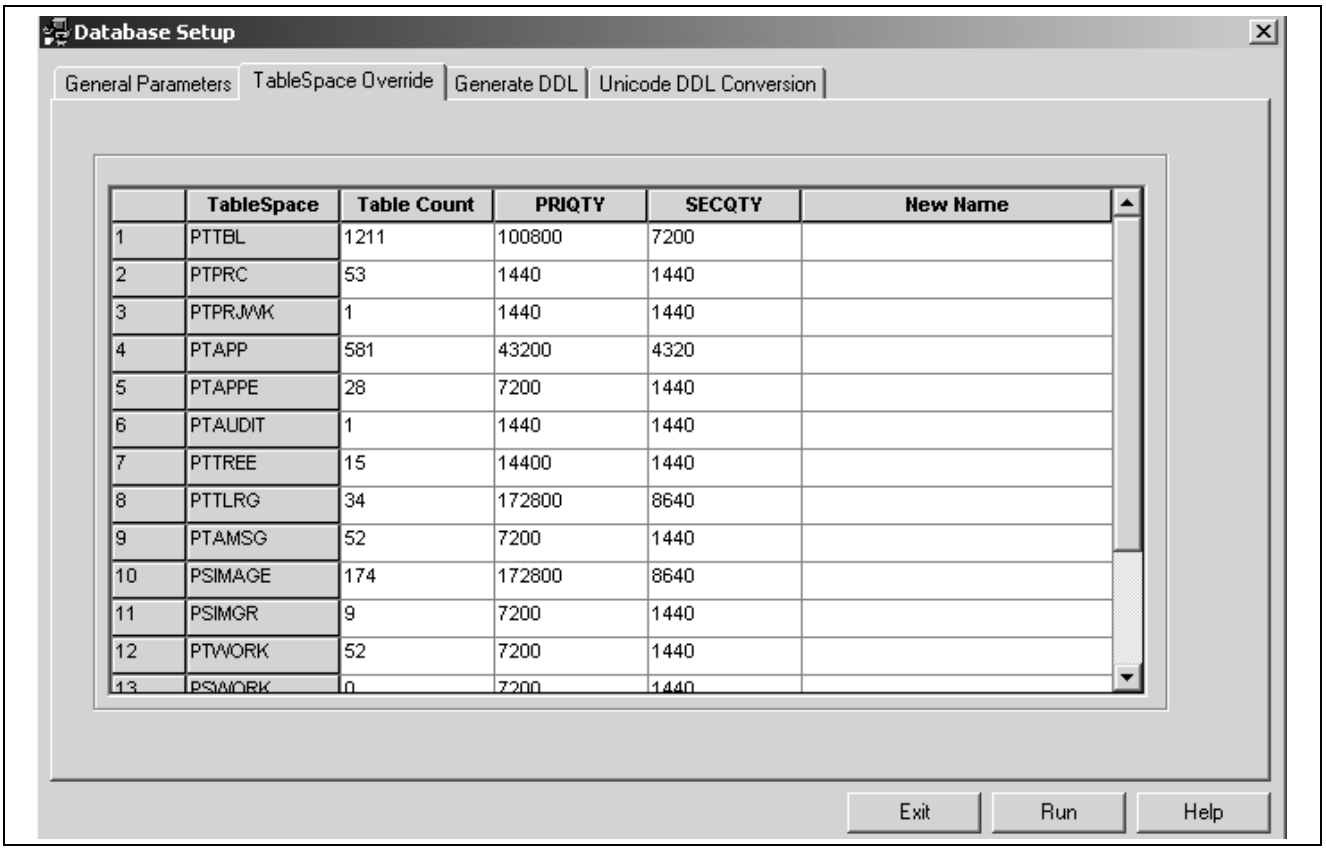
Note. LOCKSIZE does not appear as an override parameter on the GUI. LOCKSIZE is controlled automatically by PSTAAT. Those tables originally delivered in tablespaces set to a LOCKSIZE of ROW will be remapped to tablespaces also set to a LOCKSIZE of ROW automatically. All other tablespace DDL will be generated with a LOCKSIZE of ANY.

TableSpace Override Tab:

The Tablespace Override tab works in conjunction with the General Parameters tab. After completing the General Parameters tab, click the TableSpace Override tab to determine the exact object mapping as delivered by the default (traditional) installation.

PSTAAT determines the values in the TableSpace Override grid by parsing the following input from the General Parameters tab:

- Input Database/Tablespace DDL File, also known as the *XX*DDL script (General Parameters tab, parameter 2).
- Input Table DDL File, or TBDDL.SQL script (General Parameters tab, parameter 3).



	TableSpace	Table Count	PRIQTY	SECQTY	New Name
1	PTTBL	1211	100800	7200	
2	PTPRC	53	1440	1440	
3	PTPRJWK	1	1440	1440	
4	PTAPP	581	43200	4320	
5	PTAPPE	28	7200	1440	
6	PTAUDIT	1	1440	1440	
7	PTTREE	15	14400	1440	
8	PTTLRG	34	172800	8640	
9	PTAMSG	52	7200	1440	
10	PSIMAGE	174	172800	8640	
11	PSIMGR	9	7200	1440	
12	PTWORK	52	7200	1440	
13	PSIWORK	0	7200	1440	

Database Setup page: TableSpace Override tab

Tablespace There is one row in the grid for each tablespace found in the *XX*DDL script. The name of each tablespace is listed in this column.

Table Count This is the number of tables that will be assigned to the tablespace by the default installation.

PRIQTY Default Primary space allocation for the tablespace.

SECQTY Default Secondary space allocation for the tablespace.

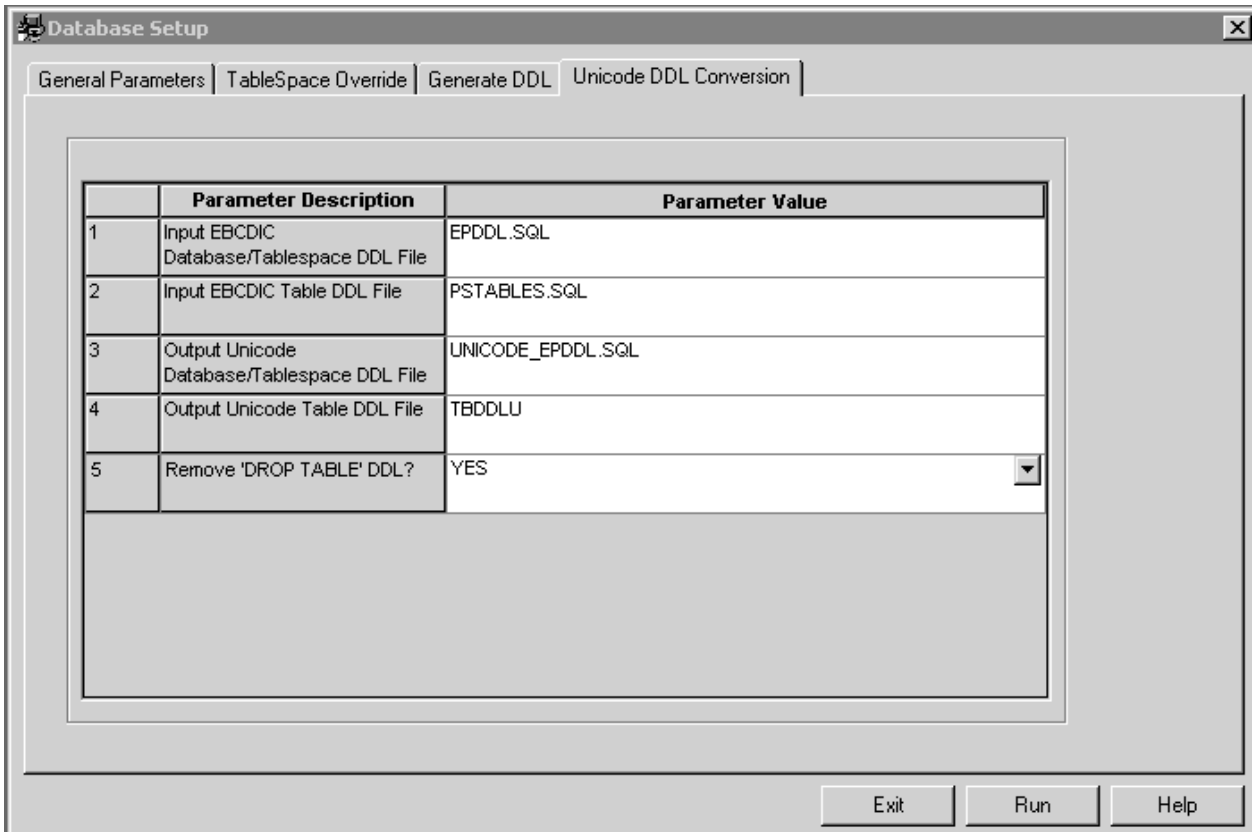
New Name Allows you to override the default tablespace name with a custom tablespace name. Although it is possible to completely override the name of any tablespace, for documentation purposes, we recommend that you use the default PSTAAT behavior of using part of the default tablespace name as a prefix in generating new tablespace names for you. Use of the New Name input parameter is required in a specific circumstance that is documented later in this appendix. See Understanding How PSTAAT Assigns An Object Naming Convention later in this appendix for a more detailed explanation of how PSTAAT determines the tablespace naming convention.

Run Button Click the Run button to optimize the DDL. PSTAAT will recreate the table-tablespace-database mapping based on the input parameters supplied in the General Parameters tab.

Unicode DDL Conversion tab:

The Unicode DDL Conversion Tab is used to 'convert' EBCDIC DDL data types to those data types required to create a PeopleSoft Unicode database. Note that this is simply one step in a multi-step process when converting an EBCDIC PeopleSoft environment to Unicode. Complete instructions for converting an EBCDIC PeopleSoft environment to Unicode are beyond the scope of this guide.

See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS," Oracle Applications Standard Benchmark, http://www.oracle.com/apps_benchmark/doc/peoplesoft /white- paper/ebcdic-unicode-encoding-scheme-db2-zos-white-paper.pdf



Database Setup page: Unicode DDL Conversion tab

(1) Input EBCDIC/Tablespace DDL File

Enter the name of the EBCDIC Database/Tablespace DDL script (that is, *XX*DDL.SQL) for conversion. Note that the path where this file is located must be entered in input box 1 (Input Directory for DDL scripts) of the General Parameters tab.

(2) Input EBCDIC Table DDL File

Enter the name of the EBCDIC table DDL script to be converted to Unicode data types. This can be a DDL script created from an Application Designer project that contains PeopleSoft PeopleTools record definitions; or, a default TBDDL.SQL script. Note that this file must also be located in the folder specified by input parameter 1 (Input Directory for DDL scripts) on the General Parameters tab.

See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS," Oracle Applications Standard Benchmark, http://www.oracle.com/apps_benchmark/doc/peoplesoft/white-paper/ebcdic-unicode-encoding-scheme-db2-zos-white-paper.pdf

(3) Output Unicode Database/Tablespace DDL File

Enter the name of the newly generated DDL script for creating databases, tablespaces, and stogroups using the Unicode encoding scheme. This output file will be written to the folder identified by input parameter 7, Output Directory for Generated DDL scripts on the General Parameters tab.

(4) Output Unicode Table DDL File

Enter the name of the newly created DDL script to create tables for storing data using the Unicode encoding scheme. This output file will also be written to the folder specified by input parameter 7, Output Directory for Generated DDL scripts on the General Parameters tab.

(5) Remove 'Drop Table' DDL

DDL created by Application Designer (when building a PeopleSoft PeopleTools project) may contain Drop Table statements for tables that Application Designer has determined already exist. When *YES* is selected from the drop down, PSTAAT will comment the Drop Table statements in the newly generated DDL. When *NO* is selected, the Drop Table statements are left uncommented in the new DDL script.

Understanding the Various PSTAAT Input and Output Files

PSTAAT is completely file driven. Although PSTAAT invokes Data Mover and Application Designer, each of which require a connection to the database server, PSTAAT itself does not communicate directly with DB2 z/OS and thus it is not capable of querying DB2. PSTAAT operates entirely by parsing various types of files (primarily DDL scripts), and then rewriting those files based on the input parameters specified in the General Parameters tab.

The following table describes the various input files, organized by location:

GUI Tab	File	Description
Generate DDL Tab	Database Input File	Located in *PS_HOME*\data. This is the same file used by Data Mover to populate the PeopleSoft database.
General Parameters Tab	Input Database/Tablespace DDL File	The name of the default database, tablespace, and stogroup DDL script (i.e. *XX*DDL.SQL)
General Parameters Tab	Input Table DDL File	The TBDDL.SQL DDL script that was generated from the Generate DDL tab or delivered with the installation files.
General Parameters Tab	Input Index DDL File	The IXDDL.SQL DDL script that was generated from the Generate DDL tab or delivered with the installation files.
General Parameters Tab	Input Temp Table DDL File	A temporary table DDL script as generated by Application Designer.
General Parameters Tab	Input Individual Table File	Input file of non-temporary PeopleSoft PeopleTools and Application tables for which the %UpdateStats metaSQL function is called. This file is delivered with the installation files.

GUI Tab	File	Description
Unicode Conversion Tab	EBCDIC/Tablespace DDL File	An EBCDIC default database, tablespace, and stogroup DDL script (i.e. *XX*DDL.SQL).
Unicode Conversion Tab	Input EBCDIC Table DDL File	An EBCDIC table DDL script to be converted to Unicode data types. This can be a DDL script created from an Application Designer project that contains PeopleSoft PeopleTools record definitions; or, a default TBDDL.SQL script. See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS," Oracle Applications Standard Benchmark, http://www.oracle.com/apps_benchmark/doc/peoplesoft/white-paper/ebcdic-unicode-encoding-scheme-db2-zos-white-paper.pdf

The following table describes the various output (new) files:

GUI Tab	File	Description
Generate DDL Tab PSTAAT will write five files to the folder specified in 'Output Directory for Generated DDL Scripts', input parameter four (4), of the Generate DDL tab.	Output Table DDL File Log File	Default table DDL script (i.e. TBDDL.SQL). The actual script name will depend on the value entered in Output Table DDL File, parameter eight (8), of the Generate DDL tab. To maintain consistency with previous releases of PeopleSoft PeopleTools, we recommend that you name the Table DDL script 'TBDDL.SQL' as shown in the examples in these instructions. A file with extension ".log" is also created with a name similar to the table DDL script (.i.e. TBDDL.log). Each table name is written to this output log as Data Mover 'extracts' the table DDL from the database input file.

GUI Tab	File	Description
Generate DDL Tab	Output Index DDL File Log File	Default index DDL script (i.e. IXDDL.SQL). The actual script name will depend on the value entered in Output Index DDL File, parameter nine (9), of the Generate DDL tab. To maintain consistency with previous releases of PeopleSoft PeopleTools, we recommend that you name the Index DDL script 'IXDDL.SQL' as shown in the examples in these instructions. A file with extension ".log" is also created with a name similar to the index DDL script (.i.e. IXDDL.log). Each index name is written to this output log as Data Mover 'extracts' the index DDL from the database input file.
Generate DDL Tab	pstaatExtractDDL.DMS	Data Mover extract script generated by PSTAAT. This is the actual script passed to Data Mover for the extraction of the default table and index DDL (TBDDL.SQL and IXDDL.SQL).
General Parameters and Tablespace Override Tabs PSTAAT will write several new DDL scripts to the folder specified in 'Output Directory for Generated DDL Scripts', parameter seven (7), of the General Parameters tab. Each will be prefaced with a lower case 'n'. In addition to the DDL scripts, PSTAAT also produces a log file.	n*XX*DDL.SQL	This is the new tablespace and database (DBD) DDL script. Non-temporary tables will be re-mapped among these tablespaces and databases based on the input parameters supplied to the General Parameters tab (that is, parameters 10-12; Maximum Number of Tables per Tablespace; Maximum Number of Tablespaces per Database, Bufferpool allocations, and so on).
General Parameters and Tablespace Override Tabs	nTBDDL.SQL	This is the new table DDL script. Non-temporary tables will be re-mapped among the tablespaces and databases found in the new n*XX*DDL.SQL script. The object mapping is based on the input parameters supplied to the General Parameters tab.
General Parameters and Tablespace Override Tabs	nIXDDL.SQL	This is the new index DDL script for all tables except temporary tables.

GUI Tab	File	Description
General Parameters and Tablespace Override Tabs	nTEMP.SQL	This is the new temporary table DDL script. It contains DDL to create temporary tables and indexes. Tables will be re-mapped among the tablespaces and databases generated in the t*XX*DDL.SQL script (see below) The DBD mapping is based on the input parameters supplied to the General Parameters tab. Tablespace names for temporary tables only, are hard-coded with the following naming convention: TMPnnnn, where nnnn is an ascending sequence number. **Note.** This file is produced only when the Input Temp Table DDL File parameter has been entered. See the task Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces elsewhere in this appendix for further details.
General Parameters and Tablespace Override Tabs	t*XX*DDL.SQL	This script contains database and tablespace DDL for temporary tables
General Parameters and Tablespace Override Tabs	PTlog.txt	This log file summarizes the re-mapped object counts by tablespace and database in the new n*XX*DL.SQL and nTBDDL.SQL scripts. See the sample PTlog.txt output following this table. **Note.** The PTlog.txt log file contains non-temporary tables *only*.
Unicode Conversion Tab	Output Unicode Database/Tablespace DDL File	This is the new Database/Tablespace DDL script for creating databases and tablespaces. All 'Create Database' DDL statements are appended to include 'CCSID Unicode'.
Unicode Conversion Tab	Output Unicode Table DDL File	This is the new table DDL script with the converted Unicode data types. Note that all character and long character fields are converted to vargraphic and long vargraphic respectively; while date, integer, small integer, decimal, timestamp, and long varchar for bit data types remain unchanged.

Sample PTlog.txt output:

```
Database Summary:
  PeopleSoft Primary Database: PSDB

            Name     TableSpace Count
```



```
PSDB0000        20
PSDB0001        20
PSDB0002        20
PSDB0003        20
PSDB0004        20
PSDB0005        20
PSDB0006        20
PSDB0007        20
PSDB0008        20
PSDB0009        20
PSDB000A        20
PSDB000B        20
  Etc..


Tools TableSpace Summary:

          Name      Database  Table Count

         PTTBL
          PTTBL01      PSDB0000     30
          PTTBL02      PSDB0000     30
           Etc..

Application TableSpace Summary:

          Name       Database  Table Count

         OMAPP
          OMAPP01       PSDB000H    30
          OMAPP02       PSDB000H    30
           Etc.

        EXLARGE
          EXLARG01        PSDB002O    1
           Etc.
```

Task H-1: Using PSTAAT to Create TBDDL and IXDDL

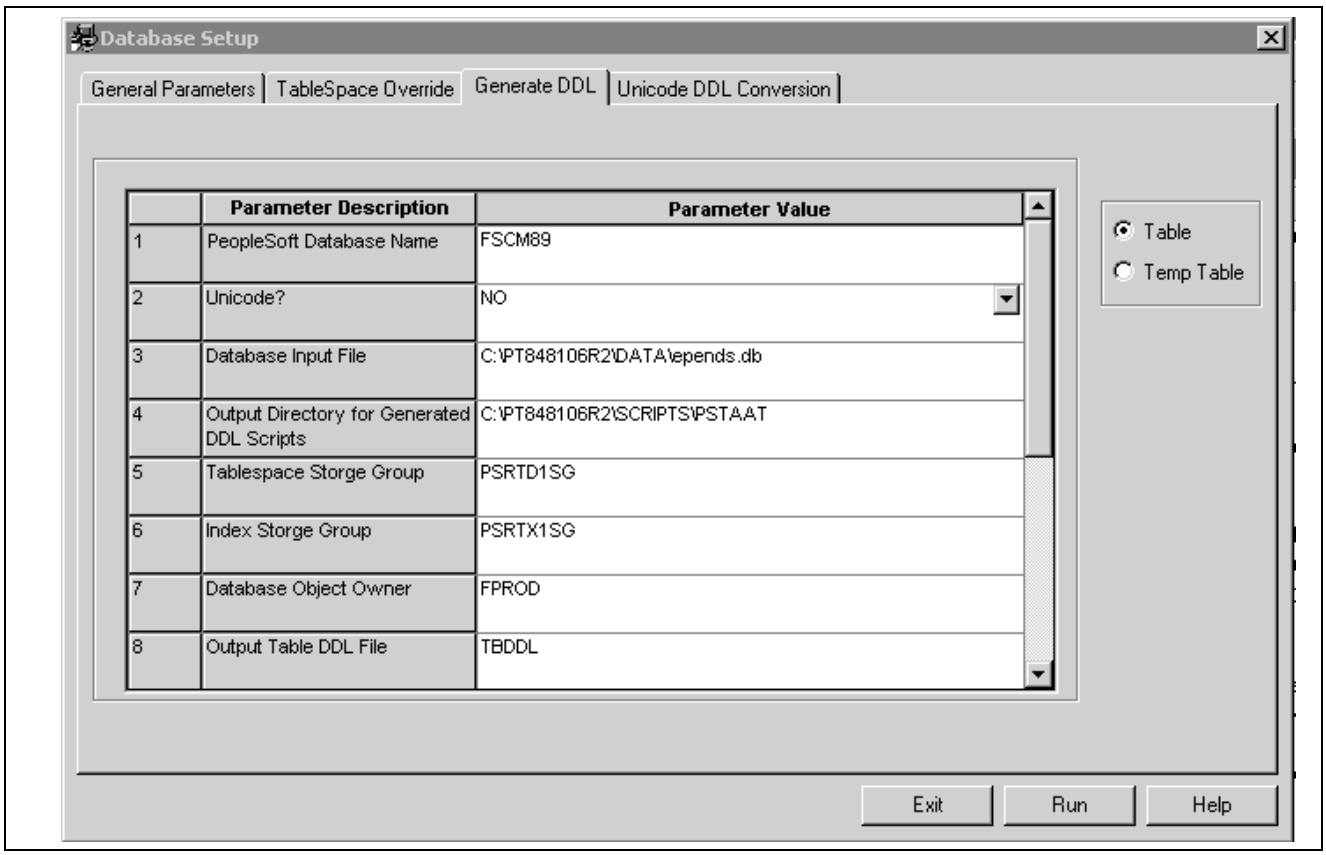
The Generate DDL tab of the PSTAAT interface is capable of extracting TBDDL.SQL and IXDDL.SQL scripts from the database import file located in *PS_HOME*\data. Note that the TBDDL and IXDDL scripts extracted from PSTAAT will be identical to those delivered with the installation files. You are free to use either set of scripts

Perform this task on a workstation with the ability to connect to the DB2 z/OS database server. PSTAAT will invoke Data Mover to extract the default table and index DDL from the database file. Data Mover requires DB2 Connect. Recall that the User ID and Password input parameters require a valid mainframe ID (such as the database Access ID) and password because Data Mover will be invoked in bootstrap mode. Your mainframe security package (such as RACF or Top Secret) must be able to authenticate this ID.

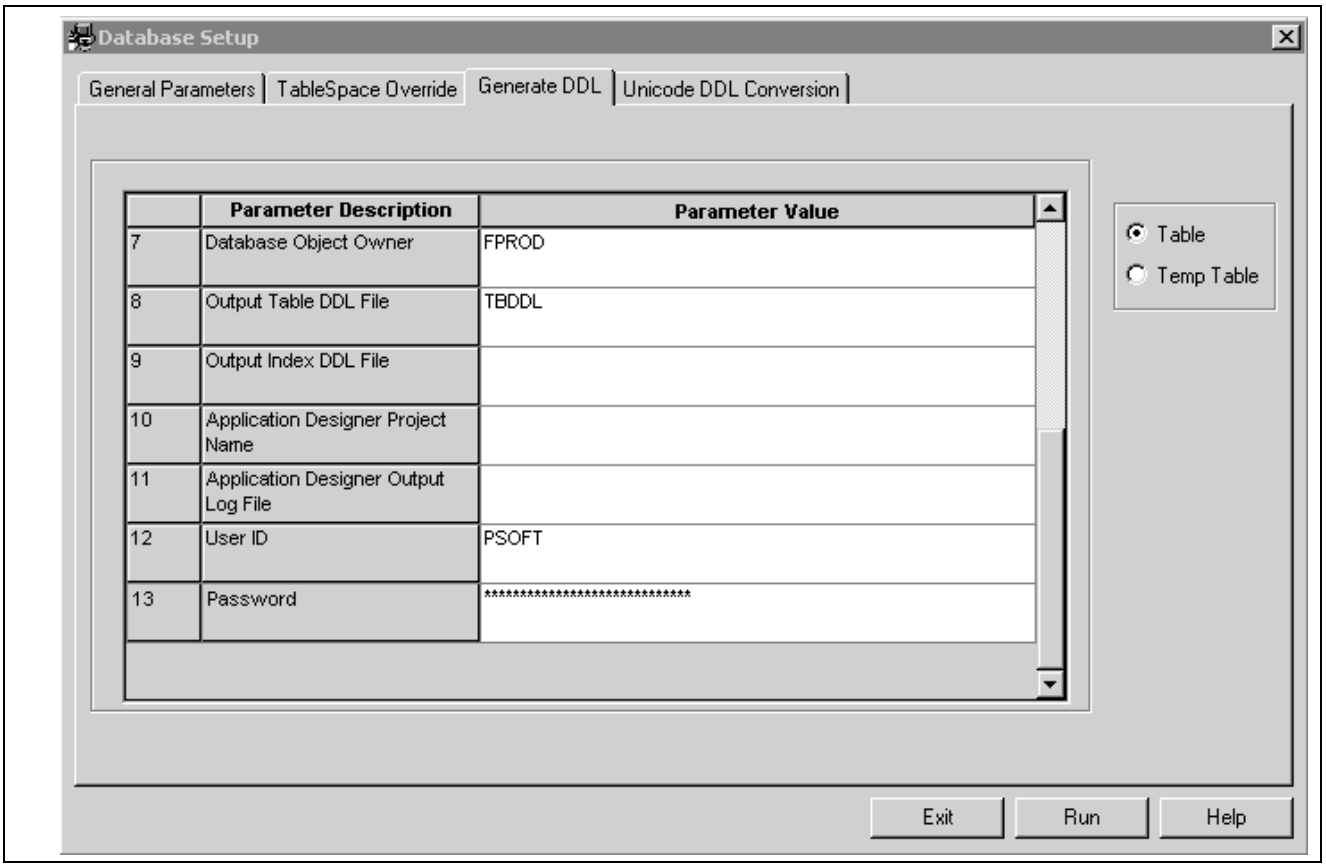
To create the TBDDL.SQL and IXDDL.SQL scripts:

1. Start PSTAAT by double-clicking the PSTAAT executable file found in *PS_HOME*\bin\client\winx86.
2. Enter input values for parameters 1-9; and 12-13 of the Generate DDL tab.

   Refer to Generate DDL tab Input Parameters under the section titled Understanding the PSTAAT Graphical User Interface for a detailed explanation of each input parameter. To maintain consistency with previous releases of PeopleSoft PeopleTools, we recommend that you use *TBDDL* and *IXDDL* as the DDL script file names for input parameters eight (8) and nine (9).
3. Select the Table radio button.
4. Click the Run button.



Generate DDL page (1 of 2)



Generate DDL page (2 of 2)

Clicking the run button invokes Data Mover. Data Mover will open a window similar to the following two examples as it writes the TBDDL and IXDDL scripts to the path specified in input parameter four (4), Output Directory for Generated DDL Scripts. Table DDL is extracted first, followed by the index DDL. The example displays messages such as `Importing PSMSFPENVSTATE`, `Creating Table PSMSFPENVSTATE`, and `Records Remaining 917`.

Note. ‘Creating Table ..’ and ‘Building required indexes for..’ messages will scroll to the output window as Data Mover generates the DDL. These windows will close automatically as soon as Data Mover has completed. Data Mover is simply writing the DDL to an output file—it is *not* creating any database objects in the DB2 subsystem.

```
Data Mover
Records remaining: 918
Importing  PSMSFPENVSTAGE
 Creating Table  PSMSFPENVSTAGE
Records remaining: 917
Importing  PSMSFPUBDATA
 Creating Table  PSMSFPUBDATA
Records remaining: 916
Importing  PSMSFREFRESH
 Creating Table  PSMSFREFRESH
Records remaining: 915
Importing  PSMSFSEQ
 Creating Table  PSMSFSEQ
Records remaining: 914
Importing  PSMSFTABLES
 Creating Table  PSMSFTABLES
Records remaining: 913
Importing  PSMSFUSER
 Creating Table  PSMSFUSER
Records remaining: 912
Importing  PSMSGAGTDEFN
 Creating Table  PSMSGAGTDEFN
Records remaining: 911
Importing  PSMSGCATDEFN
 Creating Table  PSMSGCATDEFN
```

Data Mover extracting Table DDL

```
Data Mover
 Building required indexes for MCFUQWORKSET
Records remaining: 1404
 Building required indexes for MESSAGE_LOG
Records remaining: 1403
 Building required indexes for MESSAGE_LOGPARM
Records remaining: 1402
 Building required indexes for MESSAGE_SET_CPY
Records remaining: 1401
 Building required indexes for MOBILEID
Records remaining: 1400
 Building required indexes for MSF_PUBDATA_AET
Records remaining: 1399
 Building required indexes for NVS_OPR_RPTS
Records remaining: 1398
 Building required indexes for NVS_REPORT
Records remaining: 1397
 Building required indexes for NVS_REPORT_AUTH
Records remaining: 1396
 Building required indexes for NVS_REPORT_LANG
Records remaining: 1395
 Building required indexes for NVS_SCOPE
Records remaining: 1394
 Building required indexes for NVS_SCOPE_FIELD
Records remaining: 1393
```

Data Mover extracting Index DDL

Note. At this point, you have the option of executing the default TBDDL.SQL and IXDDL.SQL scripts as directed by the "Creating a Database" chapter; or you may continue to use PSTAAT to optimize them as described in the subsequent sections of this appendix.

Task H-2: Using PSTAAT to Customize DDL

This section discusses:

- Understanding How PSTAAT Assigns an Object Naming Convention
- Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database

- Using the New Name Parameter to Override Tablespace Name
- Customizing DDL Scripts
- Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation With PSTAAT
- Using PSTAAT to Override the Default Bufferpool Assignment
- Using PSTAAT to Override the Default Segment Size
- Validating Input

Understanding How PSTAAT Assigns an Object Naming Convention

For databases, PSTAAT uses the Primary Database Prefix of the General Parameters tab as a constant when deriving the naming convention to be used for the individual physical databases that will comprise the logical PeopleSoft database. PSTAAT will use the prefix entered here as the first part of the database naming convention, and generate an ascending sequence for the remainder of the eight character DB2 z/OS database name.

For example, entering *HCMPD* as the Primary Database Prefix on the General Parameters tab allows PSTAAT to use the remaining three "free" characters to generate database names with the following ascending naming convention:

```
HCMPD000, HCMPD001, HCMPD002, HCMPD003,...HCMPD009, HCMPD00A, HCMPD00B…etc.
```

Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database

Databases:

Note. Depending on the desired number of tables to be assigned per tablespace, desired number of tablespaces to be assigned per database, and the total number of tables to be created; entering a Primary Database Prefix value greater than five characters may cause PSTAAT to exhaust the possible unique values to use in generating the ascending sequence. *This can result in duplicate database names, causing the DDL to fail when it is ultimately executed on the DB2 z/OS database server.*

A primary database prefix of three characters—five characters at the most, is highly recommended to prevent duplicate database names in the generated DDL script.

Note. The maximum number of databases that can be created in a DB2 subsystem is approximately 65,271 (see Appendix A of the DB2 for z/OS SQL Reference for details). Be aware that it is possible to reach this limit when using PSTAAT to install large PeopleSoft applications and in doing so, allocating very few tables per tablespace and grouping very few tablespaces per database. Hence, a complete one table per tablespace, one tablespace per database configuration may not be possible depending on the number of tables contained in the application. It is also possible to reach the internal DB2 database limit in situations where PeopleSoft applications share the subsystem with other applications.

IBM has suggested the following very general guidelines with respect to 'object mapping' for DB2 z/OS:

- If possible, create no more than 50 tables per individual physical database.

- Try to limit the total number of objects created per database descriptor (DBD) to no more than 1000. Objects that constitute the DBD include but are not limited to all tablespaces, tables, indexes, index spaces, relationships, and so on, that reside in a single physical DB2 database.

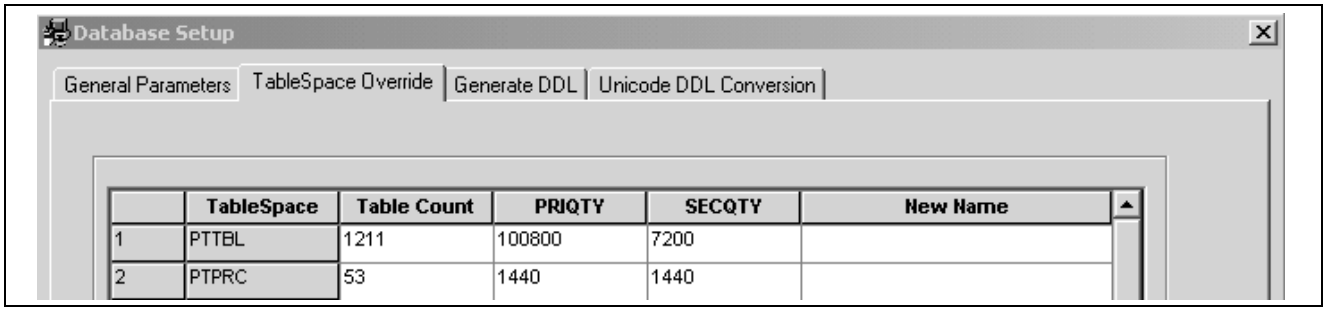
Note that these are only general guidelines and may not be adequate for every installation.

Tablespaces:

The tablespace naming convention is controlled internally by PSTAAT. PSTAAT derives an ascending sequence for tablespace names similarly to the manner in which it does so for database names. Depending on the length of the default tablespace name and the number of tables to be assigned per tablespace, PSTAAT will use up to five or six characters of the default tablespace name, and then append an ascending sequence for the remainder of the eight character DB2 z/OS tablespace name.

For example, the Tablespace Override tab (below) indicates that there are 1,211 tables by default in tablespace PTTBL. Requesting a one table per tablespace configuration by entering one (1) in the Maximum Number of Tables per Tablespace text box of the General Parameters tab causes PSTAAT to create 1,211 tablespaces—one for each table delivered in tablespace PTTBL. The 1,211 tablespaces will be named as follows:

```
PTTBL01, PTTBL02, PTTBL03, PTTBL04...PTTBL0A, PTTBL0B...etc., through PTTBLXN
```



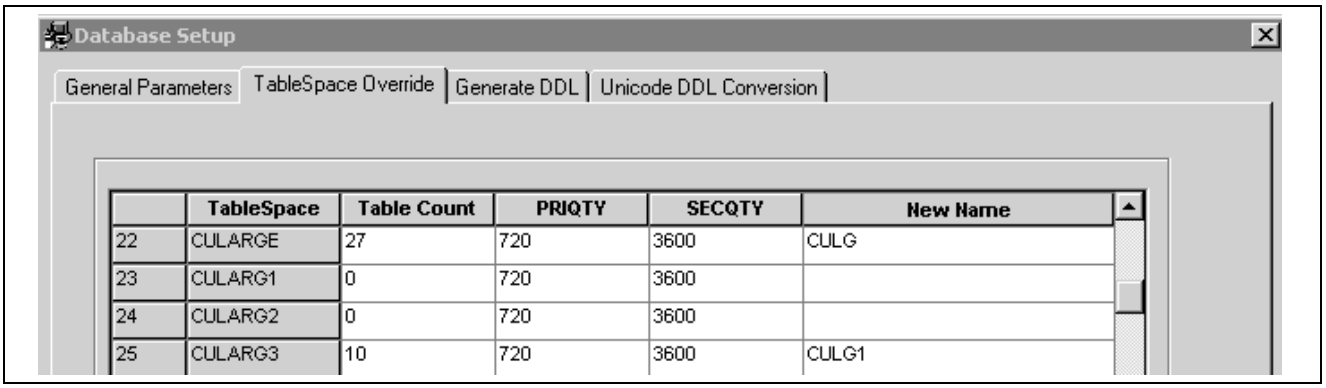
Reviewing Table Count on the TableSpace Override tab

Using the New Name Parameter to Override Tablespace Name

As indicated previously, this input parameter, found on the Tablespace Override tab, allows you to override the default tablespace name with a custom tablespace name. Although it is possible to completely override the name of any tablespace, we do recommend that you allow PSTAAT to determine new tablespace names for you except for the circumstance described in this section.

Use this information to prevent duplicate Tablespace names when the default *XX*DDL script contains similarly named Tablespaces:

Some of the delivered *XX*DDL.SQL scripts contain default tablespace names that are similar to the naming convention used by PSTAAT. The following example is from the EPDDL.SQL script:



Using the New Name parameter on the TableSpace Override tab

Because PSTAAT may use up to five or six of the original characters when determining the new tablespace name, it is possible that PSTAAT will create duplicate tablespace names when it encounters multiple tablespaces in the default *XX*DDL.SQL script named with as many identical, consecutive characters. For example:

```
CULARGE, CULARG1, CULARG2, CULARG3
```

To prevent duplicate tablespace names in this circumstance, review the list of default tablespace names in the TableSpace Override grid before clicking the Run button in the procedure below to generate optimized DDL. Add an override value to the New Name text box next to any series of tablespaces for which the default naming convention includes 5 or more identical consecutive characters. PSTAAT will substitute the specified override value when it is generating tablespace names for optimized DDL.

Task H-2-1: Customizing DDL Scripts

PSTAAT can assist you in the following:

- Customizing the DDL by allowing you to override the supported PeopleSoft PeopleTools DDL parameters for DB2 z/OS so they more closely fit standards at your site.
- Creating a more optimal mapping of non-temporary tables among tablespaces and databases.
- Isolating temporary tables and certain Application and PeopleSoft PeopleTools tables to individual tablespaces for use with the %UpdateStats metaSQL function and to enhance concurrency.

To optimize the default *XX*DDL.SQL, TBDDL.SQL, and IXDDL.SQL scripts:

1. If it is not already running, start PSTAAT by double-clicking on the executable file found in *PS_HOME*\bin\client\winx86.
2. Select the General Parameters tab.
3. Enter the desired General Parameters input values.

   For a detailed explanation of each of these input parameters, refer to the previous section titled General Parameters Tab Input under the section called Understanding the PSTAAT Graphical User Interface.
4. Click the Tablespace Override tab to view the table count per tablespace as defined by the default *XX*DDL.SQL and TBDDL.SQL scripts; and the default Primary and Secondary space allocations.
5. Click the Run button.

   PSTAAT will parse the default *XX*DDL, TBDDL, IXDDL and Temp scripts, and the Individual table file table script (input parameters 2-6), and write the corresponding new DDL scripts.

6. View the PTlog.txt file to see the database and tablespace names generated by PSTAAT, and the new object count per tablespace and database.

If you are unsatisfied with the object mapping and want to regenerate the DDL, you may do so by repeating steps 2-6 above using new input parameters. Each of the output scripts (nTBDDL.SQL, nIXDDL.SQL, Temp, and n*XX*DDL.SQL and so on) will be rewritten.

See the previous sections for important details to keep in mind when choosing the primary database prefix, table and tablespace counts per DBD, Bufferpool allocations, and the default Segsize.

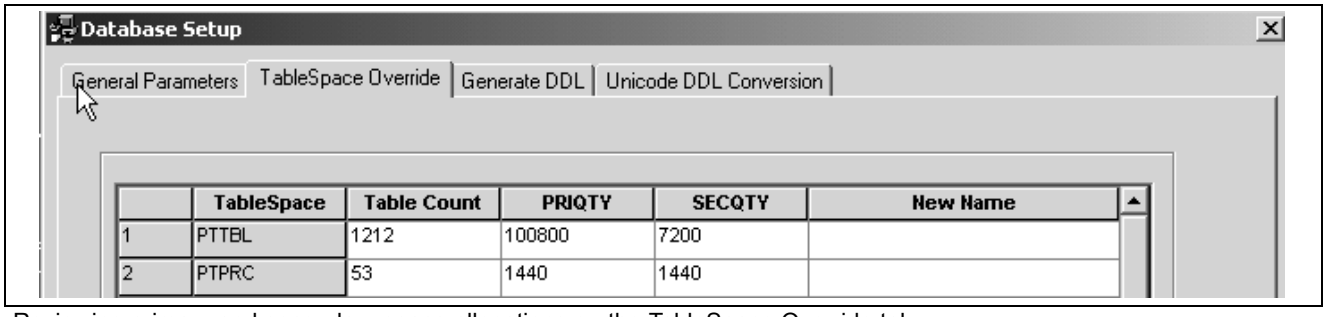
See Understanding How PSTAAT Assigns an Object Naming Convention.

See Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database.

See Using the New Name Parameter to Override Tablespace Name.

Task H-2-2: Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation With PSTAAT

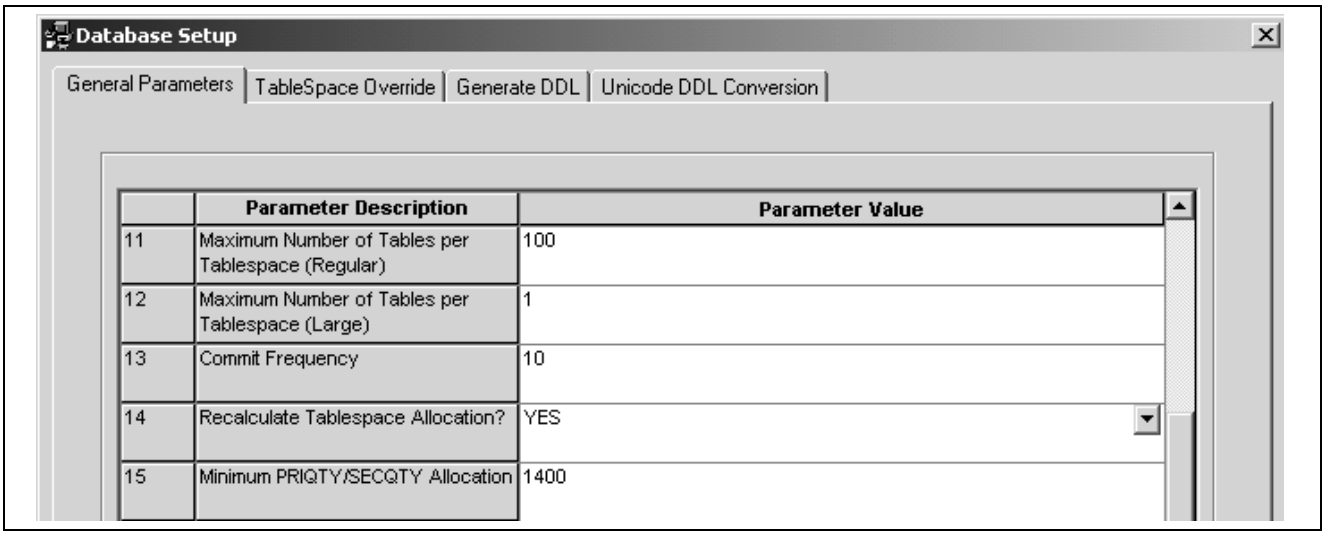
As PSTAAT parses the Database and Tablespace DDL script (*XX*DDL.SQL) and writes new tablespace DDL based on the table count provided, it always applies the original primary and secondary space allocation to each new tablespace that is generated unless the Recalculate Tablespace Allocation text box (General Parameters) is set to *YES*. The original primary and secondary allocations as read from the *XX*DDL.SQL input file are always displayed in the Tablespace Override tab.



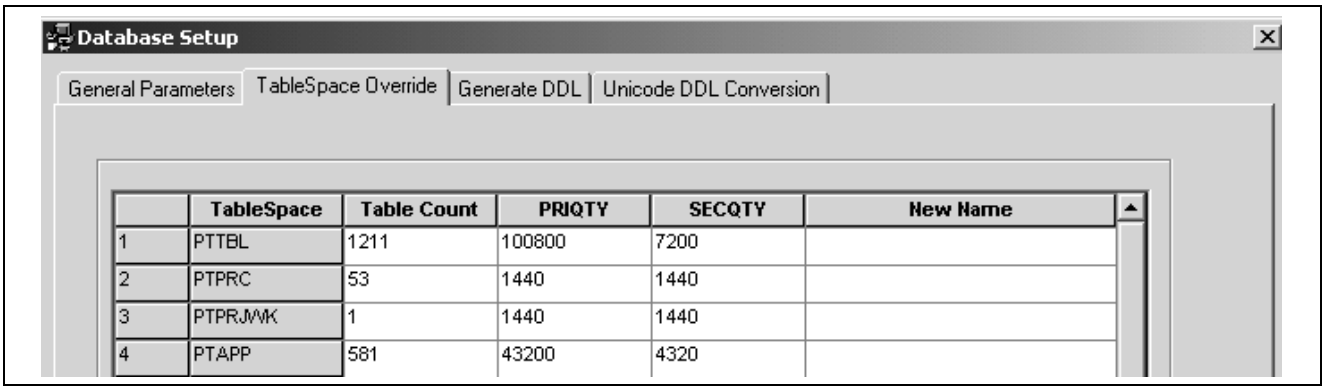
Reviewing primary and secondary space allocations on the TableSpace Override tab

Once again using PTTBL as an example, and a hypothetical value of one (1) for input parameter ten (10) of the General Parameters tab, Maximum Number of Tables per Tablespace (Regular), PSTAAT will create all 1,211 individual tablespaces for each table originally assigned to PTTBL with the original Primary and Secondary space allocations of 100800 and 72000, respectively.

The default allocation may be less than ideal for each of the 1,211 tables when assigned to an individual tablespace. PSTAAT will thus recalculate these allocations when Input parameter 14, Recalculate Tablespace Allocation, is set to YES, and a value is provided for Minimum PRIQTY/SECQTY Allocation. The recalculation method is described below using tablespaces PTTBL and PTAPP as examples.



Setting up recalculation of tablespace allocation on General Parameters tab



Reviewing allocations on TableSpace Override tab

Example with Tablespace PTTBL:

PSTAAT creates DDL for 13 tablespaces each with a PRIQTY of 7753 and SECQTY of 5538.

```
CREATE TABLESPACE   PTTBL01 IN HCMPD000
      USING STOGROUP PSRTD1SG PRIQTY 7753 SECQTY 5538
      FREEPAGE  20 PCTFREE 0
      SEGSIZE  4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE NO ;
```

- 1211 tables / 100 tables per tablespace = 13 tablespaces
- PRIQTY becomes 7753 (100800 / 13)
- SECQTY becomes 5538 (72000 /13)
- The value for Input Parameter 15, Minimum PRIQTY/SECQTY Allocation (1440) was not used because it is less than the SECQTY calculated by PSTAAT.

Example with Tablespace PTAPP:

PSTAAT creates DDL for six tablespaces each with a PRIQTY of 7200 and SECQTY of 1440.

```
CREATE TABLESPACE   PTAPP01 IN HCMPD001
      USING STOGROUP PSRTD1SG PRIQTY 7200 SECQTY 1440
      FREEPAGE  20 PCTFREE 0
```



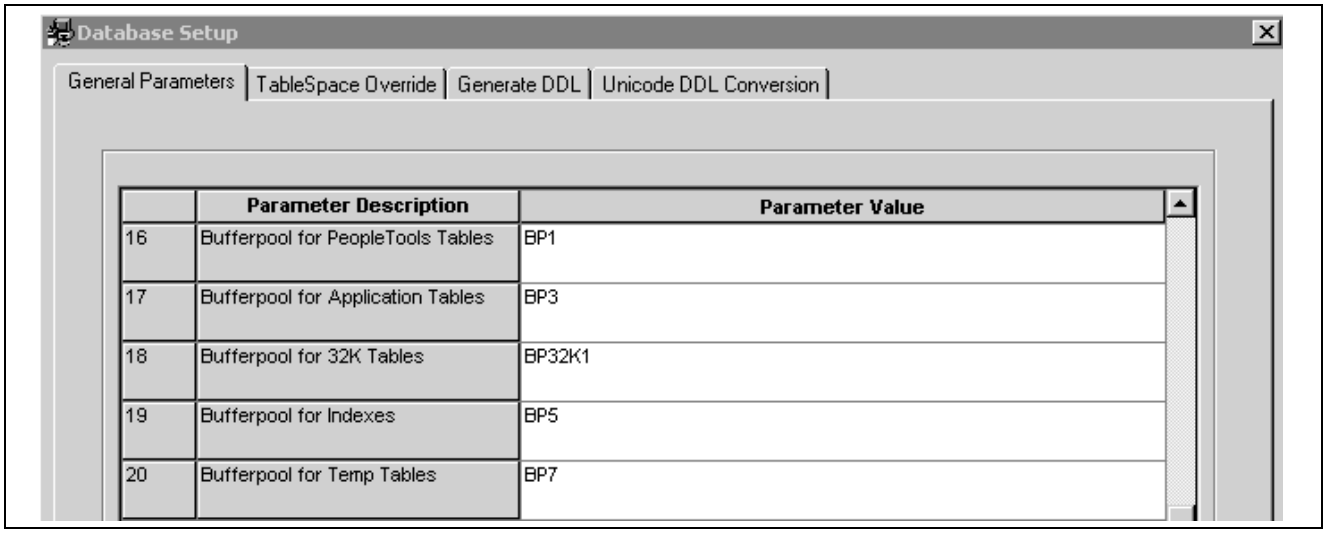
```
SEGSIZE  4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE NO ;
```

- 581 tables / 100 tables per tablespace = 6 tablespaces
- PRIQTY becomes 7200 (43200 / 6)
- The value for Input Parameter 15, Minimum PRIQTY/SECQTY Allocation, is substituted (1440) in this case because it is greater than the quantity calculated by PSTAAT: (4320 /6 = 720).

Note. PSTAAT will always choose the greater value between the value that it calculates and the value specified in the Minimum PRIQTY/SECQTY Allocation text box.

Task H-2-3: Using PSTAAT to Override the Default Bufferpool Assignment

It is possible to override the default bufferpool assignments found in the *XX*DDL.SQL script with PSTAAT as follows:



Reviewing bufferpool assignments on General Parameters tab

- PeopleSoft PeopleTools tables and Application tables will be assigned to two separate bufferpools. Note that all PeopleSoft PeopleTools tables will be assigned to the bufferpool specified for General Parameters tab, Input parameter 16; and all Applications tables will be assigned to the bufferpool specified for Input parameter 17.
- Determine the specific 32 KB bufferpool (such as BP32K, BP32K1, and BP32K2) that you want to use for those objects that require a 32 KB bufferpool and enter it into input parameter 18. Certain PeopleSoft PeopleTools and Applications tables are assigned to BP32K via the default *XX*DDL.SQL and TBDDL.SQL scripts because their row length requires the larger page size. PSTAAT will substitute the value of input parameter 18 for each table originally assigned to BP32K in the default script.
- Indexes will be assigned to a specific bufferpool (Input parameter 19).
- Temporary tables will be assigned to a specific bufferpool (Input parameter 20).

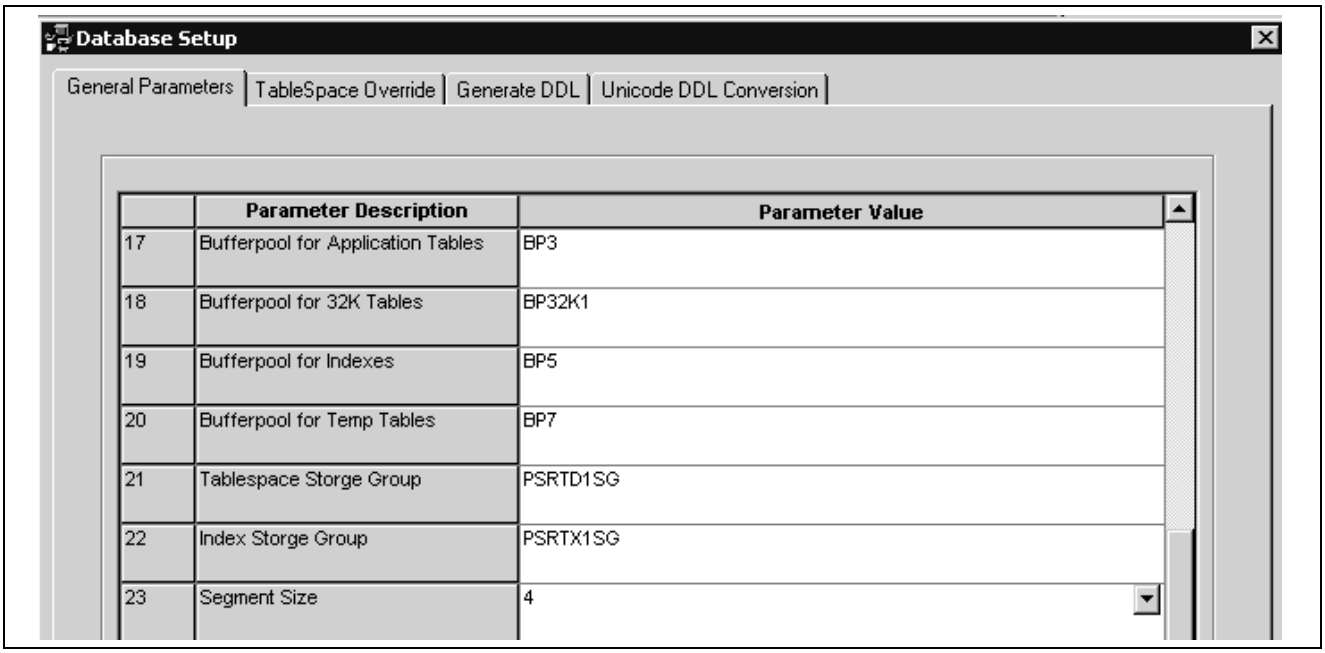
  The default Unicode *XX*DDLU.SQL script alternates bufferpool assignments between BP8K0, BP8K1, BP8K2, and BP8K3. When given an *XX*DDLU.SQL script as input, PSTAAT simply substitutes the values of input parameters 16-20 for the default assignments in the original Unicode script. Be careful to specify legitimate 8 KB bufferpools when optimizing a *Unicode XX*DDLU.SQL with PSTAAT. PSTAAT will not validate the validity of the bufferpools specified in the graphical user interface for a Unicode installation.

Note. You must enter legitimate, active bufferpools for input parameters 16-20, or the DDL generated by PSTAAT will fail. PSTAAT will not validate the syntax or legitimacy of the bufferpools entered for any of these input parameters.

The bufferpool override capability of PSTAAT is merely intended to provide a modest level of additional flexibility in making bufferpool assignments over the default assignments found in the *XX*DDL.SQL scripts. It is not possible for PSTAAT to determine an optimal run time configuration for production environments based on its script parsing and reformatting capabilities.

Task H-2-4: Using PSTAAT to Override the Default Segment Size

It is possible to override the default SEGSIZE assignment for each tablespace found in the *XX*DDL.SQL script with PSTAAT as follows:



Reviewing segment size on General Parameters tab

- Select a valid SEGSIZE from the drop-down list box provided for input parameter 23 of the General Parameters tab.
- PSTAAT will substitute the value selected from the list box of input parameter 23 for the SEGSIZE of *all* tablespaces.

Note. Obviously, using the same SEGSIZE value for all tablespaces leads to a less than optimal configuration for a production run-time environment. Using a particularly large SEGSIZE for a table that consumes few pages will waste excessive amounts of disk space.

Similar to the bufferpool override capability of PSTAAT, the SEGSIZE override is merely intended to provide a modest level of additional flexibility in making SEGSIZE assignments over the default assignments found in the *XX*DDL.SQL scripts. It is not possible for PSTAAT to provide an optimal run time configuration for a production environment based on its script parsing and reformatting capabilities.

For more details regarding the use of the SEGSIZE parameter, consult the DB2 for z/OS Administration Guide.

Task H-2-5: Validating Input

As previously alluded, PSTAAT is not capable of validating the legitimacy of certain input parameters that will ultimately be substituted into the reformatted n*XX*DDL.SQL, nTBDDL.SQL, and nIXDDL.SQL scripts.

Warning! Caution must be exercised when entering certain input parameters because PSTAAT does not validate the syntax or legitimacy of these items. Please review all DDL scripts generated by PSTAAT before executing them.

Invalid input for the following parameters could lead to DDL that will fail when executed on the DB2 z/OS database server:

Generate DDL Tab:

- Input Parameter 1: PeopleSoft Database Name

  PSTAAT is incapable of determining whether the logical database name that you have chosen already exists in PS.PSDBOWNER, nor can it validate that it has been properly cataloged with DB2 Connect.

- Input Parameters 5 and 6: Tablespace and Index Storage Group

  PSTAAT is not capable of pre-determining whether the STOGROUPs provided exist in the DB2 subsystem, nor can it validate the names for the presence of typographical errors.

- Input Parameter 7: Database Object Owner

  PSTAAT is incapable of determining whether the value entered as the Database Object Owner has already been used within the DB2 zOS subsystem for a non-PeopleSoft application. Using an owner id previously used by a non-PeopleSoft application can create problems when auditing the PeopleSoft database. PSTAAT is also incapable of determining whether the proper security setup steps have been completed with respect to the Database Object Owner. Review the section Understanding Database Creation in the first chapter for more details regarding the specific requirements of the Owner Id.

  See "Preparing for Installation," Planning Database Creation.

- Input Parameter 10: Application Designer Project Name

  PSTAAT is incapable of determining whether this project exists in the PeopleSoft database. This project must already exist, as PSTAAT will pass the project name directly to Application Designer to create temporary table DDL.

  Any error messages that indicate a problem with the Application Designer project are directed to the log file specified in the Logging tab of the Build Settings dialog. Here is an example of the log file error output:

  ```
  PeopleSoft Project Command Line
  Build Project
  Project Name: WRONG
  Tools Release: 8.51
  -CT Source Database Type = DB2ODBC
  -CD Source Database Name = PTAAT848
  -CO Source Database Operator = QEDMO

  Project WRONG is not valid or does not exist in the database.
  Error - failure in command line build
  ```

  See Using PSTAAT to Isolate Temporary Tables To Individual Tablespaces.

- Input Parameters 12 and 13: User Id and Password

PSTAAT will pass the user id and password entered in input parameters 12 and 13 directly to a command line initiated Data Mover or Application Designer task depending on the settings of the Table/Temporary Table radio buttons. Data Mover or Application Designer (not PSTAAT) will subsequently make a connection to DB2 z/OS through DB2 Connect when creating the default TBDDL.SQL and IXDDL.SQL scripts, or creating temporary table DDL.

PSTAAT is incapable of validating the accuracy of the user ID and password prior to passing them on to Data Mover or Application Designer. Both the Data Mover task initiated to extract default table and index DDL, and the Application Designer task initiated to create temporary tables run asynchronously to PSTAAT, and there will be no Windows message boxes sent to the workstation in the event that the user id and password combination is invalid.

- Invalid ID and/or password passed to Data Mover:

  When attempting to extract table and index DDL with an invalid ID or password, an error message is displayed temporarily as Data Mover scrolls data to its output window (see Using PSTAAT to Create TBDDL and IXDDL); and the task will end without generating DDL. In most cases, if PSTAAT runs but fails to generate the TBDDL.SQL and IXDDL.SQL, the cause will be an incorrect user id-password combination, or a failed Data Mover connection to DB2 z/OS due to problems with the DB2 Connect configuration.

- Invalid ID and/or password passed to Application Designer:

  When creating temporary table DDL, any messages issued by Application Designer due to an invalid ID and/or password will be written to the log file specified for input parameter 11, Application Designer Output Log File.

General Parameters Tab:

- Input Parameter 8: Primary Database Prefix

  PSTAAT is incapable of determining whether the value supplied as the Primary Database Prefix will cause database names to be generated that already exist in the DB2 z/OS subsystem as it creates the new n*XX*DDL.SQL script.

- Input Parameter 9: Database Object Owner

  The same restrictions apply to those for input parameter 7 of the Generate DDL tab (see above).

- Input Parameters 16-20: Bufferpool Overrides

  PSTAAT cannot validate the syntax or legitimacy of the bufferpools entered for any of these input parameters. It cannot determine whether a particular bufferpool has been activated in the DB2 subsystem, or whether 32 KB or 8 KB bufferpools have been supplied when required. See the section titled Using PSTAAT to Override the Default Bufferpool Assignment for additional details.

- Input Parameters 21-22: Tablespace and Index Storage Groups

  The same restrictions apply to those for input parameters 5 and 6 of the Generate DDL tab (see above).

Task H-3: Using PSTAAT to Reassign Temporary Tables to Additional Tablespaces

PSTAAT can be used to reassign temporary table instances to additional tablespaces. Doing so can improve the performance and concurrency of Application Engine and %UpdateStats processing.

Here is an overview of the process:

1. Generate the temporary table and index DDL from an Application Designer project.
2. Create the project as described in the task Building the Temporary Tables and their Indexes (steps 1-8).

   See "Creating a Database" Building Temporary Tables.
3. After the project has been created:

   Use PSTAAT to invoke Application Designer through the command line to build the project (write the table DDL script). This procedure is described below.

   OR

   Build the project manually by selecting the Build Script File option on the Build Execute Options dialog box as described in the task Building the Temporary Tables and their Indexes (steps 9-18).

   See "Creating a Database" Building Temporary Tables.

   The result is identical whether you let PSTAAT call Application Designer to build the project, or build it yourself (by following steps 1-18 of the task Building the Temporary Tables and their Indexes)—the default temporary table and index DDL file.
4. Use PSTAAT to parse the default temporary table DDL, create the additional databases, and remap the tablespace assignments.

Instructions for obtaining the default temporary DDL script by allowing PSTAAT to invoke Application Designer to build the project follow:

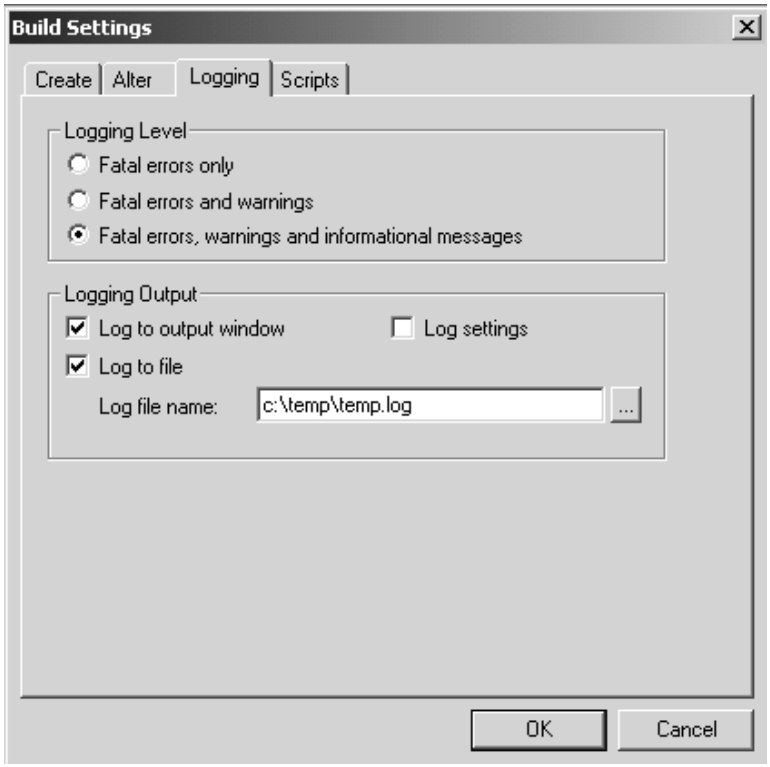
1. Start PSTAAT by double-clicking on the PSTAAT.exe found in *PS_HOME*\bin\client\winx86.

   Select the Generate DDL tab.
2. Enter the name of the database into Parameter 1, PeopleSoft Database Name on the Generate DDL tab.

   Recall that a database connection is required to invoke Application Designer, so this database name must match the alias name cataloged with DB2 Connect.
3. Create an Application Designer project that contains the temporary table object definitions as described in steps 1-8 of the task Building the Temporary Tables and their Indexes.

   Save the project name as TEMPTBL.
4. From Application Designer, choose Build, Project.
5. In the Build Settings dialog box, enter a log file name on the Logging tab, and check Log to File if it is not already checked.

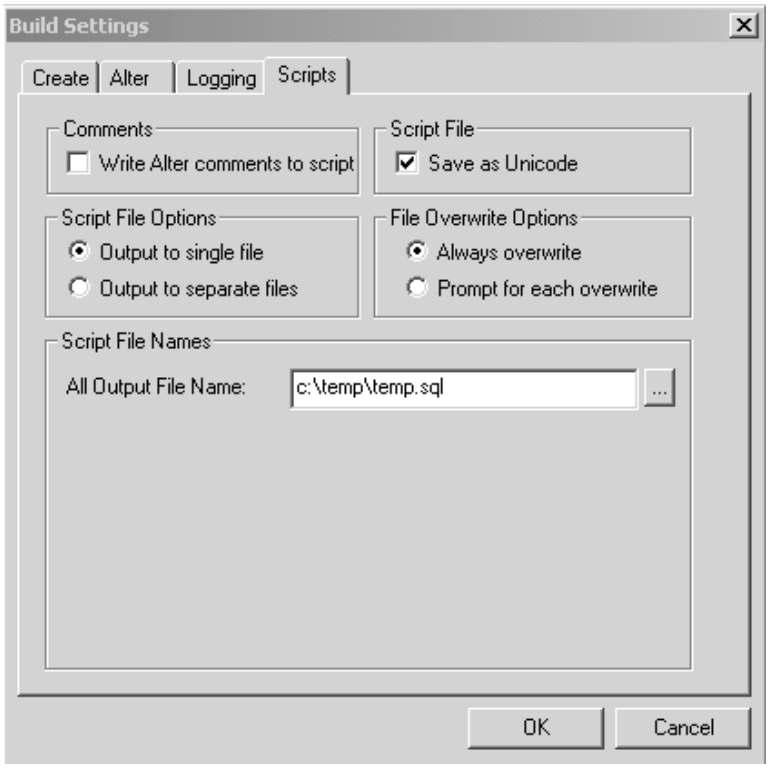
   Enter the name of this log file into Parameter 11, Application Designer Output Log File, of the Generate DDL tab of PSTAAT.



Build Settings dialog box: Logging tab

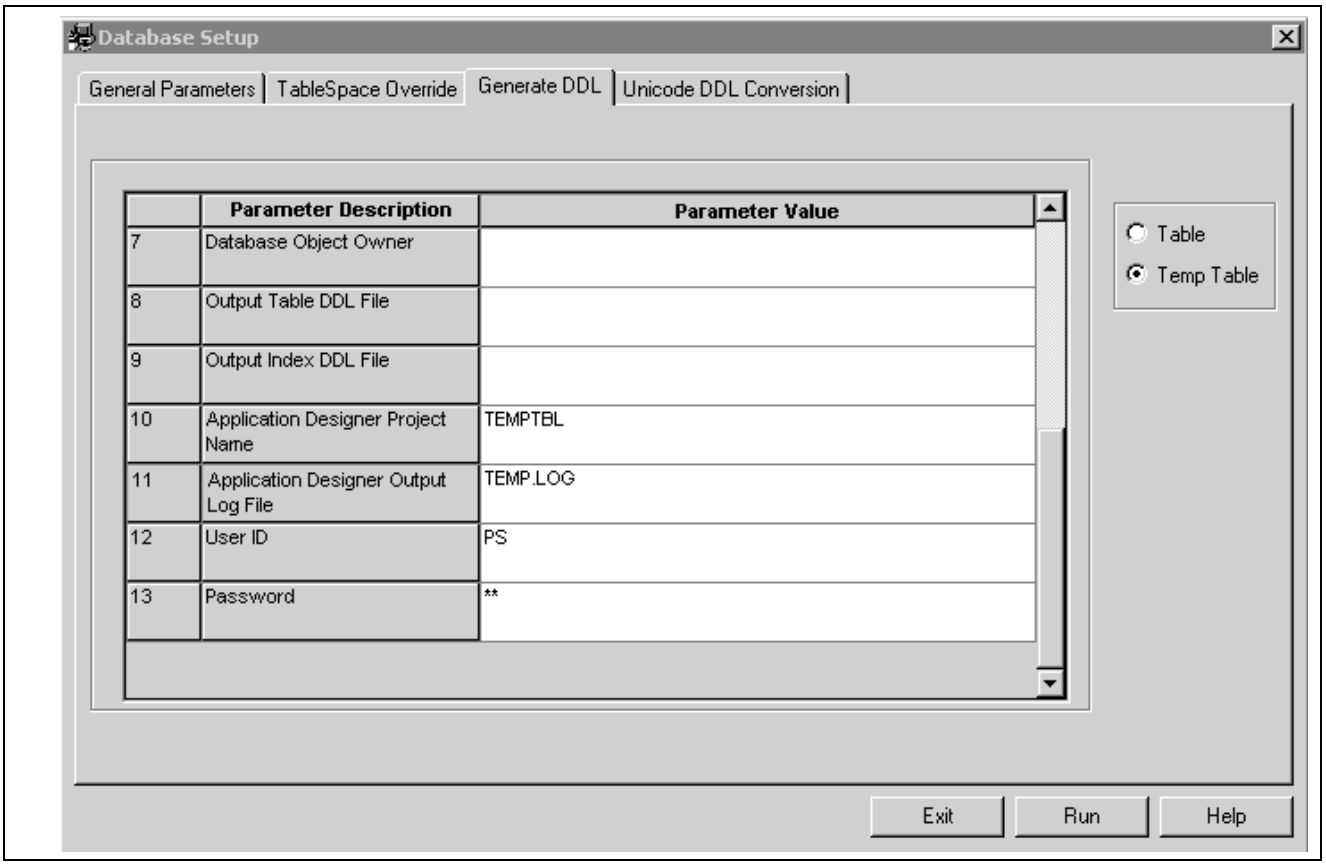
6. Select the Scripts tab of the Build Settings dialog box.
7. Select the Output to a single file radio button under Script File Options, and enter a script name for the DDL file to be created under Script File Names. The temporary table DDL script will be written to this location.

   You may close Application Designer now.



Build Settings dialog box: Scripts tab

8. Enter the name of the project (TEMPTBL) into Parameter 10, Application Designer Project Name, of the Generate DDL tab of PSTAAT
9. Enter a valid PeopleSoft user id and password combination (for example, VP1/VP1 or PS/PS) into input Parameters 12 and 13.
10. Select the Temp Table radio button on the Generate DDL tab of PSTAAT.



Selecting Temp Table option on the Generate DDL tab

11. Click the Run button.

    PSTAAT will invoke Application Designer via command line to build the project, and create the default temporary table DDL. If you closed Application Designer after creating the TEMPTBL project, you will briefly see the PeopleSoft PeopleTools splash screen as PSTAAT invokes Application Designer to build the TEMPTBL project and generate the default temporary table DDL script. This will be the only visual cue that Application Designer has been invoked. Note that you will not see the splash screen if you left Application Designer running after creating the TEMPTBL project.

12. Look for the temporary table DDL script in the folder specified on the Scripts tab of the Build Settings dialog box (see step 7 above).

13. Select the General Parameters Tab of PSTAAT to reassign the temporary tables to additional tablespaces and databases.

14. Copy the default temporary table DDL script just created (TEMP.SQL in the example shown) to the location specified in Parameter 1, Input Directory for DDL scripts on the General Parameters tab.

15. Enter the name of the temporary table DDL script (TEMP.SQL) for Parameter 5, Input Temp DDL File of the General Parameters tab.

16. Fill in all of the remaining General Parameters tab inputs.

    Review these sections for more details on the General Parameters tab and its input parameters: Understanding the PSTAAT Graphical User Interface, Understanding the Various PSTAAT Input and Output Files, and Using PSTAAT to Customize DDL.

17. Click the TableSpace Override tab, and then click the Run button.

    PSTAAT will write the following files to the Output Directory for Generated DDL Scripts:


```
tXXDDL.SQL
nTEMP.SQL
nXXDDL.SQL
nTBDDL.SQL
nIXDDL.SQL
Ptlog.txt
```

See the Output Files section of Understanding the Various PSTAAT Input and Output Files.

`nTEMP.SQL` is the “new” temporary table DDL script. `tXXDDL.SQL` contains database and tablespace DDL for the temporary tables found in nTEMP.SQL.

Tables will be re-mapped as follows:

- The DBD (database) mapping is based on the input parameters supplied to the General Parameters tab.
- Tablespace names within the t*XX*DDL.SQL script are hard-coded with the following naming convention:

  `TMPnnnn`

  where nnnn is an ascending sequence number.
- PRI and SEC quantities are hard-coded (720 and 1400 respectively). You are free to customize them for your environment prior to executing the DDL.
- Bufferpool assignment, CLOSE rule, and SEGSIZE are determined by the input specified on the General Parameters tab.

Sample tablespace DDL:

```
CREATE TABLESPACE   TMP0001 IN Q848107G
        USING STOGROUP PSRTD1SG PRIQTY 720 SECQTY 1400
        FREEPAGE  10 PCTFREE 0
        SEGSIZE  4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE YES ;
```

Task H-4: Using PSTAAT to Isolate Other Tables to Individual Tablespaces

PSTAAT is also capable of isolating certain non-temporary PeopleSoft PeopleTools and Application tables, for which the %UpdateStats metaSQL function is called, to individual tablespaces. Beginning with PeopleSoft Enterprise 9.0 Applications, PSTAAT will replace the previously delivered “enhanced” installation scripts.

A list of such tables is contained in the *XX*ENHANCED.txt text file, where *XX* is the standard PeopleSoft Application two-character prefix (the prefixes are listed in the section Transferring DDL Scripts to z/OS). The *XX*ENHANCED.txt file is located in the *PS_HOME*\scripts directory of the installation files.

See "Creating a Database," Transferring DDL Scripts to z/OS

Note. There may not be an *XX*ENHANCED.txt file for all PeopleSoft Enterprise Applications (such as the Portal).

To remap these tables to individual tablespaces, use the PSTAAT General Parameters tab as follows:

1. Enter the name of the *XX*ENHANCED.txt file as the input for parameter 6, Input Individual Table File, on the General Parameters tab
2. Copy the *XX*ENHANCED.txt file from *PS_HOME*\scripts to the location specified in Parameter 1, Input Directory for DDL scripts on the General Parameters tab.
3. Enter the remaining input parameters required by the General Parameters tab.

   Review the following sections for more details on the General Parameters tab and its input parameters: Understanding the PSTAAT Graphical User Interface, Understanding the Various PSTAAT Input and Output Files, and Using PSTAAT to Customize DDL.
4. Click the Tablespace Override tab and click the Run button.

   PSTAAT will write the following files to the Output Directory for Generated DDL:

   Scripts: nTEMP.SQL, n*XX*DDL.SQL, nTBDDL.SQL, nIXDDL.SQL, Ptlog.txt

   See the output files section of Understanding the Various PSTAAT Input and Output Files for an explanation of each file.

   These tables will be remapped in the n*XX*DDL.SQL, nTBDDL.SQL and nIXDDL.SQL files based on the input parameters supplied to the General Parameters tab. PSTAAT will derive tablespace names by using the first three to five characters of the original tablespace name, followed by an ascending sequence number.

Task H-5: Using PSTAAT to Convert EBCDIC DDL to Unicode DDL

This section discusses:

- Understanding the EBCDIC DDL to Unicode DDL Conversion
- Creating Database, Tablespace, and Table Shell DDL for an EBCDIC to Unicode Database Conversion

Understanding the EBCDIC DDL to Unicode DDL Conversion

This section can be ignored entirely if you do not intend to store data using the Unicode encoding scheme in your PeopleSoft database. Likewise, if you intend to install and import a Unicode database from scratch, ignore this section and instead follow the standard instructions for installing a Unicode database previously documented in this Enterprise PeopleTools Installation Guide for DB2 for z/OS.

However, if you have an EBCDIC database that *already exists* and you wish to convert that database to the Unicode encoding scheme, please continue with this section.

Converting an existing EBCDIC PeopleSoft database to a Unicode database requires a multi-phase process that is documented in the white paper titled “Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS.” See this white paper for complete details on completing an EBCDIC to Unicode encoding scheme conversion. One such step of this process with which PSTAAT is able to assist, is the “conversion” of the EBCDIC data types to Unicode data types within PeopleSoft PeopleTools and Application DDL. Specifically, DDL produced from the Unicode DDL Conversion tab of PSTAAT offers an additional option in creating the DDL scripts required to create the Unicode shell as described in Phase One, Creating the Unicode Database Shell, of the EBCDIC to Unicode conversion white paper. See the following sections of the “Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS” white paper for instructions on running the scripts that can be created either by the method described here with PSTAAT, or the method described in the conversion white paper:

- Phase One – Unicode Database Shell
- Creating Create Table and Create Index DDL for the Target Unicode Database
- Creating A DDL Script to Build the Target Unicode Physical Databases
- Creating A DDL Script to Build the Target Unicode Tablespaces
- Creating The Unicode Logical Database Shell

See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS," Oracle Applications Standard Benchmark, http://www.oracle.com/apps_benchmark/doc/peoplesoft /white- paper/ebcdic-unicode-encoding-scheme-db2-zos-white-paper.pdf

Task H-5-1: Creating Database, Tablespace, and Table Shell DDL for an EBCDIC to Unicode Database Conversion

When supplied with EBCDIC Database/Tablespace (*XX*DDL.SQL) and table DDL scripts (TBDDL.SQL) as input, PSTAAT is capable of parsing and recreating them with the necessary data types for creating the Unicode shell database. For the table DDL script, PSTAAT converts all character and long character fields to vargraphic and long vargraphic respectively; while date, integer, small integer, decimal, timestamp, and long varchar for bit data types remain unchanged. All 'Create Database' DDL within the Database/Tablespace script will be appended with 'CCSID Unicode'.

Note. The following instructions are divided into two procedures.

To use PSTAAT to convert EBCDIC DDL to Unicode DDL, begin by inserting *all* of the record definitions contained in the EBCDIC database into an Application Designer project, and then create the EBCDIC DDL for all tables and indexes in the database:

1. Open Application Designer.
2. Choose File, New.

   In the New dialog box, select Project, and then click OK.
3. Choose Insert, Definitions into Project.
4. Set Definition Type to Records, and Type to All Records.

   Note. Selecting All Records will insert views, sub-records, dynamic views and derived records in addition to table and temporary table definition types into the project. This is necessary to capture both the table and temporary table definition types in a single DDL file for PSTAAT. These are the two table types that will require the data type conversion from char to vargraphic and so on. Although these other definition types exist in the project, Application Designer will write table and index DDL for the table and temporary table definition types *only* based on the Build options that will be selected in a subsequent step.

   ---
5. Press ENTER, or click Insert and then click the Select All button.

   This selects all of the records.
6. Click Insert to insert all records into the new project.
7. Click Close to close the Insert into Project dialog box.
8. Before building the project, save it.

   Choose File, Save Project As and enter a project name.
9. Choose Build, Project.

The Build dialog box appears.

10. In the Build Options group, select the Create Tables check box.

    The Create Index check box is checked by default.

11. Select Build script file to direct the DDL to a file.
12. Click the Settings button.

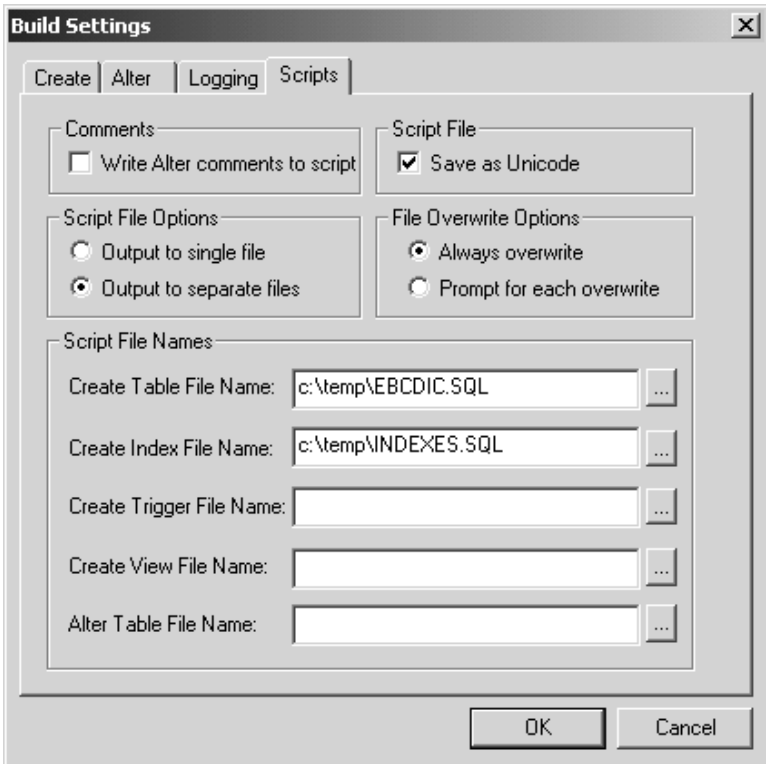
    The Build Settings dialog box appears.

13. On the Create tab, select the following:

Build Settings dialog box: Create tab

- Recreate table if it already exists under Table Creation Options
- Skip view if it already exists under View Creation Options
- Recreate index if it already exists under Index Creation Options

14. Select the Scripts tab, and select Output to Separate Files under Script File Options.
15. Under Script File Names, specify the path and filename for the output files that will contain the table and index DDL.



Build Settings dialog box: Scripts tab

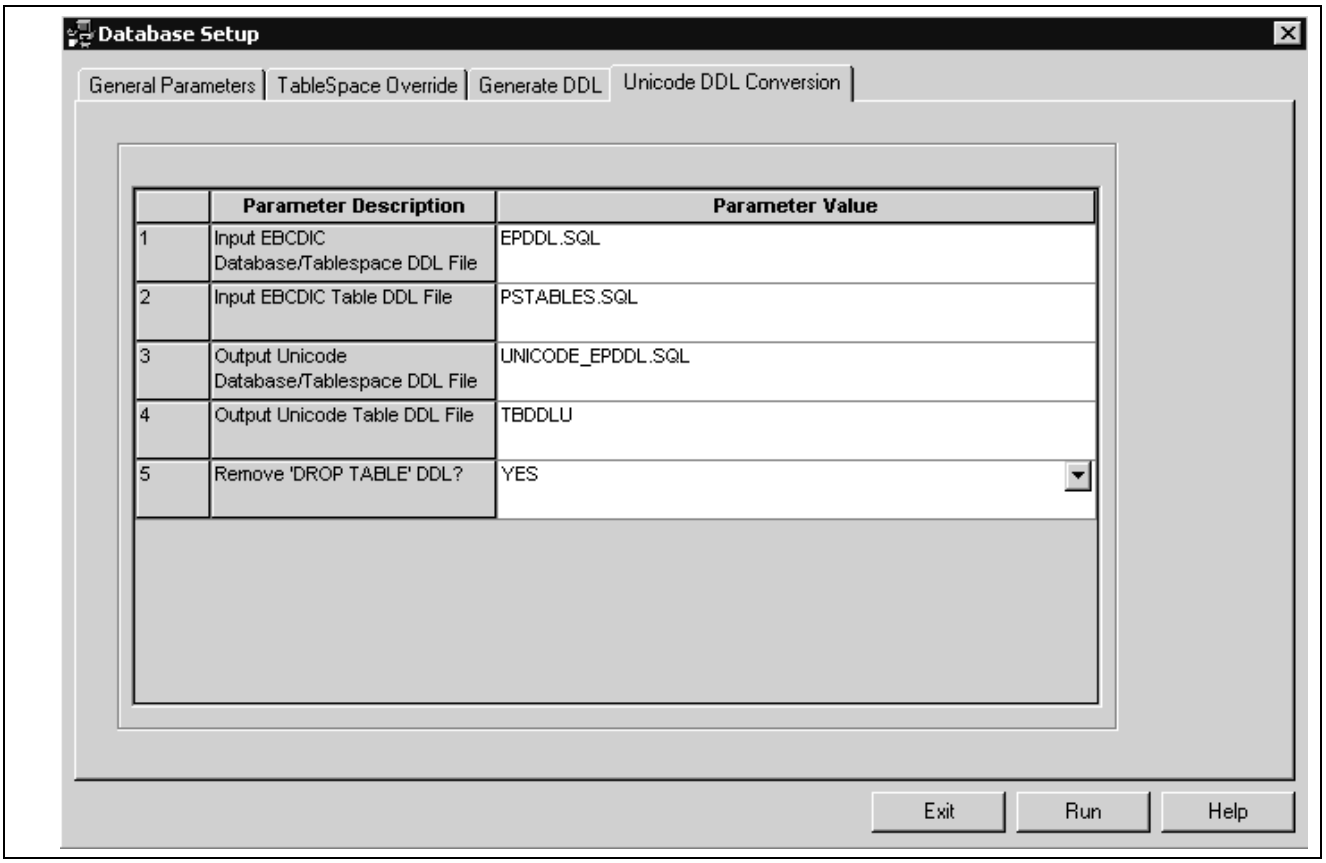
16. Click OK to accept the build settings.
17. Click Build to create the table and index DDL script.

    Disregard the subsequent warning message about “potentially destructive settings.” The output is directed to a script only. Database objects will not be dropped.
18. After the script generation process has finished, click Close in the Build Progress dialog box to return to Application Designer.

After completing the previous steps:

1. Start PSTAAT by double clicking on the PSTAAT.exe found in *PS_HOME*\bin\client\winx86.

   Click on the Unicode DDL Conversion tab.
2. Enter the EBCDIC Database/Tablespace DDL script (*XX*DDL.SQL) name into input parameter 1, Input EBCDIC Database/Tablespace DDL File, of the Unicode DDL Conversion tab.
3. Enter the name of the EBCDIC table DDL script that was just created by Application Designer in input parameter 2, Input EBCDIC Table DDL File, of the Unicode DDL Conversion tab. (EBCDIC.SQL in the example shown above.)
4. Enter Output file names for input parameters three (3) and four (4) of the Unicode DDL Conversion tab. These will become the names of the new DDL scripts.



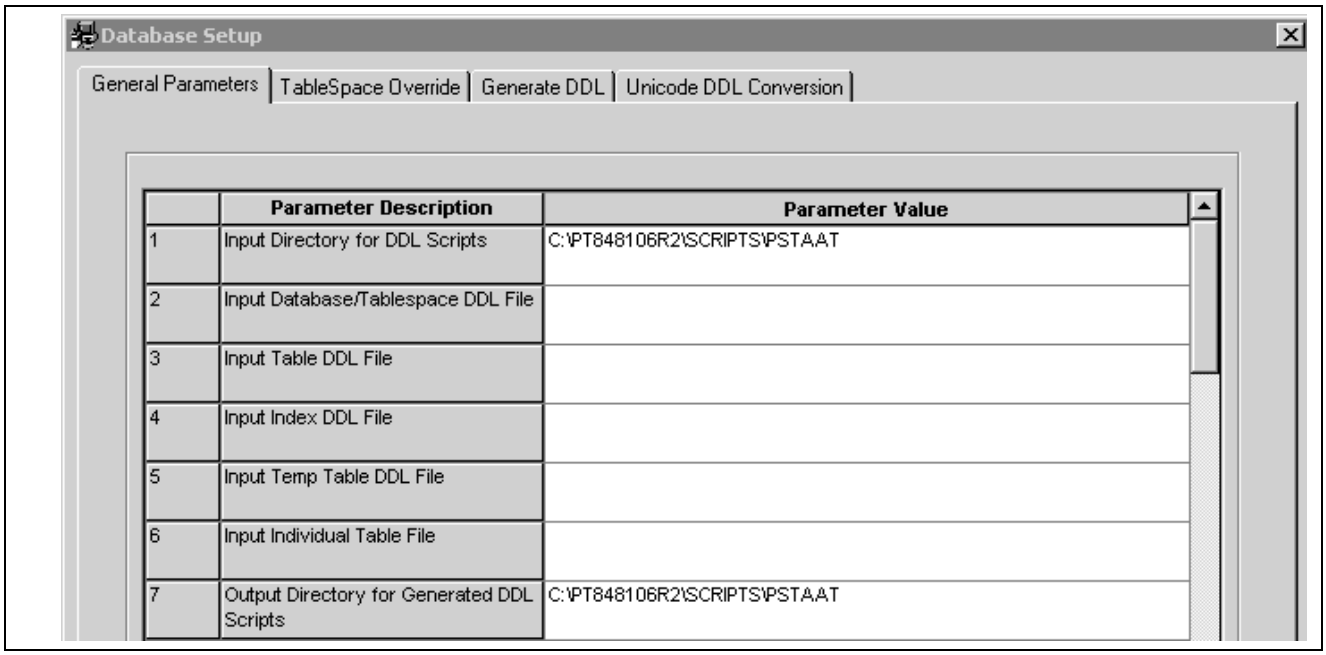
Specifying output files on Unicode DDL conversion tab

5. Select YES from the drop-down list box in input parameter five (5), Remove ‘Drop Table’ DDL.

   The Recreate table if it already exists option was set earlier in the Build Settings dialog box when the project was built so that Application Designer would create DDL for all record definitions for which a table exists in the database. Application Designer thus generates ‘Drop Table’ DDL prior to each ‘Create table’ DDL statement in the script. Choosing YES from this list box instructs PSTAAT to put comment marks prior to each Drop Table statement in the new Unicode table DDL script. This will prevent the EBCDIC tables from being dropped when the new Unicode DDL scripts are executed. Again, refer to the previously mentioned EBCDIC to Unicode conversion white paper before executing these scripts.

6. Click the General Parameters tab and enter the directory location of the EBCDIC Database/Tablespace script and the EBCDIC table DDL script (to be converted) into parameter 1 (Input Directory for DDL scripts).

   Enter the Output Directory for the new Unicode shell database scripts into parameter 7 (Output Directory for Generated DDL Scripts).



Specifying input and output directories on General Parameters tab

7. Click the Run button on the Unicode Conversion Tab.

   The new scripts will be written to the path specified in the Output Directory for Generated DDL Scripts on the General Parameters tab.

   Note. All tablespaces in the converted tablespace DDL (n*XX*DDL.SQL) will be allocated to BP8K1 by default. The General Parameters tab can be used to further optimize the DDL and assign additional 8 KB bufferpools.

8. Continue with the rest of the process documented in the “Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS” white paper.

   See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS," Oracle Applications Standard Benchmark, http://www.oracle.com/apps_benchmark/doc /peoplesoft/white- paper/ebcdic-unicode-encoding-scheme-db2-zos-white-paper.pdf

Task H-6: Using PSTAAT to Install PeopleSoft Databases

Previous sections of this Appendix describe the individual tabs of the PSTAAT graphical user interface and their various functions to either generate default DDL, or optimize default DDL. This section describes several important points to consider when using PSTAAT.

We recommend that you use PSTAAT to create environments that are more production-capable after you first become thoroughly familiar with the default installation process.

PSTAAT operates independently of the PeopleSoft PeopleTools metadata, has no direct knowledge of the data model of the individual Applications, and no mechanism itself to communicate directly with a DB2 for z/OS database server. Its primary capability is that of parsing DDL input files, and subsequently rewriting modified versions of those files for output. Because Application Designer is required to create temporary table DDL from a project containing record definitions, you must obviously complete enough of the installation steps to successfully connect Application Designer to the database. Additionally, because most customer installations will include multiple database environments, including one Demo copy of each Application, you may find it most convenient to use PSTAAT to create additional more production-worthy environments than the default installation process is capable of producing. PSTAAT can be used effectively to create such an environment as follows:

See "Creating a Database," Building Temporary Tables.

1. First, create and import a complete Demo environment without optimizing the DDL.

   Obtain the default TBDDL.SQL and IXDDL.SQL scripts from the installation files, or use the Generate DDL tab of PSTAAT to create them.

2. Obtain a DDL script for temporary tables by building (script only) an Application Designer project (DDL script only) from the Demo environment created in step one (above) as directed in the task Building the Temporary Tables and their Indexes.

   See "Creating a Database," Building Temporary Tables.

3. Collect the following files for input to PSTAAT:

   ```
   xxENHANCED.txt file for your application
   xxDDL
   TBDDL.SQL
   IXDDL.SQL
   Temporary table DDL script
   ```

   See Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces and Using PSTAAT to Isolate Other Tables to Individual Tablespaces.

4. Fill in *all* 24 text boxes of the General Parameters tab, and use the Tablespace Override tab to optimize the DDL as described in the previous sections of this appendix.
5. FTP the DDL generated from PSTAAT to the mainframe (HLQ.PSvvv.DDLIB) and make any other desired modifications.
6. Execute the DDL using DSNTEP2, or some other batch SQL processor.
7. Save a copy of the DDL scripts generated from PSTAAT in *PS_HOME*\scripts on the file server.
8. Continue with the rest of the process as documented in this installation guide.

Other important considerations when using PSTAAT:

- Be sure to run the SETSPACE and SETTMPIN SQRs as directed after successfully executing all DDL as documented in this installation guide.
- PeopleSoft upgrade processes may attempt to create new tables in the default tablespaces. These scripts will fail if the default tablespace does not exist. To prevent failures during an upgrade, execute the default *XX*DDL.SQL script so the vanilla tablespaces exist in each of your environments. You may reduce the primary space allocations on these tablespaces to avoid excessive waste of disk space.
- As indicated previously, always store a copy of all PSTAAT modified DDL in the *PS_HOME*\scripts folder of the PeopleSoft PeopleTools file server.

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