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Enterprise PeopleTools 8.48 Installation for DB2 UDB for z/OS

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ORACLE

Enterprise PeopleTools 8.48
Installation for DB2 UDB for z/OS
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About This Documentation

This preface discusses:

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Note. This book is designed to direct you through a basic PeopleSoft installation. It is not a substitute for the database administration manuals provided by your RDBMS vendor, the network administration manuals provided by your network vendor, or the installation and configuration manuals for additional software components used with PeopleSoft.

Note. Required updates to this installation documentation are provided in the form of "Required at Install" incidents, available on PeopleSoft Customer Connection. In addition, *application-specific installation steps are provided in a separate document specific to the application*. For instance, if you are performing Oracle's PeopleSoft CRM installation, you need both this PeopleTools installation guide and any additional instructions provided by CRM. To find the installation documentation specific to your application, go to Customer Connection, choose *Site Index*, the letter *I*, *Installation Guides and Notes*, and then look under the subcategory for your particular application.

Note. Before proceeding with your installation, check PeopleSoft Customer Connection to ensure that you have the latest version of this installation guide for the correct version of PeopleTools.

Audience

This book is written for the individuals responsible for installing and administering the PeopleSoft environment. We assume that you are familiar with your operating environment and RDBMS and that you have the necessary skills to support that environment. You should also have a working knowledge of SQL. We recommend that you have completed at least one PeopleSoft introductory training course (particularly the Server Administration and Installation course) and have a basic understanding of the PeopleSoft System. Probably the most important component in the installation and maintenance of your PeopleSoft system is your onsite expertise. Only qualified and experienced individuals should attempt to install PeopleSoft. If you have any doubts as to whether your onsite staff is capable of successfully completing an installation, contact your PeopleSoft representative.

Products Referenced in this Book

This installation guide refers to these products:

- Oracle's PeopleSoft Enterprise PeopleTools, referred to as PeopleTools
- Oracle's PeopleSoft Enterprise products, referred to as PeopleSoft
- Oracle's PeopleSoft Pure Internet Architecture
- Oracle's PeopleSoft Change Assistant

- Oracle's PeopleSoft Change Impact Analyzer
- Oracle Application Server
- Oracle Enterprise Manager
- Oracle BPEL Process Manager
- Applications such as Oracle's PeopleSoft Enterprise Human Capital Management and Oracle's PeopleSoft Enterprise Customer Relationship Management

  See All PeopleSoft Enterprise Products on Oracle's web site, http://www.oracle.com/applications /peoplesoft/all_ent_products.html

Related Publications

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

For reference information on PeopleTools, you may wish to consult the following books:

- *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration:* This includes information on configuring the PeopleSoft application server and supported web servers, data integrity tools, database level auditing, and PeopleTools utilities, including Configuration Manager.
- *Enterprise PeopleTools 8.48 PeopleBook: Security Administration:* This includes information on setting up and modifying user access to PeopleSoft applications, and defines the various IDs and passwords used in installation.
- *Enterprise PeopleTools 8.48 PeopleBook: Data Management:* This includes information on PeopleSoft administrative utilities, such as Data Mover, Data Archive Manager, and so on.
- *Enterprise PeopleTools 8.48 PeopleBook: PeopleCode Language Reference:* This includes reference information on the PeopleCode language, such as built-in functions, classes, meta-SQL, system variables, and so on.
- *Enterprise PeopleTools 8.48 PeopleBook: PeopleCode Developer's Guide:* This includes general information about the PeopleCode editor, the Component Processor, the data buffers, and how to use specific functions and classes.
- *Reporting and Analysis Tools:* For information on PeopleSoft's reporting and analysis tools, see the Enterprise PeopleTools 8.48 PeopleBooks on Crystal Reports for PeopleSoft, PS/nVision, PeopleSoft Query, PeopleSoft Tree Manager, PeopleSoft Process Scheduler, and PeopleSoft Cube Manager.
- *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Application Designer:* This includes information about the main tool for developing PeopleTools applications.
- *Enterprise PeopleTools 8.48 PeopleBook: Global Technology:* This includes information on the role of PeopleTools in the globalization of PeopleSoft applications.
- *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Application Engine:* This includes information on the PeopleSoft proprietary batch programming tool.

  For information on a tool to help you write transformation Application Engine programs see the appendix "Using XSLT Mapper with Oracle BPEL Process Manager."

For reference information on your particular application, refer to the documentation for your application.

CHAPTER 1

Preparing for Installation

This chapter discusses:

- Understanding the PeopleSoft Installation
- Assembling Related Documentation
- Verifying Hardware and Software Requirements
- 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 UDB for z/OS Subsystem Configuration
- Installing Supporting Applications
- Setting Up Database Connectivity
- Using Connect ID
- Setting Up z/OS User IDs
- Using Storage Enhancements for z/OS
- 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:

- If you will be upgrading your current release after you perform this installation, you also need to install the Upgrade Assistant or Change Assistant. The upgrade page on PeopleSoft Customer Connection includes information on which tool you need.
- For critical issues related to the installation process, see the PeopleSoft Customer Connection web site. Be sure to read the “Required for Installation or Upgrade” incidents for the PeopleTools version that you are installing.

- For online, interactive technical support information, use the Oracle Metalink web site.

  See Oracle Metalink, https://metalink.oracle.com
- To download software and documentation, use the Oracle Technology Network.

  See Oracle Technology Network, http://www.oracle.com/technology/index.html
- This installation guide may refer you to PeopleBooks for more information or instructions. If you install PeopleBooks to your web server, you can easily refer to the documentation during the installation process.

See Also

"Installing PeopleBooks"

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Upgrade Assistant

Enterprise PeopleTools 8.48 PeopleBook: Software Updates

"Installing PeopleSoft Change Assistant"

Task 1-1: Assembling Related Documentation

Before you begin your installation, you should have the following documentation ready for reference:

- Locate the supplemental installation documentation for any PeopleSoft applications that you plan to install.

  Be sure to use both the PeopleTools Installation Guide for your database platform *and* the supplemental application installation instructions. (For example, if you are installing CRM, you need to have the PeopleTools Installation Guide for the appropriate PeopleTools release and the supplemental CRM installation instructions.) The application installation instructions are available on Customer Connection.
- Locate the database administration manuals provided by your RDBMS vendor, the network administration manuals provided by your network vendor, and the installation and configuration manuals for additional software components used with PeopleSoft.
- For administration information regarding your database platform, please refer to the relevant appendix in the following PeopleBook.

  See *Enterprise PeopleTools 8.48 PeopleBook: Data Management.*

Task 1-2: Verifying Hardware and Software Requirements

Before you install PeopleSoft you must verify that you have the correct hardware and software in place to support a successful installation.

Warning! If you are unable to meet any of the criteria outlined in the Enterprise PeopleTools 8.48 Hardware and Software Requirements documentation and Supported Platforms on PeopleSoft Customer Connection, contact PeopleSoft before going forward with the installation. Attempting to complete an installation on an unsupported configuration can be a *very* costly decision, and PeopleSoft will not provide support for such installations.

Use the following sources of information on currently supported hardware and software:

- The Enterprise PeopleTools 8.48 Hardware and Software Requirements book provides an overview of PeopleSoft architecture, as well as general information on the hardware and software required for a successful installation.

  This book is a snapshot of supported configurations; it does not provide up-to-the-minute information on supported maintenance releases or required patches. Be sure to check Supported Platforms on PeopleSoft Customer Connection (discussed next) to verify time-sensitive information, such as supported versions of additional software components used with PeopleTools. To find the hardware and software requirements guide, sign on to PeopleSoft Customer Connection, select Site Index, select the letter H, select the entry hardware and software requirements, and then select PeopleTools.

- Supported Platforms on PeopleSoft Customer Connection provides the most current support information on hardware platforms, RDBMS versions, client connectivity versions, required compiler versions, and additional component versions.

  The information in this database supplements and supersedes any information in the Enterprise PeopleTools 8.48 Hardware and Software Requirements book. To go to Supported Platforms, sign on to PeopleSoft Customer Connection, and select the link Implement, Optimize + Upgrade. Then select Implementation Guide, Supported Platforms, PeopleSoft Enterprise.

- Before you begin your installation, read the version of the document "Required Operating System, RDBMS & Additional Component Patches Required for Installation" that is appropriate for your database platform and other configuration.

  See “Required Operating System, RDBMS & Additional Component Patches Required for Installation,” PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise.)

- Additional documentation for DB2 UDB for z/OS is available on PeopleSoft Customer Connection.

  See PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By Database Management System, Platform Communications By Topic).

  Note. DB2 UDB for z/OS is the official IBM name for the DBMS. For the sake of brevity, this documentation sometimes refers to DB2 UDB for z/OS as *DB2 z/OS*, and it sometimes refers to DB2 UDB for Linux, UNIX, and Windows as *DB2/LUW*.

Task 1-3: Considering Project Planning

Identify the maintenance schedule for upcoming PeopleTools and 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. Release dates are posted on Customer Connection. 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 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.

Task 1-4: Planning Your Initial Configuration

This section discusses:

- Understanding Workstations

- Defining the File Server
- Defining the Database Server
- Defining the Application Server
- Defining the Batch Server
- Defining the Web Server
- Using Laser Printers

Note. DB2 UDB for z/OS is the official IBM name for the DBMS. For the sake of brevity, this documentation sometimes refers to DB2 UDB for z/OS as *DB2 z/OS*, and it sometimes refers to DB2 UDB for Linux, UNIX, and Windows as *DB2/LUW*.

Note. COBOL is not needed for PeopleTools or for applications that contain no COBOL programs. Check Supported Platforms on Customer Connection for details about whether your application requires COBOL.

See "PeopleSoft Application COBOL Requirements," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Batch).

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 now called the PeopleTools Development Environment. These clients—which run on Windows XP and Windows Server 2003—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.

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 *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "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 Windows machine that you use to perform your PeopleTools installation must be running in 256-color mode or higher when running the CD install, Internet install, and Database configuration in 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 Windows—such as Macintosh or UNIX.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Task 1-4-1: Defining the File Server

For DB2 z/OS, the file server is used as a staging location to FTP files to the z/OS batch server only.

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 Upgrade Assistant or Change Assistant, and all of the executables and scripts that are necessary to perform an upgrade. In addition, the file server is a source repository for COBOL and SQR (you will apply patches and updates from Customer Connection directly to the file server and then copy the updated files to your other servers).

Important! Remember, a COBOL compiler is not needed for PeopleTools unless your application contains COBOL programs. If your application requires COBOL and you're running on Windows, we require that you maintain a central repository of your COBOL source code on the Windows file server.

See the following task later in this chapter for details on where you should install your COBOL compiler.

See Installing Supporting Applications.

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 conventionally referred to 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.

Task 1-4-2: 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 PeopleSoft on the PeopleSoft CDs.

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 1-4-3: 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 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 PeopleSoft 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

Enterprise PeopleTools 8.48 PeopleBook: Internet Technology

Task 1-4-4: 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.

PeopleSoft 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, Microsoft Word, or Cube Manager—you need to set up a Windows batch environment on a Windows application server or on a dedicated 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

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.

Task 1-4-5: 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 three J2EE web application servers (also commonly referred to as web servers):

- Oracle Application Server
- BEA WebLogic Server
- IBM WebSphere Server

These web servers are supported on the following operating systems:

Oracle Application Server	BEA WebLogic Server	IBM WebSphere Server
Windows Server 2003	Windows Server 2003	Windows Server 2003
HP-UX (Intel Itanium, PA-RISC 64–bit)	HP-UX (Intel Itanium, PA-RISC 64–bit)	HP-UX (PA-RISC 64–bit)
Solaris (64–bit SPARC)	Solaris	Solaris
Red Hat Linux Enterprise Server	Red Hat Linux Enterprise Server	Red Hat Linux Enterprise Server
SUSE Linux Enterprise Server	SUSE Linux Enterprise Server	SUSE Linux Enterprise Server
AIX	AIX	AIX
	Tru64	

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

- With Oracle Application Server, Oracle/PeopleSoft supports the Oracle HTTP Server and Oracle Application Server Web Cache as reverse proxy servers.
- With BEA WebLogic, the certified HTTP servers are Microsoft IIS, iPlanet web server, Apache HTTP server, and BEA WebLogic Server.
- With IBM WebSphere, the certified HTTP servers are IBM HTTP Server (IHS), Microsoft IIS, and iPlanet web server.

WebLogic, WebSphere, and the above reverse proxy servers will provide out-of-the-box SSL support across all supported operating systems. WebLogic and 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 1-4-6: 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

Enterprise PeopleTools 8.48 Hardware and Software Requirements

Supported Platforms, PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

Task 1-5: 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 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. To properly install a Demo database, you must select both the System Database and the Demo Database options during the installation of PeopleSoft applications.

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 1-5-1: Using Multiple Databases

To facilitate optimal performance and minimal use of shared mainframe resources, PeopleSoft employs a multiple-database strategy on DB2 z/OS. PeopleSoft 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 PeopleTools tables PS.PSDBOWNER and PSSTATUS.

PeopleSoft 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 1-5-2: 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 1-5-3: 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 1-5-4: 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 PeopleTools tables.

PeopleSoft 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 PeopleTools tables. The PeopleSoft access ID is the DB2 owner ID.

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:

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

In secondary authorization ID processing, at sign on, PeopleTools, under authorization of the access ID, issues the SET CURRENT SQLID 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. Often customers ask whether the access ID needs SYSADM authority to the DB2 subsystem. The answer is *no.*

Note. With SYSADM authority, the access ID may issue SET CURRENT SQLID 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.

Note. At PeopleSoft, 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' 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 1-6: 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 PeopleSoft and their language codes are listed below. These are the languages for which PeopleSoft provides pretranslated products. If you plan to provide users access to your applications in these languages, PeopleSoft 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 PeopleSoft-provided translations at a later date. After installation, you also have the option of performing your own translations, and adding additional languages.

Code	Language
CFR	Canadian French
DAN	Danish
DUT	Dutch
ENG	US English
FIN	Finnish
ESP	Spanish
FRA	French
GER	German
ITA	Italian
NOR	Norwegian
POR	Portuguese
SVE	Swedish

Note. PeopleSoft MultiChannel Framework users who want to display certain Japanese characters should install JDK 1.4.2_11+.

See Also

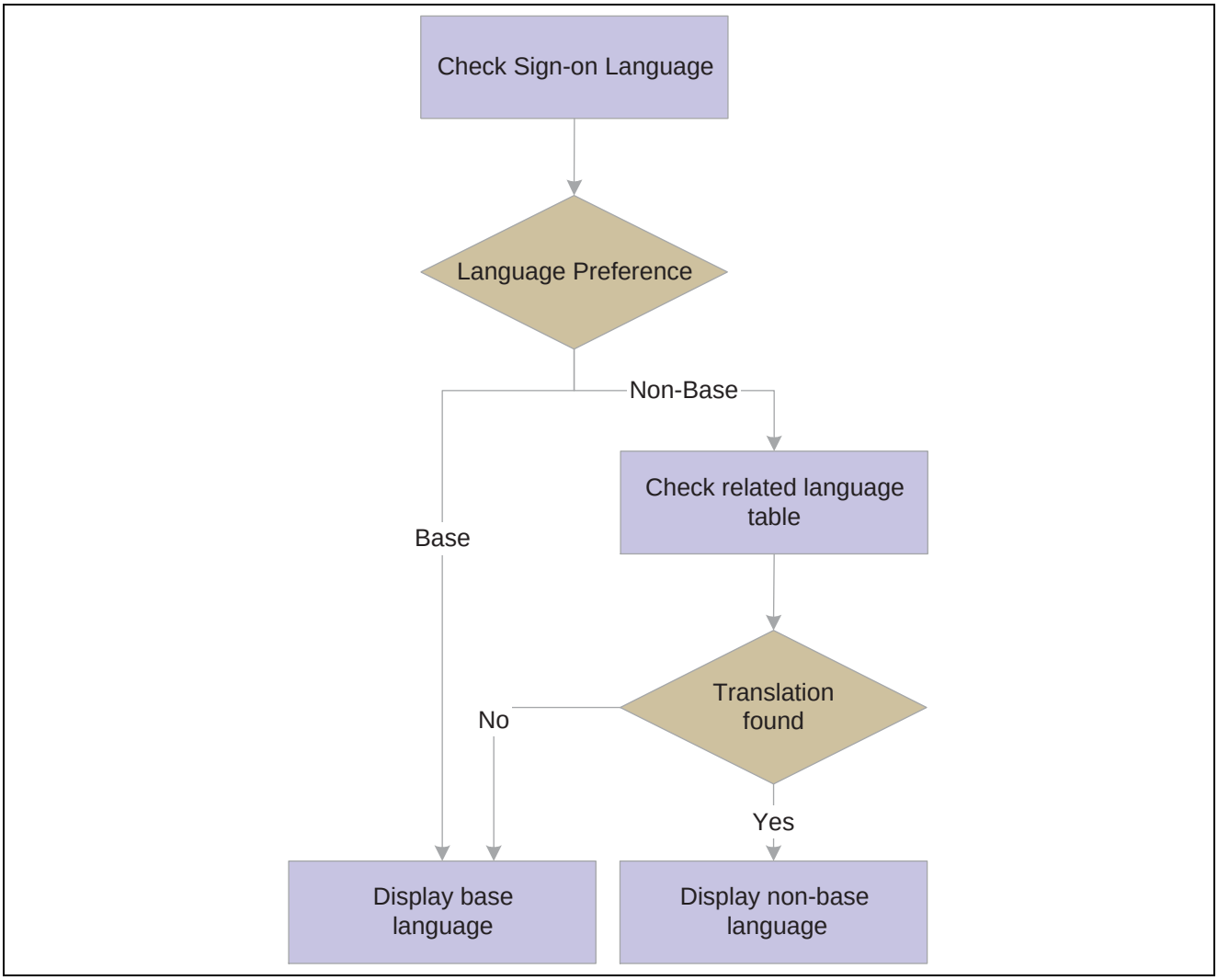
Enterprise PeopleTools 8.48 PeopleBook: Global Technology

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework

Task 1-6-1: 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 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, PeopleTools immediately loads the required definition from the base language PeopleTools tables. However, if the user's preferred language differs from the database's base language, 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 flowchart shows this logic:



Language selection process

While these queries typically occur very quickly, they still take up valuable processing time. To optimize performance you should set the base language of your database as the language that is used most often by your users.

Task 1-6-2: Selecting Additional Languages

Because more than one language can coexist in a single PeopleSoft database, you should decide which languages to install. PeopleSoft provides translations of all end-user objects on the Global Multi-Language CD. 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 PeopleTools objects.

Task 1-6-3: 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.

See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* “Selecting and Configuring Character Sets and Language Input and Output.”

Using Unicode Databases

In addition to supporting several legacy character sets, PeopleSoft supports creating Unicode databases using DB2 UDB 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 UDB for z/OS Unicode database, you must specify the CCSID UNICODE option of the CREATE DATABASE statement.

Unicode databases are particularly important 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 as described below.

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.

On DB2 UDB for z/OS, PeopleSoft supports the following CCSIDs:

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

Note. Other languages—such as Arabic, Czech, Greek, Hebrew, Hungarian, Japanese, Korean, Polish, Russian, Thai, Turkish, Simplified Chinese, and Traditional Chinese—are only supported with Unicode.

Task 1-7: Reviewing Updates and Fixes Required at Installation

Before beginning the installation, check the Updates and Fixes database on PeopleSoft Customer Connection 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 CDs to the appropriate server, and so on.

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

To review updates and fixes required at installation:

1. Go to the PeopleSoft Internet Home Page at www.peoplesoft.com.
2. Select the link Log in now under Customer Connection.
3. 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.

4. Select Updates and Fixes.
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"

"Required Operating System, RDBMS, and Additional Component Patches Required for Installation," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise. Select your database platform.)

Task 1-8: 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 1-9: Defining DB2 UDB 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 1-9-1: 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 1-9-2: Defining Decimal Arithmetic

Arithmetic operations involving decimal numbers in PeopleSoft require a greater decimal precision than earlier versions of PeopleSoft. 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, PeopleSoft 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, PeopleSoft 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.

IBM released PTFs for DB2 v6.1 and v7.1 to enhance the functionality of the special register “SET CURRENT PRECISION”. PeopleSoft code now 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. You will need to apply the PTF’s that provide this functionality in order to run PeopleTools 8.4 . Please refer to the list of PTF’s in Customer Connection for the specific PTF numbers.

See “Important PTFs on DB2 UDB for OS/390 and z/OS” PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By Database Management System, Platform Communications by Topic, Platforms—DB2 UDB for DB2 z/OS and OS/390).

Task 1-9-3: 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. Please see the list of PTFs in Customer Connection, News and Information for the specific PTF numbers.

Task 1-9-4: 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 1-9-5: Using CCSID and DB2 z/OS Database Storage Encoding Schemes

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, please 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/or loss of data could result.

See Also

Enterprise PeopleTools 8.48 PeopleBook: Global Technology

Enterprise PeopleTools 8.48 PeopleBook: Data Management

Task 1-9-6: Using DECIMAL

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 runnng 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 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 (e.g. CRM). Product lines that only support one setting will support DECIMAL=PERIOD. Please refer to the product line specific Installation addenda for information on whether your product line supports zparm DECIMAL=COMMA.

Task 1-10: Installing Supporting Applications

PeopleSoft requires that a number of supporting applications be installed 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 PeopleSoft Customer Connection to ensure that you are installing software versions that are certified by PeopleSoft.

See PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise).

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

  Note. Remember, COBOL is not needed for PeopleTools or for applications that do not contain COBOL programs. See PeopleSoft Customer Connection to verify whether your application requires COBOL.

  See "PeopleSoft Application COBOL Requirements," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Batch).

  - For UNIX servers, install the appropriate version of Micro Focus ServerExpress.
  - For Windows servers, install the appropriate version of Micro Focus NetExpress.
  - For z/OS servers, install the appropriate version of IBM Enterprise COBOL for z/OS and OS/390.
  - If all your servers are on Windows, we recommend that you install a COBOL compiler on the file server.

    You can install 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, 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. Note that this 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. PeopleSoft 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.

- If you prefer, you can copy patches or customizations to all of your UNIX application and batch servers and compile the COBOL on each machine.

  However, PeopleSoft does not recommend this approach. It requires that you install multiple versions of the COBOL compiler, and makes it more likely that your COBOL source code will get out of sync.

  Note. Before PeopleTools 8.4, PeopleSoft delivered both source and compiled COBOL for Windows users; on UNIX COBOL had to be compiled. From 8.4 onwards, we deliver source only on both Windows and UNIX. If your application requires COBOL, you will need to compile it.

  If your application requires COBOL and you are running UNIX, you need to install the COBOL runtime on every application and batch server. This is not necessary for Windows.

- You must install SQR on any non-Windows batch server.
- On Windows batch servers and Windows 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 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.
- z/OS customers should install the appropriate IBM z/OS Java to support JDK/JRE requirements for PeopleSoft.

  The minimum support level required for PeopleTools 8.45 and higher is 1.4.1
- Install Microsoft Office (Excel and Word) on any Windows batch server or two-tier client that will be running nVision or Microsoft Word batch processes.

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

See Also

Enterprise PeopleTools 8.48 Hardware and Software Requirements

Task 1-11: 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 1-12: 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 PeopleSoft. 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 1-12-1: 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

Activity	Parameter Value and/or Underlying Statements
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 1-13: 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 PeopleTools sign-on process and database table access.

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

Task 1-13-1: 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 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.

PeopleSoft 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. PeopleSoft's 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 PeopleSoft.

Table	PeopleSoft Process(es)
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

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 via 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 8.48 PeopleBook: Internet Technology

Enterprise PeopleTools 8.48 PeopleBook: Data Management

Task 1-14: Using Storage Enhancements for z/OS

This section discusses:

- Understanding z/OS Storage Enhancements
- Prerequisites
- Enabling the Shared Library Feature

Understanding z/OS Storage Enhancements

You must implement the new storage enhancement feature for z/OS. This enhancement introduces the shared library feature of UNIX in a z/OS environment. If your operating system is on z/OS, you must complete the following task to take advantage of this storage enhancement.

Note. It is best to complete this task before installing any PeopleSoft Product.

Prerequisites

PeopleSoft requires the use of system shared library modules. When you use system shared library modules, keep in mind that you will want to:

- Specify a SHRLIBRGNSIZE value of at least 350 MB per PeopleTools version of Process Scheduler instance(s).

  Approximately 350 MB is required for the PeopleSoft shared library modules residing in each discrete version of PeopleTools installed on your system. Here are two examples of the settings you need if there are three PeopleSoft USS environments installed on your system.

  - If you are running the following three instances of Process Scheduler the SHRLIBRGNSIZE BPXPRMxx should be set to at least 1.1 GB:

Instance	PeopleTools version
instance 1	$PS_HOME_8.44/bin
instance 2	$PS_HOME_8.43/bin
instance 3	$PS_HOME_8.42/bin

- If you are running the following three instances of Process Scheduler the SHRLIBRGNSIZE BPXPRMxx should be set to at least 750 MB:

Instance	PeopleTools version
instance 1	$PS_HOME_8.44/bin
instance 2	$PS_HOME_8.44/bin
instance 3	$PS_HOME_8.43/bin

- Allow the user read access to the BPX.FILEATTR.SHARELIB on class type of FACILITY in RACF to allow the usage of extattr command for +l.
- Set the shared library extended attribute on all of the DLL (binaries). This is done when psconfig.sh and psmv.sh scripts are executed in the task "Running PSCONFIG.SH and PSMV.SH Shell Scripts to set up the USS Environment Variables and Grant Access to USS Files" in the chapter "Setting Up the Batch Environment on z/OS."

Task 1-14-1: Enabling the Shared Library Feature

The following procedure is required to enable the Shared Library feature to take advantage of new storage enhancements.

To enable the Shared Library feature:

1. In TSO/E, issue the following command to allow read access to user id "username":

```
PERMIT BPX.FILEATTR.SHARELIB CALSS(FACILITY) ACCESS(READ) ID(username)
```

2. If no other application on your system is using system shared library modules (files with .so extensions), you can define all the PeopleSoft Shared Library modules. For each Process Scheduler instance per PS_HOME/bin directory, set the SHRLIBRGNSIZE to 367001600 in BPXPRMxx. If other applications on your system are using system shared library modules, add the amount that is required for the other applications to the amount required for PeopleSoft. This value will be enabled at the next IPL of the system.

   For testing purposes, you can dynamically implement the SHRLIBRGNSIZER from SDSF or the system console by issuing a SETOMVS command to set the SHRLIBRGNSIZE:

```
SETOMVS SHRLIBRGNSIZE=367001600
```

   To confirm the new setting, issue the SDSF command D OMVS,O to display the new setting in the MVS SYSLOG:

```
D OMVS,O
```

   Note. You can issue the SDSF command D OMVS,L to display the settings for the OMVS system parameters while the processes are running.

Task 1-15: 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 1-16: Using PeopleSoft Change Assistant and PeopleSoft Change Impact Analyzer

After you have completed the tasks in this book to install 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 PeopleSoft Customer Connection. With the environment data available, PeopleSoft Customer Connection 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 PeopleTools installation, or by itself. PeopleSoft Change Impact Analyzer is a 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"

Enterprise PeopleTools 8.48 PeopleBook: Software Updates

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Change Impact Analyzer

CHAPTER 2

Installing Web Server Products

This chapter discusses:

- Installing Oracle Application Server
- Installing BEA WebLogic Server
- Installing WebSphere Application Server

See Also

"Clustering and High Availability for PeopleSoft 8.4," PeopleSoft Customer Connection (Site Index, Red Papers)

"Required Operating System, RDBMS, and Additional Component Patches Required for Installation," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise. Select your database platform or release number.)

Task 2-1: Installing Oracle Application Server

This section discusses:

- Understanding the Oracle Application Server Installation
- Prerequisites
- Preparing for the Oracle Application Server Installation
- Installing the Oracle Application Server on Windows and UNIX
- Updating the IBM JDK to Version 1.4.2
- Uninstalling the Oracle Application Server

Understanding the Oracle Application Server Installation

This section describes the installation of the J2EE and Web Cache edition of the Oracle Application Server 10g (OAS) Release 2 (10.1.2.0.2). This documentation is concerned only with the installation of OAS for use as a web server with PeopleSoft software. Further information on the configuration of OAS can be found on Customer Connection and on the Oracle web site.

Before beginning the installation, be sure to obtain any required patches for the installation from ftp://ftp.peoplesoft.com/outgoing/ptools/Oracle/OAS/101202.

Important! PeopleSoft customers are granted a license of Oracle Application Server J2EE and Web Cache Edition for use exclusively with PeopleSoft Enterprise at no additional cost. PeopleSoft Enterprise customers can choose Oracle Application Server J2EE and Web Cache Edition as an alternative to BEA WebLogic or IBM WebSphere for use with PeopleSoft Enterprise. This license is provided solely for use with PeopleSoft Enterprise and any other use of Oracle Application Server J2EE and Web Cache Edition outside of use with PeopleSoft Enterprise requires the purchase of an Oracle Application Server license. Please note that a separate installation of Oracle Application Server J2EE and Web Cache Edition is required for use with PeopleSoft Enterprise.

See Also

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Working with Oracle Application Server 10g (10.1.2.0.2)"

Oracle Application Server 10g Release 2 (10.1.2.0.2) Documentation, http://www.oracle.com/technology /documentation/appserver101202html

Prerequisites

The OAS can be used as a web server for Enterprise PeopleTools for the following operating systems:

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

See "Preparing for Installation," Defining the Web Server.

For a complete list of prerequisites, see the installation documentation for the OAS on Oracle's web site.

See http://www.oracle.com/technology/documentation/appserver101202.html. Select the View Library link for the appropriate operating system.

Task 2-1-1: Preparing for the Oracle Application Server Installation

This section discusses:

- Creating a Group for the Inventory Directory
- Creating oraInst.loc
- Creating the Operating System User
- Reviewing the Environment Variables
- Using Custom Port Numbers

Creating a Group for the Inventory Directory

If you plan to install Oracle Application Server on a computer that does not have Oracle products, create a group to own the inventory directory. The installer writes its files in the inventory directory to keep track of the Oracle products installed on the computer.

This guide uses the name *oinstall* for this operating system group.

By having a separate group for the inventory directory, you allow different users to install Oracle products on the computer. Users need write permission for the inventory directory. They can achieve this by belonging to the *oinstall* group.

For the first time installation of any Oracle product on a computer, the installer displays a screen where you enter a group name for the inventory directory, and a screen where you enter the location of the inventory directory. The default name of the inventory directory is *oraInventory*. If you are unsure if there is already an inventory directory on the computer, look in the /etc/oraInst.loc file for Linux and AIX systems and the /var/opt/oracle/oraInst.loc file for other UNIX platforms. This file lists the location of the inventory directory and the group which owns it. If the file does not exist, the computer does not have Oracle products installed on it.

Creating oraInst.loc

If the oraInst.loc file does not exist in the /etc directory for Linux and AIX systems or the /var/opt/oracle directory for other UNIX platforms, you must create it before starting the silent and non-interactive installation of Oracle Application Server. This file is used by the installer.

1. Log in as the root user:

   ```
   % su
   ```

2. Using a text editor such as vi or emacs, create the oraInst.loc file in the /etc directory for Linux and AIX platforms, and in the /var/opt/oracle directory for other UNIX platforms.
3. Enter the following line in the file, where *oui_inventory_directory* is the full path to the directory where you want the installer to create the inventory directory:

   ```
   inventory_loc=oui_inventory_directory
   ```

   Make sure that the oinstall operating system group has write permission to this directory.

   See Creating a Group for the Inventory Directory.
4. Create an empty `/etc/oratab` file:

   ```
   # touch /etc/oratab
   ```

5. Exit from the root user.

   ```
   # exit
   ```

Creating the Operating System User

Windows:

The operating system user performing the installation must belong to the Administrators group.

UNIX:

Create an operating system user to install and upgrade Oracle products. This guide refers to this user as the *oracle* user. The oracle user running the installer must have write permission for these directories:

- the Oracle home directory, which contains files for the product you are installing
- the inventory directory, which is used by the installer for all Oracle products

If the computer contains other Oracle products, you might already have a user for this purpose. Look in the /etc/oraInst.loc file for Linux and AIX platforms, and in the /var/opt/oracle/oraInst.loc file for other UNIX platforms. This file lists the location of the inventory directory and the group who owns it. If the file does not exist, the computer does not have Oracle products installed on it.

See Creating oraInst.loc.

If you do not already have a user for installing Oracle products, create a user with the following properties:

Login name	Select a name for the user. This guide uses *oracle*.
Group identifier	Select a name for the group. This guide uses *oinstall*. The primary group of the oracle user must have write permission for the oraInventory directory.
Home directory	The home directory path must not include any spaces. The home directory for the oracle user can be the same as the home directories of other users.
Login shell	The default login shell can be the C, Bourne, or Korn shell.

Reviewing the Environment Variables

Make sure the following conditions for environment variables are met:

- ENV, ORACLE_HOME, and ORACLE_SID must *not* be set. If necessary, unset these variables.
- PATH, CLASSPATH, and LD_LIBRARY_PATH must not contain references to directories in any Oracle home directories.
- Set DISPLAY to the monitor where you want the installer window to appear.

  Note. On AIX platform, DISPLAY should be set even when using the OAS silent installation procedure.

- TNS_ADMIN must not be set.
- TMP is optional. If TMP is not set, the value defaults to /tmp.

Note. If you use the `su` command to switch users (for example, switching from the root user to the oracle user), check the environment variables when you are the new user because the environment variables might not be passed to the new user.

Using Custom Port Numbers

By default, the installer configures Oracle HTTP Server to use port 7777, not port 80. Port 7777 is the default port because on UNIX, components that use port numbers lower than 1024 require additional steps to be done as the root user before the components can run. Because the installer does not have root access, it has to use a port greater than 1024.

If you want Oracle HTTP Server to use a different port, such as port 80, use the "static ports" feature, which enables you to specify port numbers for components. Although you can change the port number after installation, it is easier to set the port number during installation. The OAS cannot use port numbers that are less than 1024 and greater than 50000.

To instruct the installer to assign custom port numbers for components:

1. Create a file containing the component names and port numbers.

   This file is typically called the `staticports.ini` file, but you can name it anything you want. A sample staticports.ini file is located at <*INSTALL_DIR*>\Disk1\stage\Response.

2. During the installation, on the Specify Port Configuration Options window, select Manual and enter the full path to the staticports.ini file.

   If you do not specify the full path to the file, the installer will not be able to find the file. The installer will then assign default ports for all the components, and it will do this without displaying any warning.

Task 2-1-2: Installing the Oracle Application Server on Windows and UNIX

This procedure describes the installation of the OAS middle tier software, which comprises the OAS J2EE and Web Cache. The OAS software is provided to the customer using Oracle E-Delivery.

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

1. Download the zipped files containing the OAS from Oracle E-Delivery.
2. Create a temporary folder, <INSTALL_DIR>, for your operating system.
3. Extract each zipped file into a separate folder labelled Disk<#> under <INSTALL_DIR>.
4. Start the installation:

   Note. For AIX, it will prompt you to run rootpre.sh. Enter *y* if rootpre.sh has already been run. If this is the first time any Oracle product is being installed on this AIX machine, please stop the OAS installation and run rootpre.sh as the "root" user before continuing with OAS installation.

   - For Windows, double-click <*INSTALL_DIR*>\Disk1\setup.exe.
   - For UNIX, run <*INSTALL_DIR*>/Disk1/runInstaller.
5. Click Next.

   The product selection window appears. Oracle Application Server 10g 10.1.2.0.2 is the default product. Accept the default.

   Note. English is the default language. To install different languages, click the Product Languages button. Make the selection in the popup window and click OK.

Product selection window

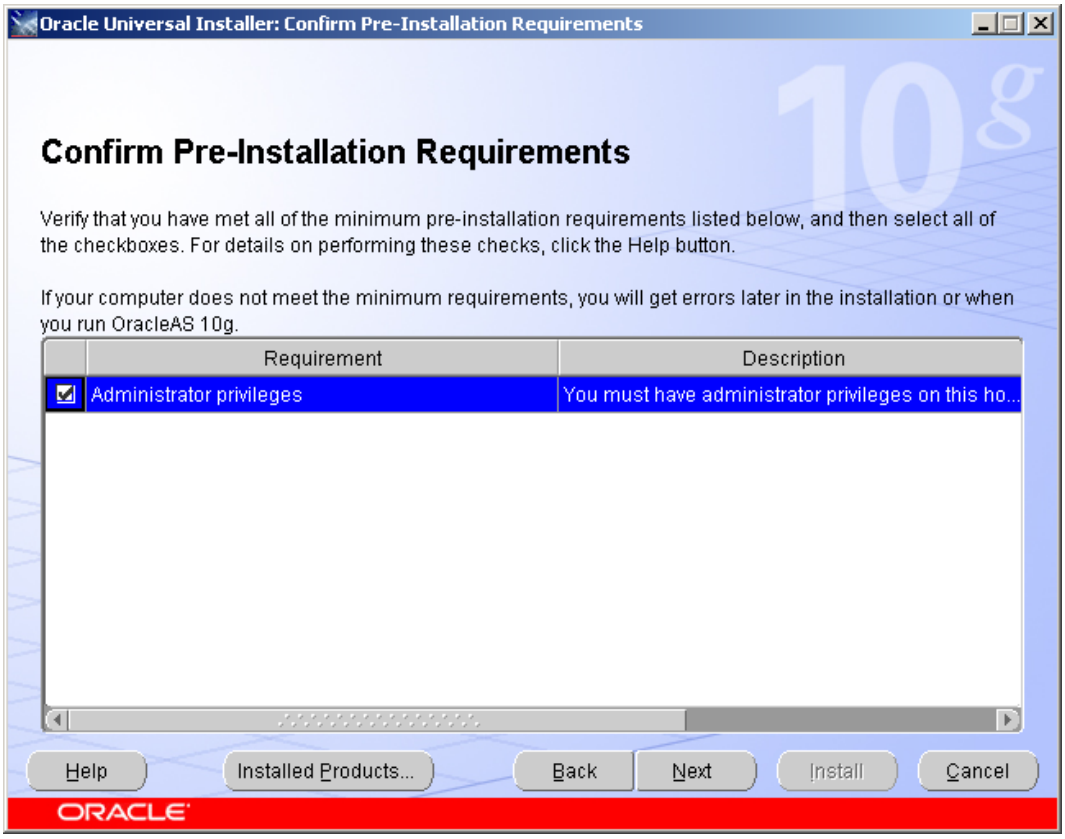
6. Click Next.

   The Installation type selection window appears. J2EE and Web Cache is the default installation type. Accept the default.

Installation type selection window

7. Click Next.

   A window appears listing the pre-installation requirements. Select the Administrator privileges check box.

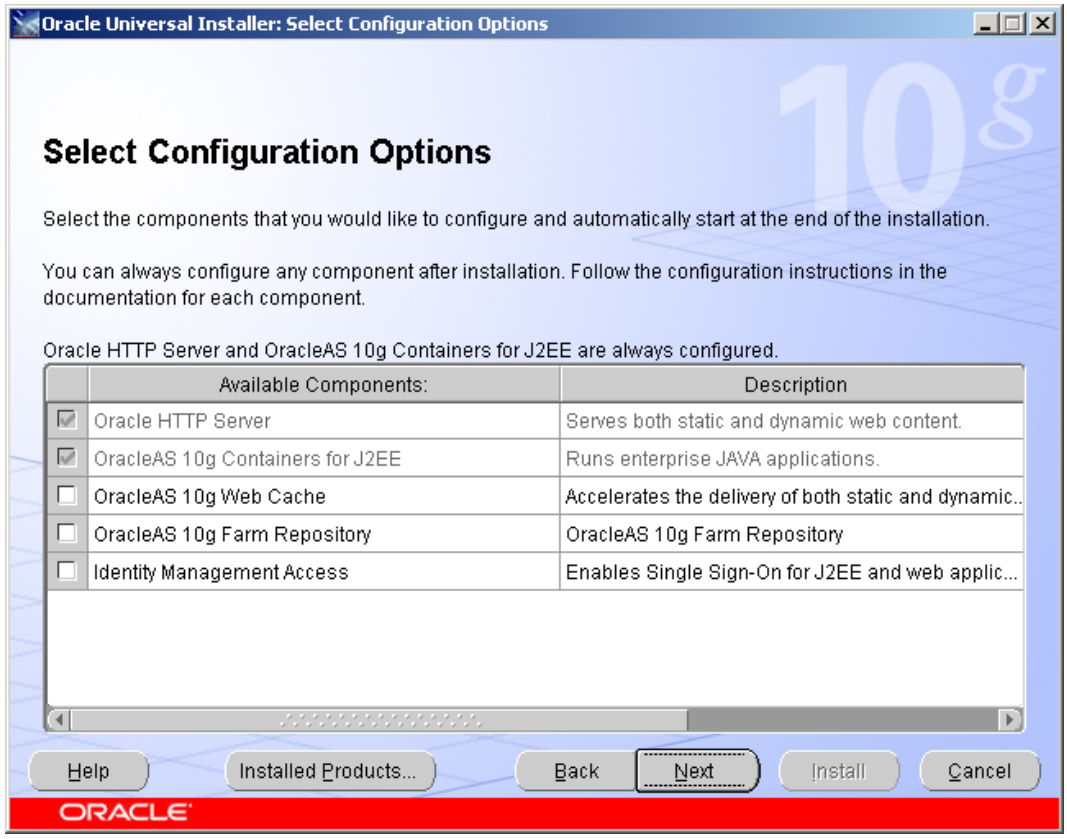


Confirm Pre-Installation Requirements window

8. Click Next.

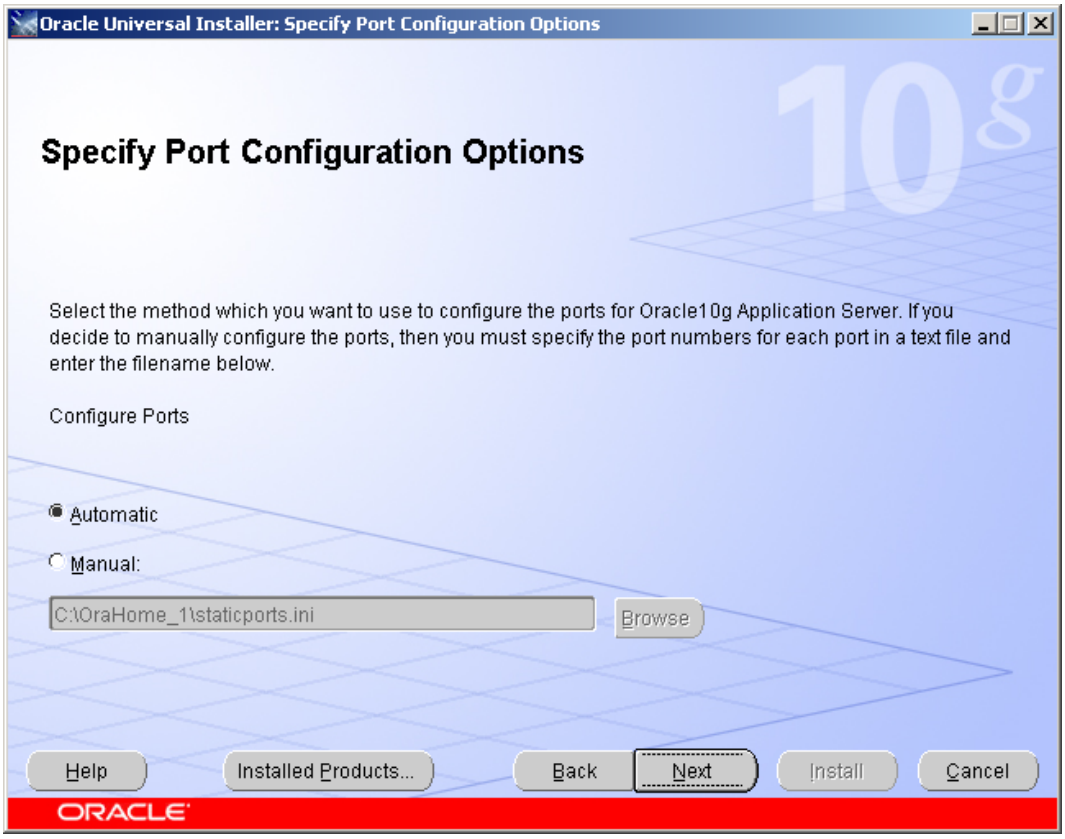
   Confirm that the Oracle HTTP Server and OracleAS 10g Containers for J2EE are selected.

Note. Select Oracle Application Server 10g Web Cache only if the customer has purchased Web Cache license from Oracle.



Select Configuration Options window

9. Click Next.



Specify Port Configuration Options window

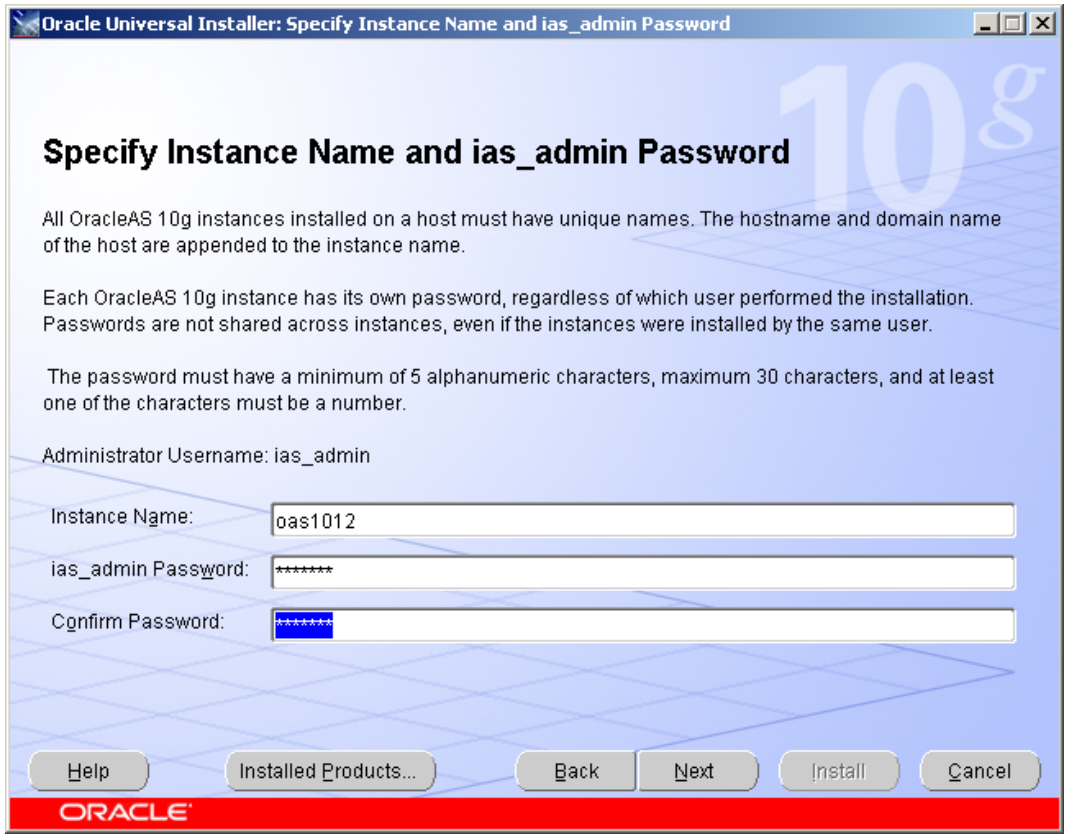
Select one of the following radio buttons to specify the port configuration:

- Automatic: Select this option to use the default port values.
- Manual: Select this option to instruct the installer to assign custom port numbers for components. Specify the full path and name of the file containing the component names and port numbers.

  See Preparing for the Oracle Application Server Installation, Using Custom Port Numbers.

10. Click Next.

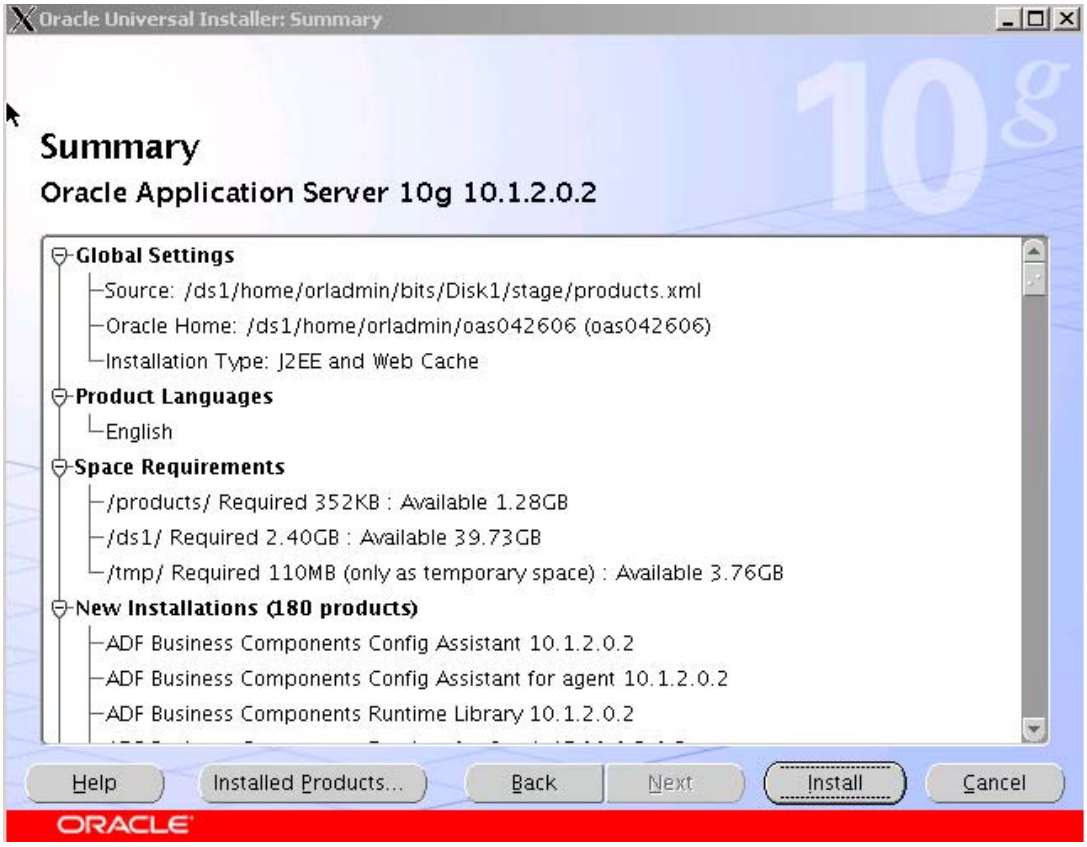
    Specify the OAS instance name and password. The Oracle instance name can be different from the Oracle home name.



Specify Instance Name and ias_admin Password

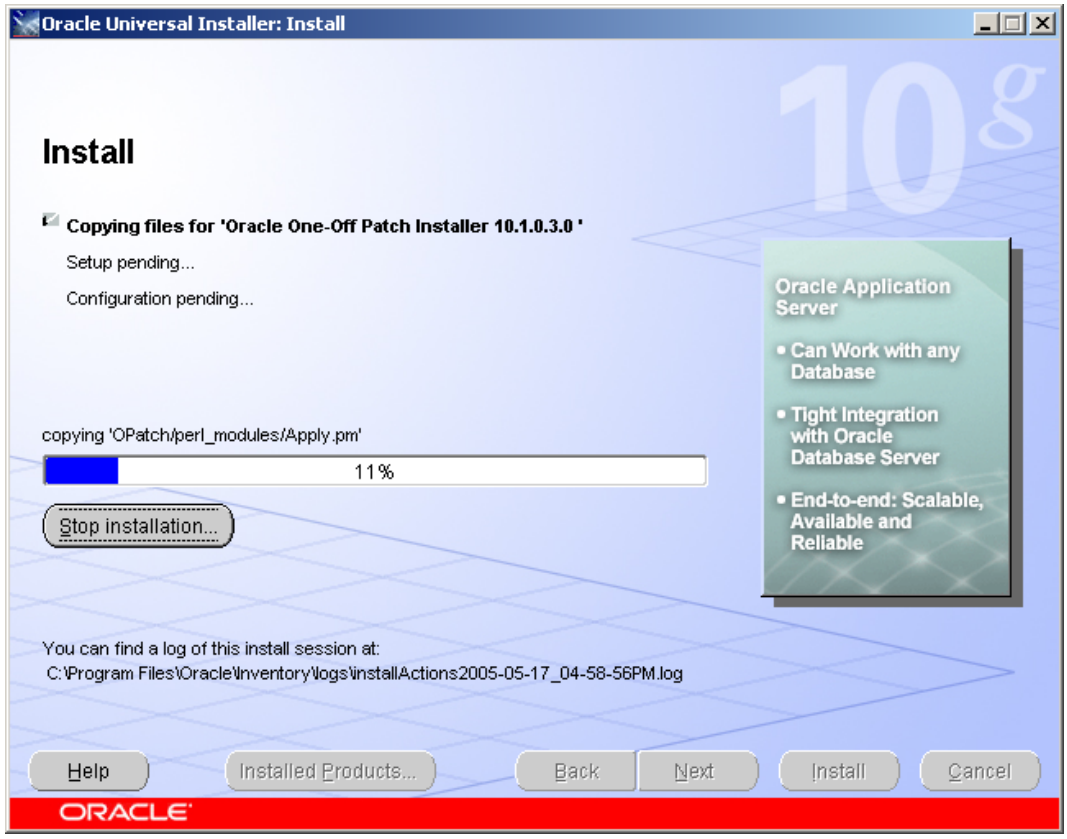
11. Click Next.

    Review the summary information. To make changes in the installation information, click Back. If you are ready to begin the installation, click Install.

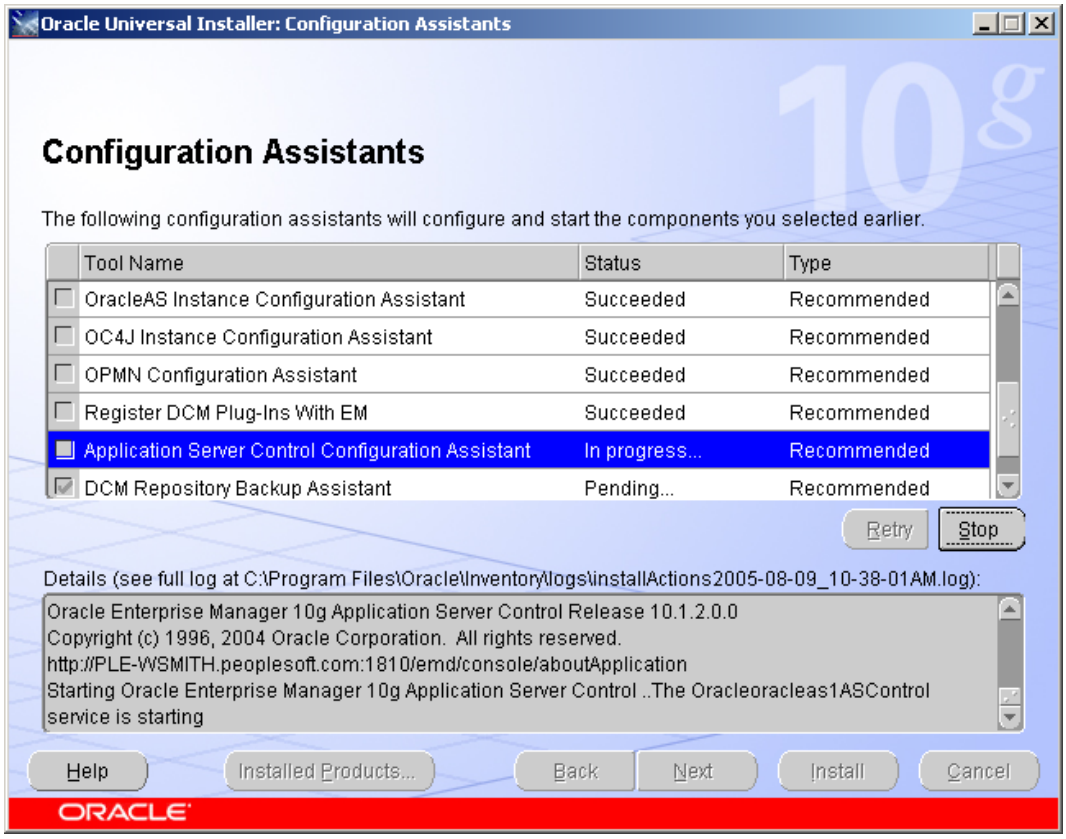


Summary

12. Windows appear showing the progress of the installation and configuration.



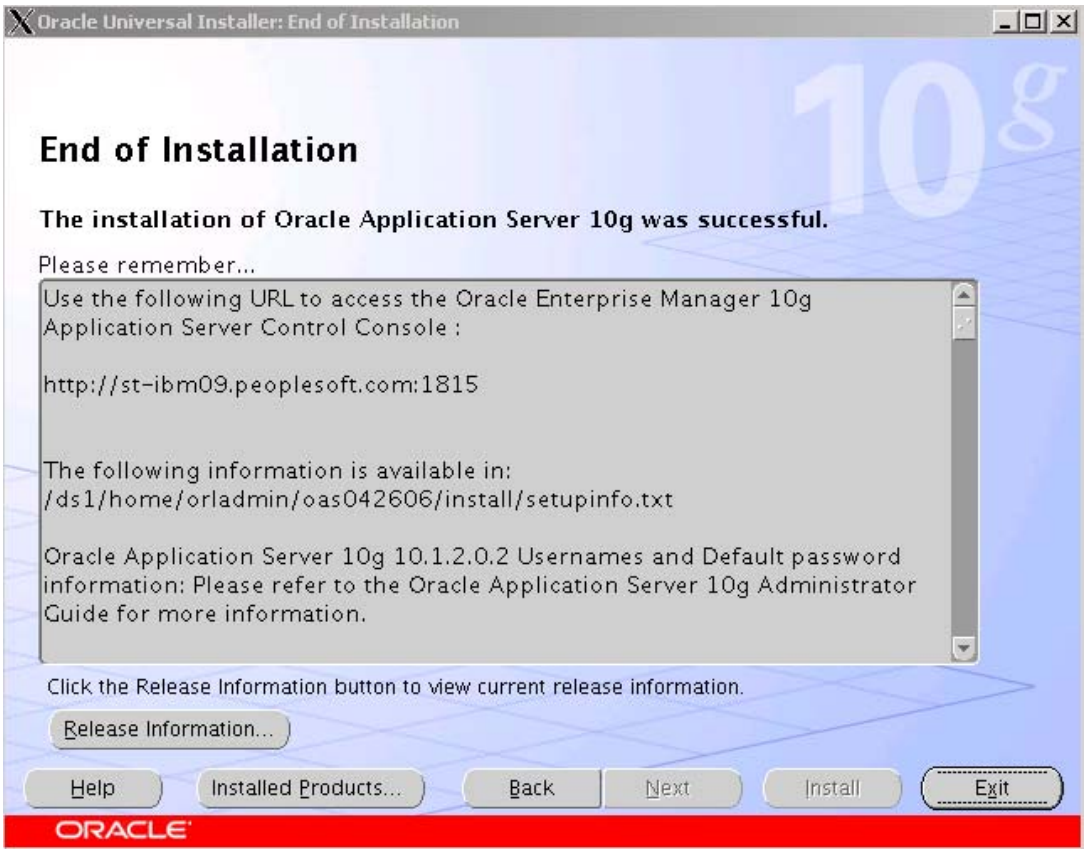
Install window



Configuration Assistants window

13. When the installation is complete, the end of installation window appears.

    Make note of the information displayed on the installation log file and login URL. Click Exit.

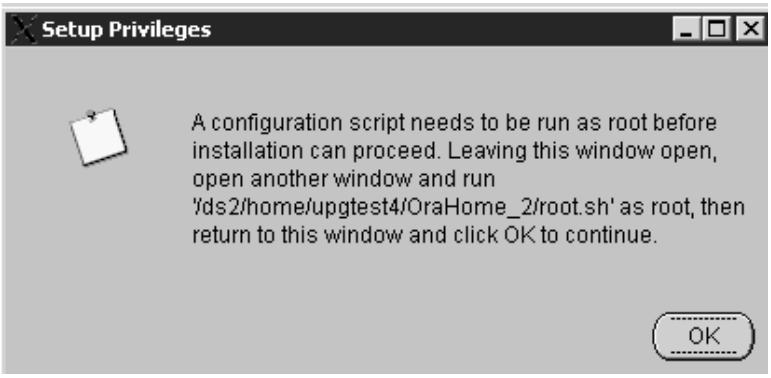


End of Installation window

14. On UNIX, the following message box appears.

    Open a new window and run the script `<OAS_HOME>/root.sh` as root.

    Click OK to complete the installation.



Setup Privileges for Oracle Application Server

Task 2-1-3: Updating the IBM JDK to Version 1.4.2

This is a post-installation step for AIX only.

To update the IBM JDK build:

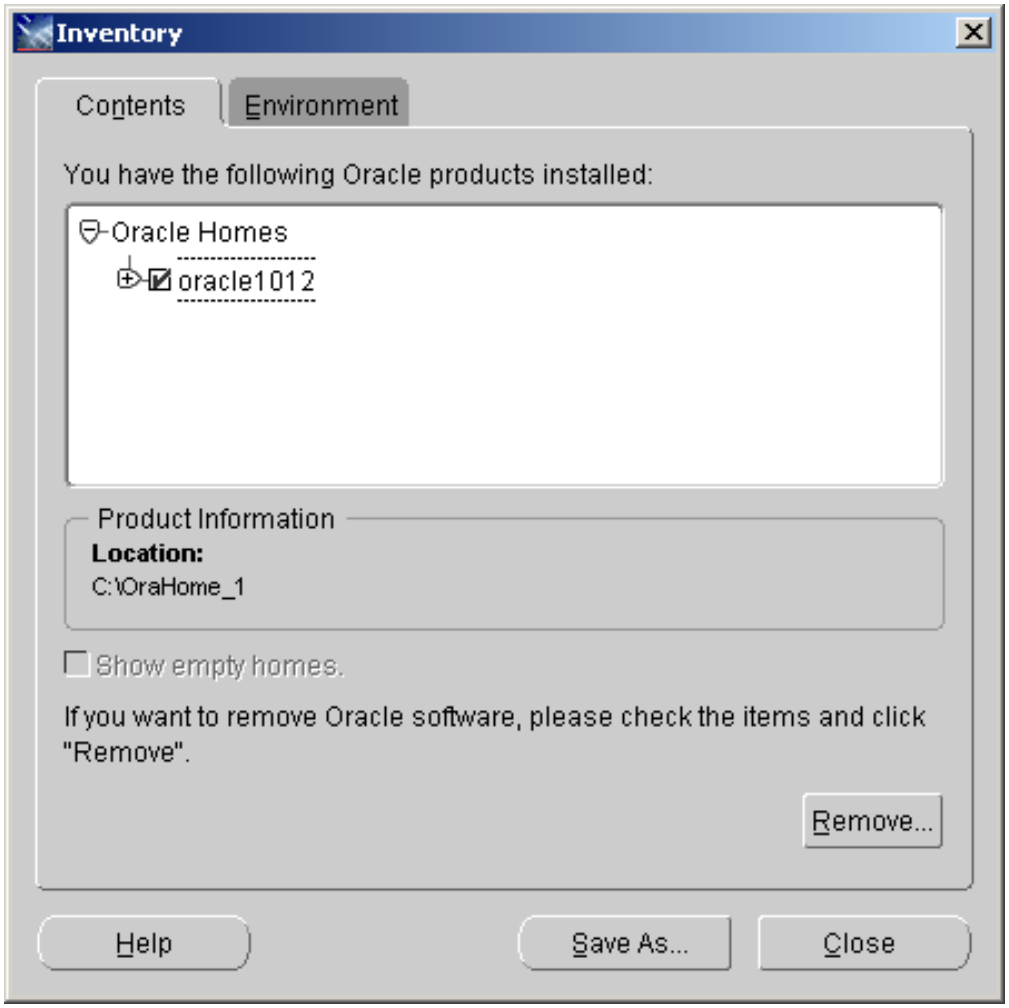
1. Download IBM JDK ca142-20050609 from http://www-128.ibm.com/developerworks/java/jdk/aix /service.html.
2. Extract to a temp directory. For example, /tmp/jdk142.
3. Rename <ORACLE_HOME>/jdk to <ORACLE_HOME>/jdk.old
4. Move /tmp/jdk142 to <ORACLE_HOME>/jdk
5. Run the command `<ORACLE_HOME>/bin/emctl stop iasconsole.`
6. Run the command `<ORACLE_HOME>/bin/emctl start iasconsole.`

Task 2-1-4: Uninstalling the Oracle Application Server

To remove the OAS 10.1.2.0.2 installation:

1. Navigate to the directory, <INSTALL_DIR>, that contains the extracted installation files for OAS.
2. Change directory to Disk1.
3. On Windows, run `setup.exe -deinstall`.

   On UNIX, run `./runInstaller -deinstall`
4. On the Inventory dialog box, select the OAS_HOME that you want to uninstall and click the Remove button.



Inventory dialog box for OAS

5. Review and accept the next two confirmation dialog boxes.
6. When the Inventory dialog box reappears, click Close.
7. On Windows, you must reboot and remove the OAS_HOME directory after the uninstall process.

Task 2-2: Installing BEA WebLogic Server

This section discusses:

- Understanding the WebLogic Installation
- Installing WebLogic

Understanding the WebLogic Installation

PeopleSoft ships a licensed edition of BEA WebLogic Server 8.1. The Windows distribution of BEA WebLogic is located on the WebLogic CD-ROMs provided by PeopleSoft.

Note. The WebLogic server installation can be run from our CD or from a copy of the CD as long as the path to the CD is not a UNC and does not contain spaces.

Note. To familiarize yourself with the most current support information and information about any required WebLogic Service packs based on OS platform or PeopleTools versions, consult PeopleSoft Customer Connection or the Hardware and Software Requirements guide. Note that WebLogic Server Service packs are cumulative, and you must uninstall any previous service packs before upgrading (or downgrading).

Note. The installation of Weblogic Server 8.1 requires 500 MB of free temporary space to extract the required files and run. By default, /tmp and %TEMP% are used on UNIX and Windows, respectively. In addition 500 MB of free space is required on the drive/device to which you opt to install WebLogic Server. If adequate space is not available, you will be prompted for alternate locations.

See Also

Enterprise PeopleTools 8.48 Hardware and Software Requirements

BEA's official installation instructions: http://e-docs.bea.com/wls/docs81/

PeopleSoft Customer Connection, Supported Platforms (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

Task 2-2-1: Installing WebLogic

The following steps assume that you have the PeopleTools WebLogic CD for your platform in the D drive.

Note. BEA WebLogic Server 5.1, 6.1 and 8.1 can coexist on a single machine. If you choose to install this version of WebLogic in an existing BEA_HOME directory (for example, c:\bea), you must shut down all instances of WebLogic Server running in that BEA_HOME before performing this installation.

To install the WebLogic Server 8.1:

1. Insert the WebLogic Server 8.1 CD for your OS platform into an accessible CD-ROM drive and run the provided install command (install.cmd on Windows and ./install.sh on UNIX).

   Note. Running install.sh on SuSE 9 Linux generates the message "cat: /etc/redhat-release: No Such file or directory". This message is benign. You can safely ignore the message and continue the installation.

   The install process will perform the base and service pack install, patch install, license install, and a JRE install if applicable. With prior releases of PeopleTools and WebLogic, each of these steps had to be run manually.

Platform	WebLogic Server CD
Windows Server 2003, Red Hat and SuSE Linux Enterprise Server	CD1
AIX, HP-UX Intel Itanium	CD2
HP-UX PA-RISC 64–bit	CD3

Platform	WebLogic Server CD
Solaris	CD4
Tru64	CD5

Note. The installation script accepts command line arguments for silent installs. For usage, run install -? or install -help.

2. Specify the directory where you want to install WebLogic 8.1. This directory is known as BEA_HOME.

Note. When you install WebLogic Server, a JRE, and at least a partial JDK is installed. PeopleSoft's JRE/JDK certification for WebLogic Server is based on extending BEA's JRE/JDK certification of WebLogic Server.

Task 2-3: Installing WebSphere Application Server

This section discusses:

- Understanding WebSphere Application Server Installation
- Prerequisites
- Preparing for WebSphere Installation
- Installing WebSphere Base
- Installing WebSphere Base with the Silent Method
- Verifying the WebSphere Base Installation
- Uninstalling the Default WebSphere Application
- Installing the WebSphere Base 5.1 Plug-in for HTTP Proxy Server
- Installing WebSphere Network Deployment Manager
- Upgrading WebSphere 5.1 Base and WebSphere ND to 5.1.1.7
- Troubleshooting the WebSphere Installation and Upgrade

Understanding WebSphere Application Server Installation

This section covers the installation of the IBM WebSphere products IBM WebSphere 5.1.1.7 Application Server (Base) and WebSphere Network Deployment. For convenience and brevity, this documentation refers to these products as WebSphere Base and WebSphere ND, respectively, or collectively as WebSphere. You also have the option of installing IBM HTTP Server (IHS). The directory where you install the WebSphere products is referred to as <*WAS_HOME*>. This section concerns that portion of the installation that is needed for a basic PeopleTools installation.

Install the WebSphere components in the following order:

1. Confirm that minimum system requirements, including those for hardware and software, have been met.

   See Prerequisites.

2. Install WebSphere Base in GUI or silent mode.

   See Installing WebSphere Base.

See Installing WebSphere Base with the Silent Method.

3. Install IHS (optional).

   You can install IHS with the WebSphere Base install, or separately in silent mode.

   See Installing the WebSphere 5.1 Plug-in for HTTP Proxy Server.

4. Verify Base installation using the IVT program.

   See Verifying the WebSphere Base Installation.

5. Uninstall Default Application and stop the WebSphere Base server.
6. Upgrade WebSphere Base to version 5.1.1.7 using Fix Pack 1, Cumulative Fix 7, and JDK Fix.

   See Upgrading WebSphere 5.1 Base or WebSphere ND to 5.1.1.7.

7. Install WebSphere ND if planning to cluster WebSphere Base environment.

   See Installing WebSphere Network Deployment Manager

8. Upgrade WebSphere ND to version 5.1.1.7 using Fix Pack 1, Cumulative Fix 7, and JDK Fix.

   See Upgrading WebSphere 5.1 Base or WebSphere ND to 5.1.1.7.

Enterprise PeopleTools 8.48 comes with 3 WebSphere CDs for each platform—WebSphere Base (CD1), WebSphere ND (CD2) and WebSphere Maintenance packs (CD3). The operating system is listed on each CD.

Here is an example for the AIX platform:

CD	Name	Contents
CD1	IBM WebSphere Application Server Version 5.1 for AIX	Application server IBM HTTP Server
CD2	IBM WebSphere Application Server Version 5.1 for AIX	Network Deployment
CD3	IBM WebSphere Application Server Version 5.1.1.7 for AIX	Maintenance packs for: • Application Server • Network Deployment • IBM HTTP Server • JRE upgrade (if applicable)

Enterprise PeopleTools 8.48 comes with 4 CDs for HP and Windows platforms. The contents of CD1 and CD2 are the same as in the table above. Here are the contents for CD3 and CD4:

CD	Contents
CD3	Maintenance packs for : • Application Server • IBM HTTP Server • JRE upgrade (if applicable)
CD4	Maintenance packs for: • Network Deployment • JRE upgrade (if applicable)

See Also

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Working with IBM WebSphere"

Prerequisites

The full list of prerequisites for WebSphere Base and ND are available on the IBM website.

See http://www-3.ibm.com/software/webservers/appserv/doc/latest/prereq.html

If your operating system is not at the required patch level, a warning message will appear at the beginning of the installation. It is important to stop the installation and apply the requested patches to the system. Along with the hardware and software requirements above, you must complete the steps in the next section.

Task 2-3-1: Preparing for WebSphere Installation

The following steps are required for WebSphere Base and the WebSphere ND Embedded Messaging service:

Microsoft Windows:

- Define the process user ID with these authorizations:
  - Assign the user ID to the Administrator group.
  - Give the user ID the advanced user right *Act as part of the operating system*.
  - Give the user ID the advanced user right *Log on as a service*.
- Allocate space for Base Messaging and Message Broker.

  The following table lists the default locations for the base messaging functions and the messaging broker functions (for publish or subscribe messaging).

	Base Messaging	Messaging Broker
Installation directory	C:\Program Files\IBM\WebSphere MQ	C:\Program Files\IBM\WebSphere MQ\WEMPS
Typical space needed	70 MB (server) or 15 MB (client)	45 MB (server)

  See Troubleshooting the WebSphere Installation and Upgrade.

UNIX:

Define the operating system groups and users needed for embedded messaging:

1. If you have not already done so, create the groups *mqm* and *mqbrkrs*.
2. Add the users *mqm* and *root* to the *mqm* group.
3. Add the user *root* to the *mqbrkrs* group.
4. Log in once as user *mqm*, then log in again as *root*.

Solaris and HP-UX only:

Before installing Embedded Messaging PeopleSoft recommends that you review the machine's configuration appropriate kernel settings as described on the IBM web site.

See WebSphere Software Information Center, http://publib.boulder.ibm.com/infocenter/wasinfo /index.jsp?topic=/com.ibm.websphere.base.doc/info/aes/ae/rins_prereq.html.

Note. User IDs longer than 12 characters cannot be used for authentication with the embedded messaging. Also we recommend that you run the JMS server process for Embedded Messaging under the root user ID.

Embedded Messaging is installed in fixed locations. The following table shows the required disk space and installation directories for UNIX platforms:

	Base code	Broker code	Base data	Broker data
AIX: Installation directory	/usr/mqm	/usr/opt/wemps	/var/mqm	/var/wemps
AIX: Required disk space	40 MB (server) or 15 MB (client)	80 MB (server) or 15 MB (client)	8 MB (server) or 5 MB (client)	5 MB (server)
Linux/Intel/HP-UX and Solaris: Installation directory	/opt/mqm	/opt/wemps	/var/mqm	/var/wemps
Linux/Intel/HP-UX: Required disk space	40 MB (server) or 15 MB (client)	105 MB (server) or 15 MB (client)	8 MB (server) or 5 MB (client)	5 MB (server)
Solaris: Required disk space	40 MB (server) or 15 MB (client)	70 MB (server) or 15 MB (client)	20 MB (server) or 15 MB (client)	5 MB (server)

Note. The /var file system is used to store all the security logging information for the system, and is used to store the temporary files for email and printing. Therefore, it is critical that you maintain free space in /var for these operations.

Task 2-3-2: Installing WebSphere Base

PeopleTools 8.48 supports the IBM HTTP Server (IHS) embedded within WebSphere for both http and https. Use of an external proxy server is optional. Supported proxy servers are IHS, Sun Java System Web Server and Internet Information Server (Windows only).

Important! You must be a member of the Administrator group (or root on UNIX) to install WebSphere Base and IHS.

WebSphere Base can be installed using a GUI or silent installation option. This section explains the GUI installation. The silent installation option is covered in PeopleBooks.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with IBM WebSphere."

To install WebSphere Base from the CD:

1. If you plan to use an HTTP proxy server other than IHS, you must install it before beginning the WebSphere Base installation.

   Note. If you are planning to use IHS as the HTTP server, it can be installed as a part of WebSphere install and does not require any additional installation.

2. Stop any HTTP server (for example, IIS or Sun ONE Web Server and so on) running on the system.
3. Insert the WebSphere CD into your CD-ROM drive.
4. Navigate to the CD-ROM drive.

   Run the command `installBase.bat` (`installBase.sh` for UNIX) from a command prompt, which will start the installation of WebSphere Base.

   This invokes the default GUI install.

5. If you are prompted to select a language, select *English* (the default) and click OK.

   If you are running on a UNIX system and a window does not appear, check that the DISPLAY environment variable is set properly.

6. Click Next on the Welcome to IBM WebSphere Application Server, Version 5.1 panel.
7. On the Software License Agreement panel, check I accept the terms in the license agreement and click Next.

   Note. If the installation is on a machine that has no other copies of WebSphere on it, you will not see the panel described in steps 8 and 9. If WebSphere is already installed, use the next panel to specify whether you want multiple versions of WebSphere to coexist and run on the same computer.

8. Select Modify ports for coexistence to allow multiple versions to coexist and run on this computer by modifying the port numbers and click Next.
9. Click Next.

   A panel appears with the ports listed. PeopleSoft recommends that you add 10000 to the value of each listed port. That is, add *1* in front of the existing value.

   Note. The install wizard suggests new ports by incrementing various digits in the default ports.

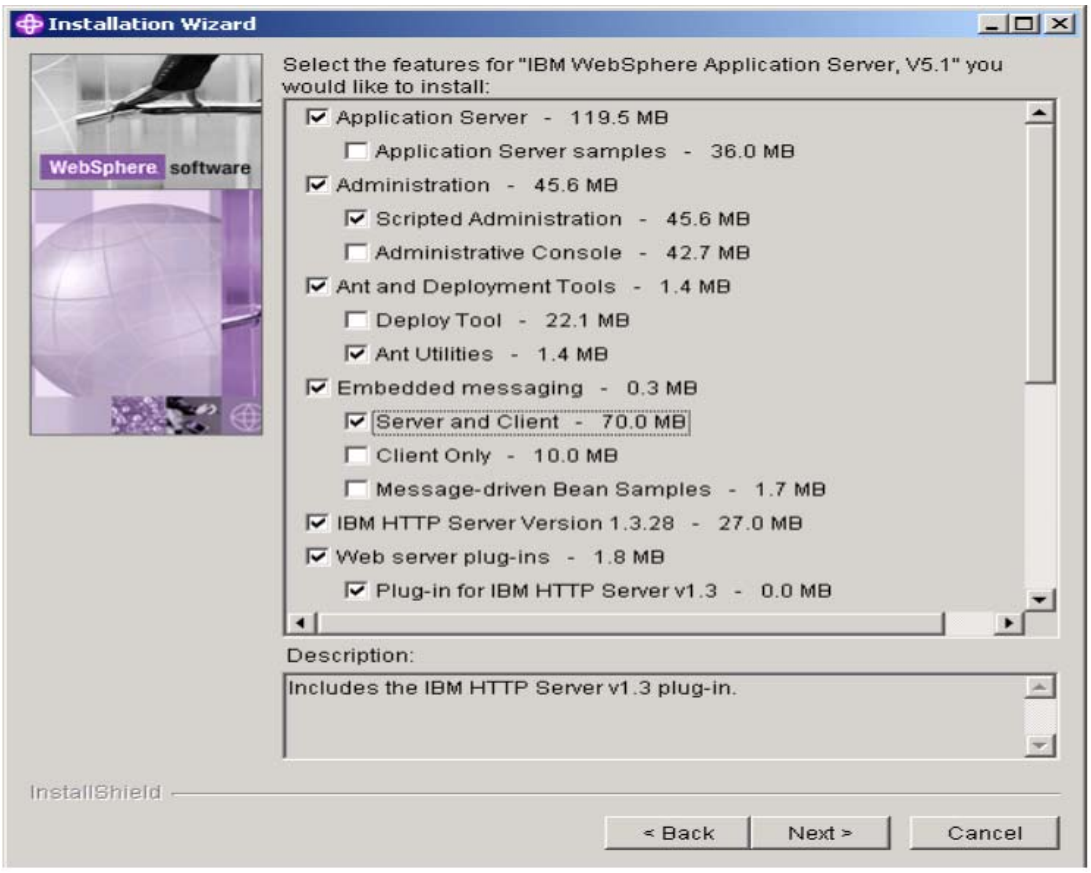
   Please write down these port changes, especially the HTTP Transport Port (Default 9080), HTTPS Transport Port (Default 9443), and Admin Console Port (Default 9090).

   The port for IBM HTTP Server port (Default 80) should not be changed from port 80. Change the value back to 80 if necessary.

Note. The installation wizard will ensure all of the prerequisites are satisfied. If you have not met all of the prerequisites, you are warned about this situation, but the installation of the product continues.

10. Select Custom on the next panel and click Next.
11. On the panel shown below, deselect the check boxes for Application server samples and Java docs.

    Select IBM HTTP Server Version 1.3.28 and Plug-in for IBM HTTP Server v1.3 if you want to install the proxy server on the same machine. Other HTTP (web server) proxy plug-ins (for example, IIS or Sun ONE Web Server) may also be selected. Select a plug-in only if the corresponding HTTP server is already installed



Custom Installation Selections for WebSphere Application Server

See Installing the WebSphere 5.1 Plug-in for HTTP Proxy Server.

12. Click Next.
13. Accept the default location for the WebSphere installation directory (<WAS_HOME>), or enter a new location.

    On Windows the default location is C:\WebSphere51\AppServer. On UNIX, the default location is the current directory, usually the cdrom drive. You must change this to a directory on a file system with enough space to install WebSphere. The default installation location for Solaris, HP-UX, and Linux is /opt/WebSphere51/AppServer. For AIX it is /usr/WebSphere51/AppServer.
14. Accept the default location for the WebSphere Embedded Messaging installation directory, or, on Windows, enter the installation directory where you installed embedded messaging.

On Windows the default installation location is C:\Program Files\WebSphere MQ. The default locations for UNIX platforms were listed in a previous section.

Note. On UNIX, WebSphere fix packs expect embedded messaging to be at the default location.

See Preparing for WebSphere Installation.

15. If you selected the IBM HTTP Server in step 11, accept the default path or update the path to reflect the version number, for example, *C:\IHS1.3.28*.
16. Click Next.

    The next panel allows you to enter the WebSphere node name and the machine's hostname (or IP address). The default node name is <*hostname*>*Node* where <*hostname*> is your machine's hostname. The default for Hostname or IP Address is <*hostname*>. You can modify these fields to include the fully qualified hostname or the IP address of the machine, but PeopleSoft recommends that you keep these defaults.
17. Click Next.
18. If you are running on Windows, you can choose the option to Run WebSphere Application Server as a server.

    Enter the password for the user id you are using.

    Note. By choosing to run the Application server as a service, you can use the Control Panel – Service to manage the Application Server. The specified username must be part of the Administrator group. Enter the password for the user id you are using.

    ---
19. Click Next.
20. Verify the selected options and click Next to begin the installation.
21. Deselect the option Select Register this product now.
22. Click Next and then Finish to complete the installation.

    Note. Check the log for any errors encountered during installation. For WebSphere this is found in <WAS_HOME>/logs/log.txt and for IHS it is found in <WAS_HOME>/logs/log_ihs.txt

    ---

Refer to the Customer Connection link ftp://ftp.peoplesoft.com/outgoing/PTools/websphere/511PT848 to check whether any iFixes are needed. If they are present, you must install them.

Task 2-3-3: Installing WebSphere Base with the Silent Method

To install WebSphere Base from the CD using the silent method, navigate to the CD-ROM drive and run one of the following commands:

Windows:

```
installBase.bat -silent
```

UNIX:

```
installBase.sh -silent
```

Important! The silent installation does not install any HTTP proxy server plug-ins or the IBM HTTP Server.

Task 2-3-4: Verifying the WebSphere Base Installation

After the installation process completes, carry out these steps to verify the WebSphere Base installation:

1. Select Verify Installation on the window titled WebSphere Application Server - First Steps.
2. Check the Install Verification Test (IVT) results for a message similar to this: "WebSphere Application Server is started and open for e-business with a *process id*."

   This message indicates a successful installation. If the installation was not successful and the server could not be started, check the log file at <WAS_HOME>\logs\ivt.log.
3. Invoke the WebSphere Administration Console by typing the URL *http://localhost:9090/admin* (where 9090 is the default administration port) from a browser window.
4. If you are running on AIX, you may see a message indicating that the AIX Web-based System Manager (WSM) is running on port 9090.

   The WSM will prevent the WebSphere Admin Console from running on port 9090. Please change the WebSphere Admin Console port in these two config files:

   - server.xml: <WAS_HOME>/config/cells/machine-cell/nodes/machine-node/servers/server-name
   - virtualhosts.xml: <WAS_HOME>/config/cells/machine-cell/nodes/machine-node

Task 2-3-5: Uninstalling the Default WebSphere Application

The default application will cause a conflict with the PeopleTools software, so it must be un-installed. This conflict is due to the default use of the context root "/" by both programs.

1. Start WebSphere and invoke the WebSphere Administration Console.

   From the Admin console, expand Applications, Enterprise Applications.
2. Select the check box for the (1) DefaultApplication.
3. Click Stop and then click the Uninstall button to begin removing the default installation.

   If the Default Application is not present, then it was not installed.
4. Save the configuration and log out.

Task 2-3-6: Installing the WebSphere Base 5.1 Plug-in for HTTP Proxy Server

WebSphere Application Server (Base) Version 5.1 supports a variety of HTTP proxy servers (such as IBM HTTP Server and IIS). The plug-in forwards requests from the HTTP server to WebSphere. When a client makes a request to the HTTP Server, it delegates the request to its plug-in, which forwards the request to WebSphere. Here is an example of such an environment:

Example of WebSphere plugin

Additionally, most production architectures will use the HTTP server with WebSphere Network Deployment. Such topics are fully addressed in the PeopleSoft Red Paper on clustering.

See "Clustering and High Availability for PeopleSoft 8.4," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Implementation Documentation and Software, Red Paper Library).

To install the plug-in:

1. Copy the .resp file, based on your HTTP Server as shown in the table, from the cdrom /base directory to the temp directory.

HTTP Server	resp File	Command
IBM HTTP Server & plug-in	IHS_N_Plugin.resp	install –options /temp/IHS_N_ Plugin.resp
IBM HTTP Server plug-in only	IHSproxyPlugin.resp	install –options /temp /IHSproxyPlugin.resp
Sun Java System Web Server	SunOneProxyPlugin.resp	install –options /temp /SunOneProxyPlugin.resp
Microsoft IIS	IISproxyPlugin.resp	install –options C:\temp \IISproxyPlugin.resp

2. Update the .resp file for the HTTP server you installed as follows, substituting the correct name for <HTTP-Server>:
   - Set *<HTTP-Server>.installLocation* to the directory location where you want to install the HTTP server. For example,

     `ihsFeatureBean.installLocation=C:\IBMHttpServer`

   - Set *wasBean.installLocation* to the directory location where you want the plug-in modules installed. For example:

     `wasBean.installLocation=C:\WebSphere51\plugin`

3. From the cdrom/base/<OS> directory, issue the command listed in the Command column in the table above.

   This will start the silent install with the selected options. You can monitor the installation by viewing the file log.txt in the temp directory.

4. If you are running on Windows, reboot the machine.
5. Locate plugin-cfg.xml on Http (Reverse Proxy) Server machine.

   For example, if you are using IHS, locate the file IBM_HTTP_Server_HOME/conf/httpd.conf, and search for the text `plugin-cfg.xml` to determine the location of the file. Similarly on Sun Java Web Server, search for the text `plug-cfg.xml` in the file magnus.conf, and on Microsoft IIS use HKEY_LOCAL_MACHINE > SOFTWARE > IBM.

   Note. Before proceeding to the next step, it is a good idea to make a back-up copy of the original plugin-cfg.xml file on HTTP Server machine.

6. Copy the file plugin-cfg.xml from <WAS_HOME>/config/cells/plugin-cfg.xml, and overwrite plugin-cfg.xml on the HTTP server (Reverse Proxy Server) machine.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with IBM WebSphere."

Task 2-3-7: Installing WebSphere Network Deployment Manager

WebSphere Application Server (Base) Version 5.1 also contains the Network Deployment (ND) component. If you plan on implementing a WebSphere Base clustered environment, install WebSphere 5.1 ND.

Note. WebSphere ND can be installed using either GUI or silent install method. You only need to choose one of these methods to install an instance of WebSphere ND.

In order to use WebSphere ND, you will first install the Deployment Manager:

1. Stop any HTTP Server (IHS, IIS, or Sun ONE) running on the system.

   Open a Command prompt window on Windows, (or xterm on UNIX), navigate to <WAS_HOME>\bin, and type `stopserver server`*n* (where *n* is the server number, for example server1). Wait until you get a confirmation message that the server has stopped.

   If you get the error "Could not create SOAP connector", the server was not running.

2. Run the following command from the CD-ROM drive directory.
   - Windows:

     ```
     installDeployMgr.bat
     ```

   - UNIX:

     ```
     installDeployMgr.sh
     ```

Task 2-3-8: Upgrading WebSphere 5.1 Base and WebSphere ND to 5.1.1.7

Prerequisites

This section discusses upgrading WebSphere Base or ND to version 5.1.1.7 using Fix pack 1, Cumulative Fix 7, and JDK Fix.

If you are planning to use WebSphere Base or ND and IHS on the same machine, then install IHS first before upgrading WebSphere.

- Stop both WebSphere Base and IHS.
- Ensure you have adequate space in your respective <base-home> and <ND-home> directories for the Fix pack installation.
- If WebSphere ND is used in the environment, apply the Fixpack to ND first before upgrading WebSphere Base.
- Set the JAVA_HOME variable to *WAS_Home/java*.

  On AIX, for example: export JAVA_HOME=/usr/WebSphere51/AppServer/java

Applying the Fix Pack, Cumulative Fix, and JDK Fix

To apply Fix Pack 1 to WebSphere Base and ND:

1. Run one of the following command from the cdrom directory:
   - For WebSphere Base, run `UpdateBase.sh (bat)`
   - For WebSphere ND, run `UpdateDeployMgr.sh (bat)`

2. Enter the WebSphere and IHS home directories.

   The install program will then start to apply the fix pack based on these user inputs.

   Note. On Windows, if you have installed WebSphere Base 5.1 in "c:\Program Files\WebSphere\AppServer", please enter the WebSphere home directory as *c:\progra~1\WebSphere\AppServer* when you run `UpdateBase.cmd`.

3. After the fix pack has been applied, run the `versionInfo.sh (bat)` program from <WAS_HOME>/bin directory to verify the installation of the fix pack.

   The WebSphere Installed Product should be at version 5.1.1.7 and IBM WebSphere JDK at 1.4.2.1.1.

4. Check PeopleSoft Customer Connection at ftp://ftp.peoplesoft.com/outgoing/PTools/websphere/511PT848 to check whether any iFixes are needed.

   If iFixes are present, you must install them.

Note. If the upgrade did not complete successfully, refer to the next section on troubleshooting.

Note. Upgrade IBM HTTP Server only: If you are planning to use IHS on a separate machine, then invoke the UpdateIHSOnly.sh (bat) script from the cdrom directory to apply the fixpack to IHS only.

The UpdateBase or UpdateDeployMgr scripts generate the following output logs in the TMP directory on Windows:

Fixpack	fixpack.log
Cumulative Fix	CumlFix5117.log
JdkFix 1421	JdkFix5117.log
IFix log	ifixes.log

Task 2-3-9: Troubleshooting the WebSphere Installation and Upgrade

Read this section if you were not able to upgrade WebSphere Base or WebSphere ND or to apply the Fix Pack, Cumulative Fix pack, or JDK Fix successfully.

1. If the installation of the Fix Pack 1 does not complete successfully, check for errors in the following logs, where *<fixpack>.log* is the package name:
   - UNIX: /tmp/<fixpack>.log
   - Windows: C:/temp/<fixpack>.log
   - WebSphere update logs: <WAS_HOME>/logs/update
2. Try applying the Fix Pack, Cumulative Fix, or JDK fix using GUI mode, by running the command

   ```
   <WAS_HOME>/update/UpdateWizard.sh (bat)
   ```

   For example:

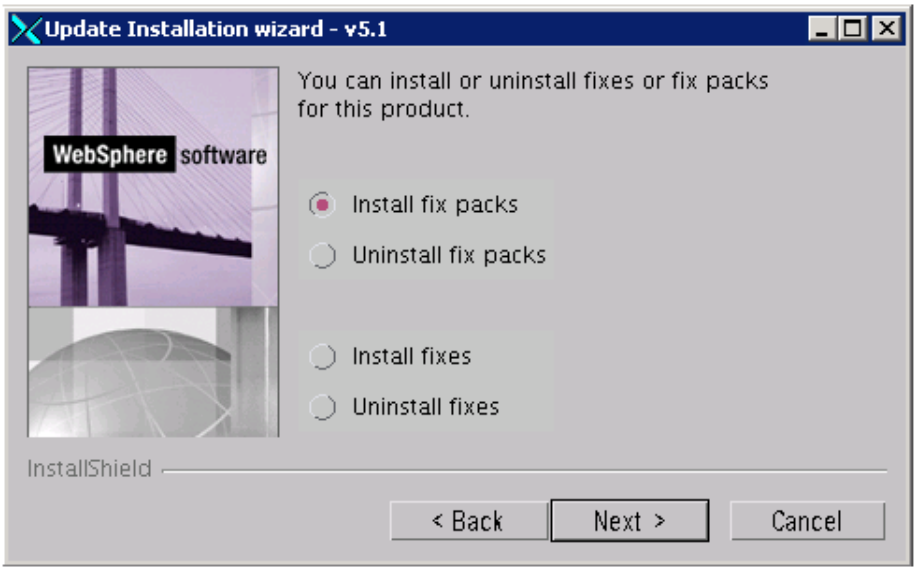
   On UNIX: `/usr/WebSphere51/AppServer/update/UpdateWizard.sh`

   On Windows: `C:\webSphere511\AppServer\update\UpdateWizard.bat`

Use this method if you are running on Windows, and you are unable to upgrade WebSphere Base or WebSphere ND due to the installation of Embedded Messaging in a non-default location.

3. Enter the home directories for WebSphere Base or ND.

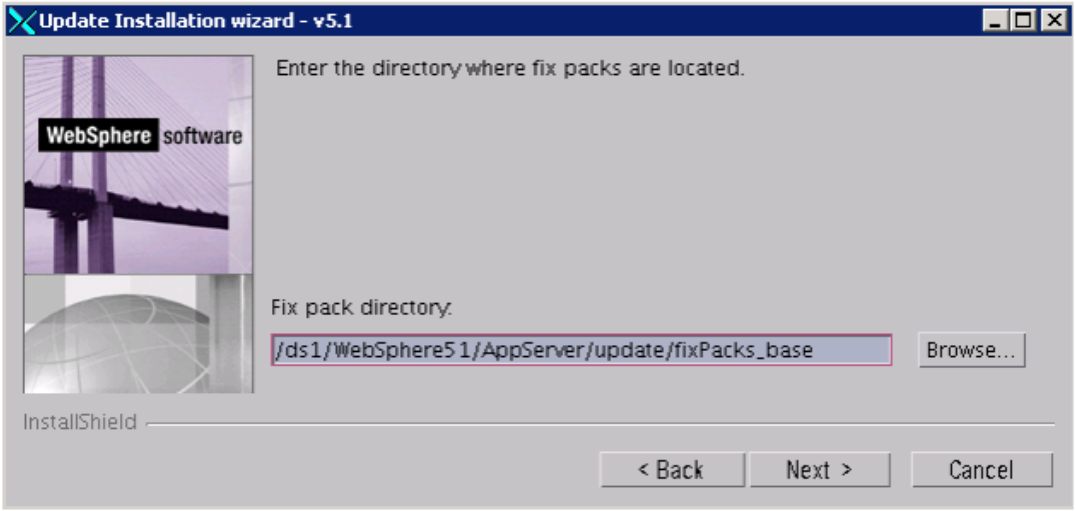
   Select the Install fix packs radio button.



Update Installation wizard - Select installation type

4. Enter the Fix Pack location.

   The location of the Fix Pack for WebSphere Base is typically <WAS_HOME>/update/fixPacks_base and the location for WebSphere ND is <ND_HOME>/update/fixPacks_nd. The GUI Wizard also asks you to specify the location of Embedded Messaging to be upgraded.



Update Installation wizard - Specify fix pack location

See Also

IBM WebSphere 5.1.1 InfoCenter, http://publib.boulder.ibm.com/infocenter/ws51help/index.jsp

CHAPTER 3

Installing Additional Components

This chapter discusses:

- Installing Tuxedo on Windows
- Installing Tuxedo on UNIX
- Installing Micro Focus Net Express for Windows
- Installing Micro Focus Server Express for UNIX and Linux

See Also

"Clustering and High Availability for PeopleSoft 8.4," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Implementation Documentation and Software, Red Paper Library)

"Required Operating System, RDBMS, and Additional Component Patches Required for Installation," PeopleSoft Customer Connection, (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise. Select your database platform or release number.)

"Installing and Configuring Software for Crystal Reports"

Task 3-1: Installing Tuxedo on Windows

This section discusses:

- Understanding Tuxedo
- Prerequisites
- Uninstalling Tuxedo from Windows (Recommended)
- Designating the Application Server Administrator
- Installing Tuxedo on Windows
- Checking the Service Account
- Setting Up the Tuxedo Services
- Verifying the Server Installation
- Ensuring that Tuxedo Coexists with Earlier Versions

Understanding Tuxedo

The PeopleSoft application server uses BEA's middleware product, Tuxedo, to perform transaction management, messaging, and administration. This task guides you through the installation of Tuxedo on your server. It is essential that you install PeopleSoft Edition - BEA Tuxedo version 8.1, which you receive with your PeopleSoft shipment as part of the CD-ROM Library. You need to install 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 Tuxedo with the PeopleSoft components.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

Note. Only one instance of Tuxedo 8.1 can be installed on a Windows machine at any given time, due to system-wide registry settings.

The installation process uses a single installation script (`install.sh` on UNIX and `pstuxinstall.exe` on Windows) to automatically install Tuxedo.

Note. It is critical that you use the PeopleSoft Edition - BEA/Tuxedo 8.1 delivered with PeopleSoft; the version of Tuxedo that you receive with your PeopleSoft shipment is the only version of Tuxedo that PeopleSoft supports with this version of PeopleTools. You cannot use any other version of Tuxedo with PeopleSoft applications. For example, if you obtain BEA/Tuxedo 8.1 directly from BEA, it may not support all functions required due to patch-level differences.

Note. All customers receive the 128-bit version of the CD-ROM, which allows users to enable 128-bit encryption.

The PeopleSoft Edition - BEA/Tuxedo CD-ROM installs serial and license information transparently to the user; there are no numbers to obtain. If you encounter a serial or licensing error on installation, you probably have an old version of Tuxedo installed.

PeopleSoft Edition - BEA/Tuxedo CD-ROM licenses users to use Tuxedo's runtime/administration environment for the purposes of installing, monitoring, and tuning their Tuxedo-based PeopleSoft application servers. Users *are not* licensed to directly use the Tuxedo development environment. Users will be able to use any higher level API or tools that PeopleTools developers build with Tuxedo and will be able to run applications that are processed with our Tuxedo enhanced tools. If you wish to extend the PeopleSoft application's functionality by directly using the Tuxedo development API, you need to acquire a full-use license for Tuxedo from BEA Systems.

See Also

Enterprise PeopleTools 8.48 PeopleBook: Internet Technology

Prerequisites

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

- PeopleSoft Edition - BEA/Tuxedo System 8.1 Installation for Windows and UNIX CD-ROM
- TCP/IP connectivity (required for PeopleSoft 8.4x) between the client machine and the application server
- Approximately 235 MB of free disk space on the application server
- A CD-ROM drive or access—locally or through the network—for the machine on which you plan to install Tuxedo

Task 3-1-1: Uninstalling Tuxedo from Windows (Recommended)

You may already have Tuxedo 8.1 installed on your system from an earlier version of PeopleTools. There may be patch level differences between the release which you are using and that to which you are upgrading. In this case you must uninstall the existing version plus patch and reinstall using the latest version provided by PeopleSoft.

Note that you can verify the required Tuxedo patch level for this release in the Release Notes. You can verify that patch level which has been installed by examining the file %TUXDIR%\udataobj\patchlev. This file will indicate the patch level installed. At the end of the file you will see an entry such as:

```
192. CR229736 TUX8.1 : Please propagate CR208755 from Tuxedo7.1
```

The above entry indicates that patch level 192 has been installed. The absence of this file indicates that no patch has been installed.

This version of Tuxedo is only supported for PeopleTools 8.44 and above, and will not work with earlier versions of PeopleTools. If you have a previous version of BEA/Tuxedo installed, we recommend that you uninstall the old version or use another machine. Only one instance of Tuxedo 8.1 can exist on a Windows box since the BEA ProcMGR service is a machine-level service capable of searching a single registry tree.

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

You may have to uninstall Tuxedo for these reasons:

- You are having problems starting Tuxedo and decide to reinstall.
- You no longer need Tuxedo on a machine.
- You are installing a newer release of Tuxedo.
- Patch differences exist between the version of Tuxedo 8.1 that is currently installed and that required for this PeopleTools release.

To uninstall Tuxedo from Windows:

1. Using PSADMIN, shut down any application server and process scheduler 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 taskbar 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 8.1 service to manual, if applicable.
   a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
   b. Select TListen 8.1 and click the Stop button.
   c. Choose the Startup Type and set to Manual.
4. Stop and set the BEA ProcMGR V8.1 service to manual.

   a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
   b. Select BEA ProcMGR V8.1 and click the Stop button.
   c. Choose the Startup Type and set to Manual.
5. Reboot your machine.
6. Uninstall Tuxedo in one of the following ways:
   - Using the Tuxedo 8.1 installation CD provided by PeopleSoft, open a Command Window, navigate to the root of the CD, and enter `pstuxinstall rmall`. This will remove Tuxedo 8.1 plus any delivered Tuxedo patches from your system.
   - Using the Add/Remove Programs dialog, in sequence remove: Tuxedo 8.1 RP and then Tuxedo 8.1.
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.
   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.

Task 3-1-2: Designating the Application Server Administrator

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.

Note. The designated user must be a local Windows administrator and must have full system privileges. The Tuxedo install program creates a new service for Windows—called BEA ProcMGR V8.1—for which you need administrator privileges. This service was developed to port BEA/Tuxedo from UNIX to Windows. Administrator rights are required since system registry settings are updated. Once this new service is created, you must reboot to start it.

Note. The Application Server Administrator, not the Windows Administrator, will install Tuxedo.

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 3-1-3: Installing Tuxedo on Windows

Here is how to properly install the Tuxedo component of your application server.

To install Tuxedo on Windows:

1. Insert the PeopleSoft Tuxedo CD-ROM labeled “Tuxedo 8.1 CD-1” into the CD-ROM drive.

   Using Explorer, navigate to the root directory on the CD:

   ```
   D:\
   ```

   (This assumes that your CD-ROM drive is your D drive.)
2. Double-click pstuxinstall.exe to begin the installation process.
3. You are prompted for the BEA Home directory. If you have existing BEA products on the machine, you may supply an already designated BEA Home location or accept the default of c:\bea.
4. You are prompted for the Tuxedo installation directory. This can be a subdirectory of the BEA Home directory or a directory of your choice.
5. You are prompted for the 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.

   Note. If you intend to maintain multiple versions of 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 Tuxedo.

   See Ensuring that Tuxedo Coexists with Earlier Versions.
6. You are prompted for the TListen password. Again, unless you plan to use the Tuxedo Web Monitor, this service will be disabled following installation so you may go ahead and accept the default.

   Note. If you intend to use the Tuxedo Web monitor for domain administration, PeopleSoft recommends that the TListen password be hard to guess and securely protected, since the Web monitor can start and stop production application server domains.

   ---
7. If you are satisfied with your selections confirm this when requested. This is your final opportunity to choose your Tuxedo installation location.
8. Tuxedo 8.1 plus patch will now be installed to your system. When the installation has completed you are notified by the command line installer.
9. Reboot your machine to complete the installation.

Task 3-1-4: Checking the Service Account

Now you need to ensure that the Windows services are properly configured. PeopleSoft recommends installing the application server binaries locally on your C drive, for best performance, and using the Local System account radio button (see below) to start the BEA ProcMGR V8.1 service, with these exceptions:

- 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 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 username—not the machine name—and your password. Then click OK.
- 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.

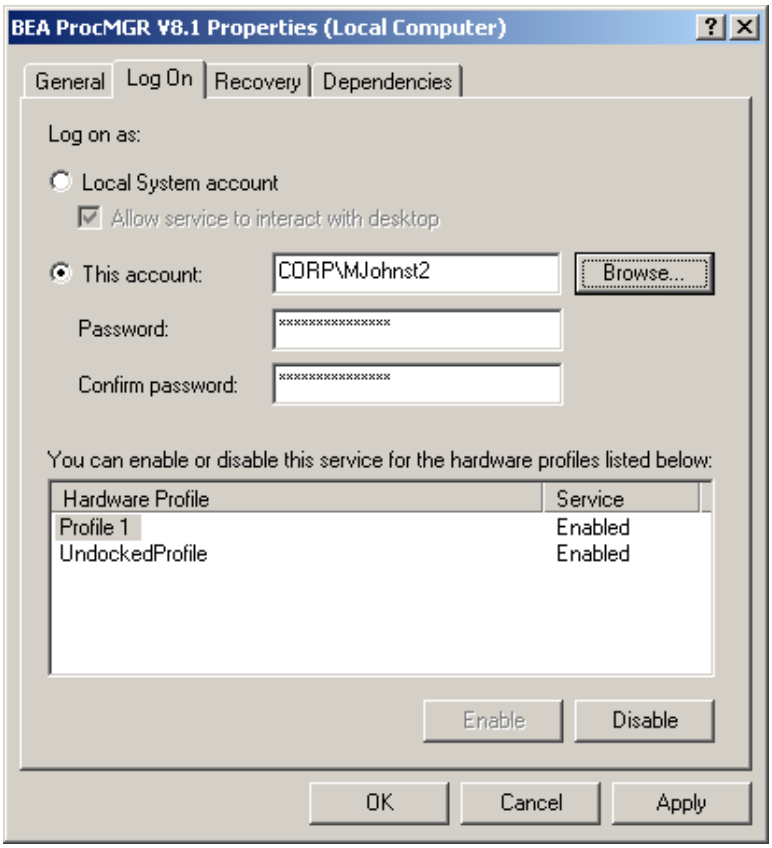
Note. When using Tuxedo with Process Scheduler, you must use the Windows username that starts the Process Scheduler server agent. This is necessary because the installation of the PeopleSoft ODBC driver sets up the registry settings to be accessible only by this username. If you do not use the correct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

Task 3-1-5: Setting Up the Tuxedo Services

To set up the Tuxedo services:

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 *BEA ProcMGR V8.1*.

   Double-click BEA ProcMGR V8.1 to open the properties dialog box.
5. On the General tab, if the Stop button is enabled, click on it to stop the current BEA ProcMGR V8.1 process.
6. Select Log On.



BEA ProcMGR V8.1 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.

Note. When you configure your application server domain, the user ID designated to be the Application Server Administrator must have read and write permissions to the PeopleSoft file directory and read permission to the %TUXDIR% directory, such as c:\bea\tuxedo8.1.

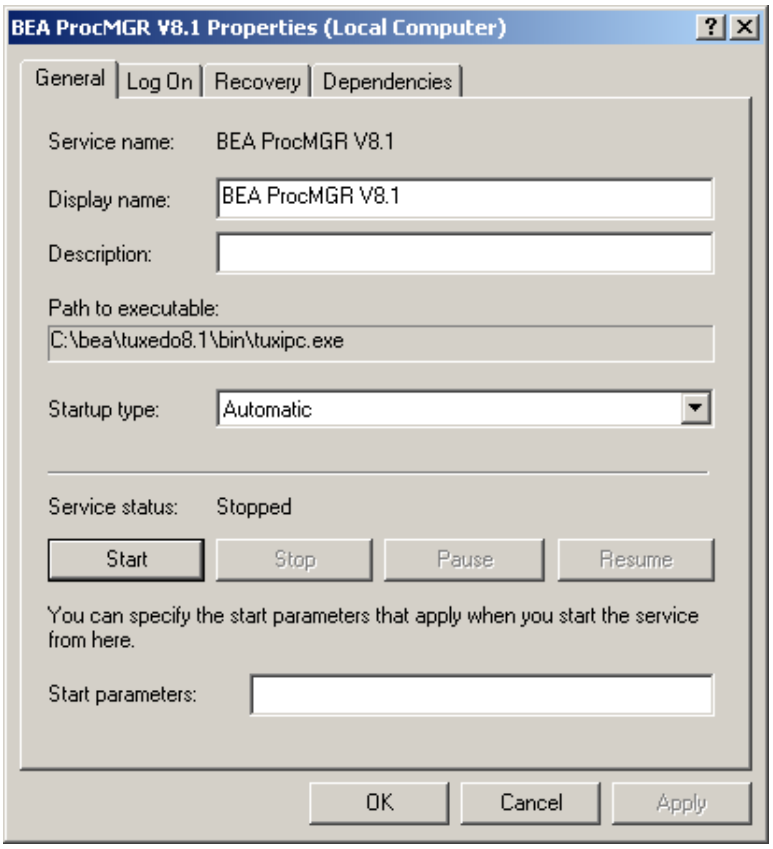
See “Configuring the Application Server on Windows.”

Note. 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 BEA ProcMGR 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, please ensure that the user ID that starts the BEA ProcMGR V8.1 service has access to these network drives. The application server and the process scheduler are started by the BEA ProcMGR V8.1 service and therefore inherit the same permissions as the BEA ProcMGR V8.1 service.

---

8. Select General.

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



BEA ProcMGR V8.1 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 8.1 service.

Task 3-1-6: Verifying the Server Installation

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

To verify the server installation:

1. Go to the udataobj directory under <TUXDIR>.
2. Ensure that the lic.txt file exists.
3. Verify that the file patchlev exists.

   If neither of these files exist:

   - Verify that no error messages were displayed during installation of Tuxedo 8.1.
   - Verify that you have sufficient disk space on the directory or file system used for <TUXDIR>.
   - Reinstall BEA/Tuxedo 8.1.

Task 3-1-7: Ensuring that Tuxedo Coexists with Earlier Versions

This section discusses:

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

Understanding the Use of Multiple Tuxedo Versions

PeopleTools 8.44 and above use Tuxedo 8.1. Earlier versions of PeopleTools rely on earlier versions of Tuxedo—for example, PeopleTools 8.41 uses Tuxedo 6.5. If you are installing only PeopleTools 8.48, you can safely skip this section. If you need to run application servers on PeopleTools 8.48 and earlier PeopleTools versions on the same machine, read this section to learn about coexistence issues. Although Tuxedo 8.1 coexists with earlier 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 Tuxedo changes your TUXDIR and PATH environment variables. Although you do not need to change these environment variables to successfully run PeopleTools 8.48 with Tuxedo 8.1, earlier versions of 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 Tuxedo release. For example, 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 Tuxedo version before any entries for Tuxedo 8.1 <TUXDIR>\bin. For example the setting PATH=c:\winnt;c:\bea\tuxedo8.1\bin;c:\tux65\bin will cause your pre-8.44 application server domains to no longer work. You would need to change this to PATH=c:\winnt;c:\tux65\bin;c:\bea\tuxedo8.1\bin;

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

Changing the TListen Port

Installing Tuxedo 8.1 and earlier creates a new service known as TListen. In most cases, you can disable this service as it is not required to run 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 Tuxedo 8.1 and an earlier version concurrently.

Task 3-2: Installing Tuxedo on UNIX

This section discusses:

- Understanding Tuxedo
- Prerequisites
- Removing Tuxedo on UNIX

- Completing the Preinstallation Checklist
- FTPing Tuxedo Installation Files to UNIX
- Designating the Tuxedo Owner
- Installing Tuxedo on UNIX
- Verifying the Server Installation

Understanding Tuxedo

The PeopleSoft application server uses BEA's middleware product, Tuxedo, to perform transaction management, messaging, and administration. This chapter guides you through the installation of Tuxedo on your server. It is essential that you install PeopleSoft Edition - BEA Tuxedo version 8.1, which you receive with your PeopleSoft shipment as part of the CD-ROM Library. You need to install Tuxedo before you go any further in setting up your application server and your PeopleSoft Internet Architecture. After you perform the installation described here, you will configure the application server environment to incorporate Tuxedo with the PeopleSoft components.

Note. PeopleSoft ships Tuxedo 8.1 with PeopleTools 8.44 and above. If you have a previous version of Tuxedo installed, you need to install the new version of 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.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

Note. Tuxedo should only be installed 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 PeopleTools 8.1x customer and have Tuxedo 6.5 installed, you may install Tuxedo 6.5 and 8.1 on the same machine in separate directories (for example, /bea/tuxedo/8.1 and /prod/tuxedo/6.5).

The installation process uses a single installation script (`install.sh` on UNIX and `pstuxinstall.exe` on Windows) to automatically install all of these products.

Note. It is critical that you use the PeopleSoft Edition - BEA/Tuxedo 8.1 delivered with PeopleSoft; the version of Tuxedo that you receive with your PeopleSoft shipment is the only version of Tuxedo that PeopleSoft supports with this version of PeopleTools. You cannot use any other version of Tuxedo with PeopleSoft applications. For example, if you obtain BEA/Tuxedo 8.1 directly from BEA, it may not support all functions required due to patch-level differences.

Note. All customers receive the 128-bit version of the CD-ROM, which allows users to enable 128-bit encryption.

The PeopleSoft Edition - BEA/Tuxedo CD-ROM installs serial and license information transparently to the user; there are no numbers to obtain. If you encounter a serial or licensing error on installation, you probably have an old version of Tuxedo installed.

PeopleSoft Edition - BEA/Tuxedo CD-ROM licenses users to use Tuxedo's runtime/administration environment for the purposes of installing, monitoring, and tuning their Tuxedo-based PeopleSoft application servers. Users *are not* licensed to directly use the Tuxedo development environment. Users will be able to use any higher level API or tools that PeopleTools developers build with Tuxedo and will be able to run applications that are processed with our Tuxedo enhanced tools. If you wish to extend the PeopleSoft application's functionality by directly using the Tuxedo development API, you need to acquire a full-use license for Tuxedo from BEA Systems.

See Also

Enterprise PeopleTools 8.48 PeopleBook: Internet Technology

Prerequisites

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

- PeopleSoft Edition - BEA/Tuxedo System 8.1 Installation for Windows and UNIX CD-ROM
- TCP/IP connectivity (required for PeopleSoft 8.4x) between the client machine and the application server
- A CD-ROM drive or access—locally or through the network—for the machine on which you plan to install Tuxedo

---

Note. If CD-ROM access is unavailable, you must FTP files from the BEA/Tuxedo CD to UNIX, using the instructions provided below.

- Root access on the UNIX machine
- Approximately 250 MB of free disk space on the application server

Task 3-2-1: Removing Tuxedo on UNIX

You may already have Tuxedo 8.1 installed on your system from an earlier release of PeopleTools. There may be patch level differences between the release which you are using and that to which you are upgrading. Note that you can verify the required Tuxedo patch level for this release in the Release Notes. You can verify that patch level which has been installed by examining the file $TUXDIR/udataobj/patchlev. This file will indicate the patch level installed. At the end of the file you will see an entry such as:

```
192. CR229736 TUX8.1 : Please propagate CR208755 from Tuxedo7.1
```

The above entry indicates that patch level 192 has been installed. The absence of this file indicates that no patch has been installed.

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

- You are having problems starting Tuxedo and decide to reinstall.
- You no longer need Tuxedo on a machine.
- You are installing a newer release of Tuxedo.
- Patch differences exist between the version of Tuxedo 8.1 that is currently installed and that required for this PeopleTools release.

To remove Tuxedo from UNIX:

1. Using PSADMIN, shut down any application server and process scheduler domains that may be running on the machine.

2. Use the UNIX `rm` command to directly remove the Tuxedo installation.

   Be sure to remove the directory containing Tuxedo, commonly known as TUXDIR.

3. Remove the TUXDIR environment variable and any entries containing your platform-specific LIBRARY PATH and PATH environment variables.

Task 3-2-2: Completing the Preinstallation Checklist

We recommend that you complete the following preinstallation checklist before you begin the Tuxedo installation. 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
BEAHOME	The high level directory where you converge the installation for all BEA products	[/bea]	
TUXDIR	The directory where Tuxedo system software will be installed.	[/bea/tuxedo/8.1]	
Username	The UNIX user name of the Application Server Administrator (Tuxedo owner).	[tuxedo]	
Groupname	Specify the UNIX group name of the Tuxedo owner.	[tuxedo]	

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

Task 3-2-3: FTPing Tuxedo Installation Files to UNIX

In the event that a CD-ROM drive is not directly accessible from the UNIX Host OS, it is necessary to insert the CD into the CD-ROM drive on a Windows system and transfer the files to the UNIX host. This procedure details how to perform that task, using FTP.

To FTP the Tuxedo installation files to UNIX:

1. Obtain the BEA/Tuxedo CD-ROM.
2. From the $PS_HOME/setup directory of your UNIX system, ftp pstuxftp.txt (ASCII mode) to your C: drive for editing.
3. Insert BEA/Tuxedo's CD into the Windows CD-ROM drive.

   Use Explorer to examine the CD-ROM's directory structure. Write down the first two directory levels of the UNIX system you use—for example, ibm, aix51.

   Note. The Tuxedo binaries for AIX 5.1 are certified to run under AIX 4.3.3 and AIX 5.2. If you are using AIX 4.3.3, select AIX 5.1 (or the most recent version of the platform).

4. Edit pstuxftp.txt:

a. Replace the *tuxadmin* and *password* entries with an appropriate user name and password to install the Tuxedo binaries on the destination machine.

   This user name and password should correspond to the correct set of privileges to install and administer Tuxedo on the UNIX machine.

b. Replace *vendor* with the vendor name, such as *ibm*, and *release* with the OS release, such as *aix51*.

   These are the details that you noted in the previous step. Be sure to enter these values in lowercase *only*.

c. Replace all */home/tux81cd* entries with the directory name you wish to use as your high-level, virtual CD directory, such as */cdromtux.*

   Make this change for the lines beginning with `mkdir`, `put`, and `cd.`

Note. Do not forget about case sensitivity. Windows file names are case insensitive; it does not matter what case you enter them in. UNIX directory names must be in the correct case, matching the case on the CD.

---

d. You may also need to replace all *d:* entries if your CD-ROM drive is not installed as the D: drive.

5. Run the pstuxftp.txt script to transfer files to UNIX. This script should be run using ftp from a DOS command prompt. This script should be run as follows:

```
ftp -n -s:pstuxftp.txt unix_machinename
```

6. On UNIX, chmod the install.sh file to make it executable. For example:

```
chmod +x install.sh
```

7. Continue to step 5 in the following section, Installing Tuxedo on UNIX.

Task 3-2-4: Designating the Tuxedo Owner

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

To designate the 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 Tuxedo.

   Using the values from the preinstallation checklist, create the group and specify the group name. Then create the user who will be the 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 3-2-5: Installing Tuxedo on UNIX

The following procedure describes how to properly install Tuxedo plus the latest patch on your UNIX server.

Note. Remove any existing version of Tuxedo 8.1 delivered with an earlier version of PeopleTools, plus any existing Tuxedo patches, before continuing. The Tuxedo installation CD delivered with this package contains the latest patches required for this release.

To install Tuxedo on UNIX:

1. Insert the CD-ROM into the CD-ROM drive, and mount the CD-ROM from the root login.

   For mounting instructions, consult the operating system manufacturer's documentation or the UNIX manual page on mounting (use the command `man mount`).
2. List the root directory on the CD-ROM.
3. Log in as the Tuxedo administrator.

   You should no longer be logged on as root.
4. Change to the root directory on the CD-ROM.
5. Execute the shell script, install.sh.

   ```
   sh ./install.sh
   ```
6. Follow the selected prompts as indicated in the following table:

Prompt	Standard PeopleSoft Response
Please select a platform **Note.** This question is only asked if you did not use the ftp script.	Specify the number associated with the desired operating system platform you wish to install.
BEA Home being defaulted to /bea (y/n)	Type y to indicate Yes or suggest an alternative BEA HOME.
Tuxedo 8.1 will be installed to /bea/tuxedo81 (y/n):	Acknowledge the Tuxedo installation location or suggest an alternative
Accept default TListen password 'password' (y/n):	Enter password. You will need to enter this password again if you use the BEA WebGUI Monitor. Otherwise, you can just use 'password,' the default.

Task 3-2-6: Verifying the Server Installation

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

To verify the server installation:

1. Go to the udataobj directory under <TUXDIR>.
2. Ensure that the file lic.txt exists.
3. Ensure that the file tlisten.pw exists.
4. If the files lic.txt and tlisten.pw do not exist:
   - Verify that no error messages were displayed during installation of Tuxedo 8.1.
   - Verify that you have sufficient disk space on the directory or file system used for <TUXDIR>.
   - Reinstall BEA/Tuxedo 8.1.

Note. If you will be booting Application Server or Process Scheduler in a shell using a locale other than C, create a symlink in <TUXDIR> to the C directory. For instance, if the locale is Ja_JP, run this command:

```
ln –s <TUXDIR>/locale/C <TUXDIR>/locale/Ja_JP
```

Task 3-3: Installing Micro Focus Net Express for Windows

This section discusses:

- Understanding the Net Express Installation
- Prerequisites
- Installing Net Express

Understanding the Net Express Installation

Micro Focus® Net Express™ 4.0 is supplied on two CDs. CD-1 contains the Net Express and Net Express Studio software and documentation, and Microsoft Internet Explorer. CD-2 contains the Microsoft Win32 Software Development Kit for Microsoft Windows.

In the following sections, *d:* refers to the drive-ID of your CD-ROM drive, and the Run dialog is the dialog box you see if you select the *Run...* option on the Windows Start menu.

Prerequisites

To install and use Net Express you must have Microsoft Internet Explorer 5.0 or later installed. You can install Internet Explorer 6.0 from the Net Express 4.0 CD home page.

Task 3-3-1: Installing Net Express

To install Net Express 4.0:

1. Insert CD-1 into your CD-ROM drive. After a few moments, you should see the Net Express 4.0 CD home page in your browser.
2. If the home page does not appear, enter the following command in the Run dialog box:

   ```
   d:\setup.exe
   ```

3. Select Installing on the contents list on the Net Express home page, then select the link Click here to install or upgrade Net Express 4.0. The Startup process begins.
4. Follow the instructions displayed. For information on which of the options to choose for PeopleSoft software, see the instructions for installing Server Express on UNIX.

   If you encounter any problems during or after the installation, refer to the Installation Notes on the home page.

Task 3-4: Installing Micro Focus Server Express for UNIX and Linux

This section discusses:

- Understanding Micro Focus Server Express
- Prerequisites

- Installing Server Express
- Installing Remotely
- Mounting and Unmounting CD-ROMs

Understanding Micro Focus Server Express

This section provides installation instructions for Micro Focus® Server Express™ 4.0 SP2 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 you received with your Server Express CD.

Throughout this section references are made to $COBDIR. $COBDIR is the location at which you install your COBOL products.

All example command lines are specific to sh and ksh. If you are using csh you should use the equivalent csh commands for the examples provided.

See Also

Micro Focus web site: http://supportline.microfocus.com/

Server Express Documentation CD-ROM

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. Please contact your Micro Focus Account Representative or your Micro Focus licensed supplier for details on purchasing Application Server licenses.

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 be installed in a different directory to Server Express; the default directory is /opt/lib/mflmf for HP-UX, /usr/lib/mflmf for RS/6000 and PowerPC systems running AIX, and /opt/lib/mflmf on other systems. If /opt/lib does not exist, use /usr/lib/mflmf instead.

Task 3-4-1: Installing Server Express

This section provides instructions for extracting the software from CD-ROM on the target environment, and installing the software on the target environment. If the target environment does not have a CD-ROM drive go to the section Installing Remotely. The CDs are in ISO 9660 format and should be mounted using appropriate system-specific mount options. Examples are provided in the section Mounting and Unmounting CD-ROMs.

Note. The prompts and messages displayed during an installation may vary depending upon the operating system and its version. The examples here are from an installation on an AIX 5.2 operating system.

---

1. Login as root.
2. Insert the CD labeled Server Express into the CD-ROM drive.

   There are three different installation CDs, each labeled for use on various UNIX platforms and Linux. Choose the appropriate CD for your installation. If the CD-ROM is not automatically mounted, mount it using the appropriate system commands.

   See Mounting and Unmounting CD-ROMs.
3. Change to the CD-ROM directory, then run the setup script:

   ```
   sh ./setup.sh
   ```
4. Read and accept the license agreement.

   The following License Agreement appears. Answer yes (*y*) when asked if you agree to the terms of the license agreement to continue with the installation.

   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
5. A prompt appears with a list of the operating systems and hardware platforms for the products included on the CD. Enter a number corresponding to your operating system, and then enter *y* to continue with the installation.

   Here are examples of the lists provided with CDs for various platforms:

   - List from the CD labeled “For HP PA-RISC, HP Itanium and Tru64”:

     ```
     ------ Server Express 4.0 products on this CD (part number CD-SX-MF014-2) ----
     Products for the following platforms are supplied on this CD:

       1)  HP  PA-RISC   running HP/UX 11.x                        32/64-bit
       2)  HP  Itanium   running HP/UX 11.23                       32/64-bit
       3)  HP  Alpha     running Tru64 5.1B                        32/64-bit

       q)  Quit

     Please enter which product you want to install:
     ```

- List from the CD labeled “For Red Hat Linux and SuSe Linux”:

```
------ Server Express 4.0 products on this CD (part number CD-SX-MF015-3) ----
Products for the following platforms are supplied on this CD:

  1)  Intel x86     running Red Hat Enterprise Linux Rel 3/4  32-bit
  2)  Intel Itanium running Red Hat Enterprise Linux Rel 3/4  64-bit
  3)  IBM pSeries   running Red Hat Enterprise Linux Rel 3    64-bit
  4)  Intel x86     running SuSE Linux (SLES 8/9)             32-bit
  5)  Intel Itanium running SuSE Linux (SLES 9)               64-bit
  6)  IBM pSeries   running SuSE Linux (SLES 9)               64-bit
  7)  IBM zSeries   running SuSE Linux (SLES 8/9)             31/64-bit

  q)  Quit

Please enter which product you want to install:
```

Note. For Intel x86 Redhat Enterprise Linux Release 4, choose *1* to install the 32-bit version.

For Intel x86 SuSE Linux, SLES 9, choose *4*, to install the 32-bit version.

For zSeries SuSE Linux, SLES 9, choose *7*, to install the 31/64-bit version.

- List from the CD labeled “For AIX, Solaris SPARC and UnixWare”

```
------ Server Express 4.0 products on this CD (part number CD-SX-MF015) ------
Products for the following platforms are supplied on this CD:

  1)  Intel x86     running SCO UnixWare 7.1.3/7.1.4/OS6         32-bit
  2)  IBM RS6000    running AIX 5.1/5.2/5.3                      32/64-bit
  3)  Sun SPARC     running Solaris 8/9/10                       32/64-bit
  4)  x64           running Solaris 10                           32-bit

  q)  Quit

Please enter which product you want to install: 2

Platform 2 selected: IMB RS6000 running AIX 5.1/5.2/5.3
```

Note. For AIX, either 5.1, 5.2, or 5.3, choose *2* to install the 32/64-bit version.

For Solaris, either 8, 9, or 10, choose *3* to install the 32/64-bit version.

6. Specify which Server Express product you want to install. Enter *1* to install the Server Express Development System.

```
Select the product to be installed:

1) Server Express Development System - 32/64-bit - PRN=RXCAK/AAL:9i.T4.40.02
   (COBOL and Enterprise Server Development System)

2) Enterprise Server Development System
```



```
   (for installation over previously installed Server Express Development
    System as in 1 above)

3) Server Express Application Server - 32/64-bit - PRN=R1CAK/AAC:9i.T4.40.02
   (COBOL Deployment System, not required if you are using
    Development System)

4) Enterprise Server                 - 32-bit    - PRN=RBCAK/AAB:9i.T4.40.02
   (Enterprise Server Deployment System, not required if you are using
    Development System)

5) Server Express SQL Option         - 32-bit
   (for Development only)

q) quit

Enter choice: 1
```

7. Enter *y* to confirm that you have enough disk space to install the Server Express Development System software.

```
Installing the Server Express Development System product.
This product will need a maximum of approximately  92 Mb of disk space.

At a later stage you can choose not to install Enterprise Server Development
System which will reduce the final amount of disk space used.

Do you want to continue? (y/n): y
```

8. Enter the directory name where you want to install the Server Express product, and then press ENTER.

   The example here uses the directory /products/mf/sx40sp2-64bit. If you want to accept the default directory /opt/lib/cobol, just press ENTER. If the directory does not exist, you will be asked if the script should create the directory. When the system asks if you want to continue with the installation, enter *y*.

   Note. This can be any directory on any file system that has the requisite disk space.

```
Enter the name of the directory where you want to install this product
(Press Enter for default directory /opt/microfocus/cobol)
/products/mf/sx40sp2-64bit

/products/mf/sx40sp2-64bit does not exist, do you want to create it? (y/n): y

Installing into /products/mf/sx40sp2-64bit

Do you want to continue? (y/n): y
Copying files. This can take several minutes. Please wait....
```

9. Reply *y* if you see a message stating that the product was built on a different version of the operating system. Here is an example from HP-UX:


```
Micro Focus Install

This product was built on version B.11.00 of this Operating
System, this machine is running B.11.11.
Please confirm that you want to continue with this installation (y/n): y
```

10. Verify the system environment details displayed.

    The system displays a list of the operating system features. This report will vary depending upon the operating system and its version. The example here is from an installation on an AIX operating system. At the end of the report, the system asks if you understand the reference environment details. Enter *y* to continue with the installation.

Note. The report output is presented in "more" format. You can use standard "more" navigation to view the report. For example, press the space bar to page through the report.

```
When you press return you will be shown details of the reference
environment (and any compatibility environments).
Please press return when you are ready

This product is certified on the following reference environment:
The command(s) used to gather the information is given following each entry.

Operating System
----------------
AIX 5.1 Maintenance Level 3 plus 'APAR' IY22854.

uname -s
oslevel

Operating System Patches
------------------------
instfix -ik IY22854

C Compiler
----------
/usr/vac/bin/xlc  6.0.0.6

lslpp -L vac.C | grep vac.C | cut -c29-36

C++ Compiler
------------
/usr/vacpp/bin/xlC  6.0.0.0

lslpp -L vacpp.cmp.core | grep vacpp.cmp.core | cut -c29-36

Assembler
---------
as 5.1.0.25
```



```
lslpp -L bos.adt.base | grep bos.adt.base | cut -c29-36

Supported versions of Java
--------------------------
Java version = 1.3.1
Java vendor = IBM Corporation
Java OS name = AIX
Java OS arch = ppc
Java OS version = 5.1

Java version = 1.4.1
Java vendor = IBM Corporation
Java OS name = AIX
Java OS arch = ppc
Java OS version = 5.1

$JAVA_HOME/bin/java -classpath $COBDIR/lib  WhatJava

Unicode
-------
Unicode mapping tables must be installed for J2EE and Web Services to
function correctly. These tables are required for converting between
any combination of UTF-16/UCS-2, UTF-8 and other installed locales.

J2EE and Web Services
---------------------
J2EE and Web Services have been tested with :-

 WebSphere 5.1

--------------------------------------------------------------------------------


This product is also certified on the following environment:


Operating System
----------------
AIX 5.2.0.0

uname -s
oslevel

C Compiler
----------
/usr/vac/bin/xlc  6.0.0.7

lslpp -L vac.C | grep vac.C | cut -c29-36
```

```
C++ Compiler
------------
/usr/vacpp/bin/xlC  6.0.0.8

lslpp -L vacpp.cmp.core | grep vacpp.cmp.core | cut -c29-36


Assembler
---------
as  5.2.0.0

lslpp -L bos.adt.base | grep bos.adt.base | cut -c29-36

Please confirm your understanding of the above reference environment
details (y/n): y
```

11. Enter *n* when asked whether you want to use COBOL and Java EJB components together.

    The COBOL/Java EJB components of Server Express are not required for PeopleSoft COBOL applications.

    ```
    Do you want to make use of COBOL and Java working together? (y/n) n
    ```

    After pressing Enter, you see the following message:

    ```
    OK skipping Java setup
    Should you want to use Java with COBOL later on
    as super user run the command /products/mf/srvexp-4.0.sp1/bin/java_setup
    to select the version of Java you want to use.
    ```

12. Enter *y* when asked whether you want to install Micro Focus LMF. LMF is the License Management Facility. PeopleSoft recommends that LMF be installed as part of the Server Express installation.

    ```
    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 you install it now.
    Would you like to install LMF now? (y/n)
    ```

Note. You may either install LMF as part of the Server Express installation or you can install it separately. PeopleSoft recommends that you install LMF as part of the Server Express installation.

Note. We suggest that you install LMF in its own directory, not in a subdirectory of Server Express. You should have your Server Express serial number and license keys available to continue with the installation.

---

13. If the installation program detects another version of the license manager, you see a message similar to this asking whether you want to upgrade your License Manager. PeopleSoft recommends upgrading. Enter *y* to upgrade the License Manager.


```
An older version of License Manager than this one is
currently running on the system. It is installed in
/products/mf/svrexp-2.0.11/mflmf.

It is recommended that you upgrade by installing this version.
Existing installed licenses will be retained and not affected.
If you want to install this new version of License Manager
into /products/mf/sx2011/mflmf, then the currently running version must be⇒
 stopped.

Do you want to proceed with installation into /products/mf/sx2011/mflmf

(this will STOP the currently running License Manager) ? (y/n) y
```

14. Enter the name for the directory where you want to install LMF, and then press ENTER.

    If you want to accept the default directory /opt/microfocus/mflmf, just press ENTER. The directory used for this example is */products/mflmf40sp2*.

    Enter *y* when asked if you want to create the directory and continue with the installation.

```
Enter the directory name where you wish to install License Manager
(Press Enter for default directory /opt/microfocus/mflmf):
/products/mflmf40sp2
/products/mflmf40sp2 does not exist
Do you wish to create it ? (y/n) y
Empty database created ok
```

15. Enter *y* when asked if you want only superuser to access LMF. We recommend that only superuser be allowed to access the license administration system.

```
you want only superuser to be able to access the License Admin System? (y/n): y
```

16. Enter *y* when asked if you want to enable autostart. We recommend that you allow LMF to start automatically. It is recommended that you let license manager autostart 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
```

    When the license manager installation is finished, the follow message will display:

```
LMF installation complete
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...
```



```
License availability and use is affected by application design as well
as the actual number of users of the application at any given time.

If you are using Model 2 user licenses, you should monitor the license
usage closely in the first few weeks after installation in order to
ensure that your application is not impacted  by unexpected 'out of license'
conditions.

For more information please refer to the Deployment Licensing Guide.
Apptrack installation complete
```

17. Enter *n* when asked if you want to install the Enterprise Server Development System.

    The Enterprise Server Development System of Server Express is not required for PeopleSoft COBOL applications.

```
Do you want to install the Enterprise Server Development System - J2EE, Web
 Services, etc.? (y/n) n

Please wait while the Enterprise Server part of this product is removed.
This may take a few minutes...
```

18. For AIX, HP-UX PA-RISC, HP-Itanium, HP ALPHA/Tru64, Solaris, and zSeries SuSE 9, specify the default mode for COBOL: 32-bit or 64-bit.

```
This product can be used in either 32- 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.
```

    - Enter *64* for AIX, HP-UX PA-RISC, HP-Itanium, HP ALPHA/Tru64, Solaris, and zSeries SuSE 9.
    - Enter *32* for x86 SuSE9 Linux or x86 Redhat 4.0 Linux.

Task 3-4-2: Installing Remotely

If your UNIX system does not have a CD-ROM you can install the product by mounting the CD-ROM on another machine, transferring the product to your machine, then running the install. Before you start, make sure you have enough disk space for the product. The space needed is the same as the size of the tar files you use. In addition you need the same amount of temporary space to store the tar files.

1. Mount the CD-ROM on the machine you have selected, using whichever commands are appropriate to the operating system of that machine.

   See Mounting and Unmounting CD-ROMs.

2. Look at the file prodlist.txt. This lists the directory names and the products those directories contain.
3. Change to the directory containing the product you want to install.

   The products are stored as tar files with filenames in the format *vabccppp.tar* where abcc represents the version number (a.b.cc) of the product (for example, 4000 for version 4.0.00), and *ppp* is cob for Server Express and asp for Application Server.

4. Select the product you want to install and transfer that file (for example, by using ftp) to the required UNIX machine. If you want to install the ODBC drivers, you should also transfer any files called *odbc.tar*
5. On the target UNIX system, create the directory into which you want to install the product, for example:

   ```
   mkdir /opt/lib/cobol
   ```

6. Extract the contents of the tar file into that directory, for example:

   ```
   cd /opt/lib/cobol
   tar -xvf /tmp/v4000cob.tar
   ```

   where /tmp is the path of the directory into which the tar file was transferred from the machine upon which the CD-ROM was mounted.
7. Install the software by entering the following command:

   ```
   sh ./install
   ```

8. Continue with the installation as described in the previous section.

   See Installing Server Express.

Task 3-4-3: Mounting and Unmounting CD-ROMs

Below are examples of mount and unmount commands for several UNIX systems.

- The mount directory is /cdrom. If /cdrom does not already exist, you must first create it using the command: `mkdir /cdrom`
- Device names differ from system to system.
- The name starting /dev/ is the name of the CD-ROM drive.

Use these commands to mount and unmount the CD-ROM on your machine:

Platform	Mounting Command	Unmounting Command
Compaq Alpha systems running TRU64 UNIX	`mount -t cdfs -o noversion /dev/disk/cdrom0c /cdrom`	`umount /cdrom`
HP9000 Series running HP-UX	`mount -F cdfs -o cdcase /dev/dsk/c0t4d0 /cdrom`	`umount /cdrom`
IBM RS/6000 and Power PC systems running AIX	`mount -v cdrfs -o ro /dev/cd0 /cdrom`	`umount /cdrom`
RedHat Linux	`mount /mnt/cdrom`	`umount /cdrom`
SuSE Linux	`mount /mnt/cdrom`	`umount /cdrom`
Sun SPARC running Solaris V2.4 or later	CD-ROM is automatically mounted at /cdrom/cdrom0	`eject cdrom`

CHAPTER 4

Using the PeopleSoft Installer

This chapter discusses:

- Understanding the PeopleSoft Installer
- Prerequisites
- Using E-Delivery for the PeopleSoft Installation
- Mounting and Unmounting CD-ROMs (UNIX Only)
- Running the PeopleSoft Installer with a Single CD-ROM Drive (Optional)
- Running the PeopleSoft Installer Without Swapping CDs (Optional)
- Running the PeopleSoft Installer
- Installing the Application CD
- Loading the Multilanguage CD

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.

Understanding the PeopleSoft Installer

This section discusses:

- Defining the PeopleSoft Installer
- Understanding PeopleSoft Servers
- Defining Supported Server Combinations

Defining the PeopleSoft Installer

The PeopleSoft Installer is a Java-based tool that delivers software to your servers.

You run the PeopleSoft installer to install the necessary products on the target machines. Which files are installed depends on which products you are licensed for, the operating system on the target machine, the database platform, and the selected server option. The PeopleSoft Installer installs files directly to Windows, UNIX, and Linux machines. PeopleTools and PeopleSoft Applications use the same PeopleSoft Install template. This chapter discusses the installation of PeopleTools, followed by the installation of applications CDs and the Multilanguage CD.

To obtain the software from an FTP site, see “Using E-Delivery for the PeopleSoft Installation.”

Note. During the installation you select the servers you want to install. Keep in mind that 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.

Note. If you need to set up the file server on a separate Windows machine, you should install PeopleTools, any applications CDs, and the Multilanguage CD, as discussed in the next chapter.

See "Setting Up the File Server on Windows."

All licensed components of the PeopleSoft Architecture must be installed on each server. Ideally, you should install the Windows file server component first and then take your PeopleSoft CDs to a CD Jukebox connected to your UNIX systems. If you have multiple servers but no Jukebox for your UNIX environment, you may need to use the CD for each server.

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.

Understanding PeopleSoft Servers

You can install the whole range of PeopleSoft servers (file server, application server, and so on) with the PeopleSoft Installer. You can install PeopleSoft server software separately or together. Keep in mind which PeopleTools functionality resides in each server:

- *File Server:* All Client executables (PSIDE...), Nvision, Upgrade Assistant or Change Assistant, files and directories necessary to perform upgrade, and Client SQR.
- *Application Server:* PSADMIN, COBOL for remote call, Verity.
- *Web Server:* Windows PeopleSoft Pure Internet Architecture (PIA) install, UNIX web files and shell scripts, Portal Search data files, Verity, and Enterprise Resource Planning Connectors.
- *Process Scheduler Server:* PSADMIN, COBOL, SQR, Verity.
- *Database Server:* Scripts and data directories, files necessary to run Data Mover.

Defining Supported Server Combinations

The following table lists the supported operating systems for the various PeopleSoft servers for your database platform.

See *Enterprise PeopleTools 8.48 Hardware and Software Requirements.*

Note. If you plan to install PeopleTools and application software on Red Hat Linux, you must first install X11 client software.

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
z/OS	• AIX • HP-UX PA-RISC • z/Linux (batch server only) • Solaris • Windows • z/OS	• z/Linux • Windows	• AIX • HP-UX PA-RISC • HP-UX IPF • SUSE Linux • Red Hat Linux • Solaris • Tru64 • Windows

Prerequisites

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 1.4.x or higher.

If you are running on AIX, you must have the JDK package (a normal AIX configuration includes JDK). The default directory for the JDK installation is /usr/java14/jre/bin/java. You cannot change the default directory.

Before running the PeopleSoft installer, you must verify that you have the correct patches for your JVM level.

- For version 1.4.1, see http://www-106.ibm.com/developerworks/java/jdk/aix/service141.html.
- For version 1.4.2, see http://www-106.ibm.com/developerworks/java/jdk/aix/service.html.

Note. If your installation is different than the vendor-defined JVM Search Path, specify where you installed the Java home directory like this:

-is:javahome <*JAVA_HOME*>

For example: -is:javahome /jre/prod/1.4.1.

You can always specify your Java home to minimize time searching JVM.

Make sure you have at least 4.5 GB of free space to perform your installation. If you are installing Enterprise Resource Planning Connectors, you will need an additional 400 MB of disk space.

See Running the PeopleSoft Installer.

The installation process also requires at least 1.5 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.

The user who installs PeopleTools must be root or the owner of <PS_HOME>.

You must have admin privileges to install the PeopleSoft web server.

Task 4-1: Using E-Delivery for the PeopleSoft Installation

You can obtain the software by downloading it as a zip file from a secure FTP site. E-Delivery customers receive a welcome letter that includes the URL for the PeopleSoft E-Delivery site. When you unzip the downloaded file, it creates a folder and extracts all the files into the folder. You can then copy the folder and its contents to any machines that you will use as servers.

The E-Delivery installation process asks for your license code. Obtain your license code by going to the URL included in your welcome letter.

If you obtain your software using E-Delivery, follow the instructions in this chapter for installing PeopleTools, but skip the sections concerning mounting and unmounting CD-ROMs:

- Mounting and Unmounting CD-ROMs (UNIX Only)
- Running the PeopleSoft Installer with a Single CD (Optional)
- Running the PeopleSoft Installer Without Swapping CDs (Optional)

If you obtain your software using E-Delivery, you must carry out an additional step after completing the installation process, creating the database, installing the Application Server, and installing the Pure Internet Architecture. Sign into the PeopleSoft system and navigate to the Installation table on the Products tab. The location of this table will vary depending upon the application you installed. In the Installation table, uncheck the products for which you have not purchased support.

Note. PeopleSoft does not support CDs that you burn at your own site from E-Delivery files.

See Also

"Setting Up the PeopleSoft Pure Internet Architecture," Testing the PeopleSoft Pure Internet Architecture Installation

Application-specific installation instructions, PeopleSoft Customer Connection (Site Index, installation guides and notes)

Task 4-2: Mounting and Unmounting CD-ROMs (UNIX Only)

This section discusses:

- Understanding CD-ROM Mounting and Unmounting
- Mounting a CD-ROM on HP-UX
- Unmounting a CD-ROM

Understanding CD-ROM Mounting and Unmounting

This task includes sample commands to mount and unmount CDs for various UNIX platforms. We do not support automounting of CDs; automounting sometimes puts the volume label as part of the mount point, in which case the PeopleSoft Installer will not recognize the second PeopleTools CD.

Note. Most, if not all, of these platforms require root access to mount and unmount CDs. You cannot be in the mount point or any of the subdirectories when unmounting the CD. Your devices and your mount point might be different than the examples below.

UNIX Platform	Mounting a CD to /mnt/cdrom	Unmounting the CD
AIX	mount -o ro -v cdrfs /dev/cd0 /mnt/cdrom	umount /mnt/cdrom
HP-UX	mount -r /dev/dsk/c2t1d2 /mnt/cdrom	umount /mnt/cdrom
Linux	mount -t iso9660 -r /dev/cdrom /mnt/cdrom	umount /mnt/cdrom
Solaris	mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /mnt/cdrom	umount /mnt/cdrom
Tru64	mount -r /dev/disk/cdrom0c /mnt/cdrom	umount /mnt/cdrom

Task 4-2-1: Mounting a CD-ROM on HP-UX

To mount a CD-ROM on HP-UX:

1. Log on as root.
2. Determine the device address for the CD-ROM by entering the following command:

   ```
   # ioscan -C disk -f -n
   ```

   You will see output similar to the following. This output example indicates that the CD-ROM device file is /dev/dsk/c1t2d0:

   ```
   Class I H/W Path      Driver  S/W State  H/W Type  Description
   ==============================================================
   disk  0 8/0/19/0.6.0  sdisk   CLAIMED    DEVICE    IBM     DDRS-39130WS
                         /dev/dsk/c0t6d0   /dev/rdsk/c0t6d0
   disk  1 8/16/5.2.0    sdisk   CLAIMED    DEVICE    TOSHIBA CD-ROM XM-6201TA
                         /dev/dsk/c1t2d0   /dev/rdsk/c1t2d0
   ```

3. Create a new directory called /cdrom at the root of the file system. This directory becomes the CD-ROM mount point; all CD-ROM files appear under this directory.
4. Determine whether the pfs daemon is running by entering the following command:

   ```
   # ps -ef | grep pfs
   ```

   If the pfs daemon is running, output similar to the following is displayed:

   ```
   root  1681  1651  0 11:39:20 pts/ta    0:00 /usr/sbin/pfs_mountd
   root  1682  1681  0 11:39:20 pts/ta    0:00 pfs_mountd.rpc
   ```

   If the pfs daemon is running proceed to step 5. If the pfs daemon is *not* running:

   a. Edit the file /etc/pfs_fstab by adding a line similar to the one below to indicate the hardware path for the CD-ROM:


```
/dev/dsk/c0t6d0 /cdrom pfs-rrip xlat=unix 0 0
```

b. Enter the following commands:

```
# nohup /usr/sbin/pfs_mountd &
# nohup /usr/sbin/pfsd &
```

You must reenter these commands every time you restart your system.

5. To physically mount the CD-ROM, place the CD-ROM in the machine and enter the following command:

```
# /usr/sbin/pfs_mount /cdrom
```

Task 4-2-2: Unmounting a CD-ROM

To unmount a CD-ROM:

1. After you finish using the CD-ROM, enter the following command:

```
# /usr/sbin/pfs_umount /cdrom
```

2. Eject the CD-ROM.

Task 4-3: Running the PeopleSoft Installer with a Single CD-ROM Drive (Optional)

The following information is provided for mounting PeopleTools 8.4x CDs for a single CD-ROM drive or mounting multiple CDs for easier access.

To run the PeopleSoft Installer on a machine with a single CD:

1. Open two telnet sessions (such as telnet1 and telnet2).
2. In telnet1, mount the first PeopleTools CD to a directory (for example, /cdrom).
3. In telnet2, go to any directory *except* /cdrom (for example, /tmp).

   Run the PeopleSoft Installer, pointing to the executable in /cdrom—for example:

```
/cdrom/setup.aix -is:javaconsole -console -is:tempdir $HOME/tmp
```

4. Go through the install prompts in telnet2.
5. When prompted in telnet2 to swap media (to change to media 2), go back to telnet1.

   Unmount and eject the CD, then mount the second PeopleTools CD as /cdrom.
6. In telnet2, press ENTER to continue the install.
7. Repeat steps 5 and 6 for all the CDs.

Note. A common problem is that in one of the telnet sessions, the user changes the directory to /cdrom (or any of its subdirectories). As a result, the OS will not allow you to unmount and eject the CD.

Task 4-4: Running the PeopleSoft Installer Without Swapping CDs (Optional)

To avoid swapping CDs, you can either copy the contents of all CDs to a network share, or mount the eight CDs as <anydirectory>/disk1, <anydirectory>/disk2, <anydirectory>/disk3, <anydirectory>/disk4, and so on. You can mount the PeopleTools CD through a CD-ROM shared machine, a Jukebox or an NFS server. For example, on machine A (a CD-ROM drive with PeopleTools 8.4x disk1 share):

```
share /cdrom/pt84cd1r0
```

On machine B (a CD-ROM drive with PeopleTools 8.4x disk2 share):

```
share /cdrom/pt84cd2r0
```

On machine C (a CD-ROM drive with PeopleTools 8.4x disk3 share):

```
share /cdrom/pt84cd3r0
```

On machine D (a CD-ROM drive with PeopleTools 8.4x disk4 share):

```
share /cdrom/pt84cd4r0
```

On machine E (a CD-ROM drive with PeopleTools 8.4x disk5 share):

```
share /cdrom/pt84cd5r0
```

On machine F (a CD-ROM drive with PeopleTools 8.4x disk6 share):

```
share /cdrom/pt84cd6r0
```

On machine G (a CD-ROM drive with PeopleTools 8.4x disk7 share):

```
share /cdrom/pt84cd7r0
```

On machine H (a CD-ROM drive with PeopleTools 8.4x disk8 share):

```
share /cdrom/pt84cd8r0
```

On machine I (the machine where you want to install PeopleTools 8.4x):

```
mkdir -p /pt84/disk1
mkdir -p /pt84/disk2
mkdir -p /pt84/disk3
⋮
mkdir -p /pt84/disk8

mount  A: /cdrom/pt84cd1r0   /pt84/disk1
mount  B: /cdrom/pt84cd2r0   /pt84/disk2
mount  C: /cdrom/pt84cd3r0   /pt84/disk3
⋮
mount  H: /cdrom/pt84cd7r0   /pt84/disk8
```

Task 4-5: Running the PeopleSoft Installer

This section discusses:

- Understanding the PeopleSoft Installer

- Starting the PeopleSoft Installer
- Running the PeopleSoft Installer in GUI Mode
- Running the PeopleSoft Installer 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 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 PeopleTools, 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 HRMS881 for the 8.8 SP1 version of Human Resources.

The following error may appear during your installation:

```
............The wizard cannot continue because of the following error: could not
 load wizard specified in /wizard.inf (104)
```

If you see this error message during the installation of PeopleTools, your application CDs, PeopleSoft Pure Internet Architecture, or when using the Database Configuration Wizard, run `<PS_HOME>/setup/uninstall_endorsed.sh` (for UNIX) or `<PS_HOME>\setup\uninstall_endorsed.bat` (Windows) to uninstall the xerces.jar file that is located in the <PS_HOME>\jre\lib\endorsed directory. Run `<PS_HOME>/setup/install_endorsed.sh` or `<PS_HOME>\setup\install_endorsed.bat` again to install this xerces.jar back after your installation is complete. This problem happens only when the xerces.jar is installed in <PS_HOME>/jre/lib/endorsed and when this JRE is used for the installation.

Note. For HP-UX 11.11 machines, the values of maxfiles and maxfiles_lim must be at least 2048 in order for the installation to be successful.

You can run the installer in GUI mode or in console (text) mode. Running the installer on UNIX in GUI mode requires an X-Windows interface.

Note. The machine that you use to perform your PeopleTools installation must be running in *256-color mode* or higher when running the CD install, PeopleSoft Pure Internet Architecture install, and Database configuration in Windows. This is not necessary for UNIX or console mode.

The PeopleSoft Installer asks whether you want to install supporting features such as Enterprise Resource Planning Connectors, 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. To confirm that Enterprise Resource Planning Connectors will run on the operating systems and database platforms you are using, consult the Hardware and Software Requirements book.

See Also

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Integration Broker

Enterprise PeopleTools 8.48 PeopleBook: Global Technology

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

Enterprise PeopleTools 8.48 Hardware and Software Requirements, “Server Requirements”

Task 4-5-1: Starting the PeopleSoft Installer

To start the PeopleSoft Installer in GUI mode, type:

```
[path]setup.<OS> [additional flags]
```

To start the PeopleSoft Installer in console mode, type:

```
[path]setup.<OS> [additional flags] -is:javaconsole -console
```

These are the additional flags:

Flag	Description
-is:tempdir <<specify the temp dir>>	Use this flag to specify the temporary directory to extract temporary files and the bundled JRE if Java is not found. This is needed if you have less than 1.5 GB of free disk space in your temp directory.
-is:log <<specify the log file>>	Use this flag to create a log file if you encountered problems with the native launcher.
-is:javahome <<specify the java home directory>> For example, -is:javahome c:\myjdk1.4.0	Use this flag to specify where you installed the Java home directory, if your installation is different than the vendor-defined JRE Search Path.

The following table lists the native launchers and the platforms to run them:

Operating System Platform	Native Launcher to Use
AIX	setup.aix
HP-UX (PA-RISC)	setup.hp
HP-UX (IPF)	setup.hp-ia64
Linux (SuSE or Red Hat)	setup.linux
z/Linux	setup.zlinux **Note.** See the information below for the correct process to use when running the installer on z/Linux.
z/OS	Use setup.exe to install on Windows, and then use Server Transfer. This is the same procedure used in PeopleTools 8.1x
Solaris	setup.solaris
Windows	setup.exe

If you are running on z/Linux:

1. Verify the location of the temporary directory for the installation (<TEMPDIR>), or create a temporary directory if necessary. You must have at least 1.5 GB of free temporary disk space. For example,


```
mkdir $HOME/tmp
```

2. Verify that JDK or JRE 1.4.x is installed on the system.
3. Set the JAVA_HOME environment variable to the directory where the JRE 1.4.x or JDK is installed. For example:

   ```
   export JAVA_HOME=<JAVA_HOME>
   ```

4. Use this command to start the installer:

   ```
   setup.zlinux -console -is:tempdir <TEMPDIR> -is:nospacecheck -is:javahome <JAVA_⇒
   ⇒
   HOME>
   ```

   The JRE installation directory for z/Linux systems is usually /opt/IBMJava2-s390x-142/jre. If your installation is different, substitute the correct directory for <JAVA_HOME> in the command line.

Note that the PeopleTools installation spans two or more CDs. During the installation process, if you are running the installer with a single CD-ROM drive, you will be prompted to swap to the next CD before you can proceed. To avoid swapping CDs during the installation process, you need to copy the contents of all CDs to a network share (in a very specific way) before launching the PeopleSoft Installer. For example, copy the contents of the first CD to n:\ps\tools\disk1, the contents of the second CD to n:\ps\tools\disk2, and so on. Then launch the setup.*xxx* that is located at n:\ps\tools\disk1. You can use the same concept to avoid mounting and unmounting CDs on UNIX boxes during the install.

If you mounted your CDs as described in the task "Running the PeopleSoft Installer Without Swapping CDs," you will not be prompted to swap CDs during the installation.

Task 4-5-2: Running the PeopleSoft Installer in GUI Mode

To run the PeopleSoft Installer in GUI mode:

1. Launch the installer. Click Next when you see the Welcome screen.
2. Click the radio button to accept the license agreement and click Next.
3. Enter your license code and click Next.
4. 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 *Enterprise PeopleTools 8.48 PeopleBook: Global Technology*.

5. Select the servers you want to install and click *Next*.

   Warning! If you are installing for DB2/UDB 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.

   Note. 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.

Note. 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.

Note. You must select the web server if you want to install Enterprise Resource Planning Connectors.

6. Specify the directory where you want to install PeopleTools and click *Next*.

Note. Please 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.

7. *UNIX only:* If you have checked Application Server, Batch Server, or Database Server, you are prompted to enter the TUXEDO directory.
8. Choose whether to install Enterprise Resource Planning Connectors. If you choose Yes, specify the installation directory. Note that this directory must not be the location in which PeopleTools is installed, or a subdirectory of that directory.

Note. The Enterprise Resource Planning Connectors feature is supported on Windows, Solaris, AIX, HP-UX, and Linux. (If you are on another platform, you will not see this screen.) PeopleSoft provides access to an additional software product, iWay SOAPswitch, which provides ERP adaptors, or connectors, that generate Web Service Description Language (WSDL) for bridging to SAP, Oracle, and Siebel development environments. You can then easily import the WSDL into PeopleSoft to create the desired integration points. For information on configuring iWay SOAPswitch consult the PeopleSoft Integration Broker PeopleBook.

See *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Integration Broker*

Note. If you need to refer to the ERP installation log files, they will either be in your user home directory or in the directory in which ERP is installed.

9. Specify the location of your Connectivity Program Directory and click *Next*.

   The default location for the connectivity software for your platform (as set by the vendor) is listed in the following table. If the database connectivity software was installed to a different directory, enter that path instead.

Platform Name	Default Location of Database Connectivity Libraries
DB2 for z/OS	C:\sqllib\bin

10. Depending on the PeopleSoft servers you selected, choose whether to install the PeopleTools icons and click Next.
11. If you elected to install PeopleTools icons, choose a valid group folder in which to create them and click Next.
12. At this point, 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 PIA). Select the hub port number (the default is 80). This needs to match the PIA port. If you change the port number for the PIA configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Using Environment Management Component."

13. The next screen lists the PeopleTools components (features) for which you are licensed. Accept the defaults for the PeopleTools features and click Next.
    - Select *PeopleTools* to install 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 PeopleTools applications outside of the delivered PeopleSoft Application.
    - The *PeopleTools Language Pack* and *PeopleTools Language Development Kit* contain the translated PeopleTools DLLs and the resource files and headers needed to build them.

      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 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.
14. 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.
15. If prompted, change your CD during the installation process.
16. After the files have been installed, click *Finish* to complete the setup.

Note. If you have chosen to install ERP connectors, you see an informational message indicating that they are being installed.

Task 4-5-3: Running the PeopleSoft Installer in Console Mode

To run the PeopleSoft Installer in console mode:

Note. The console mode installation is typically used on UNIX platforms.

---

1. Launch the PeopleSoft Installer in console mode. At the Welcome screen, press ENTER to continue.

   See Starting the PeopleSoft Installer.

   Note. If you are running the installer with a single CD-ROM drive, you should always follow the instruction in the task "Running the PeopleSoft Installer with a Single CD."

Note. If you mounted your CDs (as described in the task "Running the PeopleSoft Installer Without Swapping CDs"), we recommend that you launch the installer from an existing directory on the box, and not the directory that links to the CD, in the following two cases: *for HP-UX*, if the CDs are mounted on Jukebox; *for TRU64*, if the CDs are mounted on a NFS server.

2. *Windows only:* Accept the license agreement by selecting 1. Select 0 when you are finished.
3. Enter your license code, and press ENTER to continue.
4. 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. 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, 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.

   Note. You must select the web server if you want to install Enterprise Resource Planning Connectors.

5. Choose whether to install Enterprise Resource Planning Connectors.

   If you choose Yes, specify the installation directory. Note that this directory must not be the location in which PeopleTools is installed, or a subdirectory of that directory.

   Note. For the current release, the Enterprise Resource Planning Connectors feature is supported only on Windows, Solaris, AIX, HP-UX, and Linux. (If you are on another platform, you will not see this screen.) PeopleSoft provides access to a third-party software product, iWay SOAPswitch, which provides ERP adaptors, or connectors, that generate Web Service Description Language (WSDL) for touchpoints in SAP, Oracle, and Siebel systems. You can then easily import the WSDL into PeopleSoft to create the desired integration points.

   See *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Integration Broker*

6. *UNIX only:* If you checked Application Server, Batch Server, or Database Server, you are prompted to enter the TUXEDO directory.
7. At this point, 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 PIA). Select the hub port number (the default is 80). This needs to match the PIA port. If you change the port number for the PIA configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

   See *Enterprise PeopleTools 8.48 PeopleBook: Software Updates,* "Configuring and Running Environment Management Components."

8. *Windows only:* Specify the database connectivity directory.

   The default location for the connectivity software for your platform (as set by the vendor) is listed in the following table. If the database connectivity software was installed to a different directory, enter that path instead.

Platform Name	Default Location of Database Connectivity Libraries
DB2 UDB for z/OS	C:\sqllib\bin

9. *Windows only:* Indicate whether you want icons to be created.
10. Choose the products that you wish to install:

```
To select/deselect a feature or to view its children, type its number

                1.   [X] PeopleTools
                2.   [X] PeopleTools System Database
                3.   [X] PeopleTools Language Pack
                4.   [X] PeopleTools Language Development Kit
```

11. 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 8.48 will be installed in the following location:
c:\temp\ptest
with the following features:
PeopleTools
PeopleTools System Database
PeopleTools Language Pack
PeopleTools Language Development Kit

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>

ERP Connectors Installation:
Not selected

Environment Hub Configuration:
Hub machine name: PSEMHUB
Hub port number: 80

Press 1 for Next, 2 for Previous, 3 to Cancel, or 4 to Redisplay [1]
```


12. Press ENTER to start the installation. You may be prompted to insert the next CD.
13. The PeopleSoft Installer will create a text-based progress bar to indicate the progress of the install.
14. Please 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.

Note. If you chose to install ERP connectors, you see an informational message indicating that they are being installed.

Task 4-6: Installing the Application CD

After installing the PeopleTools CD, install the application CD to the same <PS_HOME> directory. The screens may look slightly different depending upon which application you install.

Note. If you are installing more than one application, it is a good idea to create an application-specific <PS_HOME> and carry out an installation of 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 PeopleTools.

Note. To properly install a Demo database, you must select both the System Database and the Demo Database options during the installation of your PeopleSoft applications.

Note. The next chapter discusses the installation of the application database component to the database server.

To install the application CD:

1. Insert the application CD into the CD-ROM drive and run the setup application from the root directory of the CD.

   See Running the PeopleSoft Installer.
2. After reading the Welcome information, click Next.
3. Click Yes to agree to the Software License Agreement.
4. Enter the PeopleSoft license code and click Next.

   Note. All modules for the product line you are installing exist on the PeopleSoft Application and Database CDs regardless of the modules purchased. Your unique license code will "unlock" the combination of modules you purchased. A master license key no longer exists.
5. Select the servers you want to install and click Next.
6. Specify the directory where you want to install the application. You must specify the <PS_HOME> directory; that is the directory where you installed PeopleTools for a given server. Click Next.
7. A feature selection screen appears. (What you see depends on what product you are installing.) Select the features that you wish to install and click Next.

8. In the confirmation dialog box, click Next to begin the installation. A message box appears that indicates the progress of the installation.
9. Click Finish to exit the PeopleSoft installation program.

Task 4-7: Loading the Multilanguage CD

If you have licensed and selected to install languages other than English, you need to load the application-specific PeopleSoft Multilanguage CD. Each application CD has a corresponding Multilanguage CD that contains all the non-English translations.

Warning! The release numbers for the application CD and the Multilanguage CD must be in sync. For example, if you are installing HRMS 8.3, you can only use the Multilanguage CD HRMS 8.3 ML; you cannot use HRMS 8 SP1.

Note. Load the Multilanguage CD after you install the PeopleTools CD and the Application CD. Install the Multilanguage CD to the same <PS_HOME> as you used for the PeopleTools and Application CD.

To load the Multilanguage CD:

1. Insert the Multilanguage CD into the CD-ROM drive and run the setup application from the root directory of the CD.
2. After reading the Welcome message, click Next.
3. Click Yes to agree to the Software License Agreement.
4. Enter the PeopleSoft license code and click Next.
5. You will be asked to select the components you want to install.

   (What you see depends upon what product you are installing.) Select the applications you want to install and click Next.
6. From the confirmation dialog box, click Next to begin the installation.

   A message box appears indicating the progress of the installation.
7. Click Finish to exit the PeopleSoft installation program.

CHAPTER 5

Setting Up the Windows File Server

This chapter discusses:

- Understanding the File Server
- Mapping a Drive on the Install Workstation
- Installing the PeopleTools CD to the File Server
- Installing the Application CD
- Loading the Multilanguage CD
- Binding Windows "SQR for PeopleSoft" DB2 Connect Packages

Understanding the File Server

The file server is the environment (or file) repository for the PeopleTools Development Environment, which is required for the Database Configuration Wizard to run. The file server is also used for the files necessary to perform an upgrade. This includes Upgrade Assistant or Change Assistant and all of the executables and scripts necessary to perform an upgrade. You will apply patches and updates from PeopleSoft Customer Connection 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.

See "Preparing for Installation," Installing Supporting Applications.

Note. *The information in this chapter applies to installations on both UNIX and Windows.* If you are doing an installation only for UNIX boxes, you need a Windows file server. If you are working only on Windows, and you set up your file server in the previous chapter, you can skip this chapter.

Note. For DB2 UDB for z/OS, the file server is used as a staging location to FTP files to the z/OS batch server only.

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 this chapter to perform such local installations.

Warning! The PeopleSoft Installer installs COBOL source code from the CD to your Windows file server and to all UNIX servers, but not to the rest of your Windows servers.

If you are running Windows and your application requires COBOL, we require that you maintain a central repository of your COBOL source code on the file server. If you apply a patch or make customizations, apply them to the file server first, and then disseminate them across your servers as described here. *If you have Windows file, application, and batch servers*, you should compile the COBOL on the file server and copy the cblbina, cblbinu, or cblbine directory (depending on whether you have an ASCII, Unicode or EBCDIC database) to all the application and batch servers. The COBOL compiler itself does not have to be on the file server—as long as the workstation on which it is installed has full access to the shared drives.

For every type of UNIX operating system, we recommend that you designate a single server (either application or batch) as the compile server, so that you can compile COBOL from a central location and then distribute the cblbin directory to the rest of your application and batch servers. If you use this approach, you need only copy patches or customizations from the file server 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. If you prefer, you can copy patches or customizations from the file server to all of your UNIX servers and compile the COBOL on each machine.

Note. If you want to copy compiled COBOL programs from one UNIX server to another, both servers must be on the same operating system.

For example, if you compile on Solaris 8 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 computer).

Note. 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.

Task 5-1: Mapping a Drive on the Install Workstation

If you need to install the CDs to the file server 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. The <PS_HOME> directory was discussed in the previous chapter.

See “Using the PeopleSoft Installer.”

Note. If you install the CDs directly from the file server's CD-ROM drive, you can skip this task. Installing directly from the file server is preferable for installation because you do not need a drive to be mapped. It also provides faster performance, as there is no need for a network connection between the workstation and the server.

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 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.

Task 5-2: Installing the PeopleTools CD to the File Server

To install the PeopleTools CD-ROM to the file server:

1. Insert the PeopleTools CD into the CD-ROM drive and run the setup application from the root directory of the CD.

   A welcome screen appears.

2. Click Next.

   The licensing agreement appears.

3. Click Yes and enter your 31-digit license code from the license code sheet.
4. Click Next and choose whether to use a Unicode or a non-Unicode database.

   See "Preparing for Installation," Planning Multilingual Strategy.

   Note. Unicode databases are beneficial to customers who intend to deploy their 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 *Enterprise PeopleTools 8.48 PeopleBook: Global Technology.*

5. Select all of the servers for installation and click Next.

   Warning! If you are installing for DB2 UDB 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.

6. Click the Browse button, choose the path of the <PS_HOME> directory on the file server, and click OK.

   Click Next.

7. Choose whether to install the Enterprise Resource Planning connectors.

   If you choose Yes, specify the installation directory. Note that this directory must not be the location in which PeopleTools is installed, or a subdirectory of that directory.

   Note. The Enterprise Resource Planning Connectors feature is supported on Windows, Solaris, AIX, HP-UX, and Linux. (If you are on another platform, you will not see this screen.) PeopleSoft provides access to an additional software product, iWay SOAPswitch, which provides ERP adaptors, or connectors, that generate Web Service Description Language (WSDL) for bridging to SAP, Oracle, and Siebel development environments. You can then easily import the WSDL into PeopleSoft to create the desired integration points. For information on configuring iWay SOAPswitch consult the PeopleSoft Integration Broker PeopleBook.

   See *Enterprise PeopleTools 8.48 PeopleBook: Integration Broker.*

8. Select the location of your connectivity software.

The default location for your connectivity software (as set by the vendor) is listed in the following table. If the database connectivity software was installed to a different directory, enter that path instead.

Platform Name	Location of Database Connectivity Libraries
DB2 UDB for z/OS	C:\sqllib\bin

9. In the next dialog box, choose Yes to install an Installation icon group on the install workstation. Then click Next.
10. Then specify the desired program group folder (the default is PeopleTools 8.4 Installation) and click Next (a program folder name cannot contain any of the following characters: \ / : * ? " < > |). This step creates an icon group on the installing machine that supplies shortcuts to every program needed throughout the installation process.
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 PIA). Select the hub port number (the default is 80). This needs to match the PIA port. If you change the port number for the PIA configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

    See *Enterprise PeopleTools 8.48 PeopleBook: Software Updates,* "Configuring and Running Environment Management Components."
12. A component selection window appears. This screen lists the PeopleTools components for which you are licensed. Select the products to install from the Components list.

    Note. The components PeopleTools Language Pack and PeopleTools Language Development Kit contain the translated PeopleTools DLLs and the resource files and headers needed to build them. If you do not need translated files, you may choose to not install these two components.

    - Select *PeopleTools* to install PeopleTools Development Environment and the Upgrade Environment This component contains the core PeopleTools files and is required for the proper operation of your PeopleSoft Development and Upgrade environment.
    - Select *PeopleTools Language Pack* if you plan on running the Windows components of your 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 don't need this component.
    - Select *PeopleTools Language Development Kit* if you plan on modifying or creating your own new translations for the 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.
    - Select *PeopleTools System Database* to allow your developers to create custom PeopleTools applications outside of the delivered PeopleSoft Application.
13. Click Next. You should see the Confirm Products dialog box.
14. Click Next to verify that you want to install to the specified directory. You'll see a progress indicator so you can monitor the progress of your installation.
15. When the setup program successfully completes the installation of PeopleTools, click Finish to exit the installation program.

Task 5-3: Installing the Application CD

After installing the PeopleTools CD, install the application CD to the same <PS_HOME> directory. The screens may look slightly different depending upon which application you install.

Note. If you are installing more than one application, it is a good idea to create an application-specific <PS_HOME> and carry out an installation of 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 PeopleTools.

Note. To properly install a Demo database, you must select both the System Database and the Demo Database options during the installation of your PeopleSoft applications.

Note. The next chapter discusses the installation of the application database component to the database server.

To install the application CD:

1. Insert the application CD into the CD-ROM drive and run the setup application from the root directory of the CD.

   See Running the PeopleSoft Installer.
2. After reading the Welcome information, click Next.
3. Click Yes to agree to the Software License Agreement.
4. Enter the PeopleSoft license code and click Next.

   Note. All modules for the product line you are installing exist on the PeopleSoft Application and Database CDs regardless of the modules purchased. Your unique license code will “unlock” the combination of modules you purchased. A master license key no longer exists.
5. Select the servers you want to install and click Next.
6. Specify the directory where you want to install the application. You must specify the <PS_HOME> directory; that is the directory where you installed PeopleTools for a given server. Click Next.
7. A feature selection screen appears. (What you see depends on what product you are installing.) Select the features that you wish to install and click Next.
8. In the confirmation dialog box, click Next to begin the installation. A message box appears that indicates the progress of the installation.
9. Click Finish to exit the PeopleSoft installation program.

Task 5-4: Loading the Multilanguage CD

If you have licensed and selected to install languages other than English, you need to load the application-specific PeopleSoft Multilanguage CD. Each application CD has a corresponding Multilanguage CD that contains all the non-English translations.

Warning! The release numbers for the application CD and the Multilanguage CD must be in sync. For example, if you are installing HRMS 8.3, you can only use the Multilanguage CD HRMS 8.3 ML; you cannot use HRMS 8 SP1.

Note. Load the Multilanguage CD after you install the PeopleTools CD and the Application CD. Install the Multilanguage CD to the same <PS_HOME> as you used for the PeopleTools and Application CD.

To load the Multilanguage CD:

1. Insert the Multilanguage CD into the CD-ROM drive and run the setup application from the root directory of the CD.
2. After reading the Welcome message, click Next.
3. Click Yes to agree to the Software License Agreement.
4. Enter the PeopleSoft license code and click Next.
5. You will be asked to select the components you want to install.

   (What you see depends upon what product you are installing.) Select the applications you want to install and click Next.
6. From the confirmation dialog box, click Next to begin the installation.

   A message box appears indicating the progress of the installation.
7. Click Finish to exit the PeopleSoft installation program.

Task 5-5: Binding Windows “SQR for PeopleSoft” DB2 Connect Packages

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 7.1.0

   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.

CHAPTER 6

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

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

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

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.
- 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 CD installation was performed, it should have a PeopleTools 8.4 Installation program group, which was created when you loaded the PeopleTools CD-ROM. This isn't a requirement, but it does make it more convenient to run the PeopleTools install applications.

See Also

“Preparing for Installation”

“Setting Up the File Server”

Task 6-1: 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.
- Installs the PeopleSoft ODBC driver, which is used for PeopleSoft Open Query and for Crystal Reports, and sets up an ODBC user data source name (DSN).

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 CD 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 8.4 Installation, Configuration Manager*. (This program group will be available if you installed the PeopleSoft CDs from this workstation.)
- If the *PeopleSoft 8.4* 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 6-2: 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 PeopleSoft 8. The connect ID and password must match the z/OS ID that you set up in Chapter 1.

2. Select the Crystal/Bus. Interlink/JDeveloper tab and set the following options:
   - *Crystal EXEs Path* — Set this to the location of your 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 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 Directory* — See the appendix “Using the XSLT Mapper with Oracle BPEL Process Manager” for information on using this option.

See Also

“Preparing for Installation,” Using Connect ID

Task 6-3: Editing the Default Profile

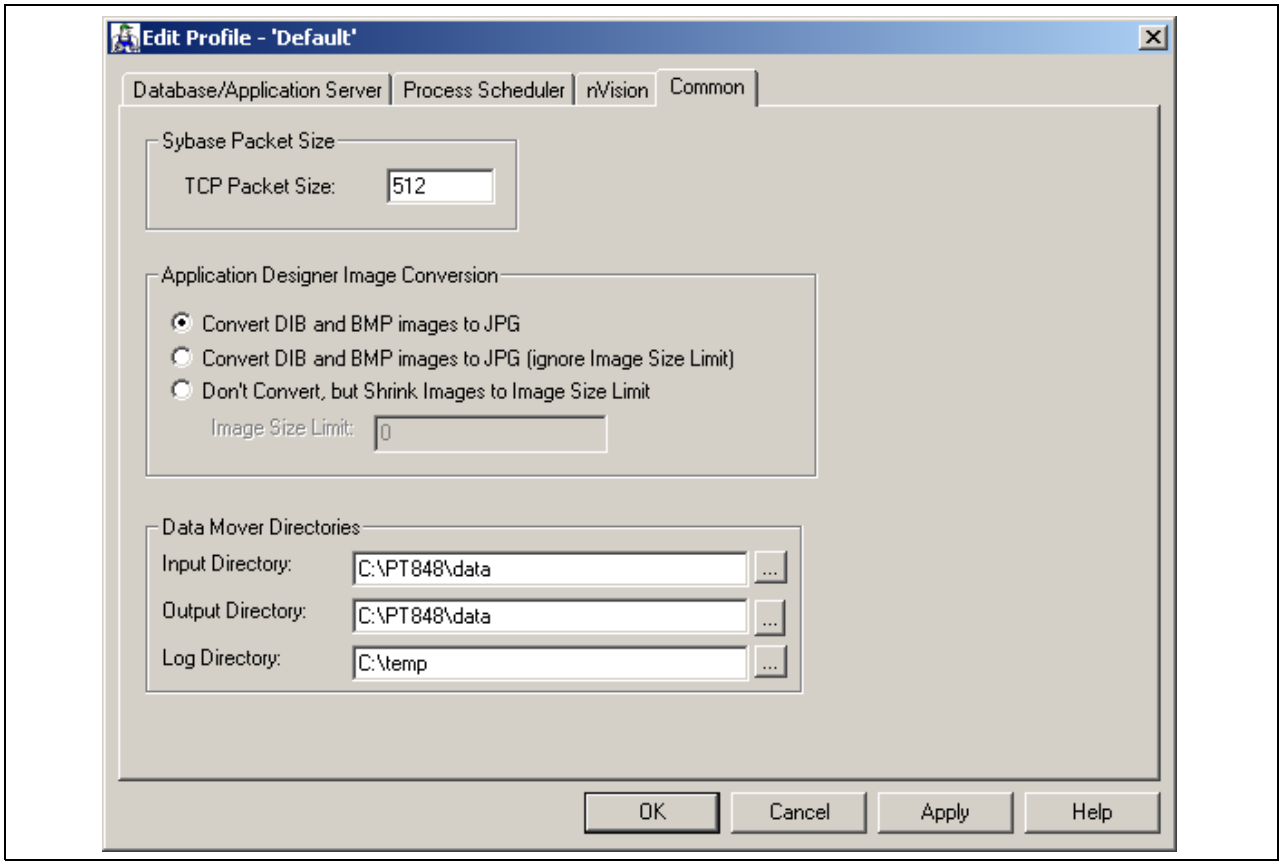
Begin by editing the default profile for the workstation. Among other things, this will verify that the paths to <PS_HOME> and its subdirectories are correctly set, which is required for subsequent tasks.

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, verify the following options; these should have been set correctly by the CD installation program:
   - Verify that the PeopleSoft Home Directory (PS_HOME) field is set to the path to <PS_HOME> on the file server.
   - 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.



Edit Profile dialog box

The following fields 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

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Using PeopleSoft Configuration Manager"

Task 6-4: Running Client Setup

The Client Setup tab does the following:

- Installs a PeopleSoft program group on the workstation.
- Installs the PeopleSoft ODBC driver required for Open Query and Crystal Reports.
- 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, including ODBC driver files, 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 8.4*.
3. If you do not have a PeopleTools 8.4 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 8.4 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. If applicable, select the option Install PeopleSoft ODBC Driver. This installs the ODBC driver, and sets up a user ODBC data source name required by PeopleSoft Query and by Crystal Reports.
5. 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 8.4 program group or install local DLLs.
6. Click OK to run Client Setup and close Configuration Manager.

See Also

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Query

Enterprise PeopleTools 8.48 PeopleBook: Crystal Reports for PeopleSoft

CHAPTER 7

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 has been re-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

Enterprise PeopleTools 8.48 Hardware and Software Requirements

Enterprise PeopleTools 8.48 PeopleBook: Global Technology

PeopleSoft Customer Connection, Supported Platforms (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

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 Payroll or 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.

Note. 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. PeopleSoft 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

Enterprise PeopleTools 8.48 Hardware and Software Requirements

PeopleSoft Customer Connection, Updates and Fixes

Task 7-1: 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.

Note. Reinstalling PeopleTools overwrites your customized PSXFR.CFG file with a blank version.

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).		PS.HR840
2. PeopleSoft File Server High Level Directory <PS_HOME>—the directory to which you installed the PeopleSoft CD-ROM, such as N:\HR840.		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		N:\HR840\STAGE
4. File Transfer Method Indicates which file transfer protocol will be used. Supported protocols include: 3270/Send Microsoft FTP Suggested Default: Microsoft FTP		Microsoft File Transfer Protocal (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.		

Transfer Parameters	Site-Specific Value	Sample Value
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.		USER1
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.		//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: //*		//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: //*		// NOTIFY=&SYSUID

Transfer Parameters	Site-Specific Value	Sample Value
10. OS390z/OS/DB2 Operator ID This parameter is for PeopleSoft internal use. Let it default to OPRID.		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		PS001
12. DB2 Subsystem Name This is the DB2 Subsystem used for the PeopleSoft application you are currently installing (DMO or SYS). Suggested Default: DDDD		DSNT
13. DB2 System Dataset Containing DSN Member This is the DB2 system dataset that contains member DSN. Suggested Default: SYS1.DB2.DDDD.DSNLOAD		DSN710.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		DSN710.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		DSN710.RUNLIB.LOAD

Transfer Parameters	Site-Specific Value	Sample Value
16. PeopleSoft Database Name Suggested Default: DB		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		PTPSQLRT
18. Plan Name for PTPSQLRT via Call Attach facility (for USS) Suggested Default: PTPSQLRA		PTPSQLRA
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*		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		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.V3R2M0.SIGYCOMP or IGY.V3R3M0.SIGYCOMP for ANSI Database (EBCDIC) IGY.V3R4M0.SIGYCOMP for Unicode Database		IGY.V3R3M0.SIGYCOMP

Transfer Parameters	Site-Specific Value	Sample Value
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		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		SYSPERM
24. Assembler System Dataset Containing STIMER		SYS1.MACLIB
25. Assembler Program Name		ASMA90
26. SQR High Level Qualifier This is the high-level qualifier used for SQR datasets. Suggested Default: PS.HR840.SQR		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		SQR
28. SQR Plan Name This is the DB2 Plan name assigned for SQR. Suggested Default: DBCALLS		SQR840
29. Target Server Hardware Platform		UNIX System Services (OS390z/OS)
30. PeopleSoft Unix System Services Home Directory Suggested Default: /u/data001 /dbname		/u/data001/PSHR800
31. Library for DB2 CLI Load Module (that is, DSNAOCLI)		DSN710.SDSNLOAD

Transfer Parameters	Site-Specific Value	Sample Value
32. Plan Name for CLI Packages (that is, DSNACLI) Suggested Default: DSNACLI		DSNACLI
33. Attachment Type for ODBC to Connect to DB2 Suggested Default: RRSAF		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/IBM /J1.4.2		/usr/lpp/java/J1.4.2

Task 7-2: 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 7-3: 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 Windows machine, making sure to select *all* of the PeopleSoft servers. This 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.BAT or PSFTXFR.TXT, depending on whether you transfer files to z/OS using 3270/Send or FTP, respectively.
- 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 7-3-1: Running the PeopleSoft Server Transfer Program

To run the PeopleSoft Server Transfer program:

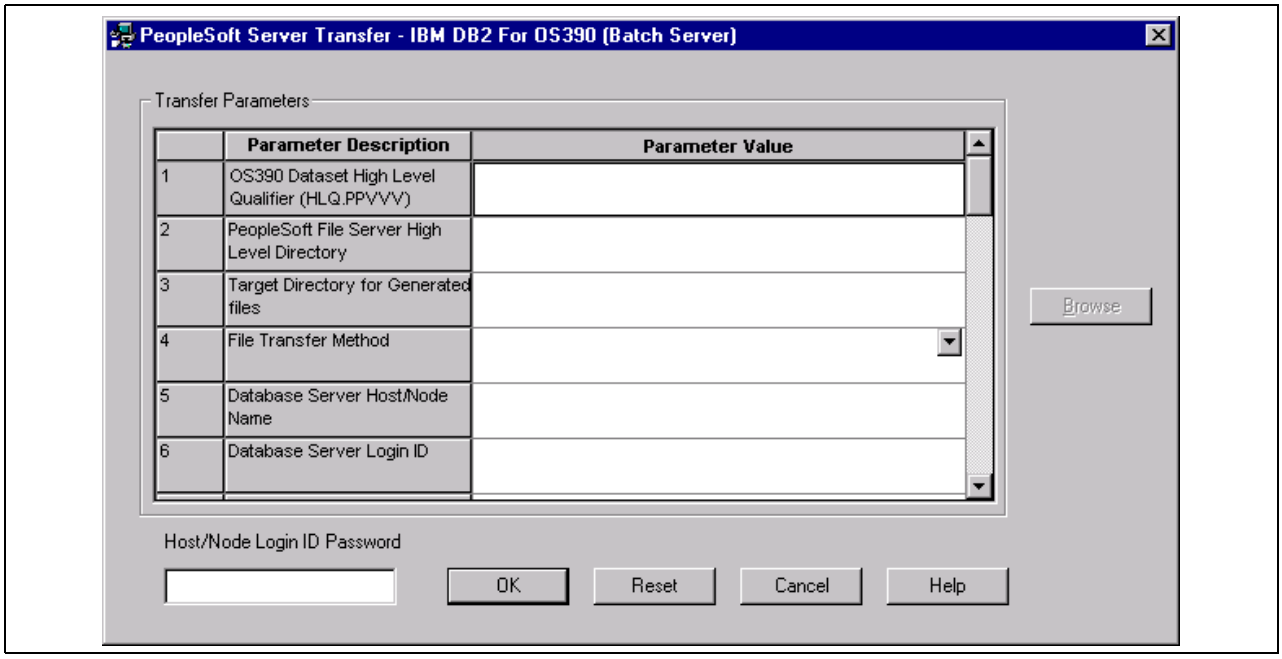
1. Start PeopleSoft Server Transfer.

   Enter the following path into the Run dialog box:

   ```
   <PS_HOME>\BIN\CLIENT\WINX86\pstrans.exe
   ```

   or select the Server Transfer shortcut, if you elected to create a Program Group during the PeopleTools CD installation.

   You see the PeopleSoft Server Transfer screen, 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 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 PeopleSoft (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.

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.
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.
PSFTXFR.BAT	The Target Directory for Generated Files that you specified previously.	A 3270/TSO Send command file that contains 3270/TSO Send statements to transfer the files. This script is an alternative to PSFTXFR.TXT and is only generated if you selected the 3270/TSO Send 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 or the 3270/TSO Send 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 7-3-2: 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. If you are using a 3270/TSO Send file transfer protocol, the file containing transfer commands is in <PS_HOME>\STAGE and is entitled PSFTXFR.BAT. If you are using 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 7-3-3: 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
	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	n/a	*.SQR	HLQ.PSVVV.SQRSRC	Application SQRs
		*.SQC	HLQ.PSVVV.SQRINC	Application SQR include members
		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	n/a	??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 UDB 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 7-4: 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

   ```
   chmod 755 psmv.sh
   ```

   at the prompt.

3. Execute the scripts by entering `psconfig.sh` and `psmv.sh` at the prompt.

Task 7-5: 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 7-6: 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 7-7: 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 7-8: 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. PeopleSoft 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 7-9: 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 8

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
- Updating Database and Tablespace Values for %UpdateStats Tables (Enhanced Install Only)
- 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 database has no company specific data, and can be used to load your data and begin development of your production database.
- *Demo:* The Demo 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 PeopleTools installation guide and any additional instructions provided by CRM. To find the installation documentation specific to your application, go to PeopleSoft Customer Connection. Under the Site Index, find the category “Installation Guides and Notes,” and then look under the subcategory for your particular application.

Note. DB2 UDB for z/OS is the official IBM name for the DBMS. For the sake of brevity, this documentation sometimes refers to DB2 UDB for z/OS as *DB2 z/OS*, and it sometimes refers to DB2 UDB for Linux, UNIX, and Windows as *DB2/LUW*.

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 *Enterprise PeopleTools 8.48 PeopleBook: Data Management*

- %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 is specified in the code, per table, but on DB2 z/OS, the RUNSTATS utility processes at the tablespace level. This can present a performance issue with our standard 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, we provide two paths for building the database objects: The "traditional" path places all tables in shared tablespaces, for those customers who may not want to use the %UpdateStats feature; and the "enhanced" path segregates each table that is the object of the %UpdateStats MetaSql into its own unique tablespace.

  You may install with either path. If you choose the enhanced path, you are not forced into enabling the %UpdateStats feature, but if you chose to enable it, or anticipate enabling it in the near future, we strongly recommend that you follow the enhanced path.

  The installation steps are similar, but the scripts to be executed are different for each path. Also, the enhanced path requires one additional script.

Note. Beginning with PeopleSoft Enterprise 9.0 Applications, the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) is required to complete the enhanced path installation. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool."

PeopleSoft Enterprise Learning Solutions 9 is an exception. It was released on PeopleTools 8.47, and includes the scripts for the enhanced path. Customers installing this release who choose the enhanced path should use the delivered scripts. PeopleSoft Enterprise Learning Solutions 8.9 does not use %UpdateStats, so does not have scripts for the enhanced path.

The following tables show the scripts that are required for the traditional and enhanced paths.

Scripts Required for Traditional Paths, by Product Line							Comments
HRMS	FIN/SCM	EPM	PA	CRM	LM	IM	
HCDDL.sql	EPDDL.sql	PFDDL.sql	PADDL.sql	CRDDL.sql	LMDDL.sql	IMDDL.sql	Contains DDL to create stogroups, databases and tablespaces.
HCDDLU.sql	EPDDLU.sql	PFDDLU.sql	PADDLU.sql	CRDDLU.sql	n/a	n/a	Contains DDL to create stogroups, databases and tablespaces for Unicode databases.
TBDDL.sql	TBDDL.sql	TBDDL.sql	TBDDL.sql	TBDDL.sql	TBDDL.sql	TBDDL.sql	Contains DDL to create tables.
TBDDLU.sql	TBDDLU.sql	TBDDLU.sql	TBDDLU.sql	TBDDLU.sql	n/a	n/a	Contains DDL to create tables for Unicode databases.
n/a	n/a	n/a	n/a	n/a	n/a	n/a	Contains Update statements to ’reassign’ tablespaces for Temp Table object types.

Scripts Required for Enhanced Paths, by Product Line for Application Releases prior to 9.0						Comments
HRMS	FIN/SCM	EPM	CRM	LM	IM	
H1DDL.sql	E1DDL.sql	P1DDL.sql	C1DDL.sql	n/a	I1DDL.sql	Contains DDL to create stogroups, databases and tablespaces.
H1DDLU.sql	E1DDLU.sql	P1DDLU.sql	C1DDLU.sql	n/a	I1DDLU.sql	Contains DDL to create stogroups, databases and tablespaces for Unicode databases.
H2DDL.sql	E2DDL.sql	P2DDL.sql	C2DDL.sql	n/a	I2DDL.sql	Contains DDL to create tables.
H2DDLU.sql	E2DDLU.sql	P2DDLU.sql	C2DDUL.sql	n/a	I2DDLU.sql	Contains DDL to create tables for Unicode databases.
H3DML.dms	E3DML.dms	P3DML.dms	C3DML.dms	n/a	n/a	Contains Update statements to 'reassign' tablespaces for Temp Table object types.

Note. Beginning with PeopleSoft Enterprise 9.0 Applications, these scripts will no longer appear on the installation CD. Use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to complete the enhanced installation. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

Using Temporary Tables

Temporary tables are a new object type defined in Application Designer to support Application Engine concurrent processing. Within PeopleSoft 8 applications, 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Application Engine.*

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 8-1: 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 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) or 3270/TSO SEND.

Files in the SCRIPTS subdirectory	Value of *XX*	Description
*XX*DDL.SQL	• Use "HC" and "H1" for PeopleSoft HRMS. • Use "EP" and "E1" for PeopleSoft Financials/Supply Chain Management. • Use "PF" and "P1" for Enterprise Performance Management • Use “IM” and “I1” for Incentive Management. • Use "PA" for Enterprise Portal Solutions. • Use "CR" and "C1" for Customer Relationship Management.	This script contains all the DDL statements to create database, storage groups, and table spaces
*XX*DDLU.SQL	• Use "HC" and "H1" for PeopleSoft HRMS. • Use "EP" and "E1" for PeopleSoft Financials/Supply Chain Management. • Use "PF" and "P1" for Enterprise Performance Management. • Use “IM” and “I1” for Incentive Management. • Use "PA" for Enterprise Portal Solutions. • Use "CR" and "C1" for Customer Relationship Management.	This script contains all the DDL statements to create database, storage groups, and table spaces for an UNICODE database.

Files in the SCRIPTS subdirectory	Value of *XX*	Description
*X*2DDL.SQL	• Use "H" for PeopleSoft HRMS. • Use "E" for PeopleSoft Financials/Supply Chain Management. • Use “C” for Customer Relationship Management. • Use “I” for Incentive Management. • Use "P" for Enterprise Performance Management.	The script is an alternative to script TBDDL, which contains DDL to create tables.
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.
IXDDL.SQL		This script contains all the CREATE INDEX statements for the product line.

Task 8-2: 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 PeopleSoft provides where an OWNERID cannot be customized. 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 8-3: 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 8-4: 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 8-5: 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

PeopleSoft delivers a generic script to create the DB2 UDB 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.

The XXDDL version is used for the traditional installation, and the X1DDL version is used for the enhanced installation for pre 9.0 Application releases, as discussed at the beginning of this chapter. Use 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
HRMS	HC or H1
Financials/Supply Chain Management	EP or E1
Enterprise Performance Management	PF or P1
Customer Relationship Management	CR or C1

Task 8-5-1: 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 HRMS 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 8-5-2: Working with Tablespaces

This section discusses:

- Using Tablespaces
- Following the Standard Tablespace Names Formats
- Naming Tablespace Defaults
- Parsing Tablespaces

Using Tablespaces

For tablespaces, PeopleSoft 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 Release 8, a new type of table is 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, the x1DDL.SQL scripts are provided for pre-9.0 Application releases to facilitate placing each table that is the object of the %UpdateStats function to its own unique tablespace. 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 for Enterprise 9.0 Applications. 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 Names Formats

The standard tablespace names that PeopleSoft 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.
- The scripts x1DDL.SQL further categorize tablespaces as follows:
- MAIN#### — Tables defined in Application Designer as SQL Tables that are the object of the %UpdateStats feature, where #### is the number assigned to make the tablespace name unique.
- TEMP#### — Tables defined in Application Designer as temporary tables that are the object of the %UpdateStats feature, where #### is the number assigned to make the tablespace name unique.
- 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
- PTCMSTAR — Tables generated by PeopleTools Cube Manager
- 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 common tablespaces and their defaults.

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.
PTCMSTAR	Tables dynamically created by Cube Manager will use 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.
MAIN####	Application tablespaces that contain a single Application Designer defined SQL table that is the object of the %UpdateStats feature, where #### is the number assigned to make the tablespace name unique.
TEMP####	Application tablespaces that contain a single Application Designer defined temporary table that is the object of the %UpdateStats feature, where #### is the number assigned to make the tablespace name unique.

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.
- TEMP#### tablespaces are placed in databases separate from general application tables. These tablespaces also use a separate 4K buffer pool.

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 *Enterprise PeopleTools 8.48 PeopleBook: Data Management.*

Task 8-6: Creating Tables

The CREATE TABLE statements to build the tables for the application group are in Partitioned Data Set HLQ.PS*vvv*.DDLLIB. There are several versions of the file containing the DDL to create the tables. TBDDL is used for the traditional installation path, and X2DDL is used for the enhanced installation path (pre-9.0 Application releases; X is a one-letter code denoting the Product Line). For Unicode databases, TBDDLU is used for the traditional installation path, and X2DDLU is used for the enhanced installation path (pre-9.0 Application releases). 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(X1DDL) 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 8-7: 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 8-8: 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 *Enterprise PeopleTools 8.48 PeopleBook: Global Technology*

Task 8-8-1: 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 PeopleSoft-provided translations for non-English languages, you must load English (ENG) in addition to the foreign language components.

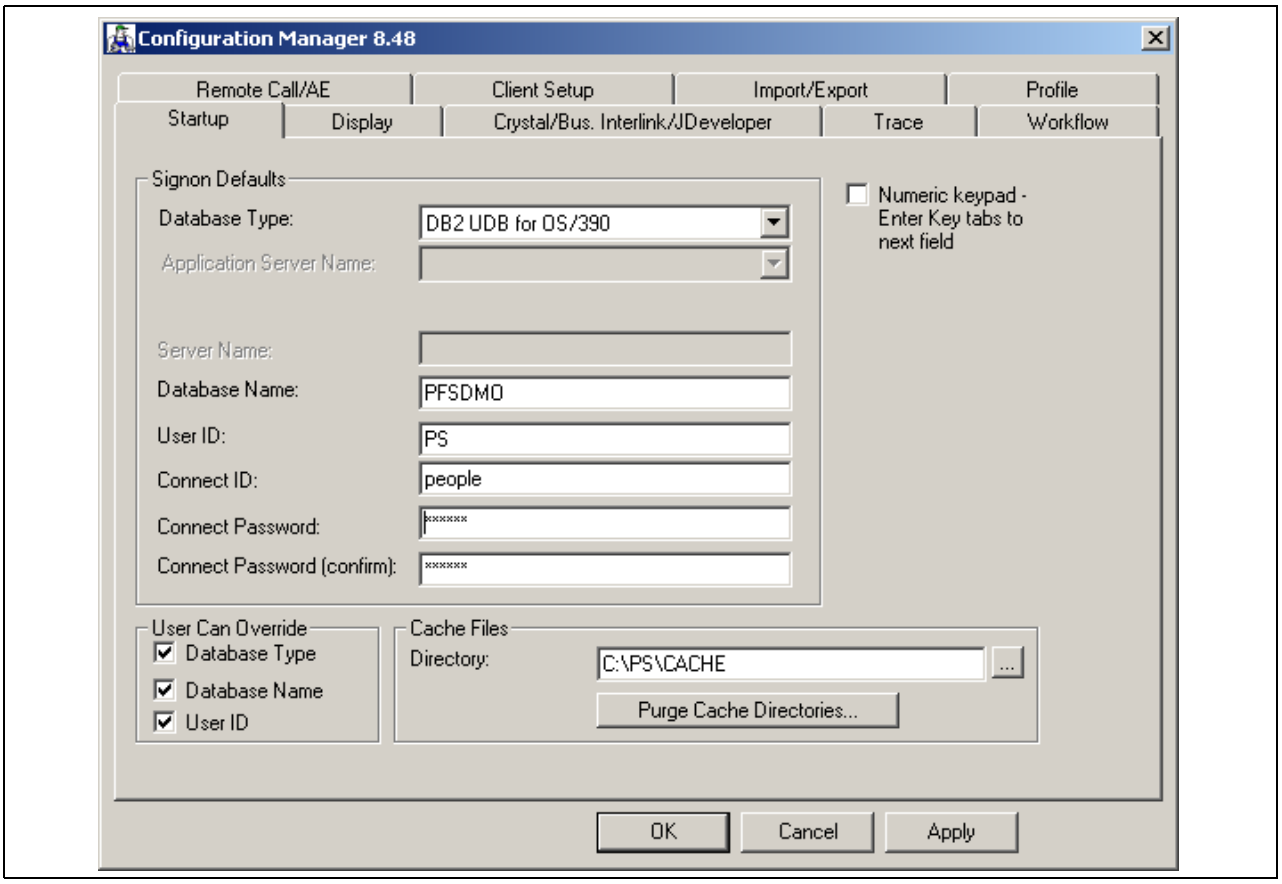
Note. If you haven't already done so, refer to Chapter 1 before determining whether to install multiple languages and whether to change your base language. See "Preparing for Installation," Planning Multilingual Strategy.

Task 8-8-2: 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 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.



Configuration Manager dialog box

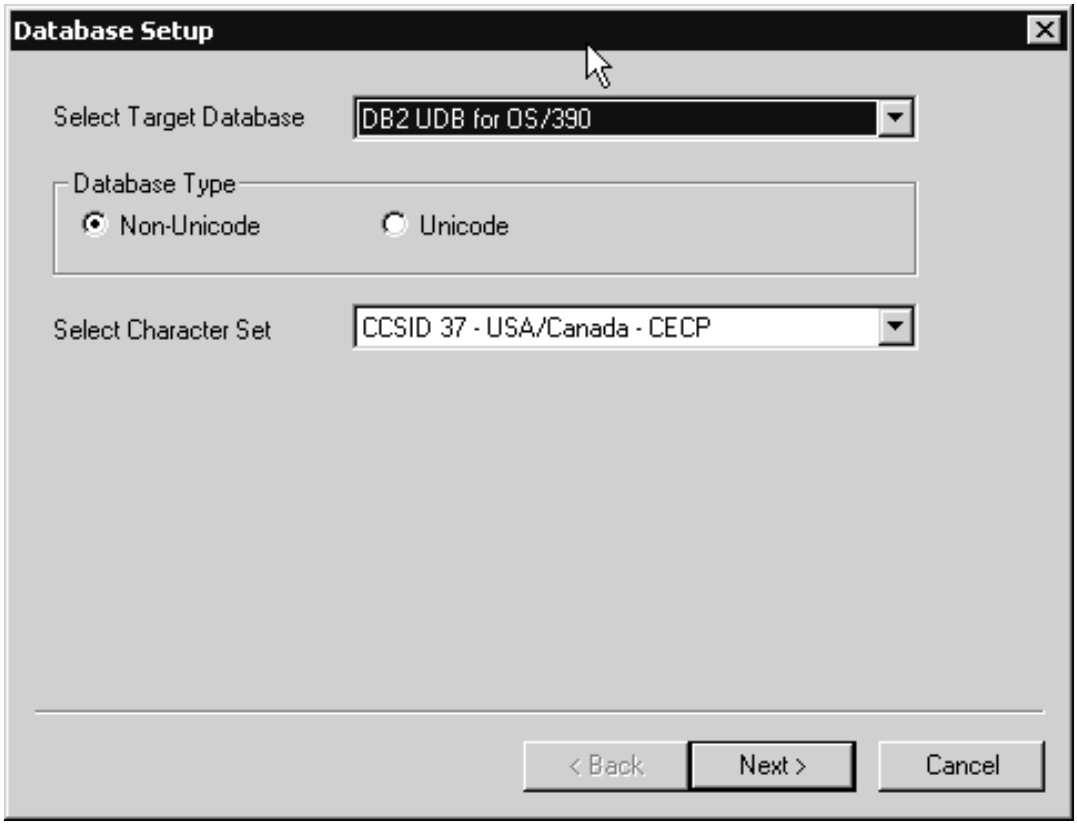
2. Log onto the database shell in *Bootstrap* mode via Data Mover.

   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 to eight characters or less.

3. Select Start, Programs, PeopleTools 8.4, Data Mover (or go to <PS_HOME>\bin\client\winx86 and run psdmt.exe). The PeopleSoft Logon window appears.
4. 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.
5. Choose File, Database Setup. You see the Database Setup dialog:



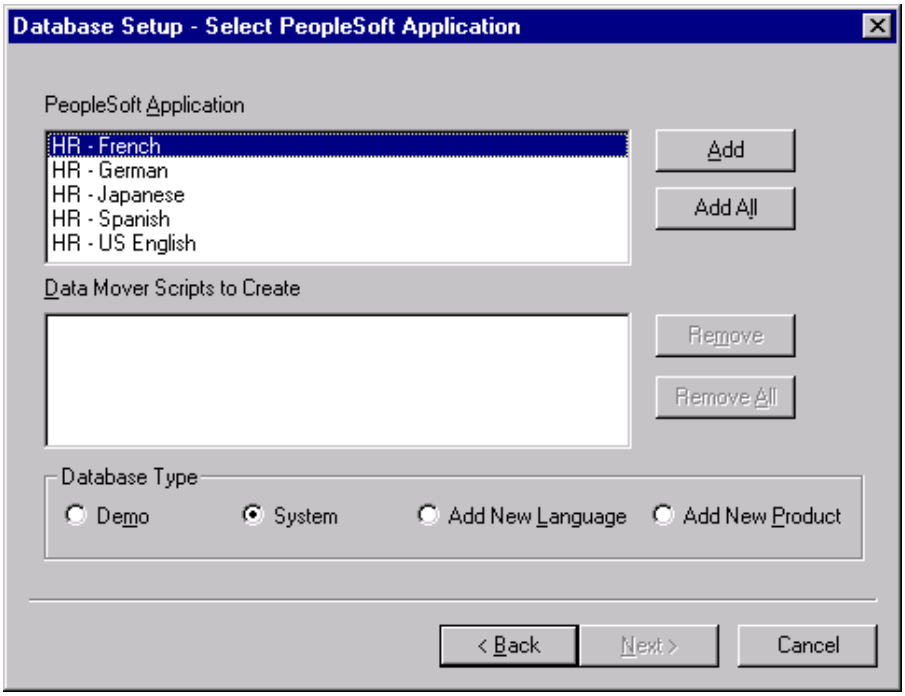
Database Setup dialog box

6. If necessary, change your Character Set, and click *Next*.

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.

---

7. Select the Demo or System radio button, depending on which type of PeopleSoft database you are installing.

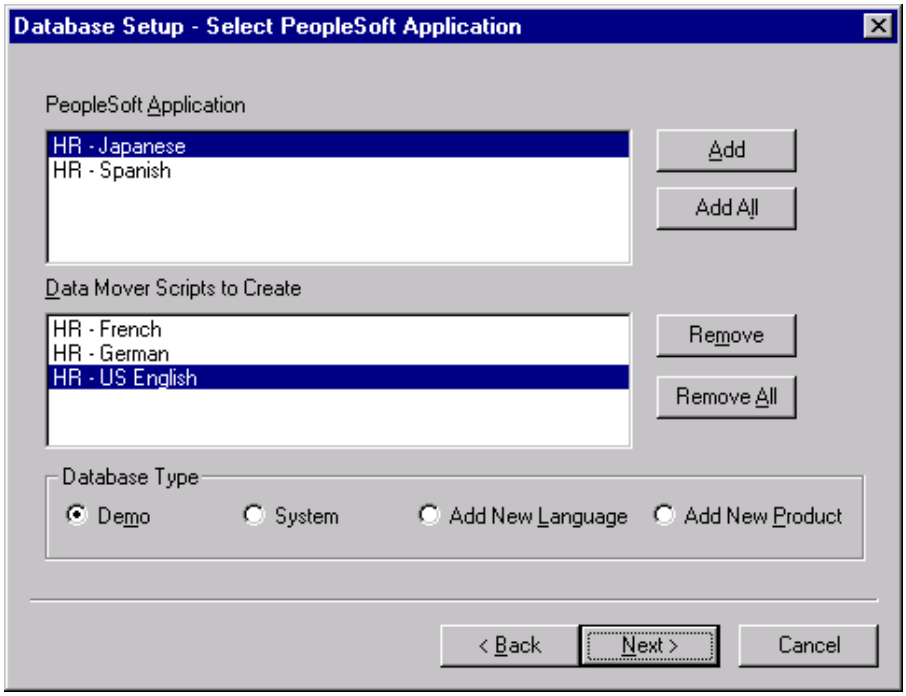


Choosing the PeopleSoft Database type in the Database Setup dialog box

8. Select the Product(s) for which you want to create a Data Mover script from the PeopleSoft Application list box. Only the Products and languages that you have licensed will be available. 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 PeopleSoft-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.

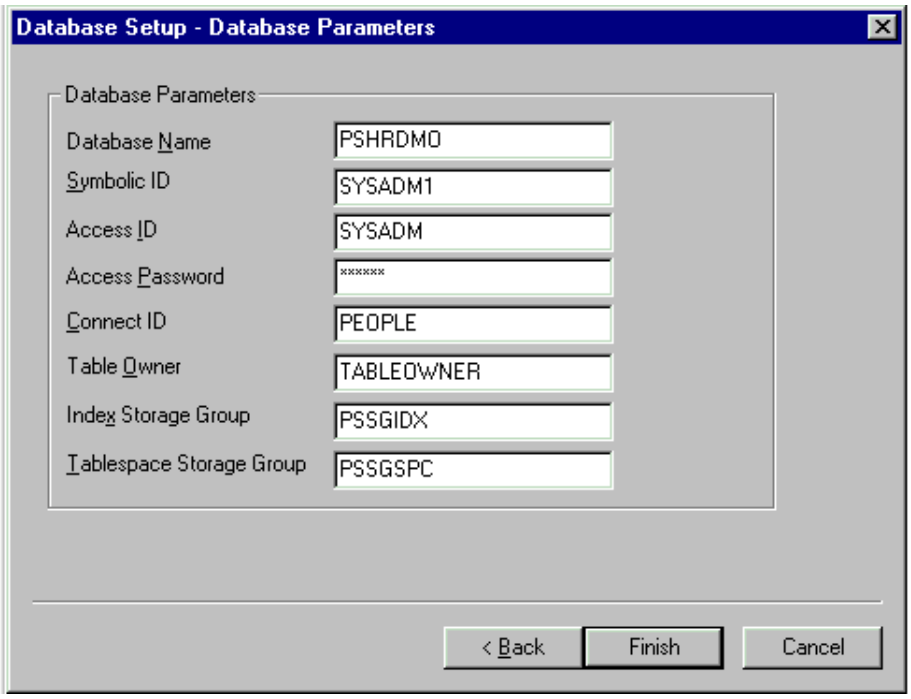
   See “Preparing for Installation,” Planning Multilingual Strategy.



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 Fin/SCM — French, you must also select PeopleSoft Fin/SCM Database — US English. This ensures that you install the necessary base-language components.

9. 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 UDB for z/OS, this is the Connect ID that can be used for the initial connection to DB2 z/OS. This ID is used for connecting to the database. The use of Connect ID is mandatory with PeopleTools 8.4.

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.

10. 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

Enterprise PeopleTools 8.48 PeopleBook: Data Management

"Extracting DDL for PTSYS Database"

Task 8-9: 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. If you want to run Data Mover on the same machine as the application server or Process Scheduler, you need to start a new telnet session without running PSADMIN and make sure the PS_SERVER_CFG environment variable is not set. PS_SERVER_CFG is only set when you run PSADMIN, so if you have not run it before this should not be a concern. When running Data Mover, you do not need to run PSADMIN.

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).

See *Enterprise PeopleTools 8.48 PeopleBook: Data Management.*

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 8-9-1: 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 8-9-2: 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 8-9-3: 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 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 PeopleTools 8.4, 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.

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 8-9-4: 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 8-9-5: 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 8-10: 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 8-11: 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
- Altering PeopleTools Tables
- Migrating Records to New Tablespaces
- Updating PeopleTools System Data
- Running PeopleTools Conversions
- Converting Integration Broker
- Changing the User Interface

Understanding Database Updates

Your PeopleSoft application database may be on a 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 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 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Application Designer*

Note. If you are installing a PeopleTools System Database or if your database is delivered on PeopleTools 8.48, the delivered database already contains the updated PeopleTools objects. Skip this task and continue with the install at the task "Running Additional Data Mover Scripts."

Here is a list of applications for which this task must be run because the version of the database that was shipped is different than the version of PeopleTools that you are running. If your application release is earlier than the release listed in the table, you must run this task:

Application Release	Application Database Version	Requires Update to 8.48?
CRM 8.9	8.45	Yes
CRM 9.0	8.48	No
ELS 8.8 SP1	8.43	Yes
ELS 9.0	8.47	Yes
EPM 8.9	8.46	Yes
EPM 9.0	8.48	No
Fin/SCM 8.9	8.46	Yes
Fin/SCM 9.0	8.48	No
HRMS 8.8 SP1	8.43	Yes
HRMS 8.9	8.45	Yes
Portal 8.8	8.42	Yes
Portal 8.9	8.46	Yes
SIM 8.9	8.45	Yes

If your application is not listed above, look for your application and PeopleTools release information on Customer Connection. Navigate to Site Index, product releases (roadmaps and schedules), Release Definitions, select your product line, and then select the product you are installing. If the Tools version is not 8.48, you must run this task. Otherwise, continue to the task "Running Additional Data Mover Scripts."

Task 8-11-1: Cleaning Up Data

If your database is delivered on PeopleTools 8.48 or higher, do *not* run this step, and instead, proceed to Updating PeopleTools System Tables. If your database is delivered on PeopleTools 8.47 or earlier, perform this step to clean out obsolete message data.

Warning! Performing this task when updating from 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 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 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 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 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 PeopleTools releases.

4. Using a SQL query tool, run the ptupgibdel8<*xx*>.sql script against your PeopleSoft database.

Task 8-11-2: Updating PeopleTools System Tables

Run SQL scripts to update your PeopleTools system tables to the latest PeopleTools release (currently 8.48).

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, and rel848
8.41	rel842, rel843, rel844, rel845, rel846, rel847, and rel848
8.42	rel843, rel844, rel845, rel846, rel847, and rel848
8.43	rel844, rel845, rel846, rel847, and rel848
8.44	rel845, rel846, rel847, and rel848
8.45	rel846, rel847, and rel848
8.46	rel847 and rel848

Application Database Version	Required Scripts for Non-Unicode Databases
8.47	rel848
8.48	None

Use the scripts in the following table for Unicode databases:

Application Database Version	Required Scripts for Unicode Databases
8.40	rel848u
8.41	rel848u
8.42	rel848u
8.43	rel848u
8.44	rel848u
8.45	rel848u
8.46	rel848u
8.47	rel848u
8.48	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. Run the storeddl.dms Data Mover script in the <PS_HOME>\scripts directory.

   This will update your platform-specific DDL model statements.

   Log out of Data Mover for the next step.
7. 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.

8. Run the msgtlsupg.dms Data Mover script in the <PS_HOME>\scripts directory.

   This will update the PeopleTools messages in your database.

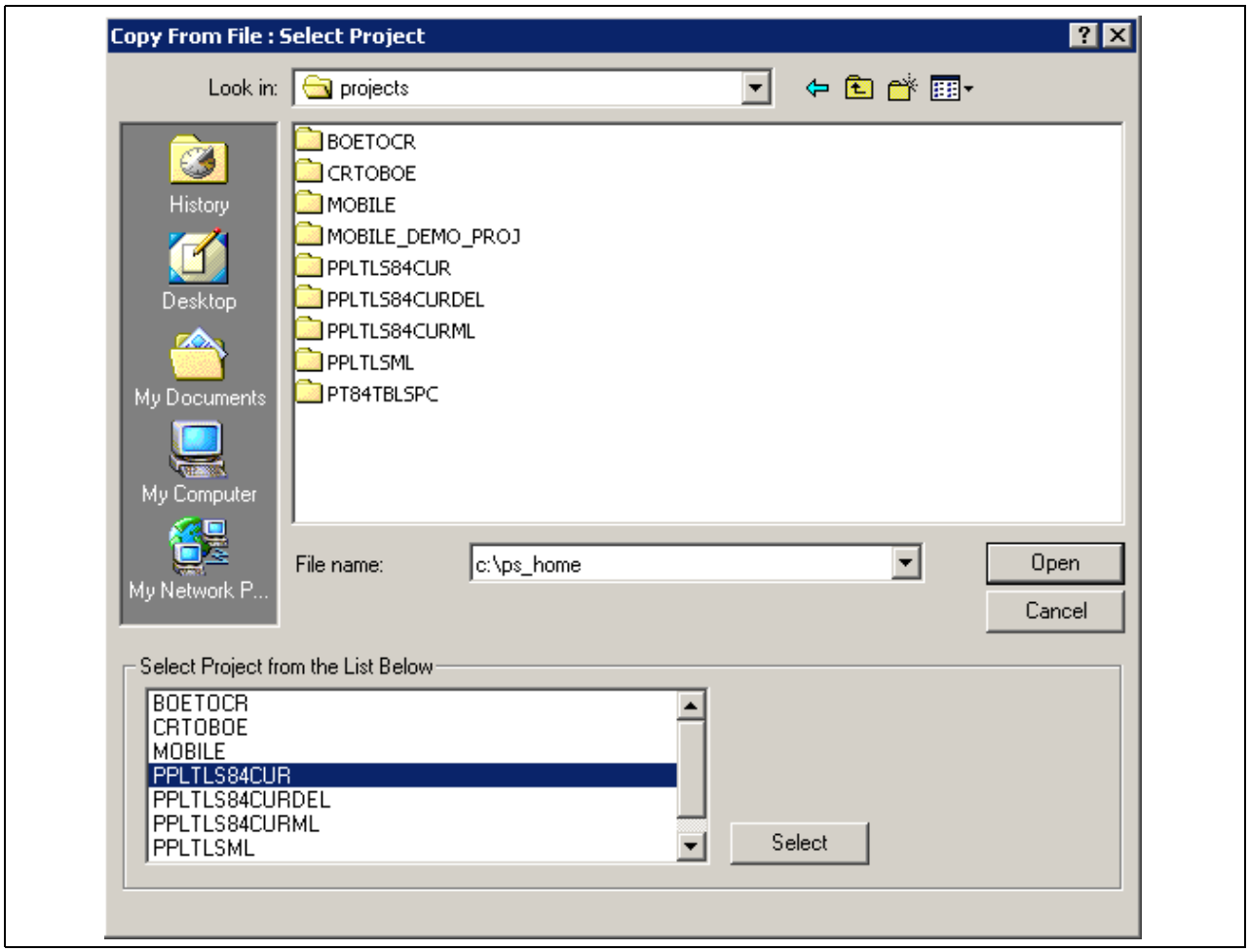
Task 8-11-3: Updating PeopleTools Database Objects

To update PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleTools release. Failure to run this step will introduce problems to your environment.

To update 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.

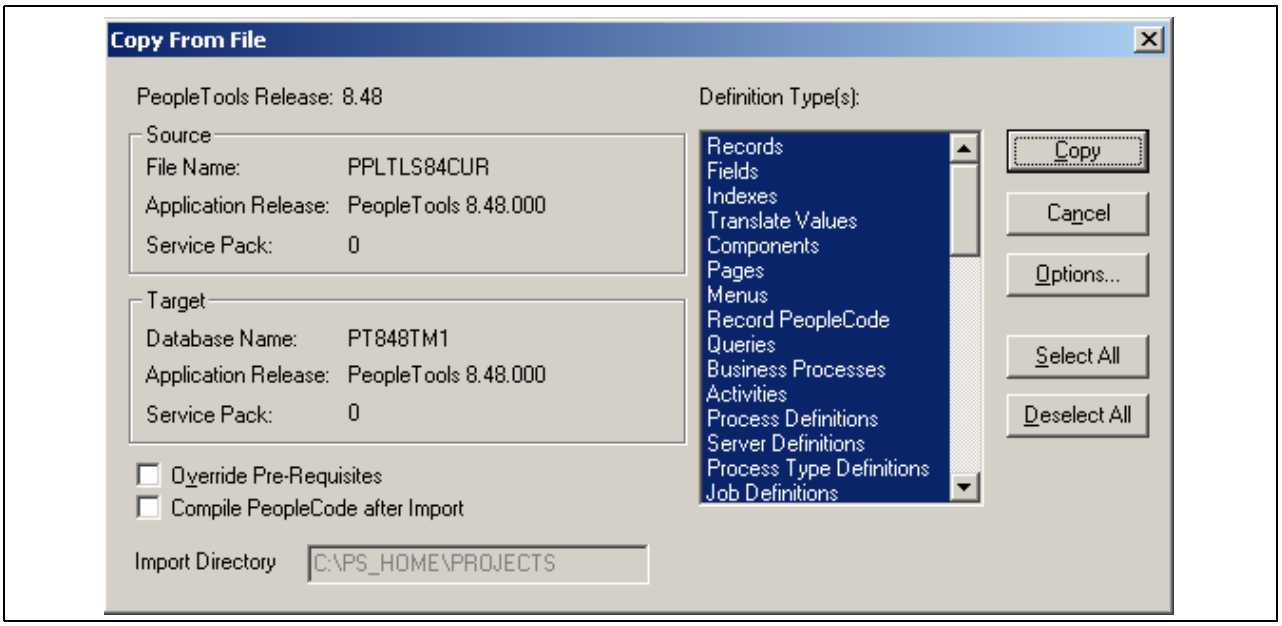
Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.



Selecting 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 8-11-4: 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 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 PPLTSL84CURML in the instructions below. Copy the PPLTLS84CURML project to update any non-French languages that are installed in the database.

To update PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleTools database objects from a file.

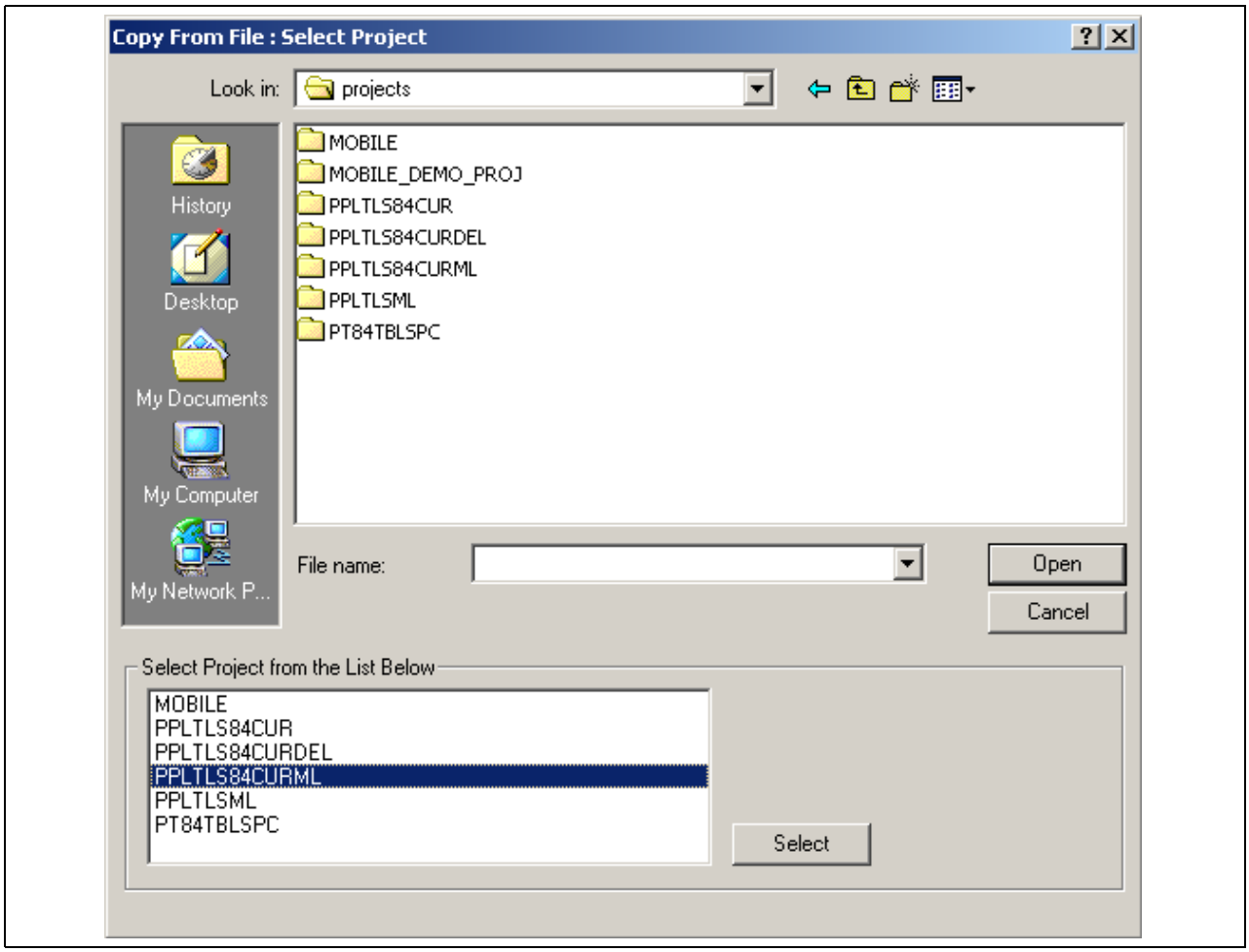
To apply the translation project for PeopleTools 8.48:

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 PPLTLS84CURML in the Copy From File dialog box

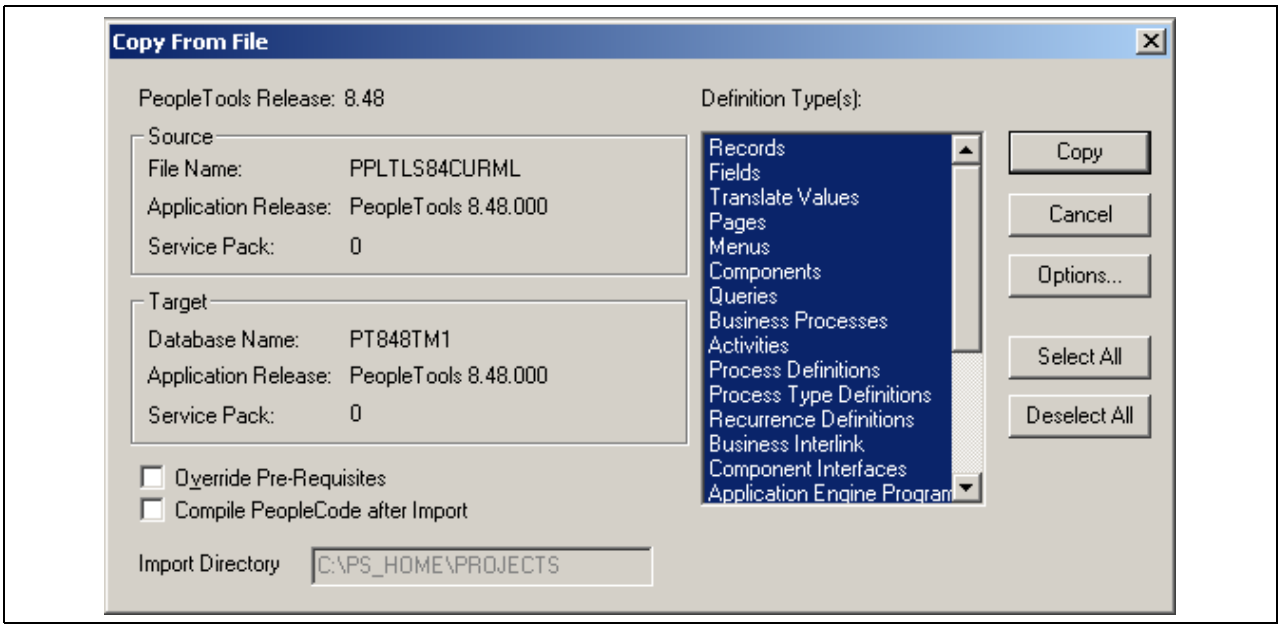
6. The Upgrade Copy dialog box appears.

   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.

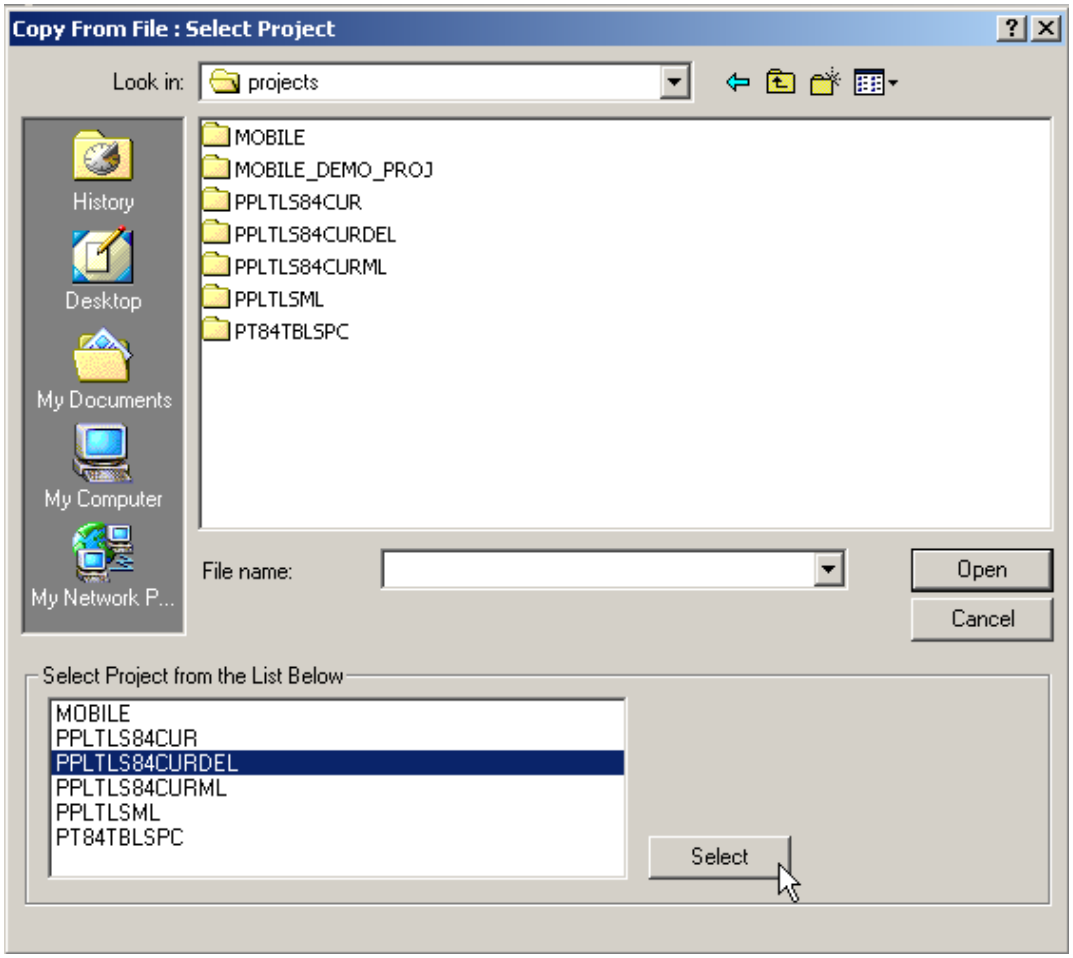
Task 8-11-5: Deleting Obsolete PeopleTools Database Objects

This process removes obsolete PeopleTools objects from your database. To update 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.

To delete obsolete 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.

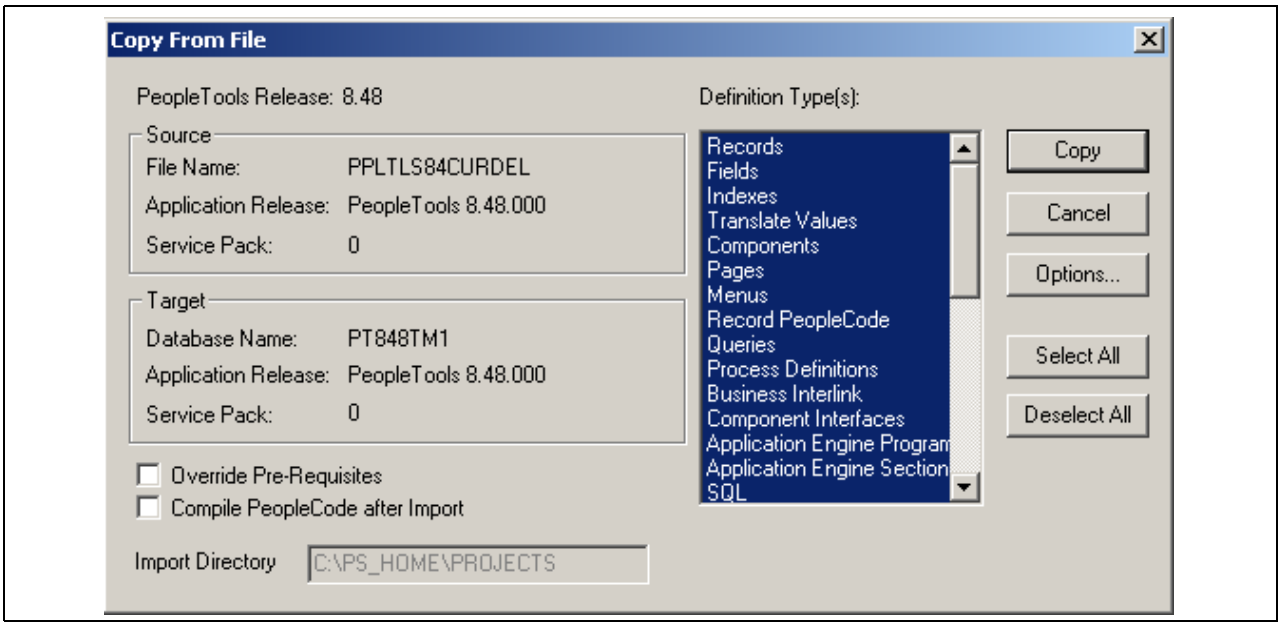
Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.



Selecting 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 are applying a required for install PeopleTools patch *and if a database project is included,* apply the database projects now. Make sure to read the patch release notes to find out if database changes are in the patch.

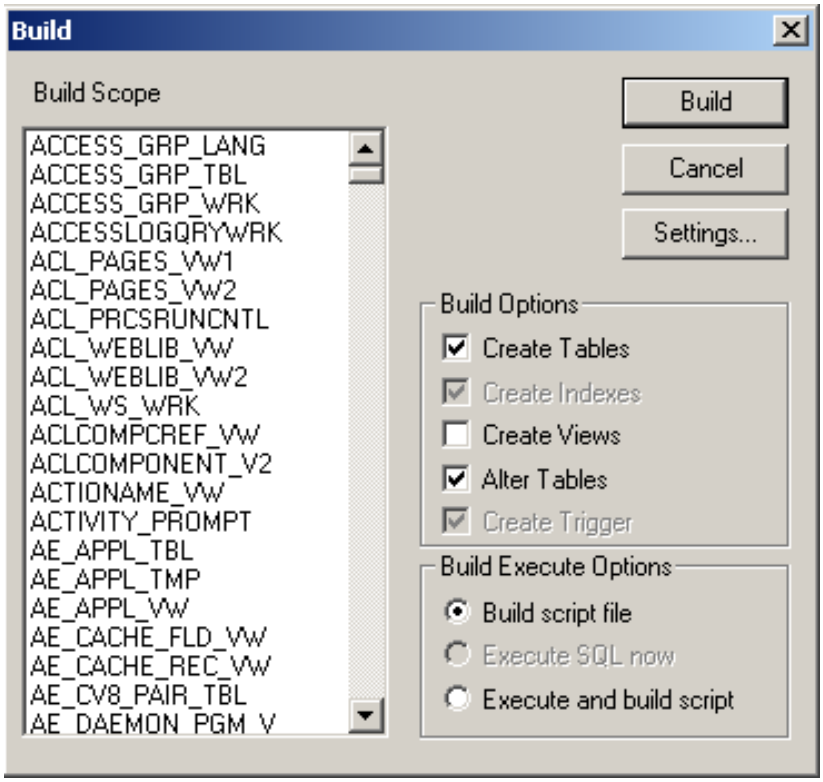
Task 8-11-6: Altering PeopleTools Tables

ALTER AUDIT is an online utility used to check whether the 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 PeopleTools tables to uncover inconsistencies. ALTER AUDIT then reports its findings. In this release, we expect to see differences between the database structure and the tools tables. You will generate and run a SQL script to synchronize the PeopleTools table definitions with the underlying tables in your database.

To alter PeopleTools tables:

1. Launch PeopleTools and sign on to the installed database.
2. From the Application Designer, select File, Open.
3. Select *Project*, enter *PPLTLS84CUR* in the name dialog box, and click OK.
4. Select Build, Project.

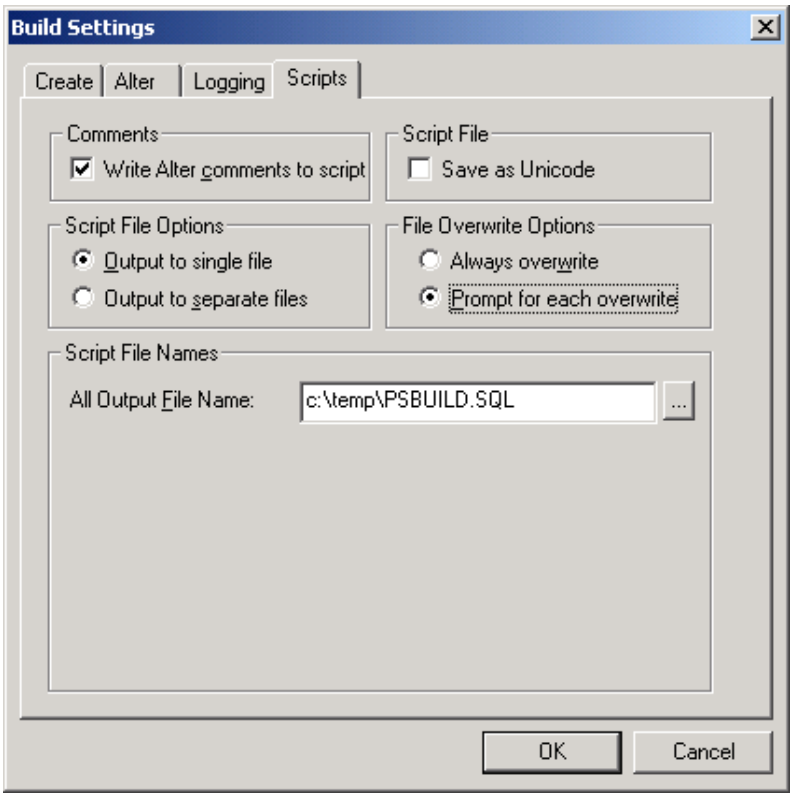
   The Build dialog box appears:



The Build dialog box

5. Select Create Tables and Alter Tables in the Build Options region (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:

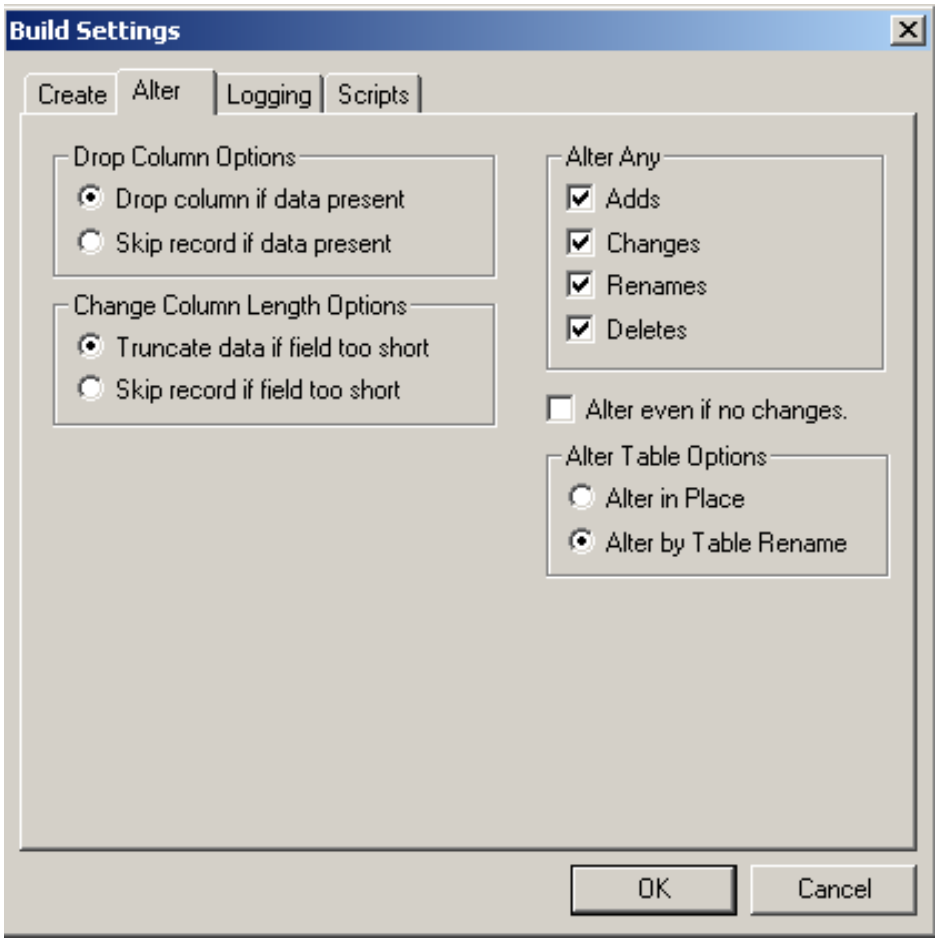


Build Settings dialog box: Scripts tab

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.

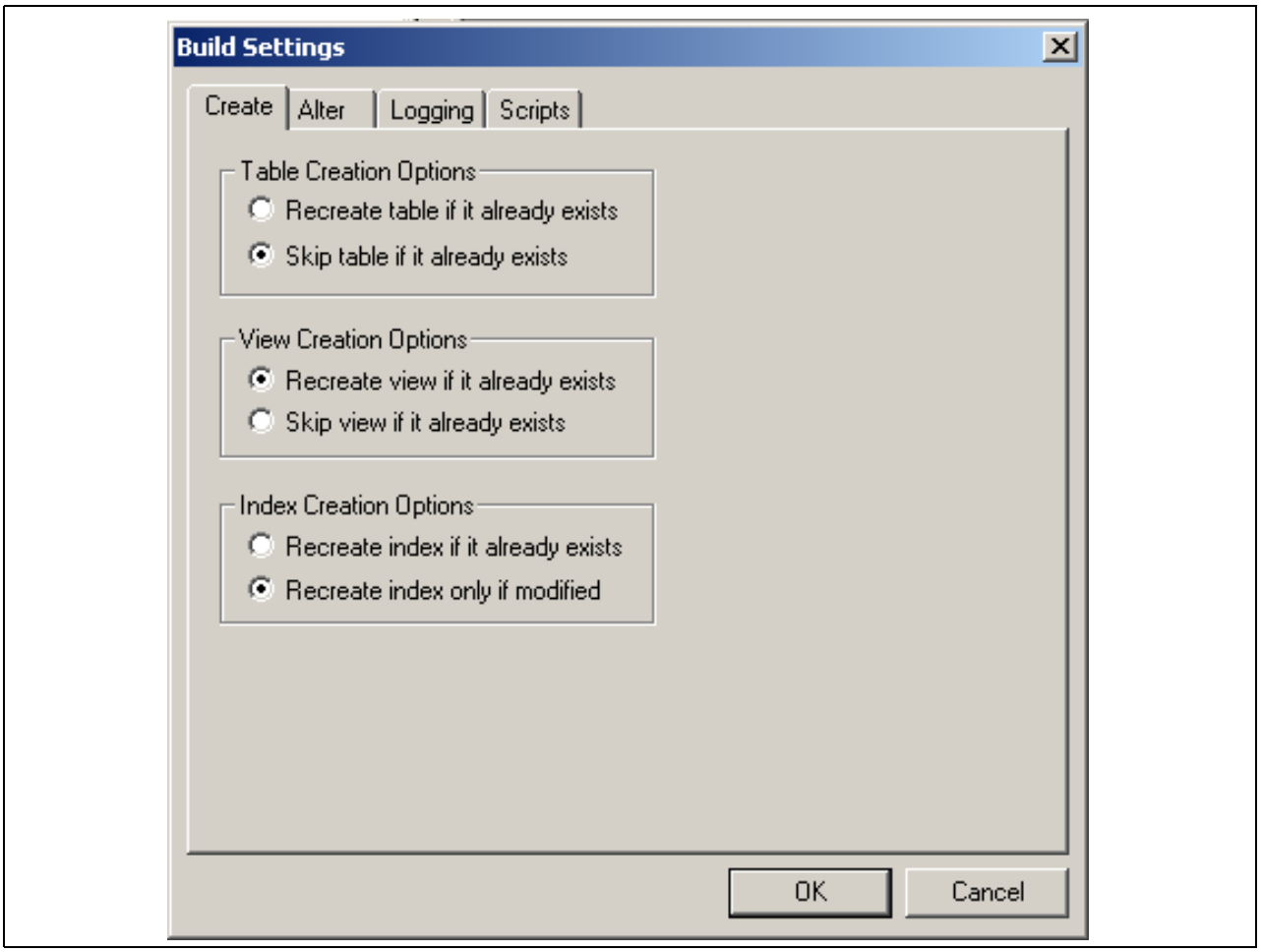
    Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.

    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 PeopleTools tables.

Task 8-11-7: Migrating Records to New Tablespaces

This section discusses:

- Copying the Tablespace Record Project
- Running Alter Tools Tables

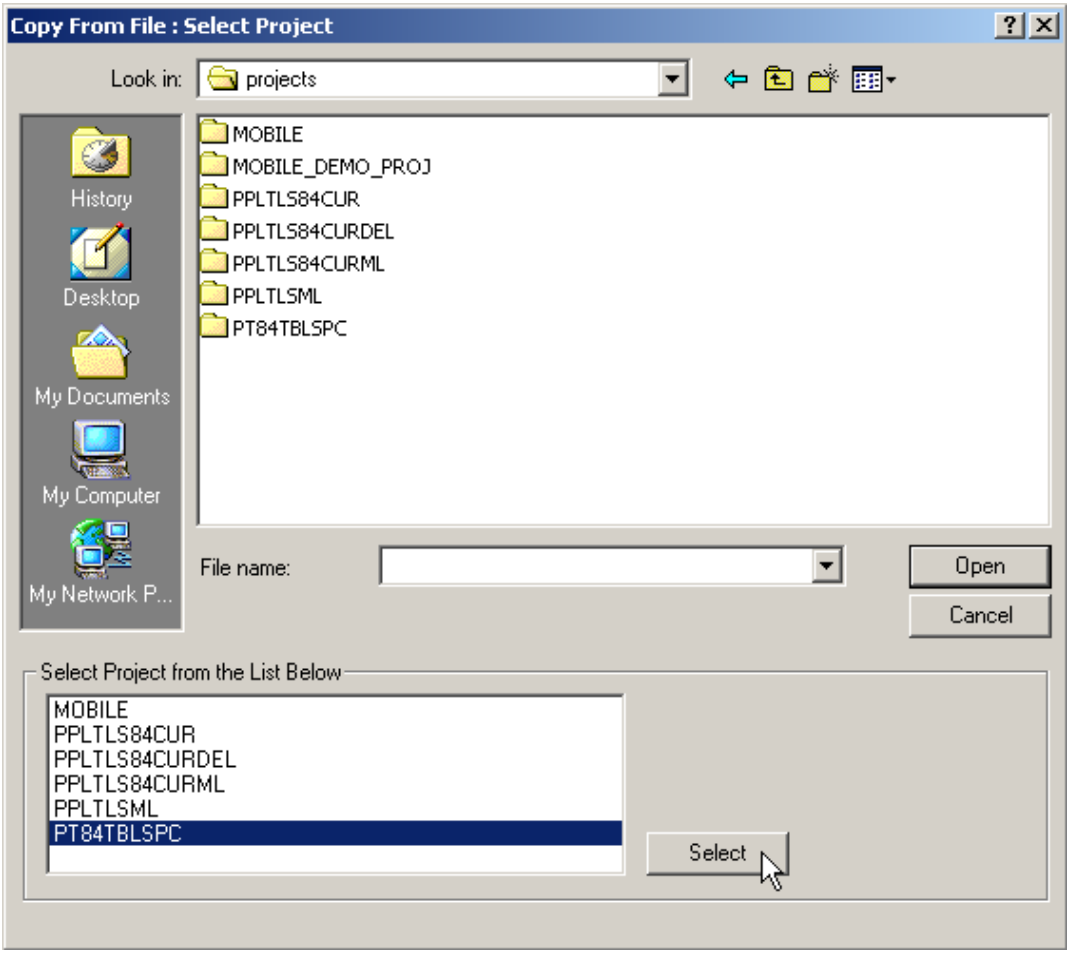
Copying the Tablespace Record Project

PeopleSoft has moved some delivered tables to different Tablespaces in 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.

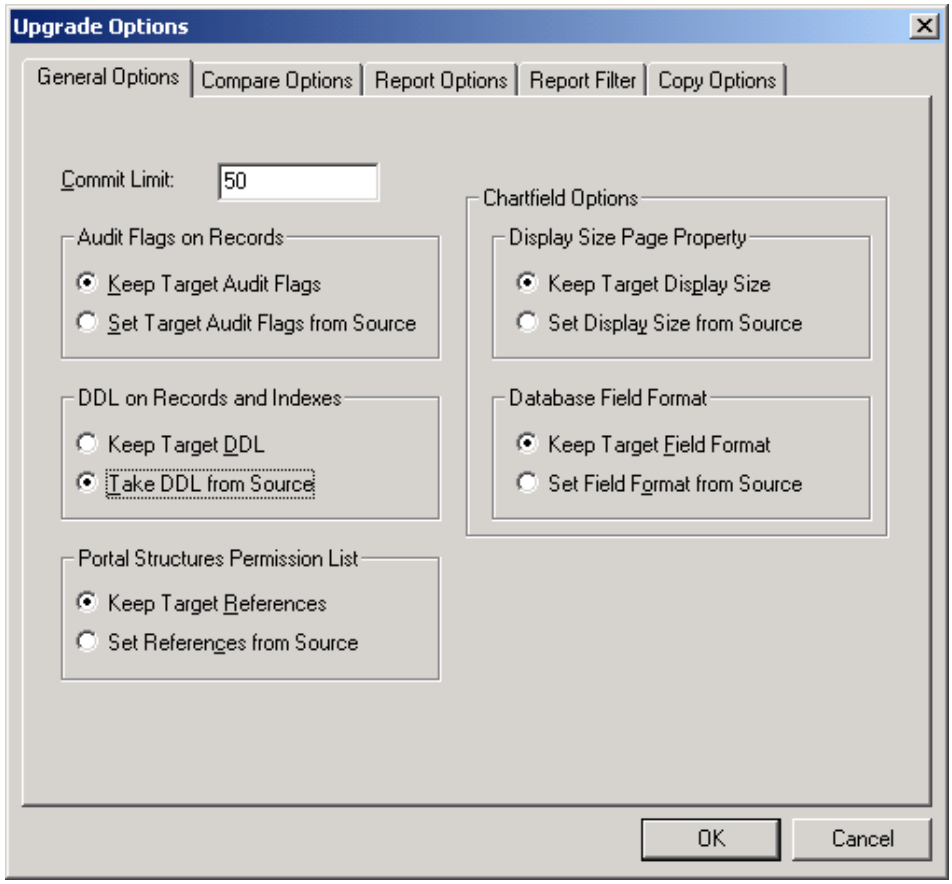


Selecting PT84TBLSPC in the Copy From File dialog box

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.

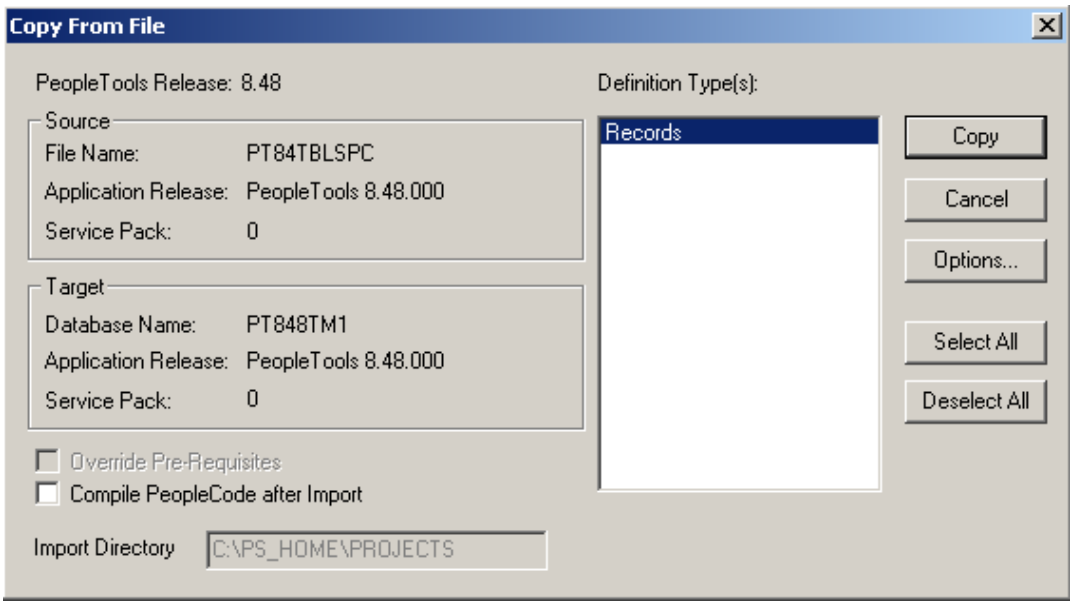
   Click OK.



Upgrade Options dialog box: General Options tab

5. Click the Copy button.

   When the progress dialog box disappears, the project has been copied.



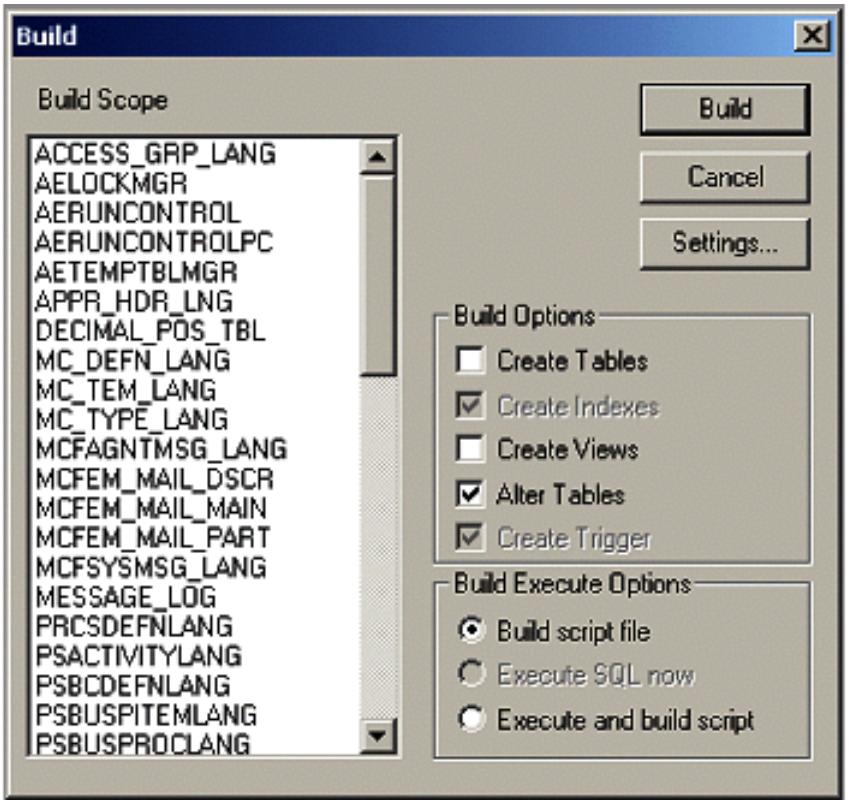
The Copy From File dialog box showing that PT84TBLSPC will be copied

Running Alter Tools Tables

To run Alter Tools tables:

1. Launch 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.

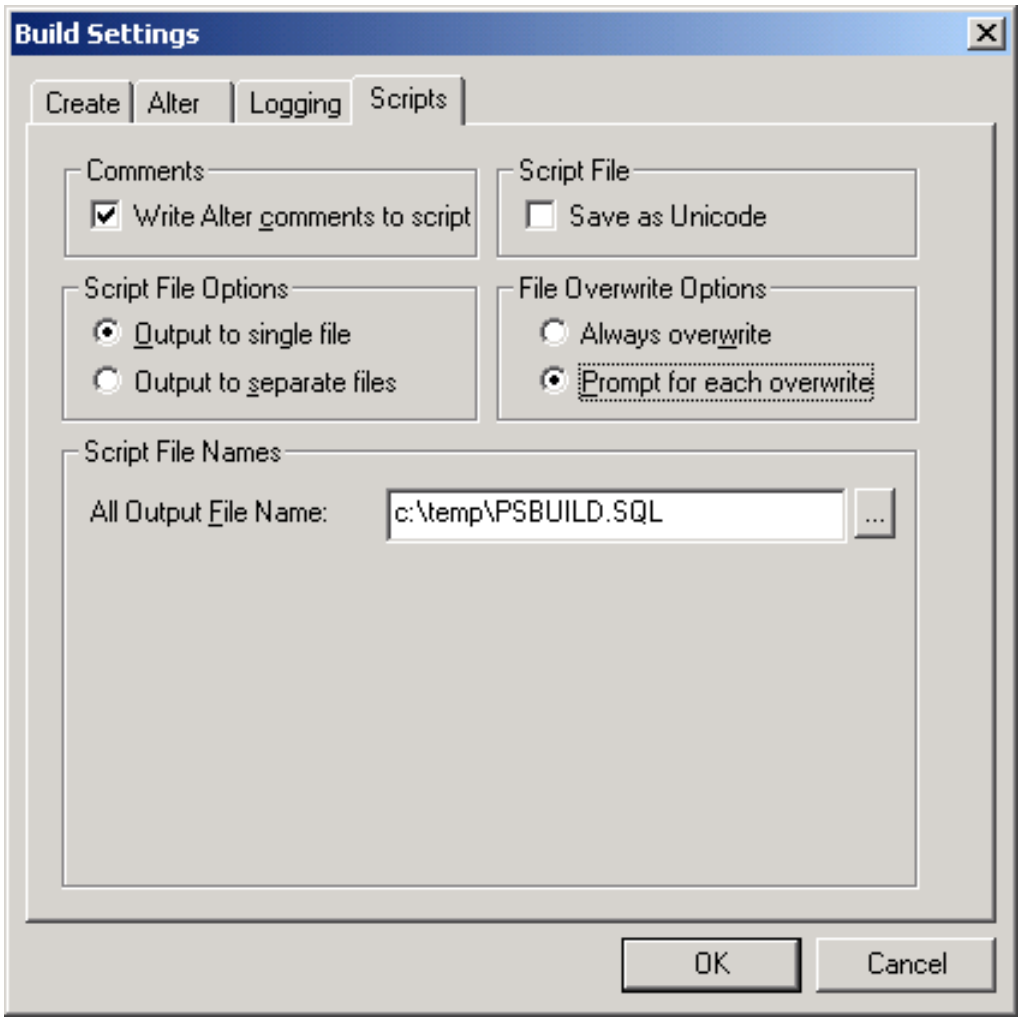
   The Build dialog box appears:



The Build dialog box

5. Select Alter Tables in the Build Options region (Create Indexes and Create Trigger will automatically be selected).
6. Select Build script file in the Build Execute Options region.
7. Click Settings.

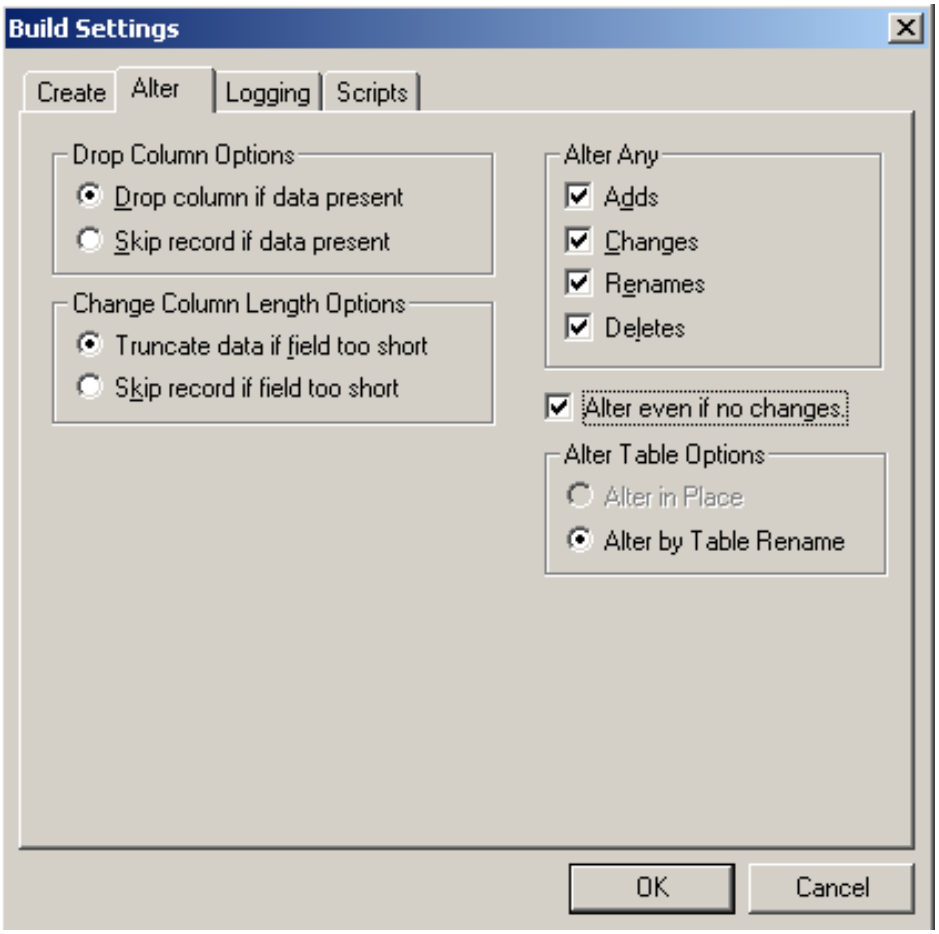
   The Build Settings dialog box appears:



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 8-11-8: Updating PeopleTools System Data

Data Mover scripts that update PeopleTools system data are run to enable new features and load new messages for the PeopleTools 8.48 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 PeopleTools system data:

Note. DB2 UDB 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 UDB 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, and pt848tls
8.41	pt842tls, pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, and pt848tls
8.42	pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, and pt848tls
8.43	pt844tls, pt845tls, pt846tls, pt847tls, and pt848tls
8.44	pt845tls, pt846tls, pt847tls, and pt848tls
8.45	pt846tls, pt847tls, and pt848tls
8.46	pt847tls and pt848tls
8.47	pt848tls
8.48	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 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:

```
UPDATE PSLANGUAGES SET INSTALLED=1 WHERE LANGUAGE_CD = 'xxx';
```

   where *xxx* is one of the PeopleSoft three-letter language code identifiers, as described earlier.

   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 pt848tls*xxx*.dms scripts in the <PS_HOME>\scripts directory.

   This will update the language-specific 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 pt848tls*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 pt848tls*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 PeopleTools COBOL stored statements.
12. Run the ptdefnsec.dms Data Mover script in the <PS_HOME>\scripts directory.

    This will update the 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 8-11-9: Running PeopleTools Conversions

This section discusses:

- Convert Portal Objects
- Convert Query Headings
- Convert Setup Manager
- Convert Navigation Collection and Pagelet Wizard Data
- Convert Additional Pagelet Wizard Data

Convert Portal Objects

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."

See Running the Database Configuration Wizard.

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, please check PeopleSoft Customer Connection 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, please check PeopleSoft Customer Connection for Required at Install patches for your application and apply the patches after installing your database.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Convert Query Headings

Crystal 9 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Query.*

Convert Setup Manager

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 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
```

Convert Navigation Collection and Pagelet Wizard Data

The application engine program UPGPT846PP adds Navigation Collection and Pagelet Wizard data from the Common Components and Enterprise Portal storage tables into PeopleTools tables.

The application engine program performs the following conversions:

1. Moves data from Common Components tables to PeopleTools tables.
2. Moves data from Enterprise Portal tables to 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 PeopleTools Pagelet Wizard version.
6. Renames Navigation Collection and Pagelet Wizard portal registry attributes to the 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 PeopleSoft delivered objects at this time. Check PeopleSoft Customer Connection 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.

Convert Additional Pagelet Wizard Data

The application engine program UPGPT848PP adds the following Pagelet Wizard data sources from Enterprise Portal to PeopleTools: IB Connector, Integration Broker, SOAP, and URL. In addition, the application program transforms the WSRP Portlets created in PeopleTools 8.46 or 8.47 versions of Pagelet Wizard. The process includes the following:

- Move data from Enterprise Portal tables to 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 PeopleSoft delivered objects at this time. Check PeopleSoft Customer Connection 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.

Task 8-11-10: 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 PeopleTools 8.48 or higher, do *not* run this task since the database is already delivered with the new Integration Broker objects as of PeopleTools 8.48. Instead, proceed to Changing the User Interface.

Updating Integration Broker Defaults

User-level node security and transactional security have been added as of 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 8-11-11: Changing the User Interface

PeopleTools has updated the styles that define the user interface. This PeopleTools release delivers the classic (old) style as well as two new styles: a dark blue style and a light blue style. PeopleTools System Databases and PeopleSoft 8.4 applications use the classic style, but all other applications use the new dark blue style. The classic style is set as the default. To use one of the new user interfaces, you have to delete the substyle sheets associated with the classic style and replace them with either the light or dark blue substyle sheet.

Note. The new user interface is supported by Internet Explorer release 5 and above and Netscape Navigator release 6 and above. If you are using a browser and release other than these, the system defaults to the classic style.

To enable a new user interface:

1. In Application Designer, select File, Open.
2. On the Open Definition dialog box, select *Style Sheet* from the Definition drop-down list.
3. Enter the name *PSSTYLEDEF* in the Selection Criteria Name field, and select Open.
4. Highlight PSSTYLEDEF in the list, and select Open.
5. Click the PSALTERNATE Sub Style Sheet and press DELETE.
6. Select Insert, Insert Sub Style Sheet.
7. Select *PSALTERNATE_LIGHTBLUE* or *PSALTERNATE_DARKBLUE*.

8. Repeat steps 5 through 7 for the PTSTYLEDEF Sub Style Sheet, making sure to use the same extension (_LIGHTBLUE or _DARKBLUE) you used for PSALTERNATE.
9. Select File, Save.
10. Open the style sheet *PSQUERYSTYLEDEF* as in steps 1 through 4.
11. Click the *PTQUERYSTYLESUB* Sub Style Sheet and press DELETE.
12. Select Insert, Insert Sub Style Sheet.
13. Select *PTQUERYSTYLESUB_LIGHTBLUE* or *PTQUERYSTYLESUB_DARKBLUE.*

    Use the same extension that you used in step 8.
14. Select File, Save.

Task 8-12: Running the DB2 RUNSTATS Utility

Run the DB2 RUNSTATS utility against all tablespaces that do not follow the naming standard MAIN####, TEMP#### and xxWORK. The tables in these tablespaces are either designated as TEMPORARY TABLES and/or Tables against which %UpdateStats is being performed. The TEMP#### and xxWORK tablespaces contain tables that are delivered empty. Performing RUNSTATS on these tables at this time could actually prove detrimental to performance. These tables have been segregated into tablespaces separate from the regular application tables, so that they may be conveniently excluded from RUNSTATS and other routine database maintenance jobs.

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 TMPnnnnn tablespaces at this time because this could prove detrimental to performance. The TMPnnnnn 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 8-13: 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 8-13-1: Creating Views in Data Mover

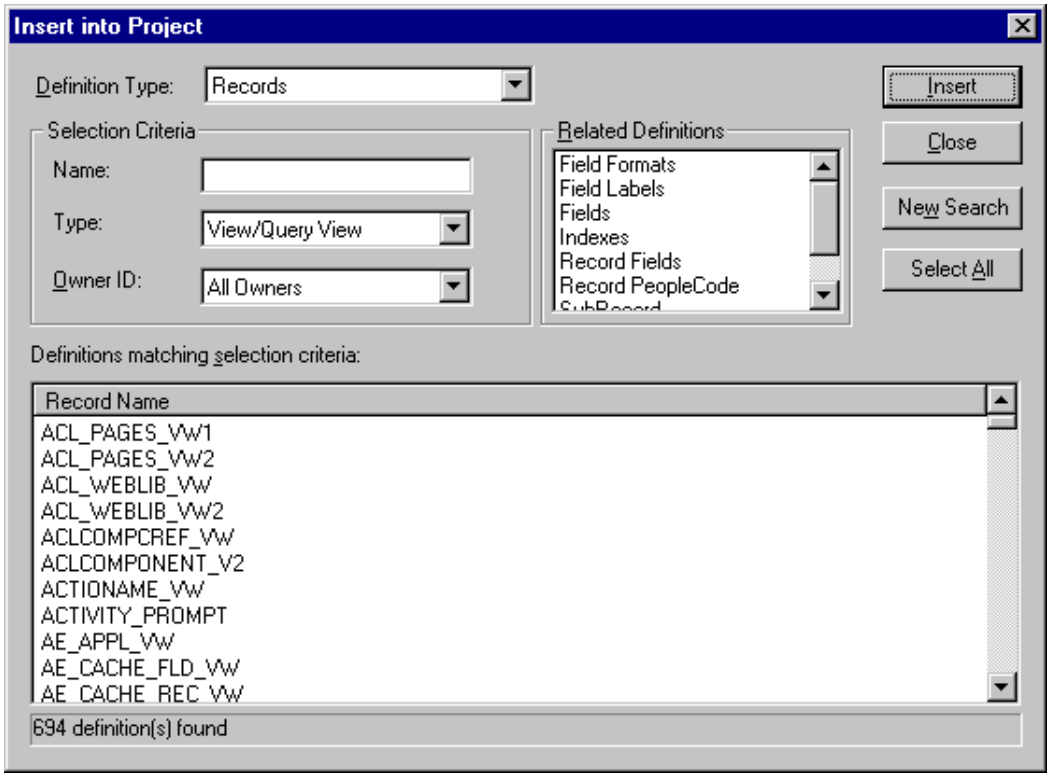
To create views in Data Mover:

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 8-13-2: Creating Views in Application Designer

To create views in Application Designer:

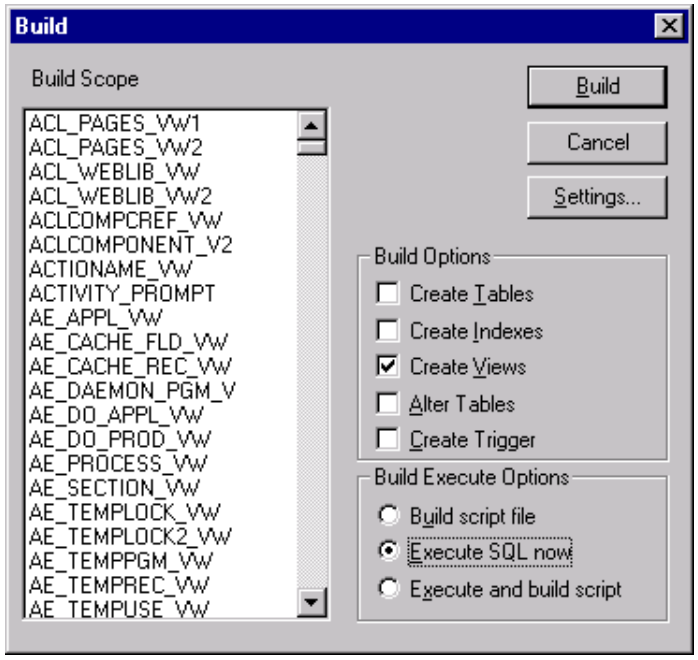
1. Start Application Designer (Start, Programs, PeopleTools 8.4, Application Designer).
2. Create a new project. Choose File, New, and then select Project from the New dialog.
3. Insert all PeopleTools view records into the project:
   a. Choose *Insert, Definitions into Project*. The *Insert into Project* dialog 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.



Insert into Project dialog box

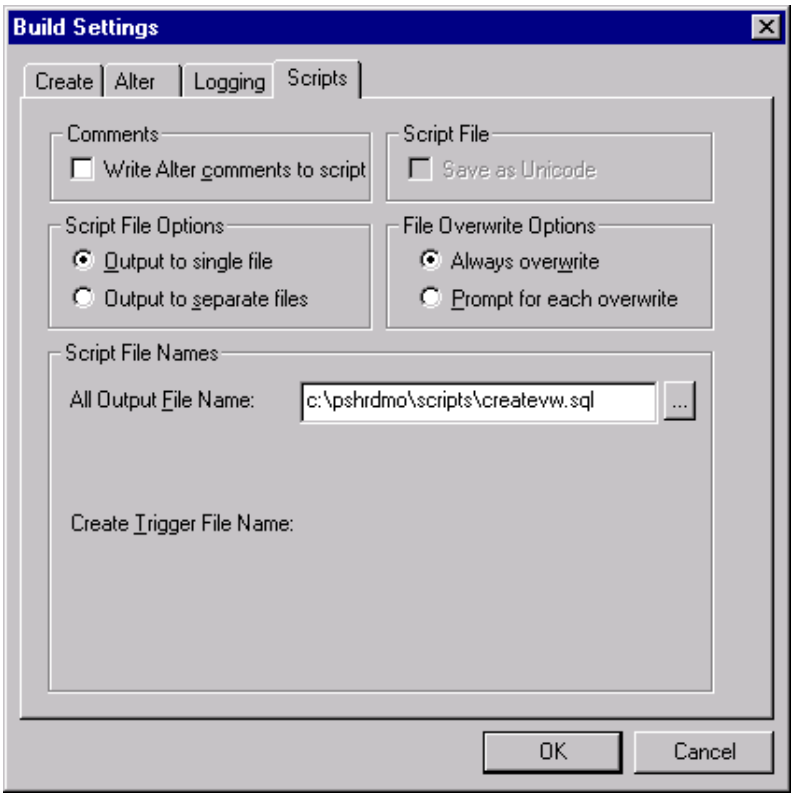
   d. Click *Select All*, and then click *Insert* to insert the View/Query View records into the project.
   e. Click *Close* to close the *Insert into Project* dialog.

4. Build the project.
   a. Choose *Build, Project*. The *Build* dialog displays.
   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.



Build Settings dialog box

d. Click *OK* to return to the Build dialog.

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 8-14: Updating Database and Tablespace Values for %UpdateStats Tables (Enhanced Install Only)

Only perform this step if you are using the enhanced installation path—that is, if you have chosen to use scripts X1DDL/X1DDLU and X2DDL/X2DDLU, as described earlier in this chapter.

Note. If you used the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to optimize your DDL, skip this task (do not run the X3DML.dms script). Instead, continue to the next task and run the SETSPACE SQR.

See Building Temporary Tables, Running SQR SETSPACE.SQR.

The database and tablespace values for any table defined in the database are stored in the DBNAME and DDLSPACENAME fields, respectively, of the PSRECTBLSPC table. Because the database is delivered in a state compatible with the traditional installation path, the database and tablespace values in PSRECTBLSPC will be out of synch with the database and tablespace names created on your database, for the temporary tables. To create accurate DDL to create these objects, you need to run Data Mover script X3DML.dms, which will update the affected tables with new tablespace values that are compatible with those created when you ran the X1DDL/X1DDLU script.

If you have modified any of the database or tablespace names in the X1DDL/X1DDLU script, you need to make the corresponding changes in the X3DML.dms script before running it, to keep the database names and tablespaces created in the X1DDL/X1DDLU script in synch with database names and tablespaces used in the X3DML.dms script.

To run the Data Mover script X3DML.dms:

1. Start Data Mover 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 X3DML.dms.
4. Select File, Run to execute the script.
5. Exit Data Mover.

Task 8-15: 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 has introduced a new temporary table structure where the number of instances for each base temporary table is controlled internally to PeopleTools. The definition of each base temporary table is stored in the 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.

PeopleSoft 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 8-15-1: 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 8-15-2: 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) intead.

- *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 8-15-3: 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.

PeopleSoft 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 8-15-4: Using the Volatile Table Attribute

Beginning with PeopleTools 8.48, all temporary tables will be created using the volatile keyword if PeopleTools detects that the database server is running DB2 UDB for z/OS release V8.1. Temporary table DDL for DB2 UDB for z/OS V7 environments will not be generated with the volatile attribute.

Sample DB2 UDB for z/OS V8.1 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 UDB for z/OS V8 SQL Reference and the DB2 UDB for z/OS V8 Administration Guide.

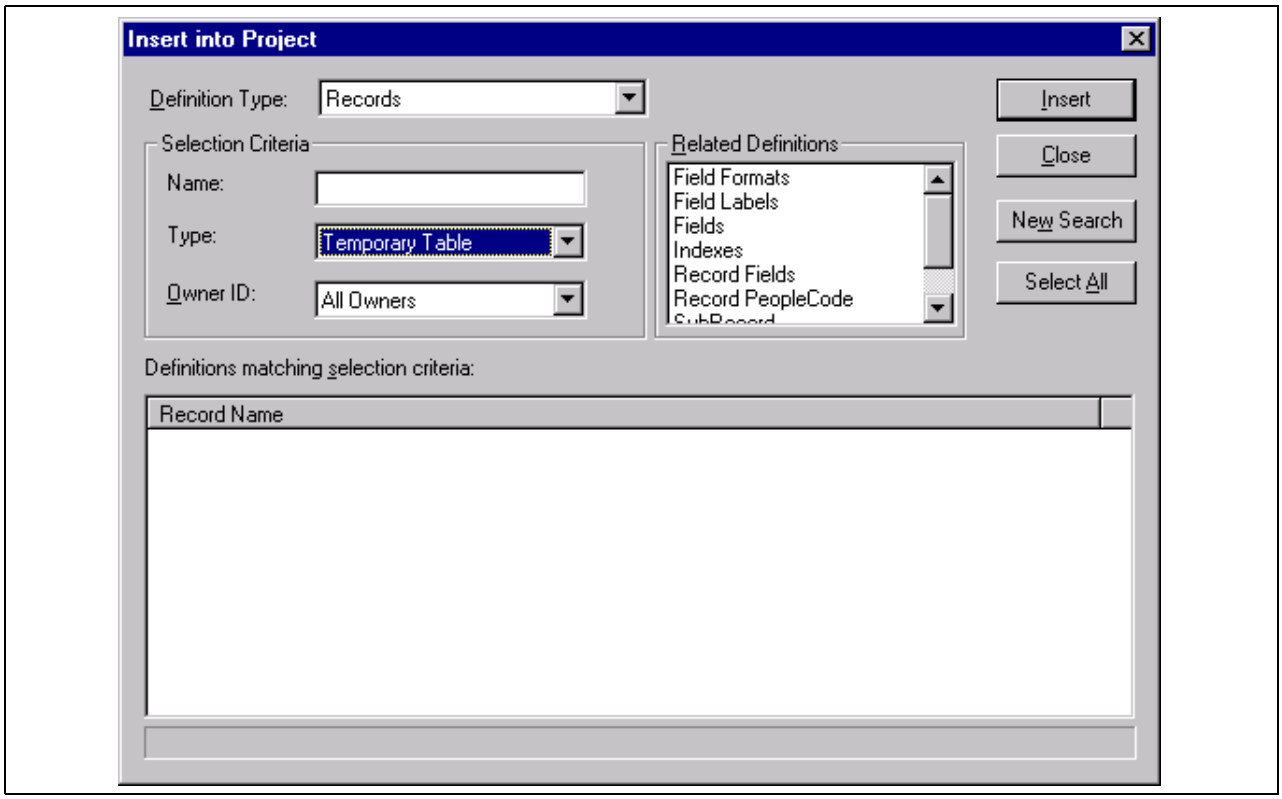
Task 8-15-5: Building the Temporary Tables and Their Indexes

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:

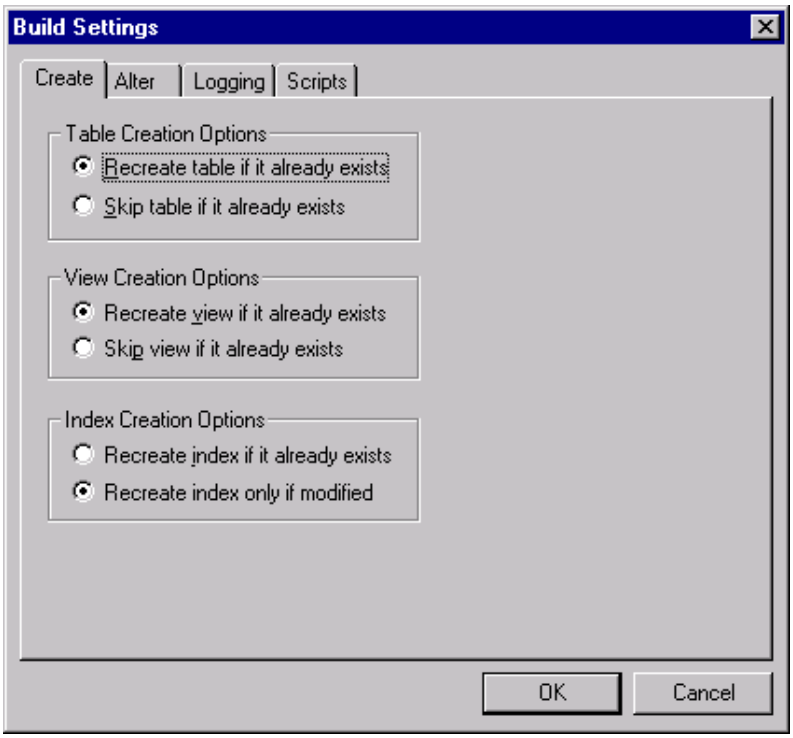
1. Open Application Designer.
2. Choose *File, New*. In the *New* dialog, select *Project*, and then click *OK*.
3. Choose *Insert, Definitions into Project*.
4. Set *Definition Type* to *Records* and *Type* to *Temporary Table*.



Insert into Project dialog box

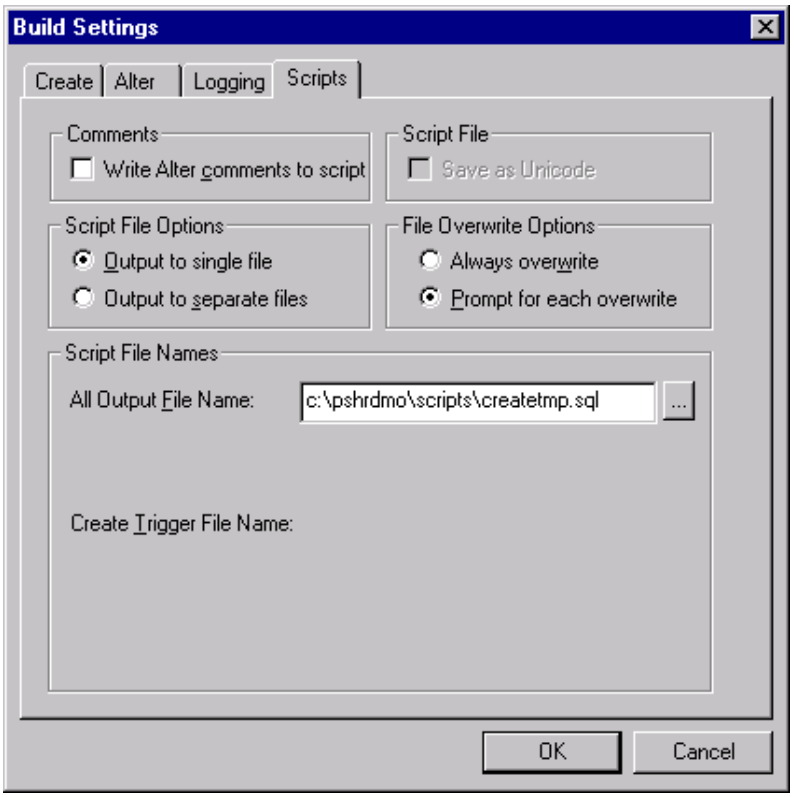
5. Press ENTER, or click *Insert* and then click the *Select All* button. This selects all of the PeopleTools Records for temporary tables.
6. Click *Insert* to insert all of the temporary tables into the new project.
7. Click *Close* to close the *Insert into Project* dialog.
8. Before building the 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).



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."

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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 8-16: 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 8-16-1: 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 8-16-2: Creating Triggers in Application Designer

To create triggers in Application Designer:

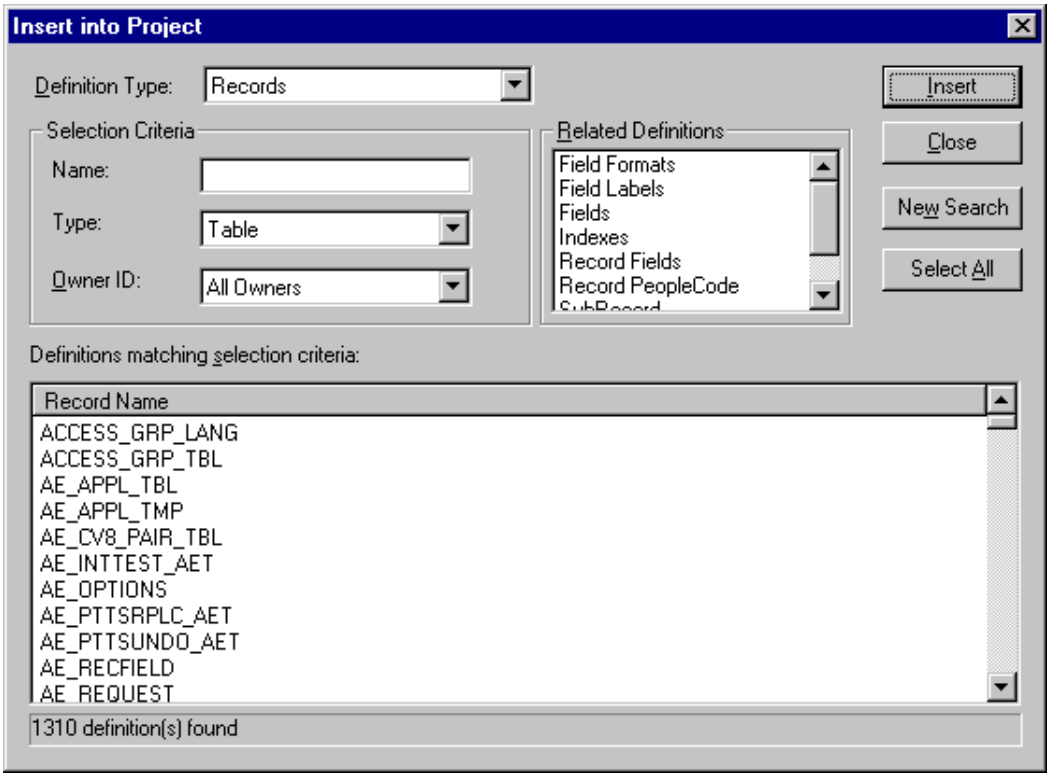
1. Start Application Designer (*Start, Programs, PeopleTools 8.4, Application Designer*).
2. Create a new project. Choose *File, New*, and then select *Project* from the *New* dialog.
3. Insert all PeopleTools Table records into the project.

   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

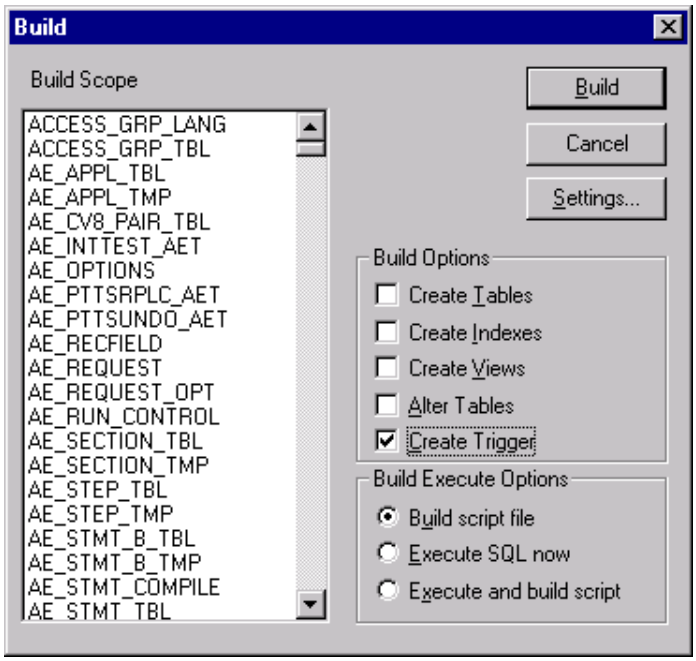
d. Click *Select All*, and then click *Insert* to insert the Table records into the project.

e. Click *Close* to close the *Insert into Project* dialog.

4. Build the project.

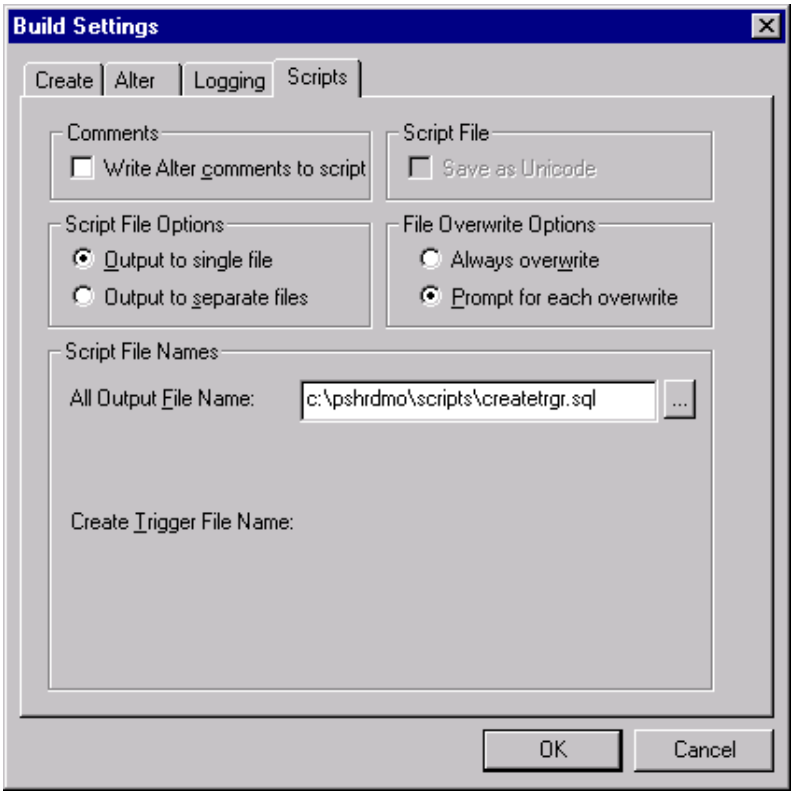
a. Choose *Build, Project*. The *Build* dialog displays.

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 8-17: 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 8-18: 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 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 (PeopleSoft-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 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 8-18-1: Applying the Multilingual Database Project

This procedure describes how to apply the multilingual database project that contains translations of the 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 8-18-2: 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 pt848tls*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 8-19: 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 8-19-1: 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, PeopleSoft does not support running PSSQR from the command line.

Task 8-19-2: Running SQRs on the Client Workstation

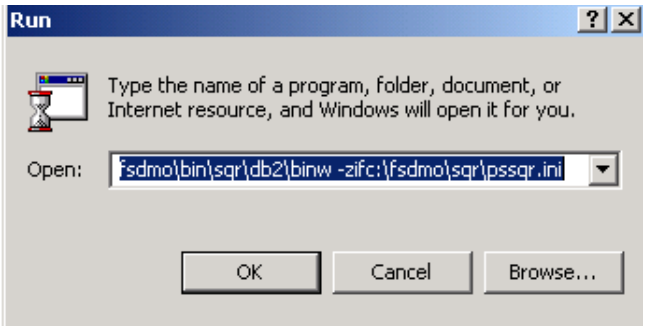
To run an SQR on the client workstation:

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\cr881dmo\).



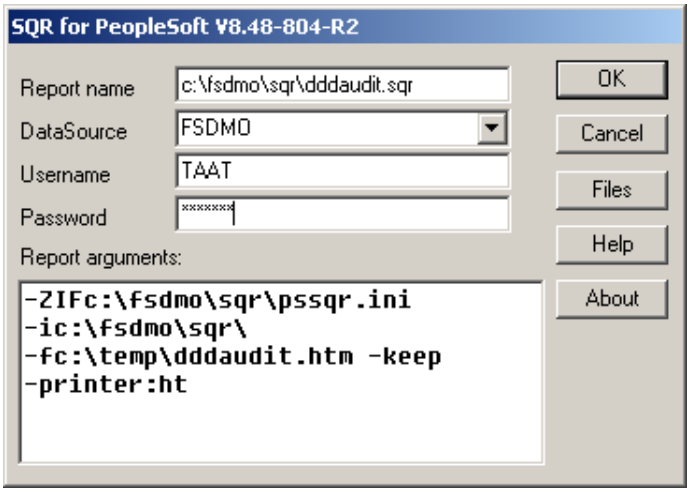
Running an SQR report on the client

The following table summarizes the SQR report arguments used by PeopleSoft. (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 resulting dialog box should look something like this:



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 8-19-3: 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 8-20: 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 8-20-1: 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. PeopleSoft 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 8-21: 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 8-22: 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."

See Running the Database Configuration Wizard.

Task 8-23: Changing the Base Language

Chapter 1 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 *Enterprise PeopleTools 8.48 PeopleBook: Global Technology.*

Task 8-24: Checking the Database

Run and examine two 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.

For further information about the dddaudit and sysaudit reports, consult PeopleBooks. This documentation includes specific information on how to interpret the reports and how to fix any errors found there.

See *Enterprise PeopleTools 8.48 PeopleBook: Data Management,* "Ensuring Data Integrity."

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

Enterprise PeopleTools 8.48 PeopleBook: Data Management

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

Task 8-25: Running Alter Audit

ALTER AUDIT is an online utility used to check whether the 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 PeopleTools tables to uncover inconsistencies. ALTER AUDIT 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 tools tables.

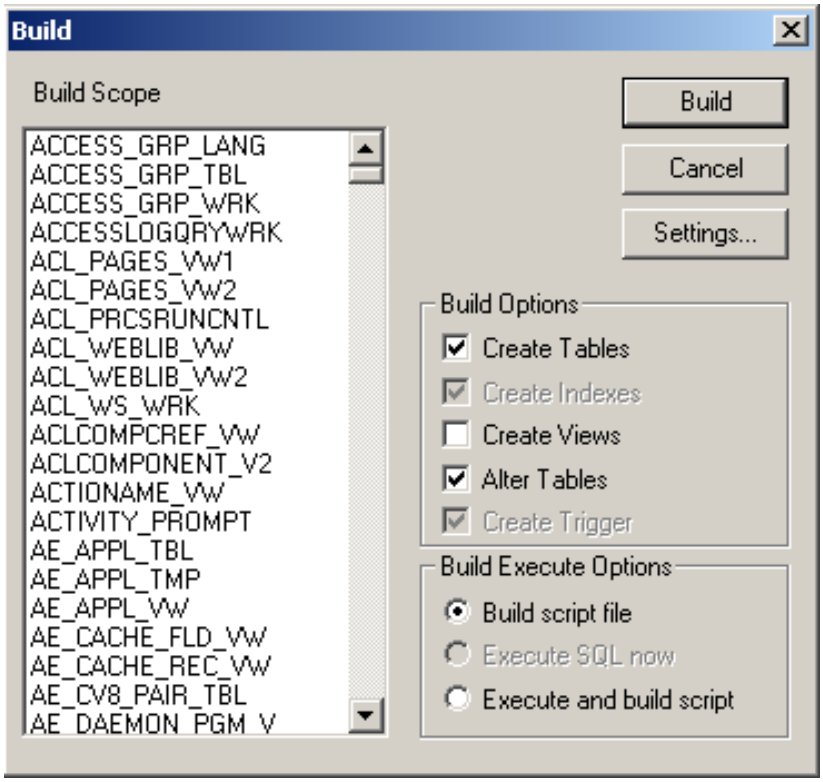
Note. If your application database was delivered on the PeopleTools release you are installing (see chart at the beginning of the task "Updating PeopleTools System Tables"), this task is optional.

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 PeopleTools tables:

1. Launch PeopleTools and sign on to the installed database.
2. From the Application Designer 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.

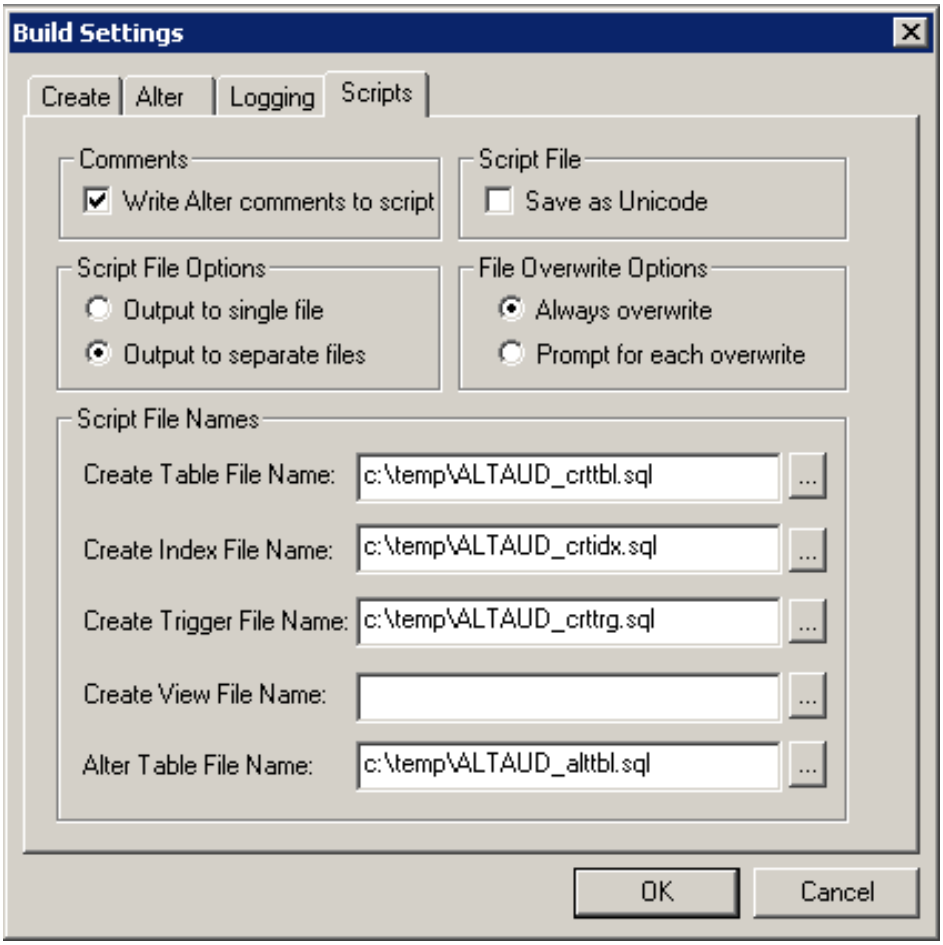
   The Build dialog box appears:



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:

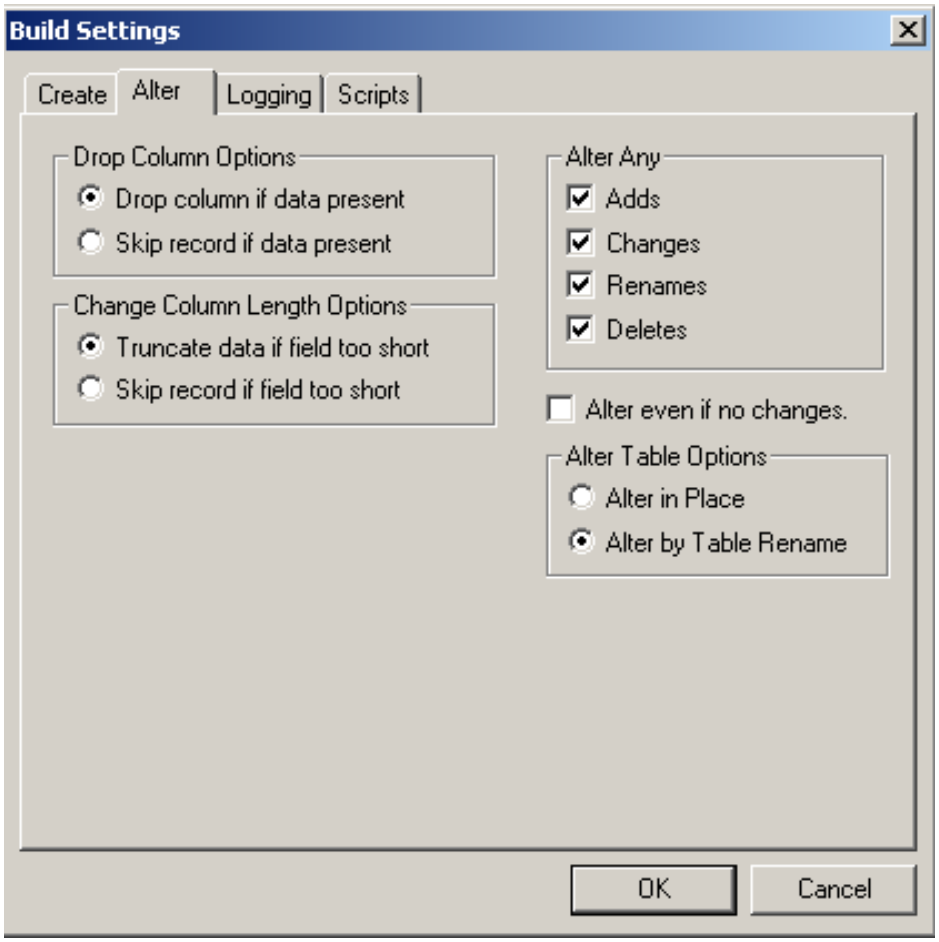


Build Settings dialog box: Scripts tab

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.

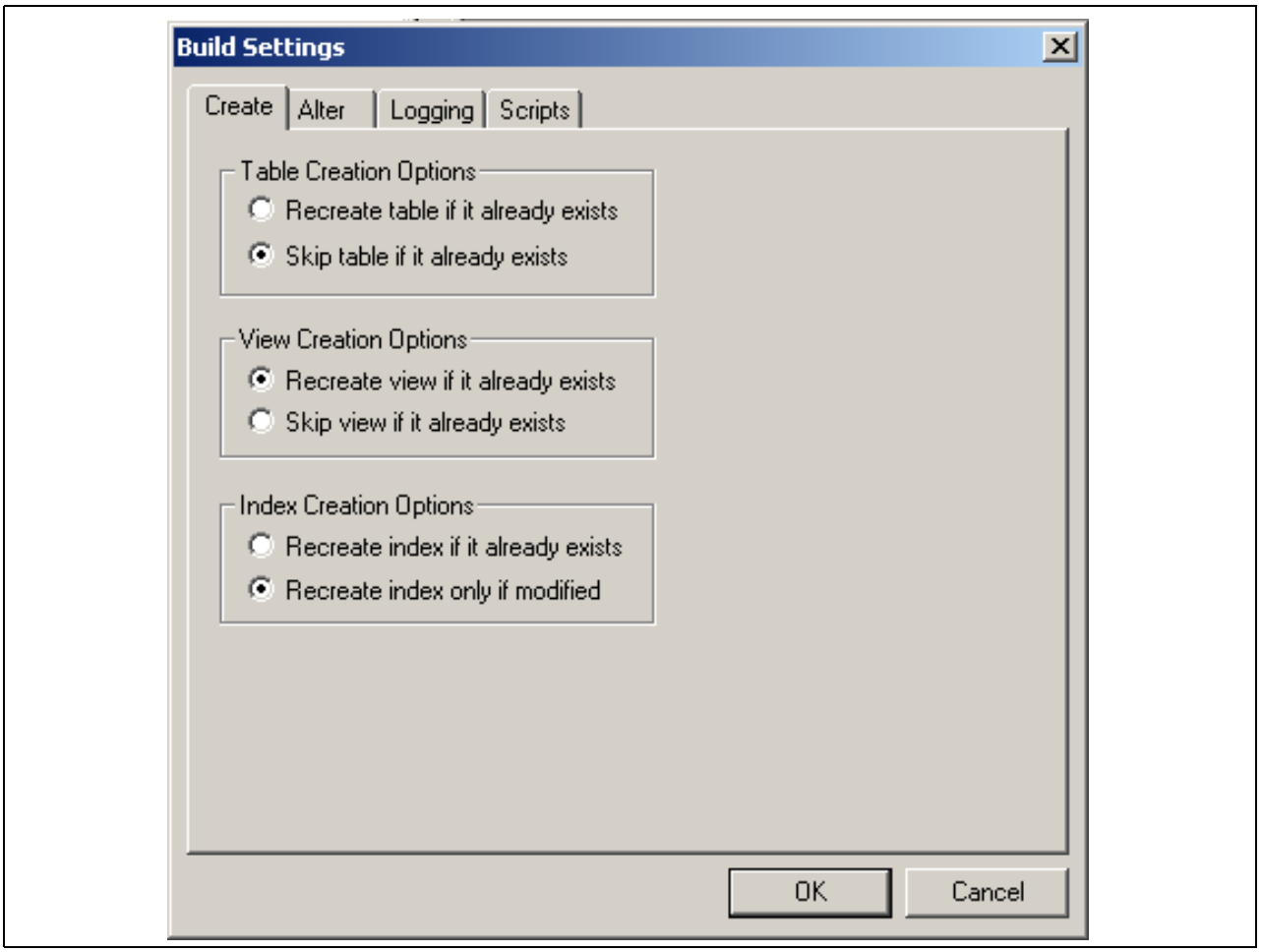
    Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.

    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 8-26: Disabling %UpdateStats

This step is required if you followed the traditional installation path, and optional if you followed the enhanced installation path.

PeopleSoft 8 introduced the meta-SQL %UpdateStats to allow an Application Engine program to update statistics in the DB2 catalog tables. For the DB2 z/OS platform, there are certain caveats to successfully implementing the %UpdateStats functionality. The primary consideration for using %UpdateStats functionality is the database schema. It is highly recommended that tables subject to this feature be placed in their own tablespace. %UpdateStats invokes the DB2 utility RUNSTATS, which is executed at the tablespace level. The more tables in a given tablespace, the longer it will take for the RUNSTATS job to complete. If the enhanced installation path is not taken, this can severely degrade rather than improve performance. PeopleSoft 8 uses the IBM Stored Procedure DSNUTILS to invoke DB2 Utility RUNSTATS.

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 *Enterprise PeopleTools 8.48 PeopleBook: Data Management.*

CHAPTER 9A

Configuring the Application Server on Windows

This chapter discusses:

- Understanding the Application Server
- Prerequisites
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain
- Configuring Fonts for Languages

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 PeopleTools or for applications that contain no COBOL programs. Check the information on PeopleSoft Customer Connection, and your application-specific documentation for the details on whether your application requires COBOL.

PeopleSoft supports a Windows application server to use with any of our supported databases.

Application servers are not supported on z/OS because 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.

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.

Note. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client), sign on to PeopleSoft using Application Server as the Connection Type, and enter <Machine name or IP Address>:<WSL port number> for the application server name—for example, 224.160.192.128:7000. (As another alternative, you can use the Configuration Manager Startup tab to insert signon defaults and use the Profiles, Database/Application Server tab to specify connect information regarding your application server.)

See Also

"Using the PeopleSoft Installer," Understanding PeopleSoft Servers

"Setting Up Process Scheduler on Windows," Starting Process Scheduler as a Windows Service

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Using PSADMIN Menus"

Enterprise PeopleTools 8.48 PeopleBook: Data Management

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

"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 8.1.

  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 9A-1: 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 “Compiling COBOL on Windows.”

If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

See *Enterprise PeopleTools 8.48 Hardware and Software Requirements.*

Task 9A-2: 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 UDB 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 UDB 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 9A-3: 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 9A-3-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. To run PSADMIN, enter the following command:

   ```
   cd <PS_HOME>\appserv
   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_HOME>\appserv directory.
5. Specify *4* for small if this is your initial domain installation, press ENTER.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*
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      :[c:\Program Files⇒
\Microsoft SQL Server\80\Tools\Binn]
  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 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).

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.

Note. 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework,* "Configuring REN Servers."

7. If you need to modify any of the values for these settings, enter the number next to the parameter name, type the new value, and press ENTER.
8. Configure the WSL to boot by changing option 6 to Yes.

   Enter *6*, and press ENTER.
9. 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.
10. 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.
11. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.

12. 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.

---

13. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.
14. 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 9A-3-2: Testing the Three-Tier Connection

If you get an error message when you try to start the application server, it may be due to an incorrect server name or port number, or because the server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Select Start, Programs, PeopleTools 8.4, 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)
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. Select *1*, Boot this domain, from the PeopleSoft Domain administration menu. Select option *1*, Boot (Serial Boot) or *2*, Parellel Boot, from the PeopleSoft Domain Boot menu.

---

10. Select Start, Programs, PeopleTools 8.4, Application Designer.
11. In the PeopleSoft Signon dialog box, select *Application Server* as the Connection Type, and confirm that the Application Server Name is correct. Enter values for User ID and password.
12. Select OK to open Application Designer.

Task 9A-3-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous 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, you must specify <PS_HOME> and the name of an existing application server domain.

To import an existing application server domain configuration:

1. Run PSADMIN:

```
cd <PS_HOME>\appserv
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
--------------------------------

1) Application Server
2) Process Scheduler
3) Search Server
4) Service Setup
q) Quit

Command to execute (1-4, q): 1
```

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 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) :
```

5. 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
```

6. If you selected *2*, provide the full path to the <PS_HOME> of the existing domain.

```
Enter PS_HOME of domain you wish to import
:C:\HR84
```

If applicable, choose among the existing application server domains in the specified <PS_HOME>:

```
Tuxedo domain list:
  1)  HR84A
  2)  HR84B

Select domain number to import: 1

Enter a name for new domain:  HR84
```

Note. Once 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, DBType, UserId, UserPswd, Workstation Listener Port, Jolt Listener Port, Jolt Relay Adapter Listener Port. DBName can be the same or different, depending on which database the application server needs to point to. DBType depends on the database type of DBName. UserId and UserPswd are the user's choice. Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine. 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 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 9A-3-4: 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. Start PSADMIN by entering:

   ```
   cd <PS_HOME>\appserv
   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.

     PeopleSoft 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=
   Do you want to change any values (y/n)? [n]:  y
   ```

   Note. 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.

- 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.

- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

Note. The WSL, JSL, and JRAD port numbers 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.

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 *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

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 9A-3-5: 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_HOME>\appserv\<domain>\LOGS\APPSRV_mmdd.log and <PS_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 started"—which is usually misleading, because the process has often 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

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework

Task 9A-4: Configuring Fonts for Languages

This section discusses:

- Configuring Asian Language Fonts

Task 9A-4-1: 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 <PSHOME>\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 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

Enterprise PeopleTools 8.48 PeopleBook: PeopleCode Language Reference, “Chart Class”

CHAPTER 9B

Configuring the Application Server on UNIX

This chapter discusses:

- Understanding the Application Server
- Understanding the Application Server Domain Processes
- Prerequisites
- Setting Environment Variables
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain
- Configuring Fonts for Languages

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 PeopleTools or for applications that contain no COBOL programs. Check the information on PeopleSoft Customer Connection, and your application-specific documentation for the details on whether your application requires COBOL.

PeopleSoft supports UNIX application servers on the following platforms:

- Hewlett-Packard HP-UX
- IBM AIX
- Tru64
- Linux

Application servers are not supported on z/OS because 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.

Note. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client), sign on to PeopleSoft using Application Server as the Connection Type, and enter <Machine name or IP Address>:<WSL port number> for the application server name—for example, 224.160.192.128:7000. (As another alternative, you can use the Configuration Manager Startup tab to insert signon defaults and use the Profiles, Database/Application Server tab to specify connect information regarding your application server.)

See Also

"Using the PeopleSoft Installer," Understanding PeopleSoft Servers

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Using PSADMIN Menus"

Enterprise PeopleTools 8.48 PeopleBook: Data Management

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

"Compiling COBOL on UNIX"

Understanding the Application Server Domain Processes

On most platforms (AIX, Solaris, Tru64, Linux, and HP-UX 11.23, also known as 11i V2, and higher, for IPF and PA-RISC) no changes are required from the system defaults, in order to allow the "small" and "development" domains that are shipped with PeopleTools to boot successfully.

Refer to the performance Red Paper for guidance in configuring your system to run larger domains. That document will describe the suggested minimum kernel settings for running PeopleTools in a real-world environment.

See PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Optimization Guide, Optimization Documentation and Software, Red Paper Library. Select the link "Online Performance Configuration Guidelines for PeopleTools" for your PeopleTools version under the heading "PeopleTools, PeopleSoft Enterprise Portal, and Other Technology.")

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.

On HP-UX 11.11, also known as 11i V1 (for PA-RISC), the following kernel parameters, at a minimum, need to be changed to allow a small domain to boot successfully:

- increase maxfiles from 60 to 1024
- increase maxuprc from 75 to 256
- increase max_thread_proc from 75 to 256

These can be changed with the kernel parameter command, kmtune (1), or with the system administration manager, SAM, with root access. Some examples are:

Query a parameter value: `kmtune -q maxfiles`

Change a parameter value: `kmtune -s maxfiles=1024`

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 8.1.

  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 9B-1: Setting Environment Variables

Telnet to your UNIX system. Log in and ensure the following environment variables are set appropriately.

One method to ensure the required PeopleSoft environment variables are set is to source psconfig.sh. Enter the following command:

```
cd <PS_HOME>
. ./psconfig.sh
```

Task 9B-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 “Compiling COBOL on UNIX.”

If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

See *Enterprise PeopleTools 8.48 Hardware and Software Requirements.*

Task 9B-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 UDB 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 UDB 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 9B-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 9B-4-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. To run PSADMIN, enter the following command:

   ```
   cd <PS_HOME>/appserv
   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_HOME>/appserv directory.

5. Specify *4* for small if this is your initial domain installation, press ENTER.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

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 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).

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.

Note. 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework,* "Configuring REN Servers."

7. If you need to modify any of the values for these settings, enter the number next to the parameter name, type the new value, and press ENTER.
8. Configure the WSL to boot by changing option 6 to Yes.

   Enter *6*, and press ENTER.
9. 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.
10. 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.
11. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.
12. 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.

---

13. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.

14. 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 9B-4-2: Testing the Three-Tier Connection

If you get an error message when you try to start the application server, it may be due to an incorrect server name or port number, or because the server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Select Start, Programs, PeopleTools 8.4, 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)
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. Select *1*, Boot this domain, from the PeopleSoft Domain administration menu. Select option *1*, Boot (Serial Boot) or *2*, Parellel Boot, from the PeopleSoft Domain Boot menu.

---

10. Select Start, Programs, PeopleTools 8.4, Application Designer.
11. In the PeopleSoft Signon dialog box, select *Application Server* as the Connection Type, and confirm that the Application Server Name is correct. Enter values for User ID and password.
12. Select OK to open Application Designer.

Task 9B-4-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous 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, you must specify <PS_HOME> and the name of an existing application server domain.

To import an existing application server domain configuration:

1. Run PSADMIN:

```
cd <PS_HOME>/appserv
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
--------------------------------

1) Application Server
2) Process Scheduler
3) Search Server
q) Quit

Command to execute (1-3, q): 1
```

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 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) :
```

5. 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
```

6. If you selected *2*, provide the full path to the <PS_HOME> of the existing domain.

```
Enter PS_HOME of domain you wish to import
:/home/HR84
```

If applicable, choose among the existing application server domains in the specified <PS_HOME>:

```
Tuxedo domain list:
  1)  HR84A
  2)  HR84B

Select domain number to import: 1

Enter a name for new domain:  HR84
```

Note. Once 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, DBType, UserId, UserPswd, Workstation Listener Port, Jolt Listener Port, Jolt Relay Adapter Listener Port. DBName can be the same or different, depending on which database the application server needs to point to. DBType depends on the database type of DBName. UserId and UserPswd are the user's choice. Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine. 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 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 9B-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. Start PSADMIN by entering:

```
cd <PS_HOME>/appserv
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.

  PeopleSoft 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=
Do you want to change any values (y/n)? [n]:  y
```

Note. 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.

- 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.

- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

Note. The WSL, JSL, and JRAD port numbers 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.

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 *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

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 9B-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 the PSADMIN PeopleSoft Domain Administration menu option 6 for Edit configuration/log files menu to check for errors in <PS_HOME>/appserv/<domain>/LOGS/APPSRV_mmdd.LOG and <PS_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 started"—which is usually misleading, because the process has often 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

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework

Task 9B-5: Configuring Fonts for Languages

This section discusses:

- Configuring Asian Language Fonts
- Installing TrueType Fonts for Tru64 UNIX

Task 9B-5-1: 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 <PSHOME>/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 <PSHOME>/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

Enterprise PeopleTools 8.48 PeopleBook: PeopleCode Language Reference, "Chart Class"

Task 9B-5-2: Installing TrueType Fonts for Tru64 UNIX

Because the fonts that come with the Tru64 UNIX do not include European characters, you must obtain and install TrueType fonts to display European and Asian characters on Tru64. You can purchase these fonts from vendors such as Founder, Dynalab Inc., and Ricoh. Once you obtain a suitable font you must install it for use by the Application Server's JVM, as described here.

To install the TrueType fonts:

1. Copy the TrueType font to the <PS_HOME>/jre/lib/fonts directory.
2. The font should come with an example fonts.scale.* file. Find this file and append the entries (not including the number at the top) to the fonts.scale file in <PS_HOME>/jre/lib/fonts.
3. Edit the number at the top of the new fonts.scale file to reflect the number of entries (the old number plus the number at the top of the example file).
4. Run `mkfontdir` in this directory.
5. Edit PSOFTFont.properties to point to this file for the language you are configuring (see above).

See Also

Founder: www.foundertype.com

Dynalab Inc.: www.dynalab.com

Ricoh: www.ricoh.com

CHAPTER 10A

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
- Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server in GUI Mode
- Installing the PeopleSoft Pure Internet Architecture on WebLogic in GUI Mode
- Installing the PeopleSoft Pure Internet Architecture on WebSphere
- Encrypting the Password (AIX Only)
- Testing the PeopleSoft Pure Internet Architecture Installation

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 Application Server (OAS), WebLogic, and WebSphere. Only complete the instructions for the web server product that you installed.

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.”

PeopleSoft only supports customer installations that use the version of the web servers packaged with 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.

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 PIA installation.

The initial PIA setup automatically creates the default PeopleSoft site named ps. In subsequent PIA 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 PIA 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.

Note. If you want to connect between multiple application databases, you need to implement single signon.

Note. If the PeopleSoft Pure Internet Architecture installation encounters an error, it will indicate which log files to refer to.

See “Installing Web Server Products.”

Warning! Do not use GUI mode to install the PeopleSoft Pure Internet Architecture if you want to install on a WebSphere server *and* you are running on a UNIX platform. In this situation, use console mode to set up the PeopleSoft Pure Internet Architecture.

Note. 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.

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 Enterprise Portal have their own installation instructions, which are available on Customer Connection. For an overview of the various types of portals, consult the following.

  See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

- *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.

- *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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework.*

- *PeopleSoft Sync Server Gateway.* The Sync Server is a specialized application server optimized for concurrent multi-user synchronization processing in support of PeopleTools Mobile Agent. The web server-based Sync Gateway routes synchronization requests and messages to and from the appropriate Sync Server.

  See *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Mobile Agent.*

- *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 *Enterprise PeopleTools 8.48 PeopleBook: Software Updates.*

See Also

Enterprise PeopleTools 8.48 PeopleBook: Security Administration

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

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 OAS, 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 *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* "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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework.*

Specify an authentication domain if you plan to use Business Objects Enterprise.

See “Installing and Configuring Software for Crystal Reports, ” Installing BusinessObjects Enterprise XI.

Task 10A-1: Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server in GUI Mode

This section discusses:

- Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server
- Uninstalling the PeopleSoft Pure Internet Architecture from Oracle Application Server

Note. The installation of the PeopleSoft Pure Internet Architecture on Oracle Application Server includes the PeopleSoft Provider. Use this to configure PeopleSoft portlets on Oracle Portal pages.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* “Deploying PeopleSoft Portlets on Oracle Portal Pages.”

Task 10A-1-1: Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server

Before installing the PeopleSoft Pure Internet Architecture (PIA) on Oracle Application Server (OAS), you must have installed the OAS software.

See “Installing Web Server Products, ” Installing Oracle Application Server.

When installing PIA on OAS, 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 PeopleTools, copy the <PS_HOME>\setup\mpinternet directory to the local machine.

1. Start opmn process if necessary.

   To check the status of the opmn process run this command:

   ```
   <OAS_HOME>\opmn\bin\opmnctl status
   ```

   If you get the response, “Unable to connect to opmn”, start it by running this command:
   ```
   <OAS_HOME>\opmn\bin\opmnctl start
   ```

   See “Installing Web Server Products,” Installing Oracle Application Server.

2. Start dcm-daemon process if necessary.

   To check the status of dcm-daemon run this command:

   ```
   <OAS_HOME>\opmn\bin\opmnctl status
   ```

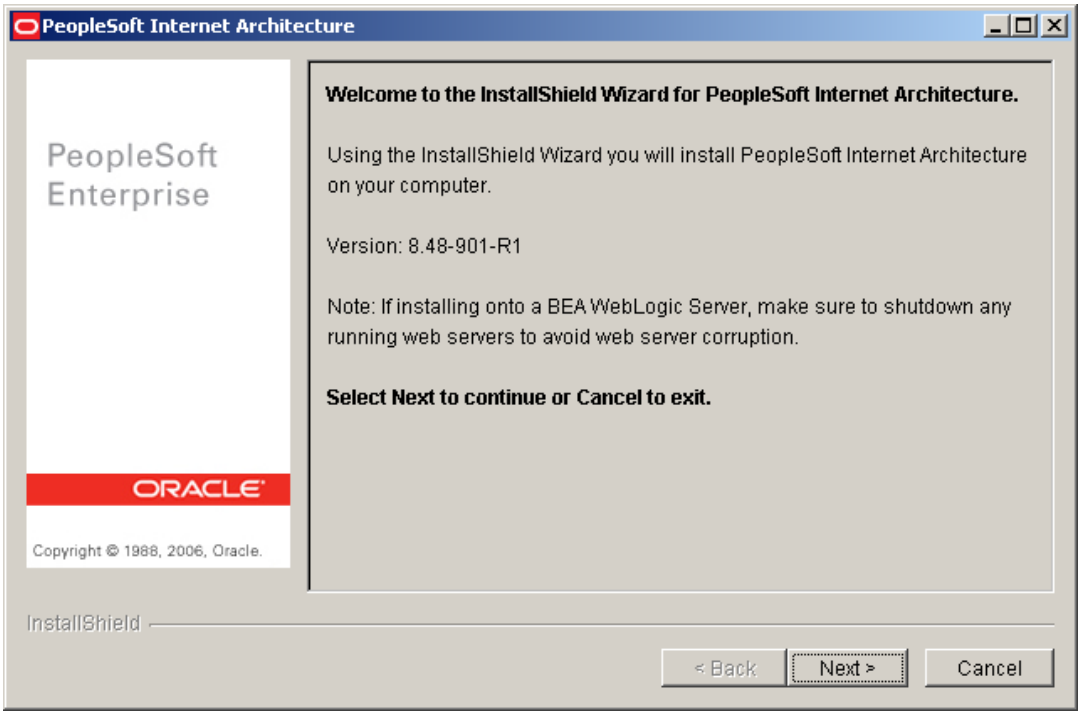
   If the dcm-daemon’s status is not “Alive”, start it by running this command:
   ```
   <OAS_HOME>\opmn\bin\opmnctl startproc ias-component=dcm-daemon
   ```

3. Navigate to <PS_HOME>\setup\mpinternet.
4. Run setup.<OS>.

Alternatively, at the command prompt, type `<JAVA_HOME>\bin\java -cp setup.jar run`, where *<JAVA_HOME>* is the directory where the JRE software is installed. The default is <PS_HOME>\jre.

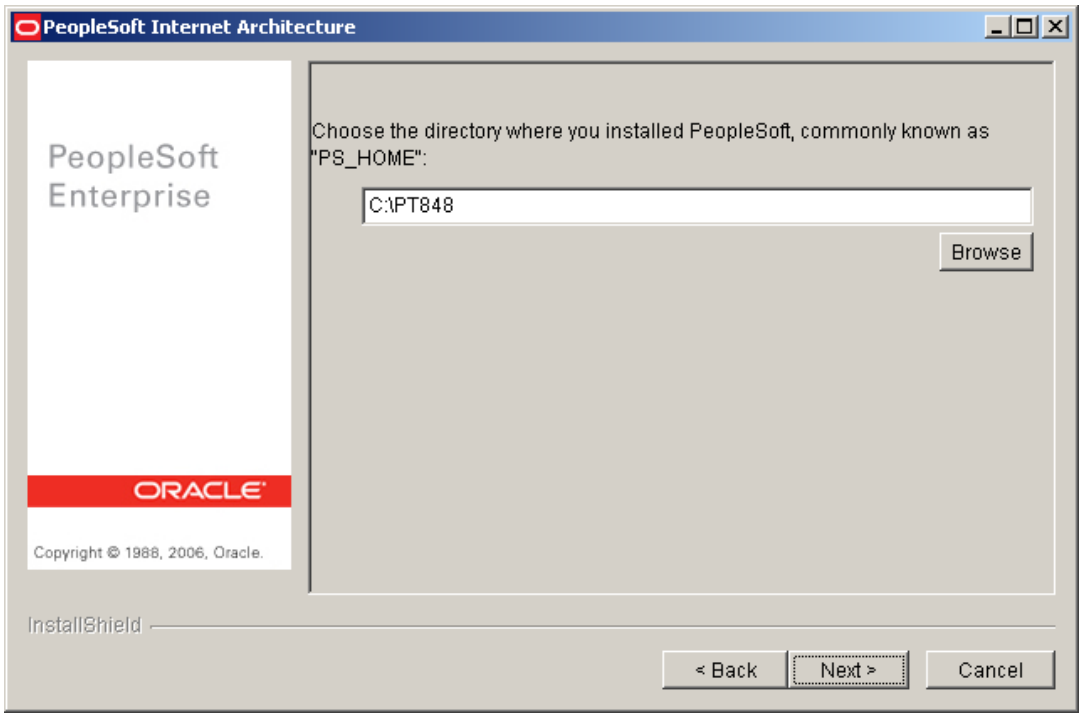
See "Using the PeopleSoft Installer," Prerequisites.

5. Click Next on the welcome screen.



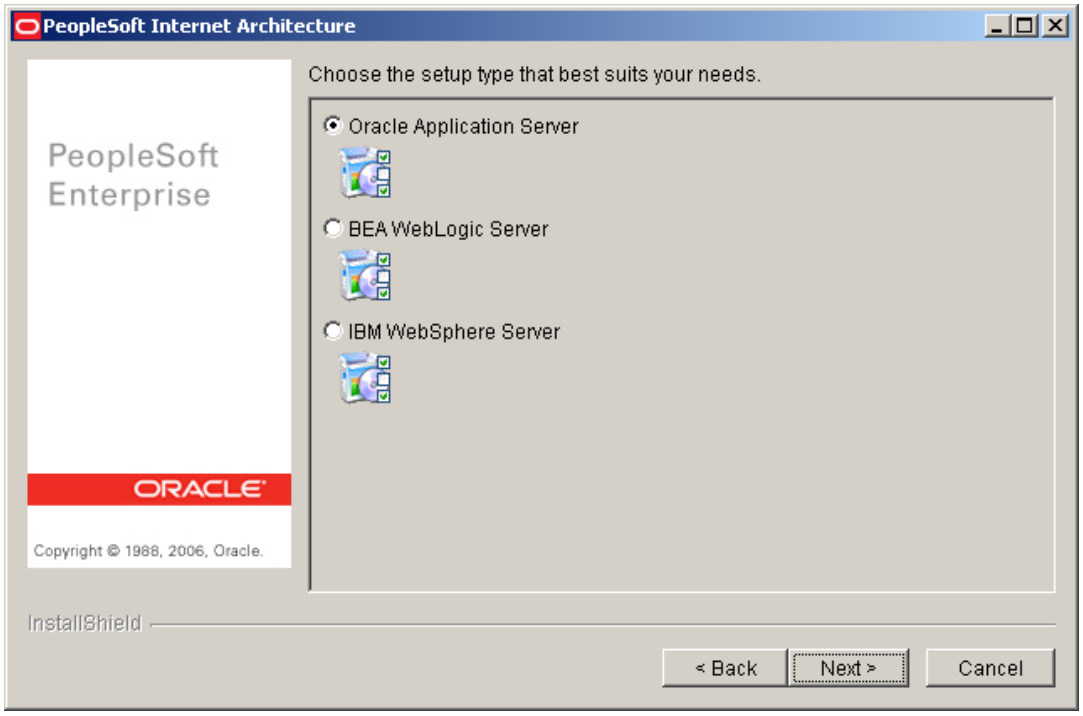
PeopleSoft Internet Architecture Welcome window

6. Enter the location of <PS_HOME>, the home directory where you installed PeopleTools.



Specifying the PeopleSoft home directory

7. Accept Oracle Application Server as the setup type.

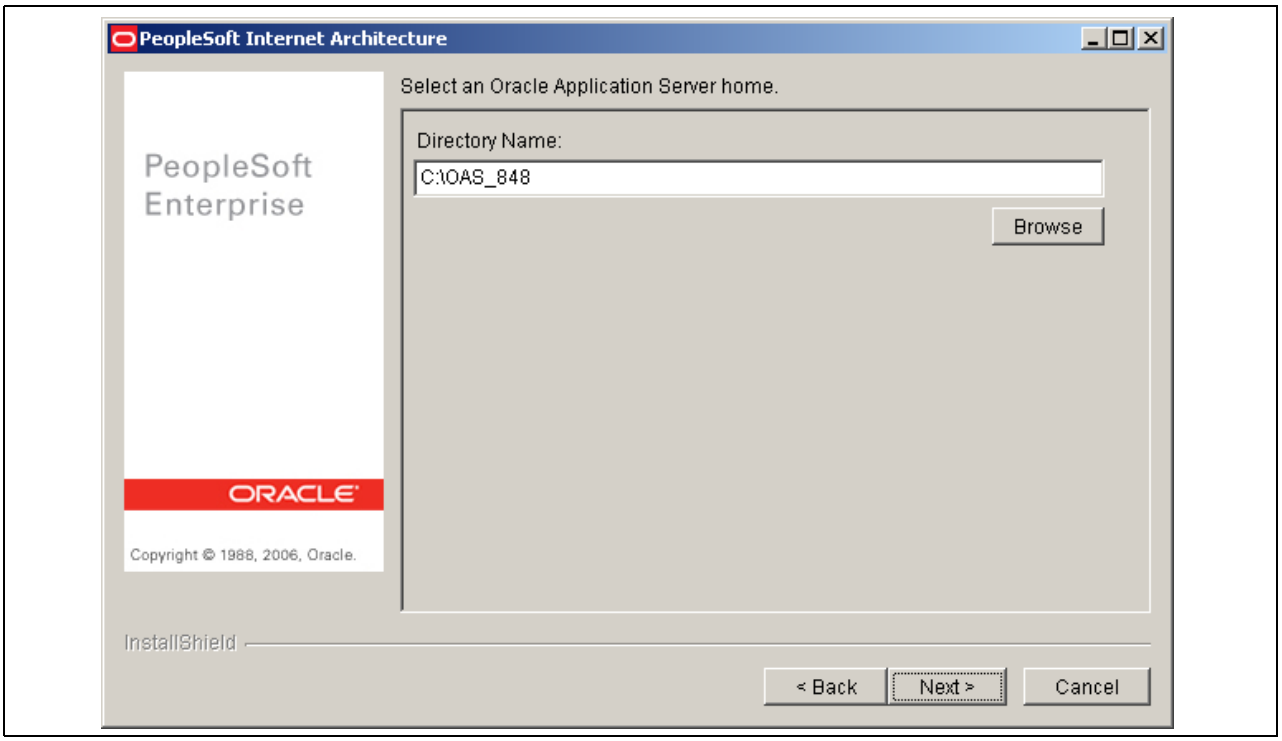


Choosing Oracle Application Server

Click Next.

8. Specify the OAS home directory; that is, the directory where you installed the OAS software.

   Click Next.



Specifying the OAS home directory

9. Enter an application name for this web server (for example, PeopleSoft) and select the type of server you want to install.

   The *Single Component Server* option creates one OC4J component to hold all the PeopleSoft web applications. The installer uses the Application Name you enter for the new component's name.

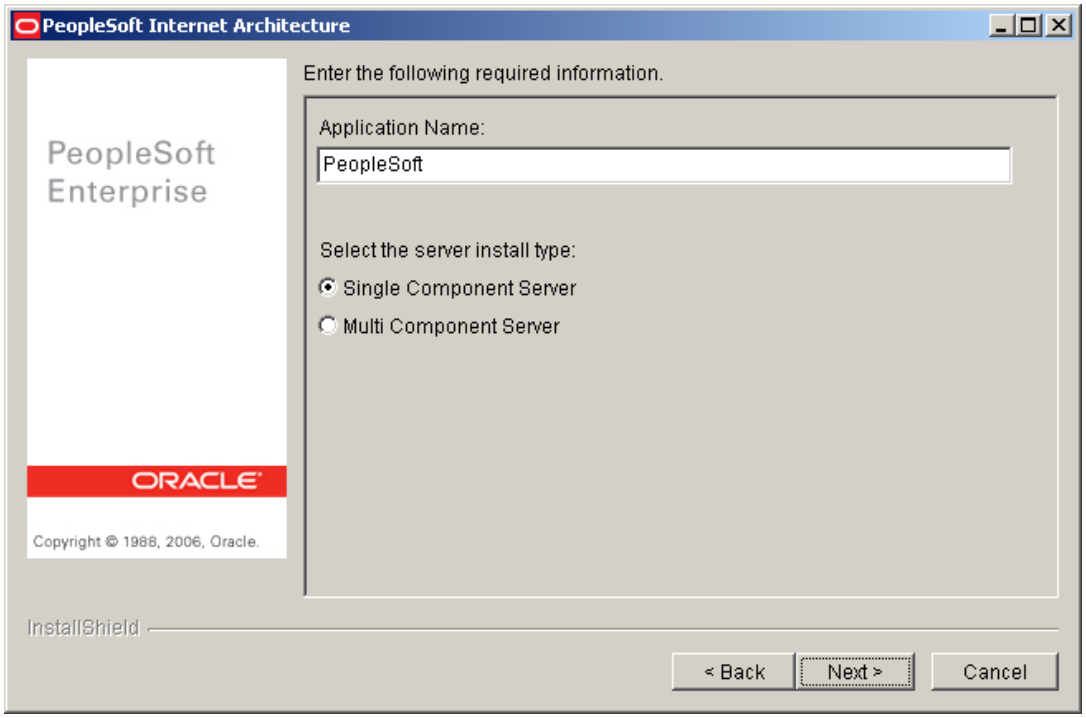
   The *Multi Component Server* option splits the PeopleSoft web application into three OC4J components—PIA_<application_name>, PSOL_<application_name> (for the PeopleSoft Online Library), and PSEMHUB_<application_name> (for the PeopleSoft Environment Management Framework). Each OC4J component has its own JVM, so the multicomponent option will be better suited for installations needing higher performance or reliability. If you are not sure which to pick choose Single.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with Oracle Application Server 10g."

   See "Installing PeopleBooks."

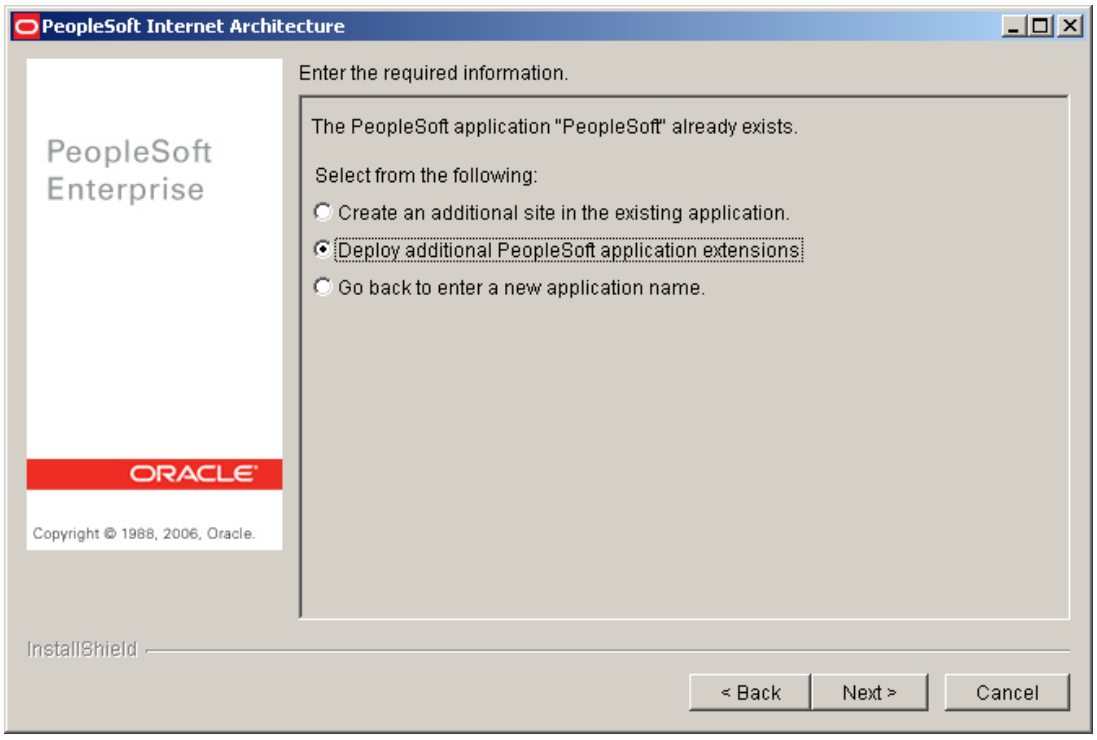
   See *Enterprise PeopleTools 8.48 PeopleBook: Software Updates,* "Configuring and Running Environment Management Components."

10. If you entered a new (unused) name, click Next and skip the next two steps. Continue with step 13.



Specifying the application name and server type

11. If the name you enter belongs to an OAS web server application that already exists, select Single Component Server or Multi Component Server and click Next.
12. Select one of the following options for the type of installation:



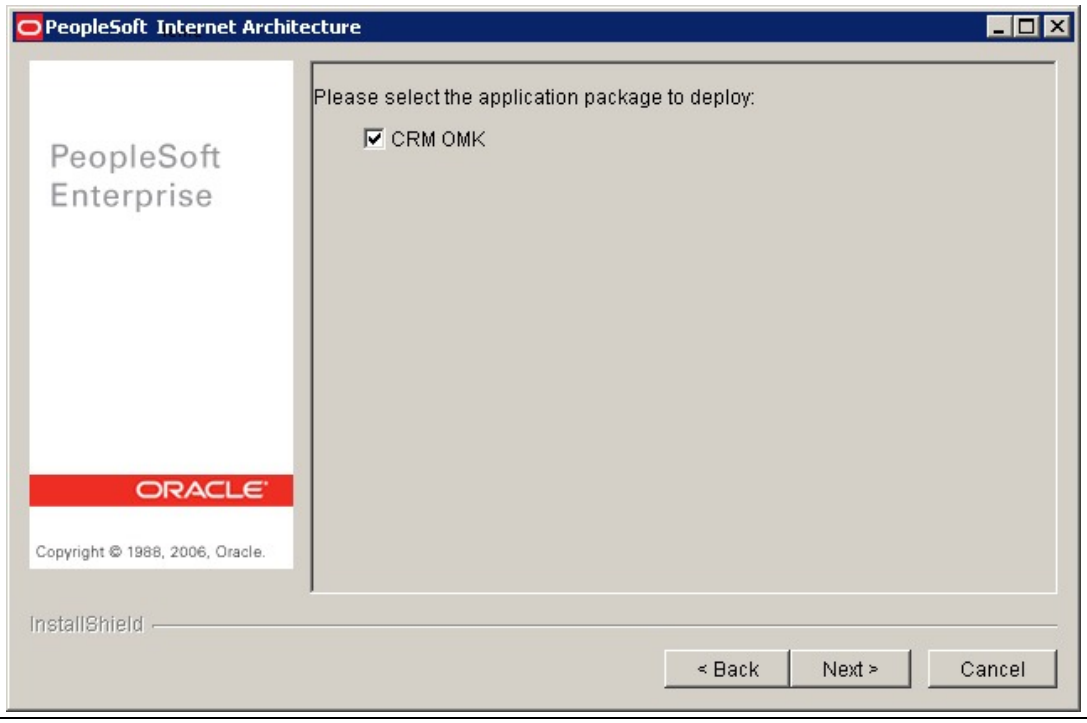
Selecting the installation options for an existing OAS application

- *Create an additional site in the existing application*: Select this option to install only the necessary files for defining an additional PeopleSoft site onto the existing OAS web server configuration.
- *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. PeopleTools does not use application extensions.
- *Go back to enter a new application name*: Select this option to return to the previous window.

Note. To redeploy PIA on OAS, you must remove the OC4J component(s) and perform a fresh PIA installation. Use Application Server Control or dcmctl commands to remove the OC4J component(s). Note that any customizations done after the PIA install must be done again.

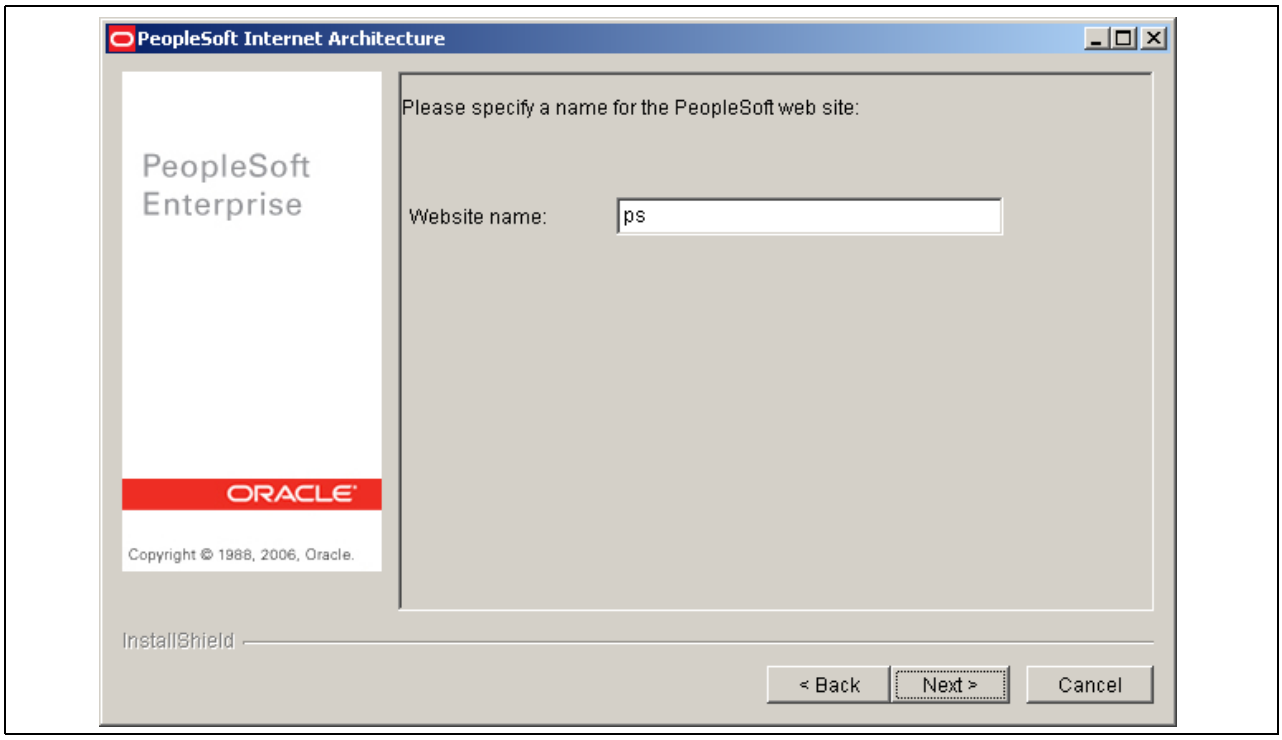
---

13. If you select the option Deploy additional PeopleSoft application extensions, a window appears listing the available application packages. Select the check boxes for those applications you want to deploy:



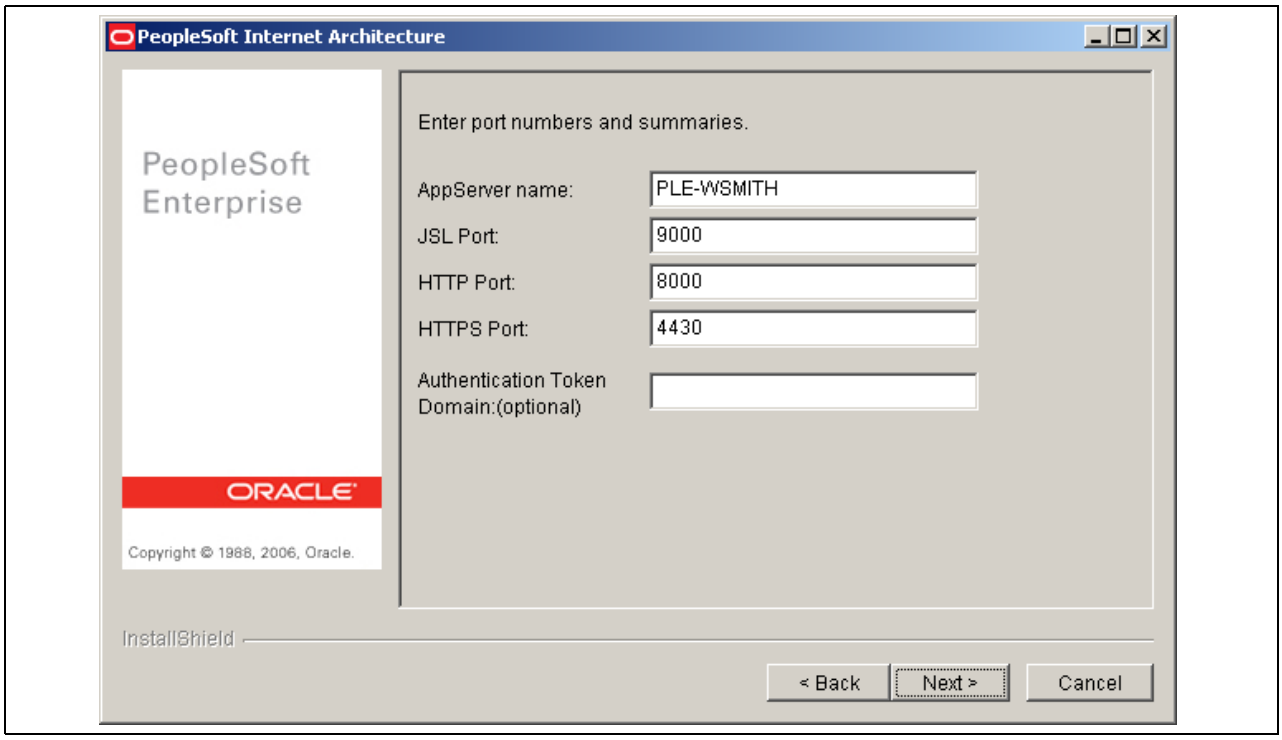
Selecting application packages to deploy

14. Enter a web site name; the default is ps.



Entering the web site name

15. Specify the 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 the app server name, port numbers, and authentication token domain for the OAS installation.

AppServer name Enter the name of your application server machine.

JSL Port

Enter the JSL port number you specified when setting up the application server (the default is 9000).

HTTP/HTTPS

The default HTTP/HTTPS ports of the Oracle HTTP Server (OHS) are 80/443 for Windows and 7777/4443 for UNIX/Linux. However, you should enter different HTTP/HTTPS port values at this point for the PIA installation. Please use any unused port other than 80/443 for Windows and 7777/4443 for UNIX/Linux. The PIA installation may fail or may not work properly if you enter the same HTTP/HTTPS ports for the PIA installation as the default OHS ports.

To access PIA, specify a URL with either the default OHS port values, or the port values you enter here for PIA. For example, http://*<machine_name>:<port_number>*/*<site_name>*/signon.html.

For Multi Component Server, the HTTP/HTTPS ports that you enter here correspond to the OC4J component PIA_<application_name>.

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. In addition, certain installation configurations require that you specify an authentication domain.

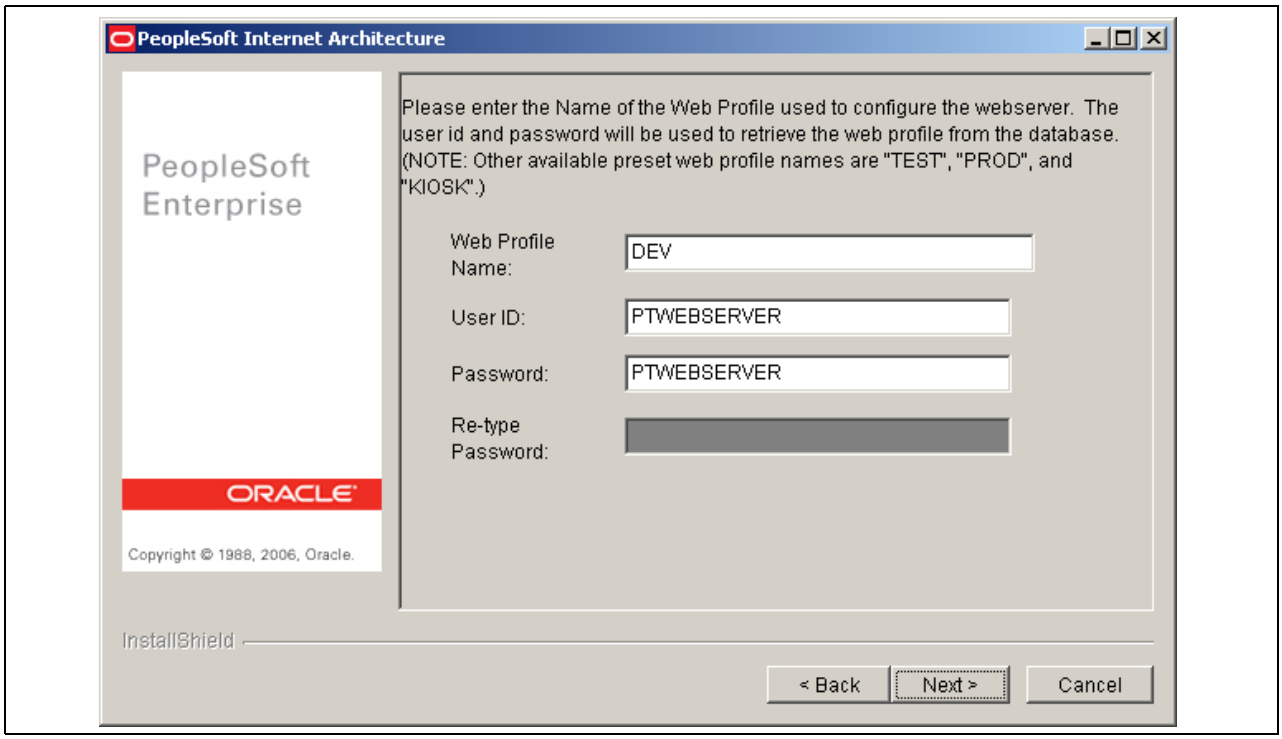
See Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.

16. Enter the name of the web profile in the database that will be used to configure this PeopleSoft web site.

    This can be either a predelivered name as shown on the page, or one you intend to create yourself using PeopleTools, Web Profile Configuration, after logging in. Each site is configured according to the profile you specify here when it is first accessed after the web server is booted. The user ID and password will be used by the PIA servlets themselves at runtime to log in to the application server to retrieve the profile. For applications on PeopleTools 8.44 and above, PeopleSoft predelivers the PTWEBSERVER user ID for the purpose of configuring PIA servlets at runtime and running the Performance Monitor Agents. You may have to unlock that user profile in certain application databases. If you have any problems logging in after starting the web server, refer to the application server domain logs.

    See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Note. If you are upgrading your application database to PeopleTools 8.44 and above, you must set up the PTWEBSERVER user ID. Go to PeopleTools, Security, User Profiles, User Profiles. Click Add a New Value, enter PTWEBSERVER for User ID, and click Add. Enter and confirm a password, and enter a description. Enter the role *PeopleTools Web Server* and then click Save.

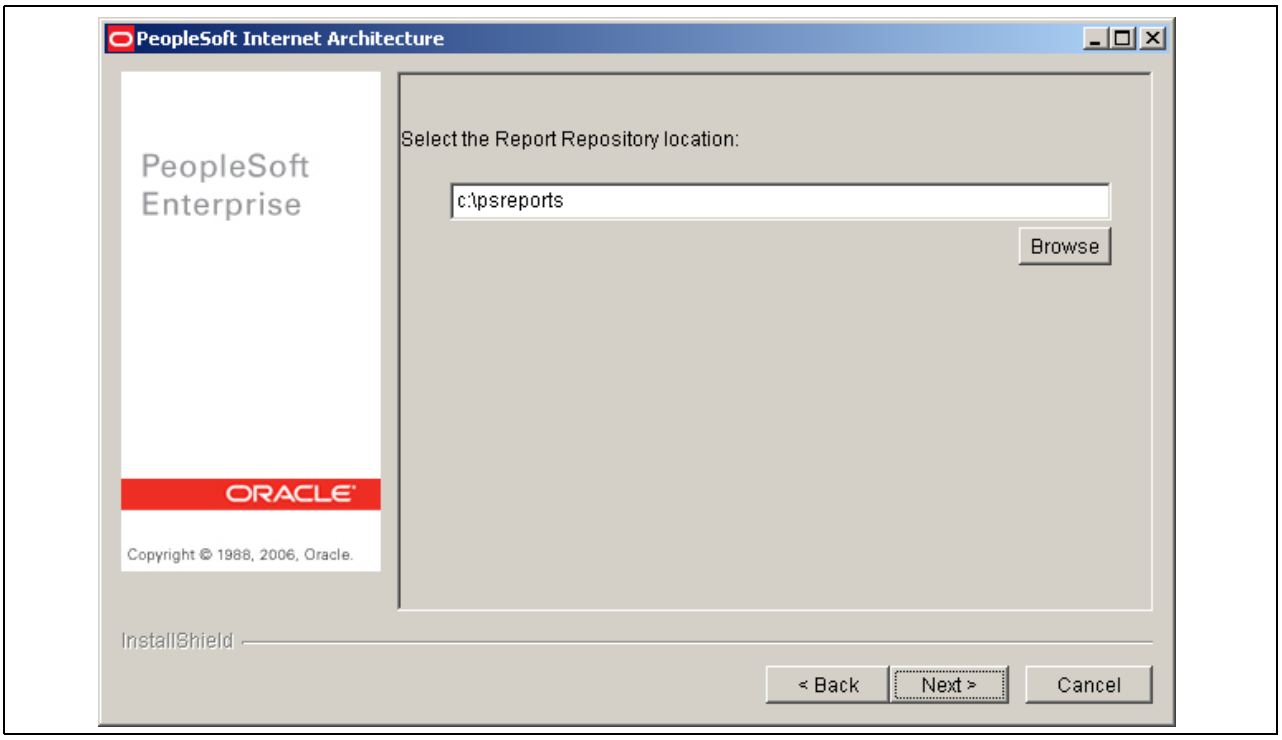


Specifying the web profile, user ID, and password

17. Specify the root directory for the Report Repository (c:\psreports by default), and click Next. You can instals to any location.

Note. For the Report Repository directory, specify the same directory that you specify as the Home Directory. Make sure that this directory is shared.

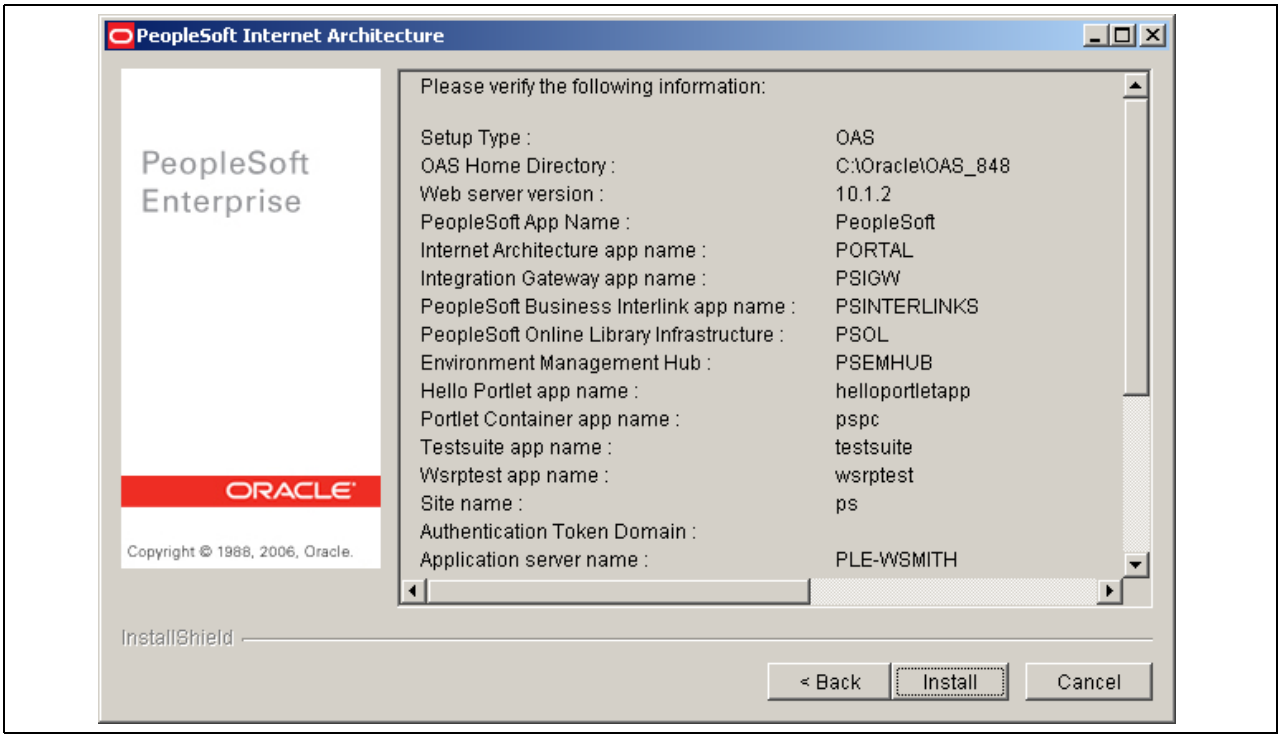
See “Setting Up Process Scheduler on Windows,” Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.



Specifying the Report Repository location

18. Verify your selections on the summary window (click Back if you need to make any changes).

    Click Install to start the installation. An indicator appears showing the progress of the installation.



Verifying the installation information

19. Click Finish.

    The default installation directory is <OAS_HOME>\j2ee\<component>\application\<application>.

Task 10A-1-2: Uninstalling the PeopleSoft Pure Internet Architecture from Oracle Application Server

To uninstall using the distributed configuration management control (dcmctl):

1. Change directory to <OAS_HOME>\dcm\bin.
2. Run this command to view a list of component names:

   ```
   dcmctl listcomponents
   ```

   The component name is the name you entered when asked for Application Name in the task "Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server." The documentation used *PeopleSoft* as an example.
3. Run the following command, substituting your application name for <*PIA_COMPONENT*>:

   ```
   dcmctl removecomponent -component <PIA_COMPONENT>
   ```
4. Run the following command:

   ```
   dcmctl updateconfig
   ```

It is also possible to uninstall using the Application Server Control pages.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with Oracle Application Server 10g."

Task 10A-2: Installing the PeopleSoft Pure Internet Architecture on WebLogic in GUI Mode

This section describes how to install the PeopleSoft Pure Internet Architecture on WebLogic.

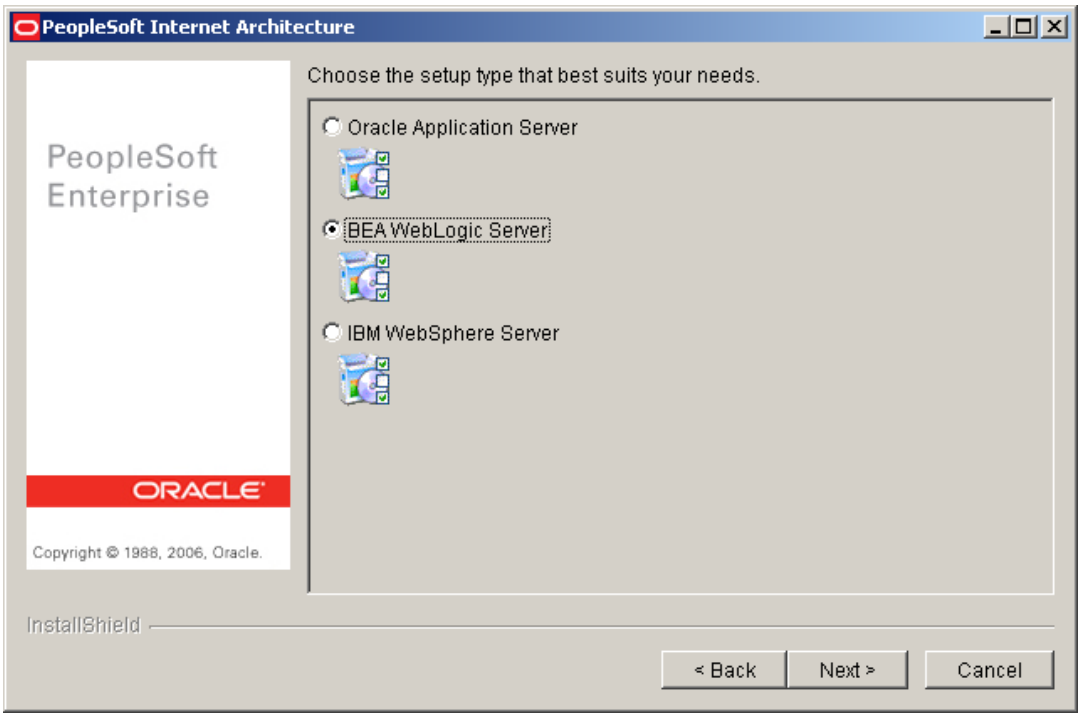
See "Installing Web Server Products," Installing WebLogic.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with BEA WebLogic."

Note. The installation will not proceed with an incorrect version of the WebLogic Server Service Pack. Make sure the correct service pack version (at least SP5) for WebLogic Server is properly installed prior to running this PeopleSoft Pure Internet Architecture install.

To install the PeopleSoft Pure Internet Architecture on WebLogic:

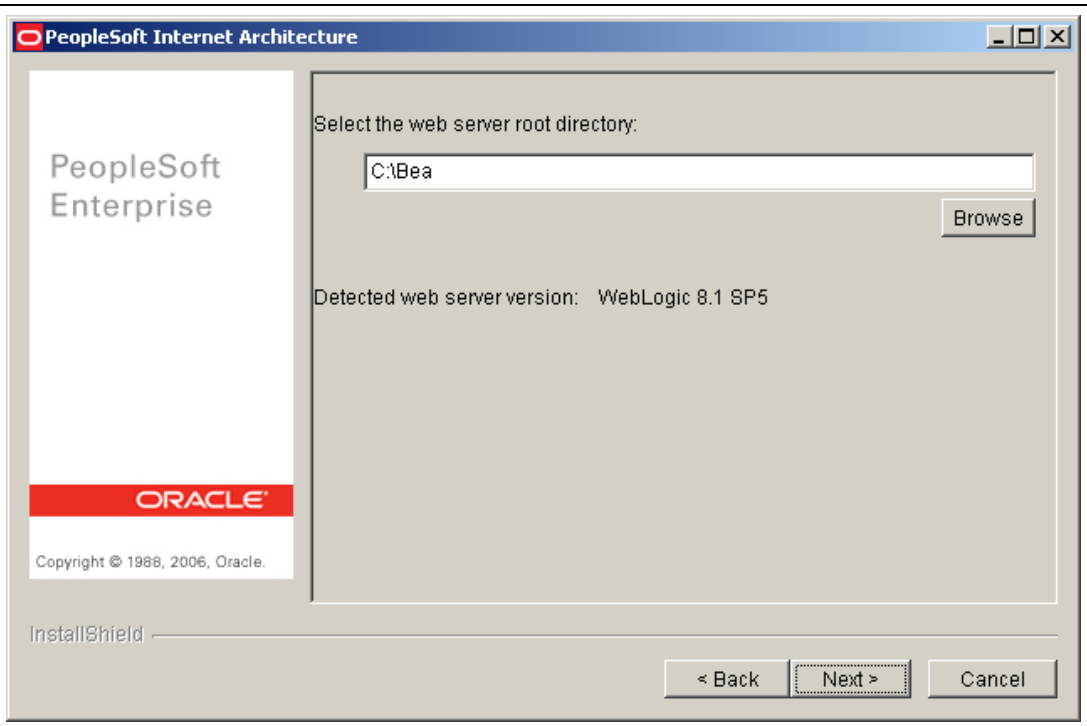
1. Go to <PS_HOME>\setup\mpinternet.
2. Run setup.<OS>.
3. Click Next in the Welcome screen.
4. Enter the same <PS_HOME> directory that you specified when running the PeopleTools Installer.
5. Choose BEA WebLogic Server and click Next.



Choosing the BEA WebLogic Server in the PeopleSoft Internet Architecture window

6. Specify the root directory where WebLogic is installed, and click Next.

Note. If you enter an incorrect path for WebLogic, you receive an error message "Detected web server version: no choices available." Check that you have WebLogic installed, and in the designated directory.



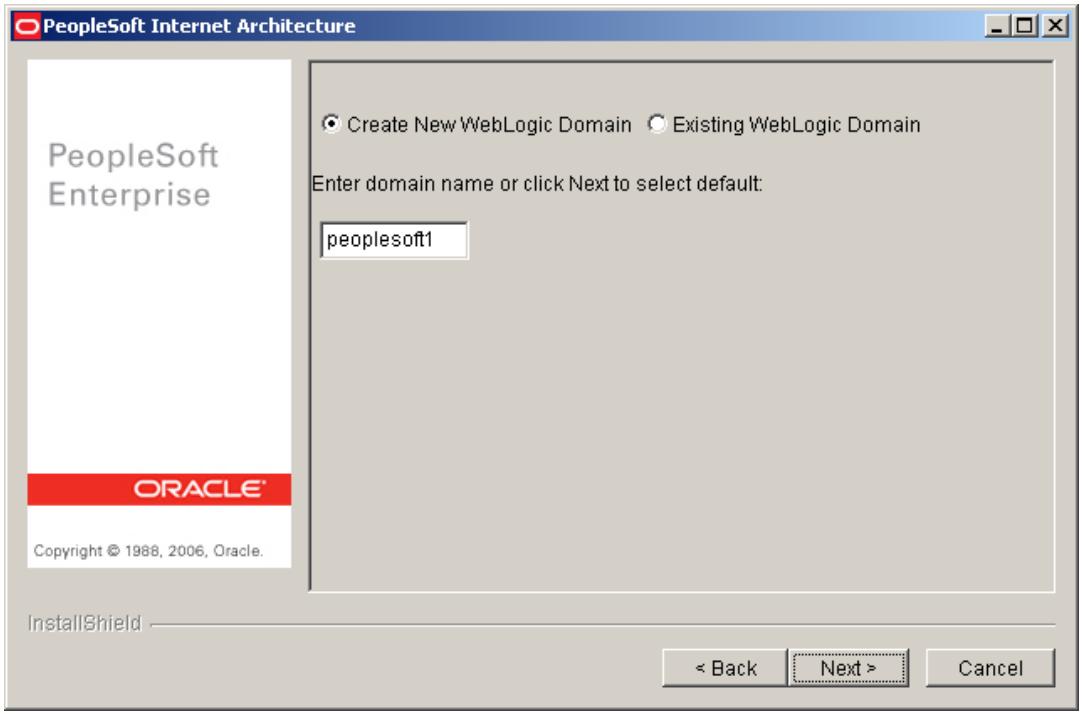
Specifying the root directory in the PeopleSoft Internet Architecture window

7. Enter the login ID and password for the new domain to be created.

   Click Next to continue. The next window asks you to choose whether to create a new WebLogic domain or to use an existing 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.



Specifying a new WebLogic domain

9. If you select Existing WebLogic Domain, specify the domain name and select one of these options:

Note. You see the option Existing WebLogic Domain only if there is already a domain in <PS_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 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>*

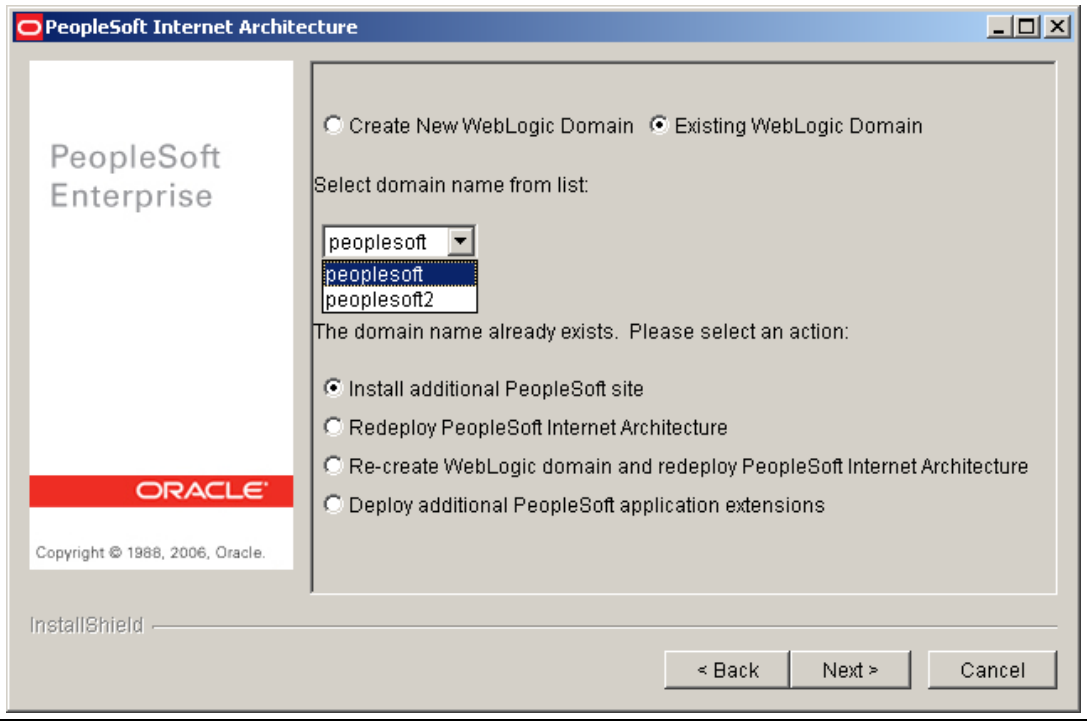
Redeploy PeopleSoft Internet Architecture

This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local WebLogic domain. Select this

	option to redeploy all of the class files and jar files that comprise web components of PeopleSoft Pure Internet Architecture. 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 WebLogic Server configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local WebLogic domain. Select this option to completely remove an existing WebLogic domain and create the newly specified PeopleSoft site.
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. PeopleTools does not use application extensions.

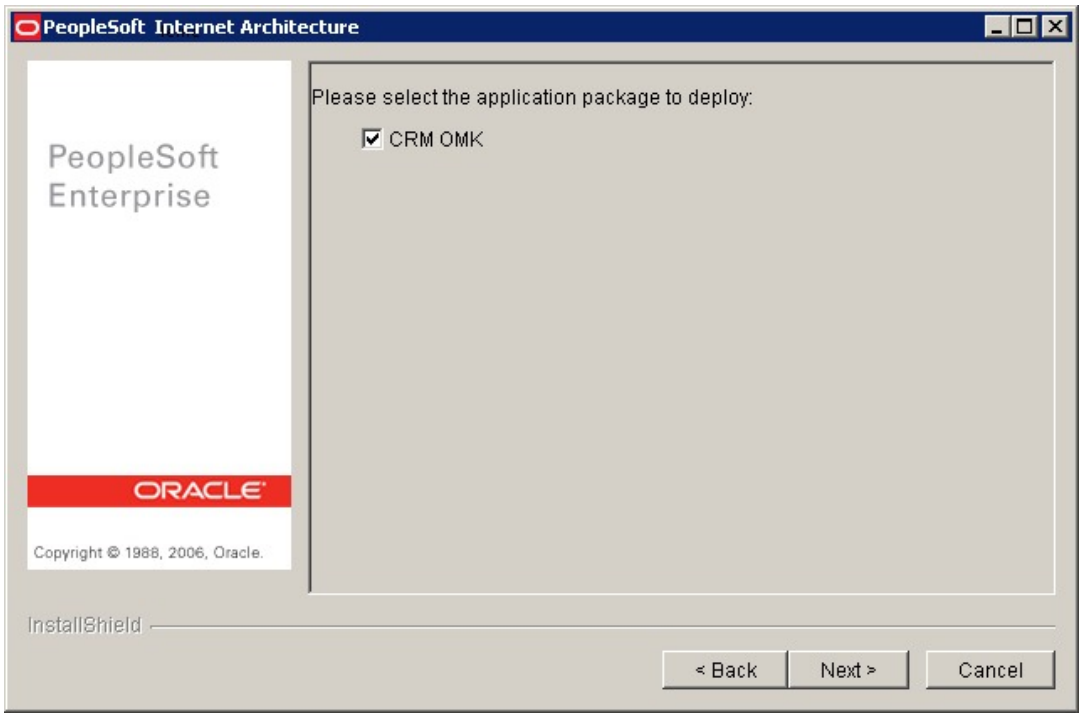
Warning! Re-creating an existing domain will delete everything previously installed into that domain, including PeopleBooks. If you choose to re-create—instead of redeploying—a domain, you may first want to back up your PeopleBooks <*docroot*> directory (typically, htmldoc) at the top level of the PeopleSoft Online Library (PSOL) web site. You can then restore it after the PeopleSoft Pure Internet Architecture installation.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*



Selecting an existing WebLogic domain

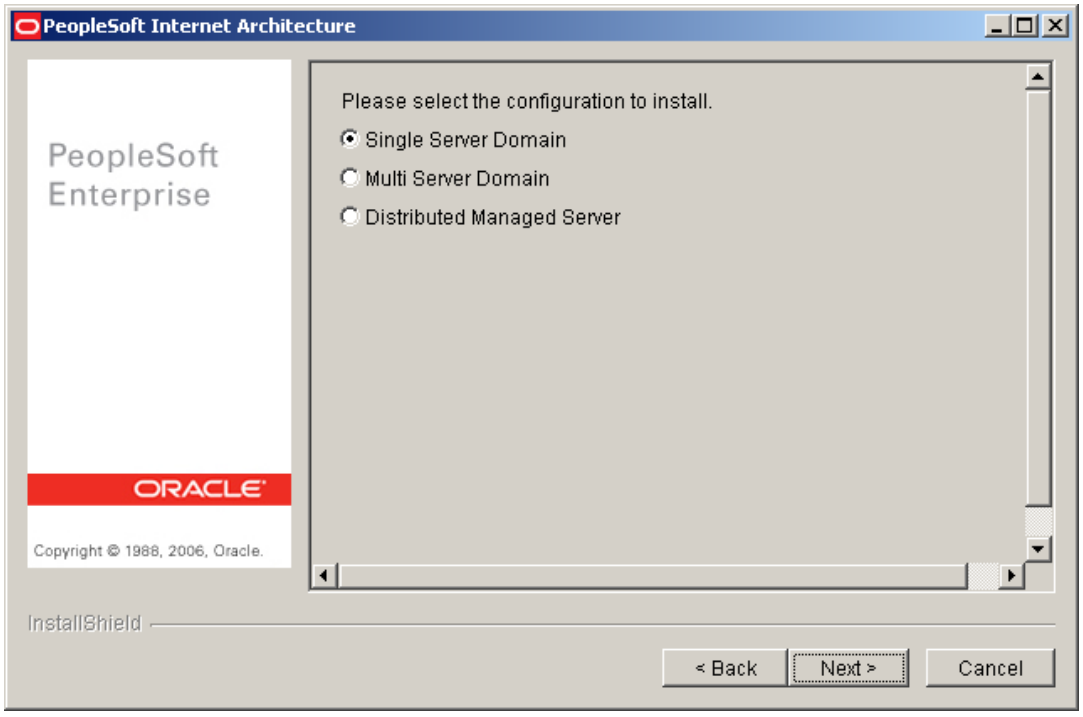
10. If there are application packages in the archives directory, you'll be asked whether you want to deploy them. (If you are using an existing domain, you'll only be prompted if you selected Deploy additional PeopleSoft extensions.)



Sample application package selection screen

11. Select the type of domain to create—single server, multi server, or distributed managed server.

Note. You must select "Multi Server Domain" if you plan to host PeopleBooks on the web server on which you are installing the PeopleSoft Pure Internet Architecture.



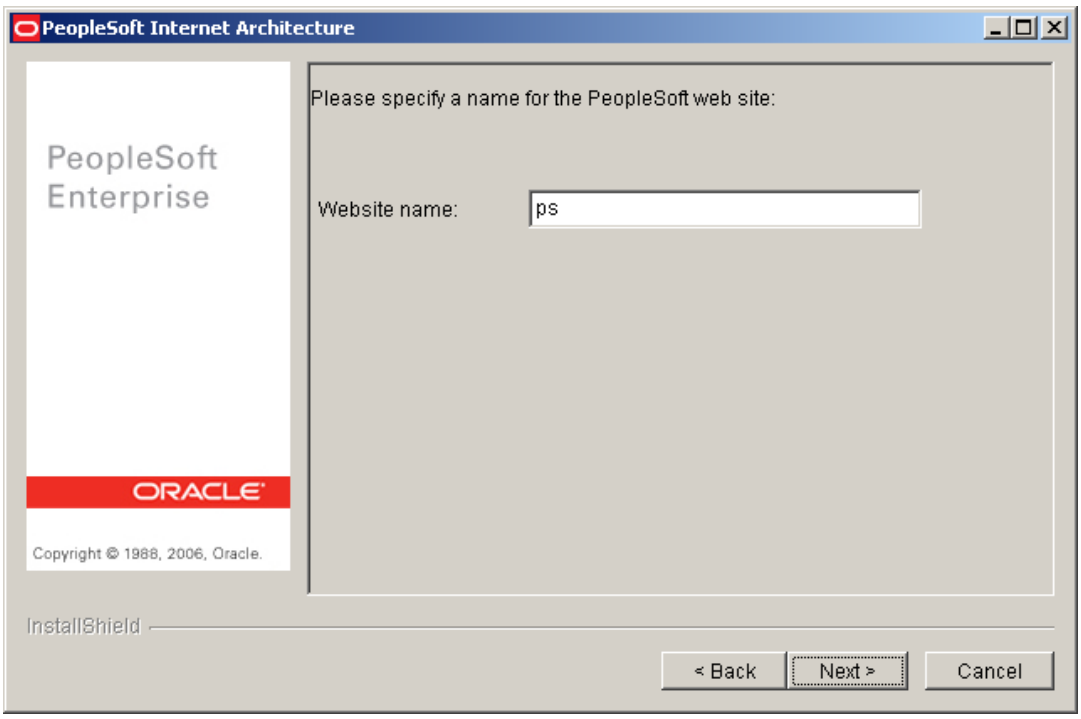
Choosing your domain type

There are three domain configuration options:

- *Single Server Domain:* This domain configuration contains one server named PIA, and the entire PeopleSoft enterprise 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 WebLogic domain provided in PeopleTools 8.40 through 8.43.
- *Multi Server Domain:* This domain configuration contains seven unique server definitions, a WebLogic cluster, and the PeopleSoft Enterprise 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).

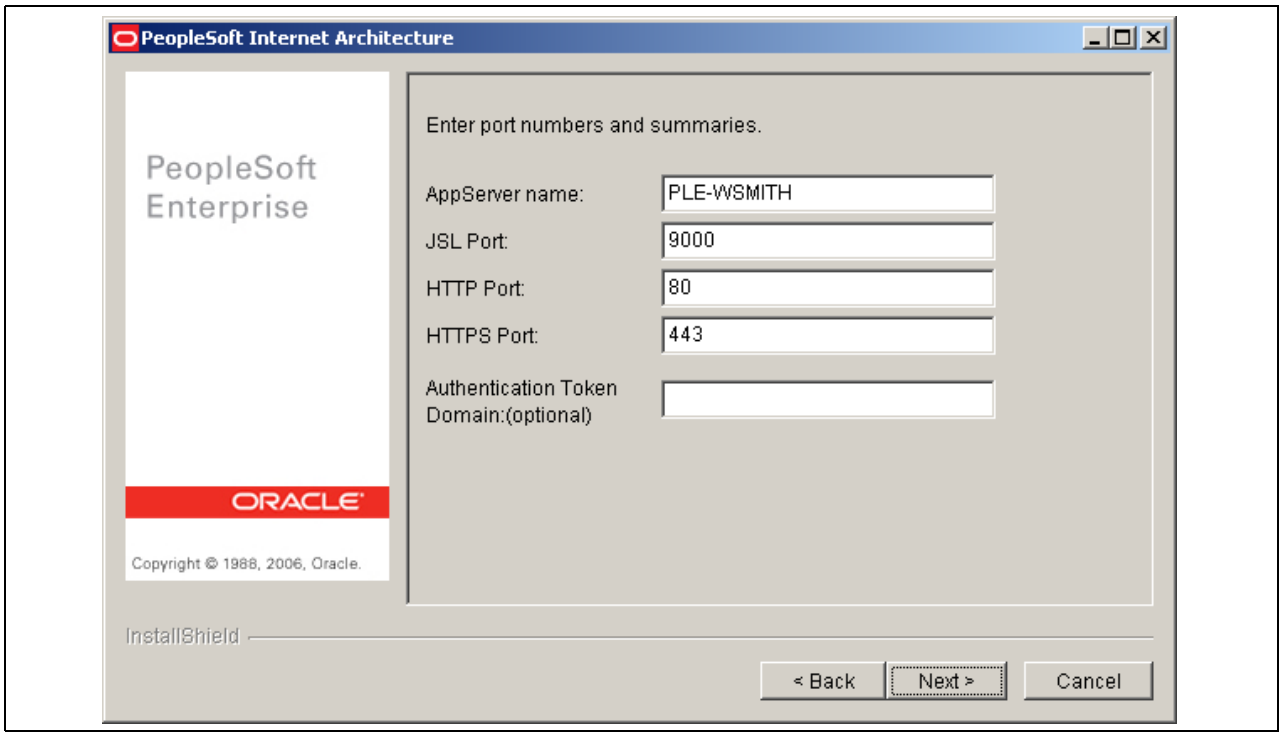


Entering the PeopleSoft web site name

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.

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 <Windows or UNIX>."



Specifying your application server name, your port numbers, and the 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.

Note. 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.

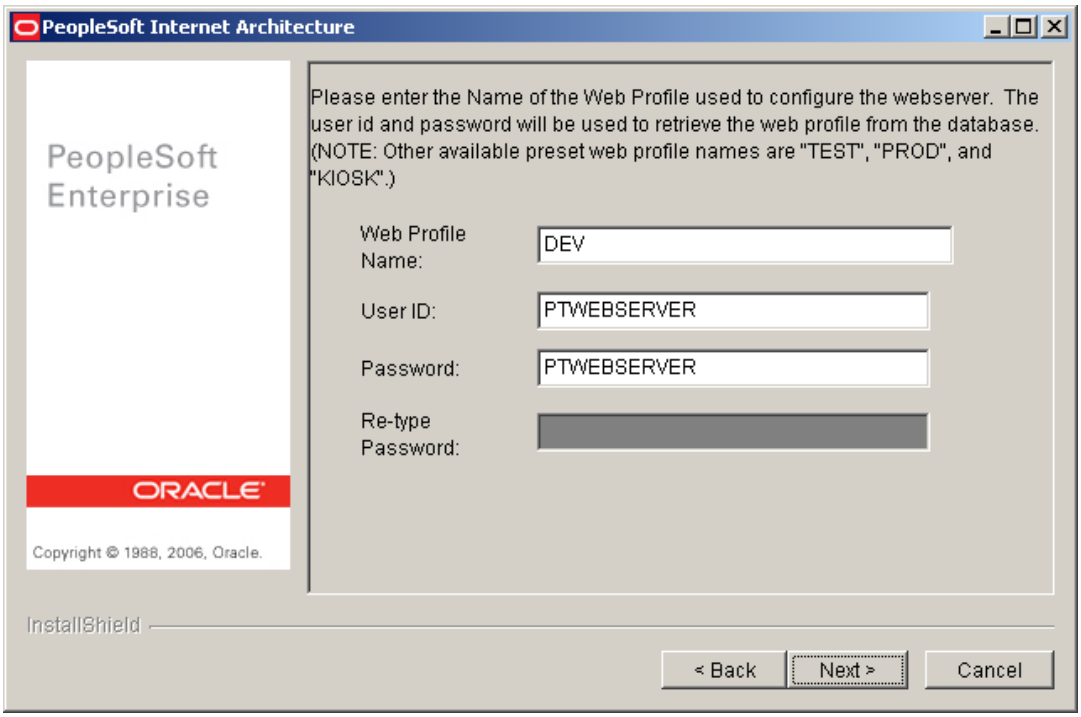
14. Enter the name of the web profile name in the database that will be used to configure this PeopleSoft web site.

    This can be the name of either a predelivered one shown on the page, or one you intend to create yourself using PeopleTools, Web Profile Configuration, after logging in. Each site is configured according to the profile you specify here when it is first accessed after the web server is booted. The user ID and password will be used by the PIA servlets themselves at runtime to log in to the application server to retrieve the profile. For applications on PeopleTools 8.44 and above, PeopleSoft predelivers the PTWEBSERVER user ID for the purpose of configuring PIA servlets at runtime and running the Performance Monitor Agents.

You may have to unlock that user profile in certain application databases. If you have any problems logging in after starting the web server, refer to the application server domain logs.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Note. If you are upgrading your application database to PeopleTools 8.44 and above, you must set up the PTWEBSERVER user ID. Go to PeopleTools, Security, User Profiles, User Profiles. Click Add a New Value, enter PTWEBSERVER for User ID, and click Add. Enter and confirm a password, and enter a description. Enter the role *PeopleTools Web Server* and then click Save.



Entering a web profile name

15. Specify the root directory for the Report Repository (c:\psreports by default), and click Next. You can install to any location.

Note. For the Report Repository directory, specify the same directory that you specify as the Home Directory. Make sure that this directory is shared.

See "Setting Up Process Scheduler on Windows," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

16. Verify all of your selections (click Back if you need to make any changes), and click Install to begin the installation.

    An indicator appears showing the progress of your installation.

17. Click Finish to complete the installation.

    The default installation directory is <PS_HOME>\webserv\<domain>\.

Note. If you are installing into an existing domain, you need to restart that domain.

Task 10A-3: Installing the PeopleSoft Pure Internet Architecture on WebSphere

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on WebSphere
- Uninstalling the PeopleSoft Pure Internet Architecture from WebSphere

Prerequisites

The information in this section applies to the installation of PeopleSoft Pure Internet Architecture on a WebSphere server.

Important! For more detailed WebSphere installation topics and Frequently Asked Questions (FAQs) refer to the PeopleSoft Customer Connection link ftp://ftp.peoplesoft.com/outgoing/PTools/websphere/51/docs.

Each WebSphere server runs one PeopleSoft Pure Internet Architecture application. If you need to install more than one PeopleSoft Pure Internet Architecture application on your WebSphere server, you must create a new server from the WebSphere Administration console and then deploy the PeopleSoft Pure Internet Architecture application to the new WebSphere server. Deploy PeopleSoft Pure Internet Architecture to WebSphere Base before clustering using Network Deployment.

You must select a unique name for each PeopleSoft Pure Internet Architecture application that you install on a WebSphere node. You cannot install two PeopleSoft Pure Internet Architecture applications with the same name to one WebSphere node.

Note. *On UNIX, install the PeopleSoft Pure Internet Architecture with a user who owns WebSphere, and who owns <PS_HOME>.* Here are two examples: If WebSphere is owned by user “root” and group “system,” PeopleSoft Pure Internet Architecture must be installed with “root” and group “system.” If WebSphere is owned by user “wsadmin” and group “wsadmin,” then PeopleSoft Pure Internet Architecture must be installed with wsadmin/wsadmin as the user and group.

If PeopleSoft Pure Internet Architecture needs to be installed through WebSphere Network Deployment as an EAR file, refer to the Red Paper section of Customer Connection for instructions.

See “Clustering and High Availability for PeopleSoft 8.4” (PeopleSoft Customer Connection, Site Index, Red Papers).

Be sure the Default Application is uninstalled through the Admin console before installing PeopleSoft Pure Internet Architecture.

Note. You do not need to uninstall previous WebSphere PeopleSoft Pure Internet Architecture installs before continuing. However, if you do decide to uninstall any previous PeopleSoft Pure Internet Architecture installs, you cannot just delete <PS_HOME>. Instead you need to follow the officially sanctioned uninstall procedure described in a later section.

See Also

"Installing Web Server Products, " Installing WebSphere

Uninstalling the PeopleSoft Pure Internet Architecture from WebSphere

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Working with IBM WebSphere"

Task 10A-3-1: Installing the PeopleSoft Pure Internet Architecture on WebSphere

Before installing the PeopleSoft Pure Internet Architecture on WebSphere, be sure you complete the requirements discussed previously.

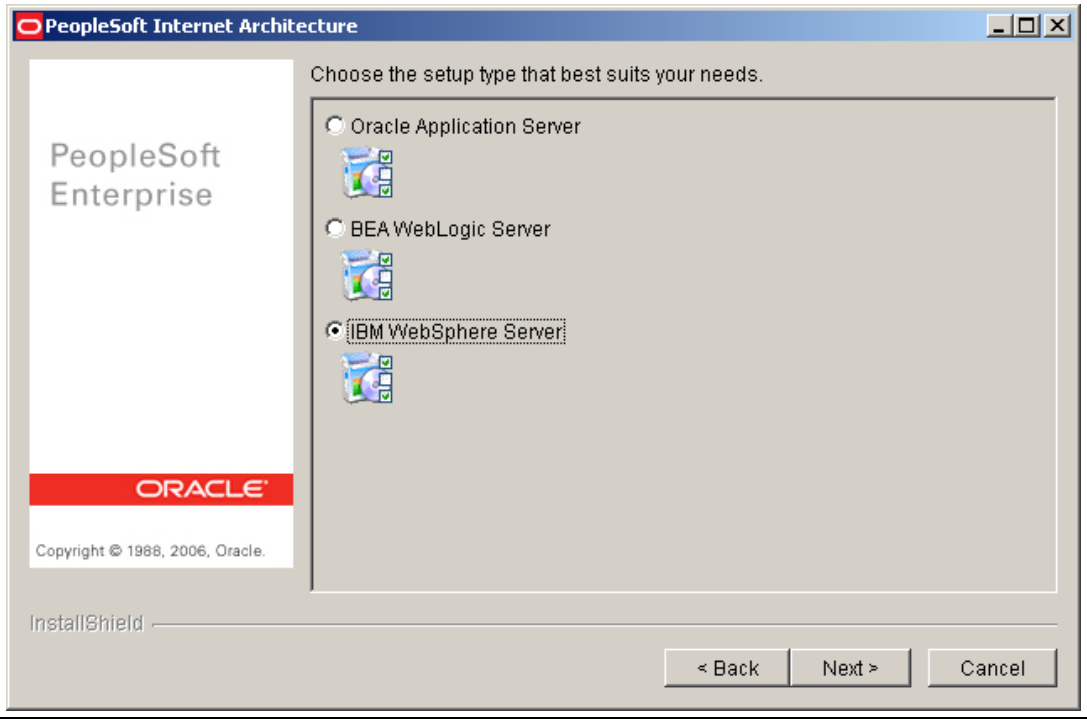
See Prerequisites.

To install the PeopleSoft Pure Internet Architecture on WebSphere:

1. Start WebSphere on the server on which you plan to deploy PeopleSoft Pure Internet Architecture. From the bin directory under the WebSphere home directory, enter:

   ```
   startServer.bat <server_name>
   ```

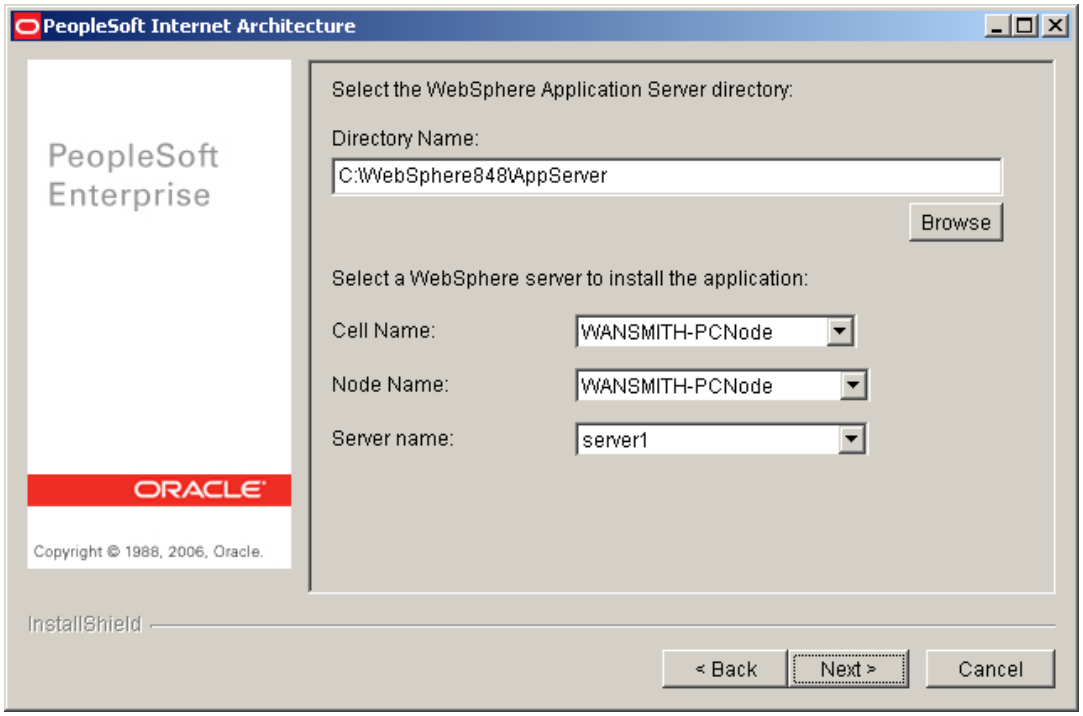
2. Go to <PS_HOME>\setup\mpinternet.
3. Double-click on setup.<OS>.
4. Click Next in the Welcome screen.
5. Choose IBM WebSphere Application Server and click Next.



Choosing the IBM WebSphere Server in the PeopleSoft Internet Architecture window

6. Specify the WebSphere application server directory, and the cell name, node name, and server name of the WebSphere server. Then click Next.

Note. If the web server on which you're installing PeopleSoft Pure Internet Architecture is not up and running, you'll receive an error message that you need to start your web server.



Specifying the WebSphere application server directory

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

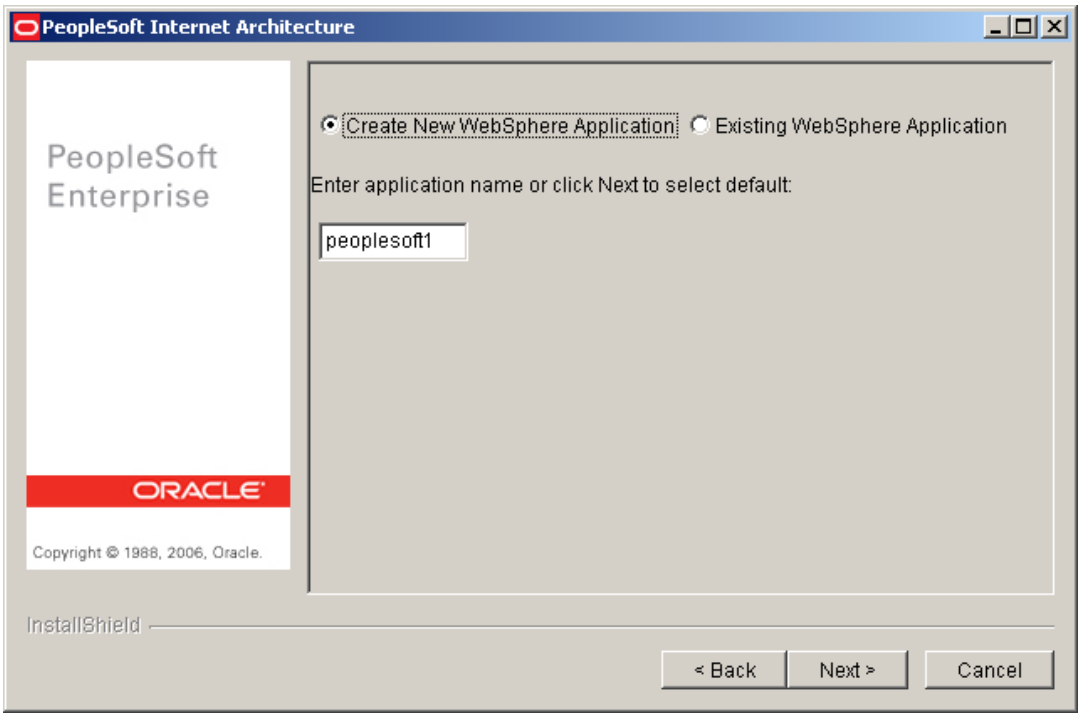
7. Choose whether to create a new WebSphere application (domain) or to use an existing application, and specify the name of the application.

Note. The name you specify for each PeopleSoft Enterprise Application must be unique for each WebSphere Node.

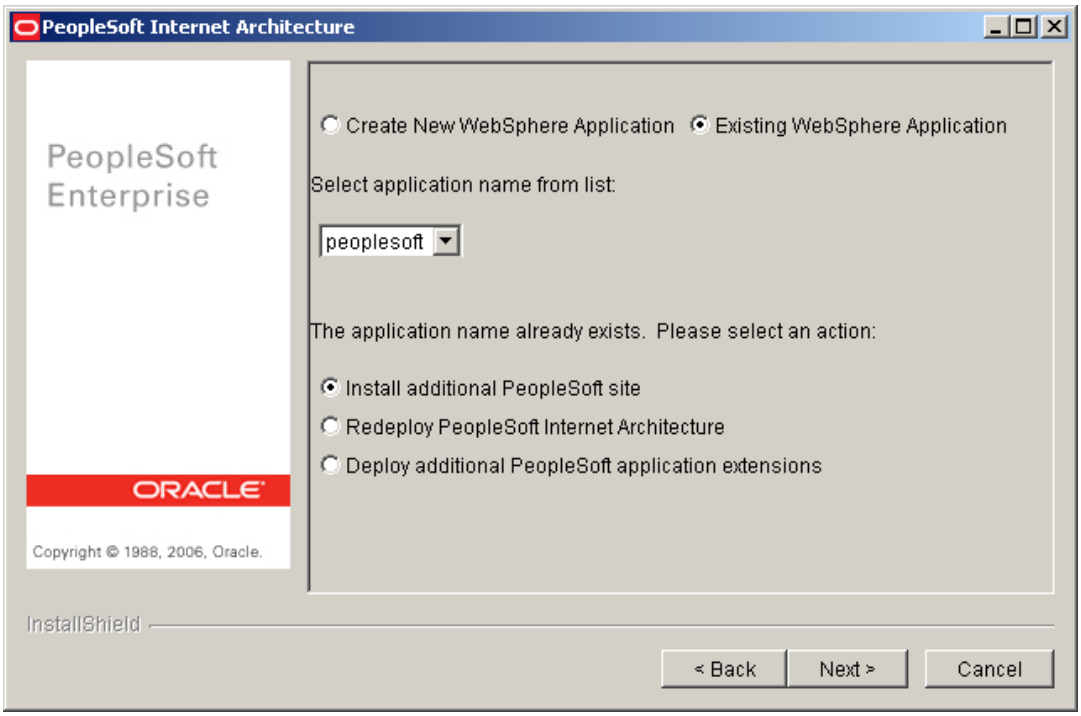
Note. You only see the option Existing WebSphere Application if there is already an application in <PS_HOME>.

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 you select Existing WebSphere Application, 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.



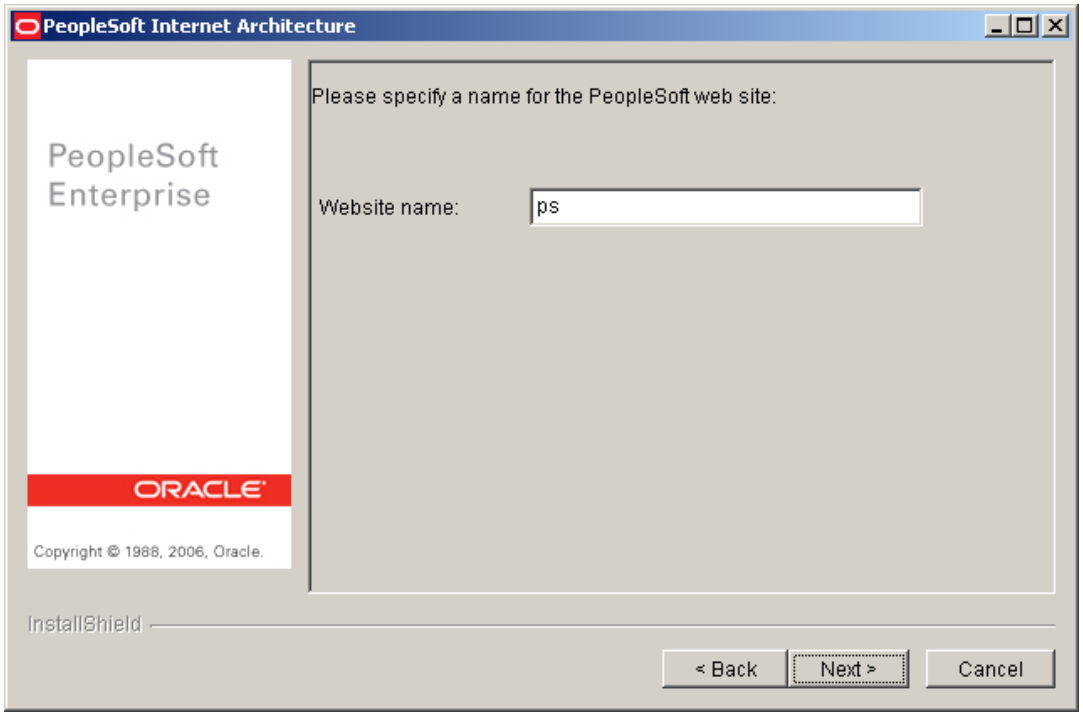
Specifying a new WebSphere domain



Selecting an existing WebSphere domain

8. If there are application packages in the archives directory, you'll be asked whether you want to deploy them. (If you're using an existing domain, you'll only be prompted if you selected Deploy additional PeopleSoft extensions.)
9. 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).



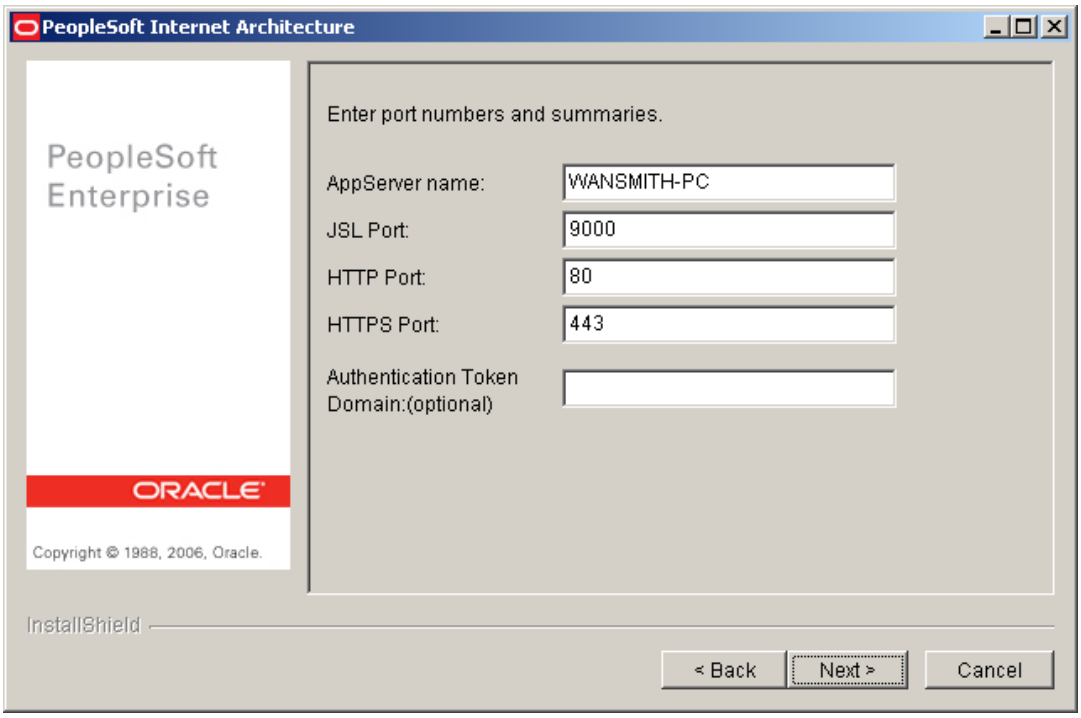
Entering the PeopleSoft web site name

10. 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.

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 Windows."

Note. The HTTP/HTTPS port numbers are reset to those that you just specified when you restart your WebSphere server.



Specifying your application server name, your port numbers, and the authentication token domain

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Note. 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.

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.

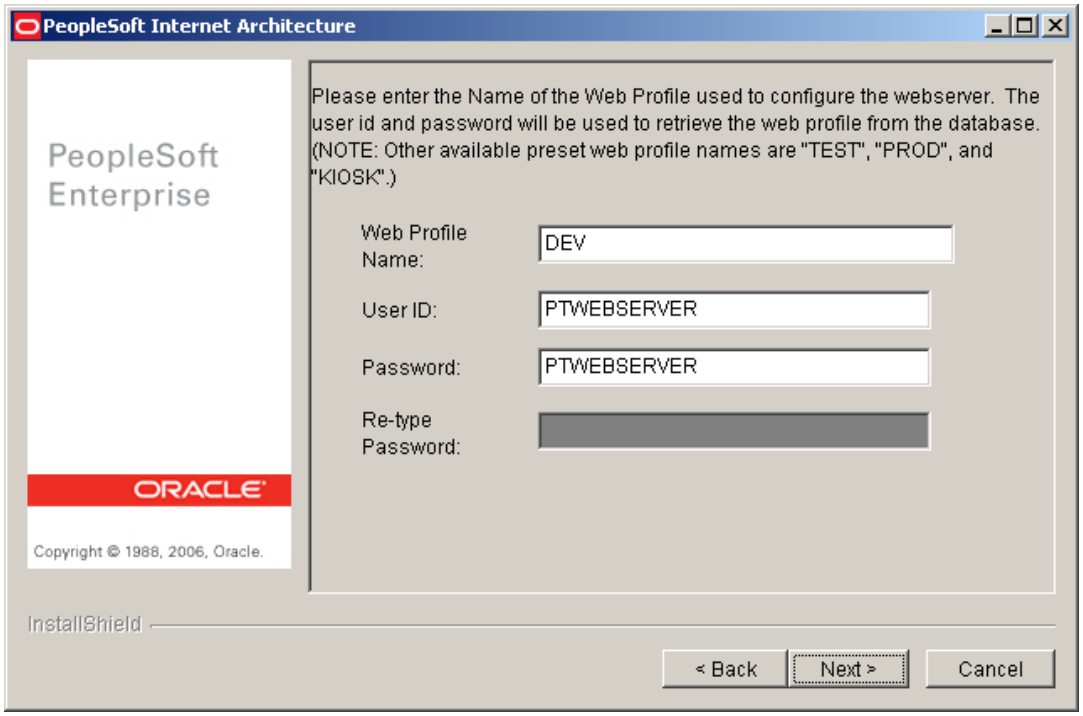
See “Understanding the PeopleSoft Pure Internet Architecture.”

11. Enter the name of the web profile name in the database that will be used to configure this PeopleSoft web site.

    This can be the name of either a predelivered one shown on the page, or one you intend to create yourself using PeopleTools, Web Profile Configuration, after logging in. Each site is configured according to the profile you specify here when it is first accessed after the web server is booted. The user ID and password will be used by the PIA servlets themselves at runtime to log in to the application server to retrieve the profile. For applications on PeopleTools 8.44 and above, PeopleSoft predelivers the PTWEBSERVER user ID for the purpose of configuring PIA servlets at runtime and running the Performance Monitor Agents. You may have to unlock that user profile in certain application databases. If you have any problems logging in after starting the web server, refer to the application server domain logs.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Note. If you are upgrading your application database to PeopleTools 8.47 or later, you will need to set up the PTWEBSERVER user ID. Go to PeopleTools, Security, User Profiles, User Profiles, click Add a New Value, enter PTWEBSERVER for User ID, and click Add. Enter and confirm a password, and enter a description. Enter the role *PeopleTools Web Server* and then click Save.



Entering a web profile name

12. Specify the root directory for the Report Repository (c:\psreports by default), and click Next. You can install to any location.

Note. For the Report Repository directory, specify the same directory that you specify as the Home Directory. Make sure that this directory is shared.

See "Setting Up Process Scheduler on Windows," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

13. Verify all of your selections (click Back if you need to make any changes), and click Next to begin the installation. An indicator shows the progress of your installation.
14. Click Finish to complete the installation.

    The default installation directory is <PS_HOME>\webserv\<cellname_nodename_servername>\<domain>
15. Stop the WebSphere server. From the bin directory under the WebSphere home directory, enter:

    ```
    stopServer.bat <server_name>
    ```

    where <server_name> indicates where you have deployed PeopleSoft Pure Internet Architecture.

Task 10A-3-2: Uninstalling the PeopleSoft Pure Internet Architecture from WebSphere

You cannot uninstall PeopleSoft Pure Internet Architecture simply by deleting <PS_HOME>, without uninstalling it from WebSphere Administration Console. If you do so, the 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 WebSphere as described here:

To uninstall PeopleSoft Pure Internet Architecture on WebSphere:

1. Open WebSphere Administration Console at http://<machine-name>:9090/admin.

   To invoke PeopleSoft Pure Internet Architecture on a non-default admin port, consult the section on WebSphere in PeopleBooks.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with IBM WebSphere."
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.
8. Delete the directory <PS_HOME>\WebServ\<cellname>_<nodename>_<servername>.

Task 10A-4: Encrypting the Password (AIX Only)

If you installed either the WebLogic or WebSphere web server on an AIX operating system, you must encrypt the password manually.

1. Navigate to <PS_HOME>/webserv/<*domain_name*>, where the default value for <domain_name> is peoplesoft.
2. Run the following commands, substituting your User ID and its password for <*userid*> and <*password*>:

   ```
   PSCipher.sh <userid>
   PSCipher.sh <password>
   ```

   The commands return encrypted values. Save these values.
3. Navigate to <PS_HOME>/webserv/<*domain_name*>/applications/peoplesoft/PORTAL/WEB-INF /psftdocs/<*site_name*>.

   The default values for <domain_name> and <site_name>, respectively, are *peoplesoft* and *ps*. If you used other values when setting up the PeopleSoft Pure Internet Architecture, use those values here.
4. Open the file configuration.properties in a text editor.
5. Replace the values of *WebUserId* and *WebPassword* in this file with the encrypted values for <*userid*> and <*password*>, respectively, from step 2.

Task 10A-5: Testing the PeopleSoft Pure Internet Architecture Installation

This section discusses:

- Starting and Stopping Oracle Application Server
- Starting and Stopping WebLogic
- Starting WebSphere
- Accessing the PeopleSoft Signon
- Updating Database Information
- Updating PeopleTools Options

Note. 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.)

Task 10A-5-1: Starting and Stopping Oracle Application Server

There are several commands you can use to start and stop OAS and PIA, either separately or together.

Action	Command (full path)
Start PIA and other related processes	`<OAS_HOME>\opmn\bin\opmnctl startall`
Stop PIA and other related processes	`<OAS_HOME>\opmn\bin\opmnctl stopall`
View the status of the PIA installation on OAS	`<OAS_HOME>\opmn\bin\opmnctl status`
Start the OAS admin console	`<OAS_HOME>\bin\emctl start em`
Stop the OAS admin console	`<OAS_HOME>\bin\emctl stop em`
Start only PIA. In a single-component installation, *PIA_component* is the same as the application name entered during the installation of PIA on OAS. In a multi-component installation, *PIA_component* is a combination of the application name entered during the installation and the specific OC4J component type. The default name for the PIA component in a multi-component installation is *PIA_PeopleSoft*.	`<OAS_HOME>\opmn\bin\opmnctl.exe⇒ startproc ias-component=OC4J process-⇒ type=PIA_component`
Stop only PIA.	`<OAS_HOME>\opmn\bin\opmnctl.exe⇒ stopproc ias-component=OC4J process-⇒ type=PIA_component`

Task 10A-5-2: Starting and Stopping WebLogic

If you are using the WebLogic web server, you need to sign on to WebLogic. If you are using WebSphere instead, go on to the next procedure.

To start WebLogic:

1. To start BEA WebLogic Server as a Windows service, install the server as a windows service using the following command in your WebLogic domain directory:

   Single Server:

   ```
   installNTservicePIA.cmd
   ```

   Multi Server or Distributed Server:

   ```
   installNTservice.cmd <ServerName>
   ```

   The Windows service name will be *WebLogicDomain-WebLogicServer*. For example, to install server PIA as an NT service in a domain named peoplesoft, run `installNTservice.cmd PIA` and you will see "peoplesoft-PIA" as a service.

2. To start BEA WebLogic Server as a foreground process, execute the following command in your WebLogic domain directory (the default directory is <PS_HOME>\webserv\<*domain_name*>):

   Single Server:

   ```
   startPIS.cmd (on Windows)
   startPIA.sh (on UNIX)
   ```

   Multi Server or Distributed Server:

   ```
   startWebLogicAdmin.cmd (on Windows)
   startWebLogicAdmin.sh (on UNIX)
   ```

   and then

   ```
   startManagedWebLogic.cmd <ManagedServerName> (on Windows)
   startManagedWebLogic.sh <ManagedServerName> (on UNIX)
   ```

3. To stop the server, execute the following command in your WebLogic domain directory:

   Single Server:

   ```
   stopPIA.cmd (on Windows)
   stopPIA.sh (on UNIX)
   ```

   Multi Server or Distributed Server:

   ```
   stopWebLogic.cmd [-url t3://ServerHostName:port | <ManagedServerName>] (on⇒
    Windows)
   stopWebLogic.sh [-url t3://ServerHostName:port | <ManagedServerName>] (on UNIX)
   ```

   See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Task 10A-5-3: Starting WebSphere

If you are using the WebSphere web server, you need to sign on to WebSphere. If you are using WebLogic instead, you should have used the previous procedure.

To start WebSphere:

1. Change directories to the folder in which WebSphere is installed—the bin directory under the WebSphere home directory.

2. Enter the command

   ```
   startServer.bat <server_name>
   ```

   where <server_name> indicates where you have deployed PeopleSoft Pure Internet Architecture.

3. To stop the server, change directories to the folder in which WebSphere is installed and enter the command

   ```
   stopserver <server_name>
   ```

   where <server_name> indicates where you have deployed PeopleSoft Pure Internet Architecture.

Task 10A-5-4: Accessing the PeopleSoft Signon

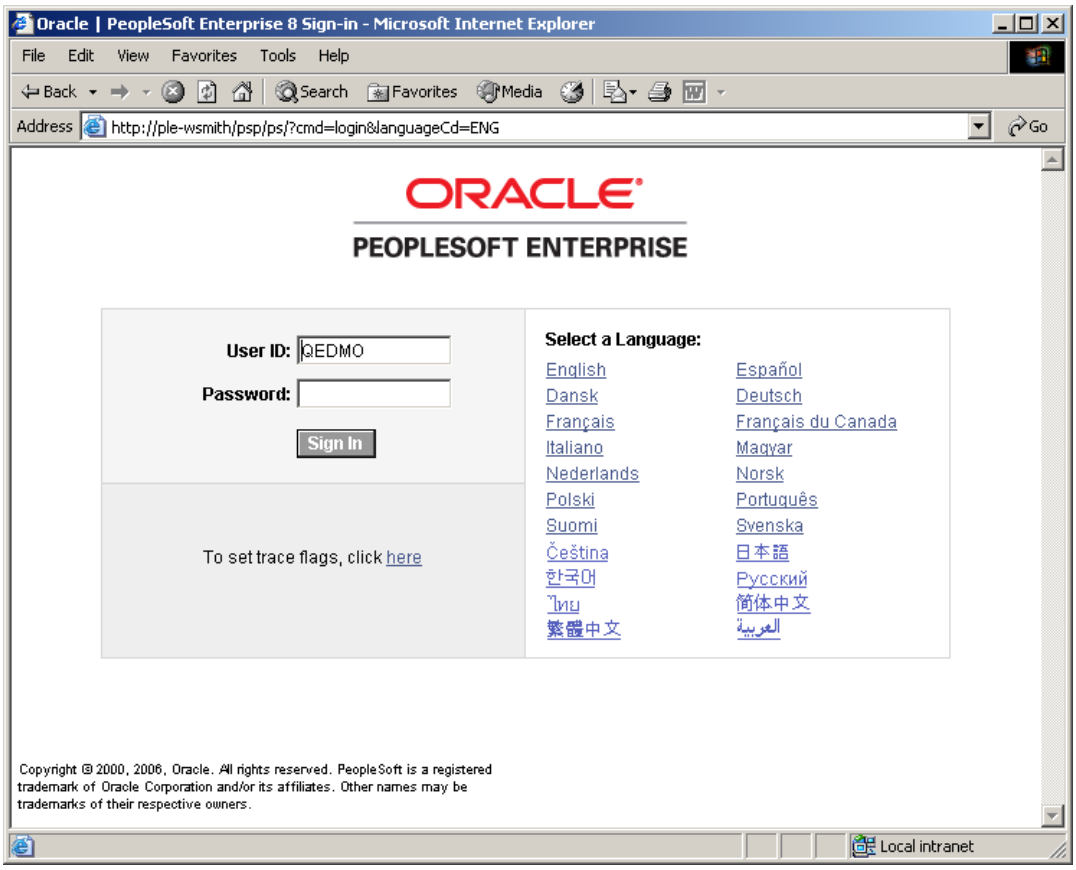
To access the PeopleSoft signon:

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 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 signon screen corresponding to your browser's language preference.



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.

   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.

Note. The user ID and password are case sensitive. You need to enter the user ID and password using UPPERCASE.

Task 10A-5-5: 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.

Task 10A-5-6: Updating PeopleTools Options

You can set the following options on the PeopleTools Options page:

- Multi-Currency — Check this box if you plan to use currency conversion.

  See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Controlling Currency Display Format."

- Base Time Zone — Check this box to set the base time zone for your PeopleTools database.

  See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology* "Setting and Maintaining Time Zones."

- Data Field Length Checking Flag — Check this box if you are using a Japanese EBCDIC (DB2 MBCS) or Japanese Shift-JIS (MBCS) database.

  See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "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 *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Sorting in PeopleTools."

CHAPTER 10B

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
- Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server in Console Mode
- Installing the PeopleSoft Pure Internet Architecture on WebLogic in Console Mode
- Installing the PeopleSoft Pure Internet Architecture on WebSphere in Console Mode
- Encrypting the Password (AIX Only)
- Testing the PeopleSoft Pure Internet Architecture Installation

Understanding PeopleSoft Pure Internet Architecture

This chapter explains how to install and configure the components of the PeopleSoft Pure Internet Architecture in console mode. It includes instructions for installing the PeopleSoft files on Oracle Application Server (OAS), WebLogic, and 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.”

PeopleSoft only supports customer installations that use the version of the web servers packaged with 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.

Before performing the steps in this chapter, verify that Sun’s international version of JRE version 1.4.1 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 PIA installation.

The initial PIA setup automatically creates the default PeopleSoft site named ps. In subsequent PIA 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 PIA 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.

Note. If you want to connect between multiple application databases, you need to implement single signon.

Note. If the PeopleSoft Pure Internet Architecture installation encounters an error, it will indicate which log files to refer to.

See “Installing Web Server Products.”

Note. 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.

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 –is:javahome command line parameter; for example: `/PA84206/setup.<OS> –is:javaconsole –console –is:tempdir<tempdir> –is:javahome <jredir>`.

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 Enterprise Portal have their own installation instructions, which are available on Customer Connection. For an overview of the various types of portals, consult the following.

  See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

- *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.

- *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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework.*

- *PeopleSoft Sync Server Gateway.* The Sync Server is a specialized application server optimized for concurrent multi-user synchronization processing in support of PeopleTools Mobile Agent. The web

server-based Sync Gateway routes synchronization requests and messages to and from the appropriate Sync Server.

See *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Mobile Agent.*

- *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 *Enterprise PeopleTools 8.48 PeopleBook: Software Updates.*

See Also

Enterprise PeopleTools 8.48 PeopleBook: Security Administration

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration

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 OAS, 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 *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* “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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft MultiChannel Framework.*

Specify an authentication domain if you plan to use Business Objects Enterprise.

See "Installing and Configuring Software for Crystal Reports, " Installing BusinessObjects Enterprise XI.

Task 10B-1: Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server in Console Mode

This section discusses:

- Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server
- Uninstalling the PeopleSoft Pure Internet Architecture from Oracle Application Server

Note. The installation of the PeopleSoft Pure Internet Architecture on Oracle Application Server includes the PeopleSoft Provider. Use this to configure PeopleSoft portlets on Oracle Portal pages.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* "Deploying PeopleSoft Portlets on Oracle Portal Pages."

Task 10B-1-1: Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server

Before you begin the installation of the PeopleSoft Pure Internet Architecture (PIA) on Oracle Application Server (OAS), you must have installed the OAS software as described previously.

See "Installing Web Server Products," Installing Oracle Application Server.

When installing PIA on OAS, 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 PeopleTools, copy the <PS_HOME>/setup/mpinternet directory to the local machine.

To install the PeopleSoft Pure Internet Architecture on Oracle Application Server:

1. Start opmn process if necessary.

   To check the status of the opmn process run this command:

   ```
   <OAS_HOME>/opmn/bin/opmnctl status
   ```

   If you get the response, "Unable to connect to opmn", start it by running this command:
   ```
   <OAS_HOME>/opmn/bin/opmnctl start
   ```

   See "Installing Web Server Products," Installing Oracle Application Server.

2. Start dcm-daemon process if necessary.

   To check the status of dcm-daemon run this command:

   ```
   <OAS_HOME>/opmn/bin/opmnctl status
   ```


If the dcm-daemon's status is not "Alive", start it by running this command:

```
<OAS_HOME>/opmn/bin/opmnctl startproc ias-component=dcm-daemon
```

3. Change directory to <PS_HOME>/setup/mpinternet and run one of these commands:

   ```
   setup.<OS> -console
   ```

   or

   ```
   <JAVA_HOME>/bin/java -cp setup.jar run -console
   ```

   where *<JAVA_HOME>* is the directory where the JRE software is installed. The default is <PS_HOME>/jre.

   See "Using the PeopleSoft Installer," Prerequisites.

   A welcome message appears.

4. Select Enter to continue.
5. Enter the <PS_HOME> directory, where you installed the PeopleSoft software.
6. At the prompt:

   ```
   [X] 1 - Oracle Application Server
   [ ] 2 - BEA WebLogic Server
   [ ] 3 - IBM WebSphere Application Server
   ```

   Press ENTER to select the default selection *1*, for the Oracle Application Server.

7. At the prompt:

   ```
   Select an Oracle Application Server home:
   Directory Name: [/opt/OraHome_1]
   ```

   Enter the directory where you installed OAS, or press ENTER to accept the default.

8. Enter an application name for this web server.
9. Select the type of server you want to install, and press ENTER to continue:

   ```
   Select the server install type:

   [X] 1 - Single Component Server
   [ ] 2 - Multi Component Server
   ```

   The *Single Component Server* option creates one OC4J component to hold all the PeopleSoft web applications. The Application Name you enter in the next step is used for the new component's name.

   The *Multi Component Server* option splits the PeopleSoft web application into three OC4J components—PIA_<application_name>, PSOL_<application_name>, and PSEMFHUB_<application_name>. Each OC4J component has its own JVM so the multi component option is better suited for installations needing higher performance or reliability. If you are not sure which to pick, choose Single.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with Oracle Application Server 10g."

10. If you enter a new name, for example, peoplesoft, press ENTER.

    Skip the next two steps, and continue with step 13.

11. If the name you enter belongs to an OAS web application that already exists, for example, *jwong_single*, select one of the options below and press ENTER to continue:

```
The PeopleSoft application "jwong_single" already exists.
Select from the following:
[X] 1 - Create an additional site in the existing application
[ ] 2 - Deploy additional PeopleSoft application extensions
[ ] 3 - Go back to enter a new application name
```

Note. To redeploy PIA on OAS, you must remove the OC4J component(s) and perform a fresh installation of PIA. Use Application Server Control or dcmctl commands to remove the OC4J component(s). Note that any customizations done after the PIA install needs to be done again.

- *Create an additional site in the existing application*: Select this option to install only the necessary files for defining an additional PeopleSoft site on the existing OAS web server configuration.
- *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 allow you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see whether this option is appropriate. PeopleTools does not use application extensions.
- *Go back to enter a new application name*: Select this option to return to the previous screen.

12. If you select the option Deploy additional PeopleSoft application extension, select the application packages you want to deploy:

```
[X] 1 -EMP PeopleSoft Activity Based Mgmt
```

13. Enter a web site name; the default is ps.
14. Specify the application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, and 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) []
```

AppServer name	Enter the name of your application server machine.
JSL Port	Enter the JSL port number you specified when setting up the application server (the default is 9000).
HTTP/HTTPS	The default HTTP/HTTPS ports of the Oracle HTTP Server (OHS) are 80/443 for Windows and 7777/4443 for UNIX/Linux. However, you should enter different HTTP/HTTPS port values at this point for the PIA installation. Please use any unused port other than 80/443 for Windows and 7777/4443 for UNIX/Linux. The PIA installation may fail or may not work properly if you enter the same HTTP/HTTPS ports for the PIA installation as the default OHS ports.

To access PIA, specify a URL with either the default OHS port values, or the port values you enter here for PIA. For example, http://<*machine_name*>:<*port_number*>/<*site_name*>/signon.html.

For Multi Component Server, the HTTP/HTTPS ports that you enter here correspond to the OC4J component PIA_<application_name>.

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. 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 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

15. Enter the name of the web profile in the database that will be used to configure this PeopleSoft web site. This can either be the predelivered name as shown on the page, or one that you intend to create yourself using PeopleTools, Web Profile Configuration after logging in. Each site is configured according to the profile you specify here when it is first accessed after the web server is booted. The user ID and password will be used by the PIA servlets themselves at runtime to log in to the application server to retrieve the profile. For applications on PeopleTools 8.44 and above, PeopleSoft predelivers the PTWEBSERVER user ID for the purpose of configuring PIA servlets at runtime and running the Performance Monitor Agents. You may have to unlock that user profile in certain application databases. If you have any problems logging in after starting the web server, refer to the application server domain logs.

    See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

    Note. If you are upgrading your application database to PeopleTools 8.44 and above, you must set up the PTWEBSERVER user ID. Go to PeopleTools, Security, User Profiles, User Profiles. Click Add a New Value, enter PTWEBSERVER for User ID, and click Add. Enter and confirm a password, and enter a description. Enter the role PeopleTools Web Server and then click Save.

    ---

16. Specify the root directory for the Report Repository (c:\psreports by default). You can install to any location.

    Note. For the Report Repository directory, specify the same directory that you specify as the Home Directory. Make sure that this directory is shared. See "Setting Up Process Scheduler," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

    ---

17. Verify your selection and press ENTER to start the installation.

    You see an indicator showing the progress of the installation.

18. When the installation is complete, exit from the console window.

The default installation directory is <OAS_HOME>/j2ee/<component>/applications/<application>.

Task 10B-1-2: Uninstalling the PeopleSoft Pure Internet Architecture from Oracle Application Server

To uninstall using the distributed configuration management control (dcmctl):

1. Change directory to <OAS_HOME>/dcm/bin.
2. Run this command to view a list of component names:

   ```
   dcmctl listcomponents
   ```

   The component name is the name you entered when asked for Application Name in the task "Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server." The documentation used *PeopleSoft* as an example.
3. Run the following command, substituting your application name for *<PIA_COMPONENT>*:

   ```
   dcmctl removecomponent -component <PIA_COMPONENT>
   ```
4. Run the following command:

   ```
   dcmctl updateconfig
   ```

It is also possible to uninstall using the Application Server Control pages.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with Oracle Application Server 10g."

Task 10B-2: Installing the PeopleSoft Pure Internet Architecture on WebLogic in Console Mode

This section describes how to install the PeopleSoft Pure Internet Architecture on WebLogic.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with BEA WebLogic."

Note. The installation will not proceed with an incorrect version of the WebLogic Server Service Pack. Make sure the correct service pack version (at least SP5) for WebLogic Server is properly installed prior to running this PeopleSoft Pure Internet Architecture installation.

To install the PeopleSoft Pure Internet Architecture on WebLogic:

1. Change directory to <PS_HOME>/setup/mpinternet and run one of these commands:

   ```
   setup.<OS> -console
   ```

   or

   ```
   <JAVA_HOME>/bin/java -cp setup.jar run -console
   ```

   where *<JAVA_HOME>* is the directory where the JRE software is installed. The default is <PS_HOME>/jre.

   See "Using the PeopleSoft Installer," Prerequisites.

A welcome message appears.

```
Welcome to the InstallShield Wizard for PeopleSoft Internet Architecture.
Using the InstallShield Wizard you will install PeopleSoft Internet⇒
 Architecture on your computer.
Version: 8.48
If installing onto a BEA WebLogic Server, make sure to shutdown any running⇒
 webservers to avoid web server configuration.
```

2. Select Enter to continue.
3. Choose the directory where you installed PeopleSoft, or <PS_HOME>.
4. At the prompt

   ```
   [X] 1 - Oracle Application Server
   [ ] 2 - BEA WebLogic Server
   [ ] 3 - IBM WebSphere Application Server
   ```

   Enter *2* to select the BEA WebLogic Server.
5. At the prompt

   ```
   Select the web server root directory:
     Please specify a directory name or press Enter [/opt/bea] /data4/syb/bea
   ```

   Enter the top-level directory where WebLogic is installed. Press ENTER to continue.

   Note. You will get an error message if you specify a directory that does not contain WebLogic, or that contains an incorrect WebLogic version.

6. Enter the administrator login and password for your WebLogic domain. Press ENTER to continue.

   ```
   Please enter the administrator login and password for WebLogic domain.

   Login ID:

       [system]

   Password:

       [password]

   Re-type Password:

       [password]
   ```

   At the next prompt you must choose whether to create a new WebLogic domain or to use an existing domain.
7. 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.

8. If you select Existing WebLogic Domain, specify the domain name and select one of these options:

Note. You only see the option Existing WebLogic Domain if there is already a domain in <PS_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 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 WebLogic domain. Select this option to redeploy all of the class files and jar files that comprise web components of PeopleSoft Pure Internet Architecture. 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 WebLogic Server configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local WebLogic domain. Select this option to completely remove an existing WebLogic domain and create the newly specified PeopleSoft site.
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. PeopleTools does not use application extensions.

Warning! Re-creating an existing domain will delete everything previously installed into that domain, including PeopleBooks. If you choose to re-create—instead of redeploying—a domain, you may first want to back up your PeopleBooks *docroot* directory (typically, htmldoc) below the PSOL directory. You can then restore it after the PeopleSoft Pure Internet Architecture installation.

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

9. Specify the name of the domain.
10. 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.)
11. Select the type of domain to create—single server, multi server, or distributed managed server.

Note. You must select "Multi Server Domain" if you plan to host PeopleBooks on the web server on which you are installing the PeopleSoft Pure Internet Architecture.


```
Please select the configuration to install.

[X] 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 enterprise 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 WebLogic domain provided in PeopleTools 8.40 through 8.43.
- *Multi Server Domain:* This domain configuration is contains seven unique server definitions, a WebLogic cluster, and the PeopleSoft Enterprise 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.

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).

---

13. 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)
```

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 <Windows or UNIX>.”

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 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. Enter the name of the web profile name in the database that will be used to configure this PeopleSoft web site.

    This can be the name of either a predelivered one shown on the page, or one you intend to create yourself using PeopleTools, Web Profile Configuration after logging in. Each site is configured according to the profile you specify here when it is first accessed after the web server is booted. The user ID and password will be used by the PIA servlets themselves at runtime to log in to the application server to retrieve the profile. For applications on PeopleTools 8.44 and above, PeopleSoft predelivers the PTWEBSERVER user ID for the purpose of configuring PIA servlets at runtime and running the Performance Monitor Agents. You may have to unlock that user profile in certain application databases. If you have any problems logging in after starting the web server, refer to the application server domain logs.

    See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

    Note. If you are upgrading your application database to PeopleTools 8.44 and above, you must set up the PTWEBSERVER user ID. Go to PeopleTools, Security, User Profiles, User Profiles. Click Add a New Value, enter PTWEBSERVER for User ID, and click Add. Enter and confirm a password, and enter a description. Enter the role *PeopleTools Web Server* and then click Save.

    ---

15. Specify the root directory for the Report Repository (/opt/psreports by default). You can install to any location.

    Note. For the Report Repository directory, specify the same directory that you specify as the Home Directory. Make sure that this directory is shared.

    See "Setting Up Process Scheduler," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

16. Verify all of your selections and press Enter to begin the installation.

    You see a progress indicator showing the progress of your installation.

17. When the installation is complete, exit from the console window.

The default installation directory is <PS_HOME>/webserv/<domain>/, where <*domain*> is the web server domain (peoplesoft by default).

Task 10B-3: Installing the PeopleSoft Pure Internet Architecture on WebSphere in Console Mode

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on WebSphere
- Uninstalling the PeopleSoft Pure Internet Architecture from WebSphere

Prerequisites

The information in this section applies to the installation of PeopleSoft Pure Internet Architecture on a WebSphere server.

Important! For more detailed WebSphere installation topics and Frequently Asked Questions (FAQs) refer to the PeopleSoft Customer Connection link ftp://ftp.peoplesoft.com/outgoing/PTools/websphere/51/docs.

Each WebSphere server runs one PeopleSoft Pure Internet Architecture application. If you need to install more than one PeopleSoft Pure Internet Architecture application on your WebSphere server, you must create a new server from the WebSphere Administration console and then deploy the PeopleSoft Pure Internet Architecture application to the new WebSphere server. Deploy PeopleSoft Pure Internet Architecture to WebSphere Base before clustering using Network Deployment.

You must select a unique name for each PeopleSoft Pure Internet Architecture application that you install on a WebSphere node. You cannot install two PeopleSoft Pure Internet Architecture applications with the same name to one WebSphere node.

Note. *On UNIX, install the PeopleSoft Pure Internet Architecture with a user who owns WebSphere, and who owns <PS_HOME>.* Here are two examples: If WebSphere is owned by user “root” and group “system,” PeopleSoft Pure Internet Architecture must be installed with “root” and group “system.” If WebSphere is owned by user “wsadmin” and group “wsadmin,” then PeopleSoft Pure Internet Architecture must be installed with wsadmin/wsadmin as the user and group.

If PeopleSoft Pure Internet Architecture needs to be installed through WebSphere Network Deployment as an EAR file, refer to the Red Paper section of Customer Connection for instructions.

See “Clustering and High Availability for PeopleSoft 8.4” (PeopleSoft Customer Connection, Site Index, Red Papers).

Be sure the Default Application is uninstalled through the Admin console before installing PeopleSoft Pure Internet Architecture.

Note. You do not need to uninstall previous WebSphere PeopleSoft Pure Internet Architecture installs before continuing. However, if you do decide to uninstall any previous PeopleSoft Pure Internet Architecture installs, you cannot just delete <PS_HOME>. Instead you need to follow the officially sanctioned uninstall procedure described in a later section.

See Also

"Installing Web Server Products, " Installing WebSphere

Uninstalling the PeopleSoft Pure Internet Architecture from WebSphere

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, "Working with IBM WebSphere"

Task 10B-3-1: Installing the PeopleSoft Pure Internet Architecture on WebSphere

Before installing the PeopleSoft Pure Internet Architecture on WebSphere, be sure you complete the requirements discussed previously.

See Prerequisites.

To install the PeopleSoft Pure Internet Architecture on WebSphere:

1. Start WebSphere on the server on which you plan to deploy PeopleSoft Pure Internet Architecture. From the bin directory under the WebSphere home directory, enter:

   ```
   startServer.sh <server_name>
   ```

2. In your shell prompt under the <PS_HOME>/setup/mpinternet directory, type

   ```
   java -cp setup.jar run -console
   ```

   or

   ```
   setup.<OS>
   ```

   You see the following:

   ```
   Welcome to the InstallShield Wizard for PeopleSoft Internet Architecture.
   Using the InstallShield Wizard you will install PeopleSoft Internet⇒
    Architecture on your computer.
   Please be sure to shutdown any running web servers at this time to avoid data⇒
    corruption.
   ```

3. Select Enter to continue.
4. Choose the directory where you installed PeopleSoft, or <PS_HOME>.
5. At the prompt

   ```
   [X] 1 - Oracle Application Server
   [ ] 2 - BEA WebLogic Server
   [ ] 3 - IBM WebSphere Application Server
   ```

   Enter *3*, to select the IBM WebSphere Application Server.

6. At the following prompt

   ```
   Select the WebSphere Application Server directory:

   Directory Name:

      Please specify a directory name or press Enter [C:\WebSphere\AppServer] c:\we
   ```



```
bsphere5\WebSphere\AppServer
```

Enter the directory where WebSphere is installed. Press Enter to continue.

Note. You will get an error message if you specify a directory that does not contain WebSphere, or that contains an incorrect WebSphere version.

---

7. Enter a cell name.
8. Enter a node name.
9. Enter a server name.

Note. If the web server on which you are installing PeopleSoft Pure Internet Architecture is not up and running, you'll receive an error message that you need to start your web server.

---

10. Choose whether to create a new WebSphere application (domain) or to use an existing domain.

Note. You only see the option Existing WebSphere Application if there is already a domain in <PS_HOME>.

If you select Create New WebSphere application, the install automatically generates a valid domain name in the domain name field. If you attempt to enter an invalid domain name, you'll be prompted to enter a new domain name or choose an existing domain.

11. Select an application name.

Note. The PeopleSoft Enterprise Application name you specify must be unique for each WebSphere node.

---

12. If you selected Existing WebSphere application, you can choose from a drop-down list of existing domains, and can select whether to install an additional PeopleSoft site, redeploy PeopleSoft Pure Internet Architecture, or deploy additional PeopleSoft application extensions.
13. 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).

---

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:

    [<MACHINENAME]

JSL Port:

    [9000]

HTTP Port:
```



```
    [80]

HTTPS Port:

    [443]

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 WebSphere server.

Note. The value you enter for the Authentication Token Domain must match the value you specific 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. Enter the name of the web profile name in the database that will be used to configure this PeopleSoft web site.

    This can be the name of either a predelivered one shown on the page, or one you intend to create yourself using PeopleTools, Web Profile Configuration after logging in. Each site is configured according to the profile you specify here when it is first accessed after the web server is booted. The user ID and password will be used by the PIA servlets themselves at runtime to log in to the application server to retrieve the profile. For applications on PeopleTools 8.44 and above, PeopleSoft predelivers the PTWEBSERVER user ID for the purpose of configuring PIA servlets at runtime and running the Performance Monitor Agents. You may have to unlock that user profile in certain application databases. If you have any problems logging in after starting the web server, refer to the application server domain logs.

    See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Note. If you are upgrading your application database to PeopleTools 8.44 and above, you must set up the PTWEBSERVER user ID. Go to PeopleTools, Security, User Profiles, User Profiles, click Add a New Value, enter PTWEBSERVER for User ID, and click Add. Enter and confirm a password, and enter a description. Enter the role *PeopleTools Web Server* and then click Save.

---

16. Specify the root directory for the Report Repository (c:\psreports by default). You can install to any location.

    Note. For the Report Repository directory, specify the same directory that you specify as the Home Directory. Make sure that this directory is shared.

    See "Setting Up Process Scheduler," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

17. Verify all of your selections and press Enter to kick off the installation. You see a progress indicator showing the progress of your installation.
18. Click Finish to complete the installation.

    The default installation directory is <PS_HOME>\webserv\<cellname_nodename_servername>\<domain>.

19. Stop the WebSphere server. From the bin directory under the WebSphere home directory, enter:

    ```
    stopServer.sh <server_name>
    ```

    where <server_name> indicates where you have deployed PeopleSoft Pure Internet Architecture.

Task 10B-3-2: Uninstalling the PeopleSoft Pure Internet Architecture from WebSphere

You cannot uninstall PeopleSoft Pure Internet Architecture simply by deleting <PS_HOME>, without uninstalling it from WebSphere Administration Console. If you do so, the 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 WebSphere as described here:

To uninstall PeopleSoft Pure Internet Architecture on WebSphere:

1. Open WebSphere Administration Console at http://<machine-name>:9090/admin.

   To invoke PeopleSoft Pure Internet Architecture on a non-default admin port, consult the section on WebSphere in PeopleBooks.

   See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* “Working with IBM WebSphere.”

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.

8. Delete the directory <PS_HOME>/WebServ/<cellname>_<nodename>_<servername>.

Task 10B-4: Encrypting the Password (AIX Only)

If you installed either the WebLogic or WebSphere web server on an AIX operating system, you must encrypt the password manually.

1. Navigate to <PS_HOME>/webserv/<*domain_name*>, where the default value for <domain_name> is peoplesoft.
2. Run the following commands, substituting your User ID and its password for <*userid*> and <*password*>:

   ```
   PSCipher.sh <userid>
   PSCipher.sh <password>
   ```

   The commands return encrypted values. Save these values.
3. Navigate to <PS_HOME>/webserv/<*domain_name*>/applications/peoplesoft/PORTAL/WEB-INF /psftdocs/<*site_name*>.

   The default values for <domain_name> and <site_name>, respectively, are *peoplesoft* and *ps*. If you used other values when setting up the PeopleSoft Pure Internet Architecture, use those values here.
4. Open the file configuration.properties in a text editor.
5. Replace the values of *WebUserId* and *WebPassword* in this file with the encrypted values for <*userid*> and <*password*>, respectively, from step 2.

Task 10B-5: Testing the PeopleSoft Pure Internet Architecture Installation

This section discusses:

- Starting and Stopping Oracle Application Server
- Starting and Stopping WebLogic
- Starting WebSphere
- Accessing the PeopleSoft Signon
- Updating Database Information
- Updating PeopleTools Options

Note. 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.)

Task 10B-5-1: Starting and Stopping Oracle Application Server

There are several commands you can use to start and stop OAS and PIA, either separately or together.

Action	Command (full path)
Start PIA and other related processes	`<OAS_HOME>/opmn/bin/opmnctl startall`
Stop PIA and other related processes	`<OAS_HOME>/opmn/bin/opmnctl stopall`
View the status of the PIA installation on OAS	`<OAS_HOME>/opmn/bin/opmnctl status`
Start the OAS admin console	`<OAS_HOME>/bin/emctl start em`
Stop the OAS admin console	`<OAS_HOME>/bin/emctl stop em`
Start only PIA. In a single-component installation, *PIA_component* is the same as the application name entered during the installation of PIA on OAS. In a multi-component installation, *PIA_component* is a combination of the application name entered during the installation and the specific OC4J component type. The default name for the PIA component in a multi-component installation is *PIA_PeopleSoft.*	`<OAS_HOME>/opmn/bin/opmnctl.exe⇒ startproc ias-component=OC4J process-⇒ type=PIA_component`
Stop only PIA.	`<OAS_HOME>/opmn/bin/opmnctl.exe⇒ stopproc ias-component=OC4J process-⇒ type=PIA_component`

Task 10B-5-2: Starting and Stopping WebLogic

If you are using the WebLogic web server, you need to sign on to WebLogic. If you are using WebSphere instead, go on to the next procedure.

To start WebLogic:

1. To start BEA WebLogic Server as a foreground process, execute the following command in your WebLogic domain directory (the default directory is <PS_HOME>\webserv\<*domain_name*>):

   Single Server:

   ```
   startPIS.cmd (on Windows)
   startPIA.sh (on UNIX)
   ```

   Multi Server or Distributed Server:

   ```
   startWebLogicAdmin.cmd (on Windows)
   startWebLogicAdmin.sh (on UNIX)
   ```

   and then

   ```
   startManagedWebLogic.cmd <ManagedServerName> (on Windows)
   startManagedWebLogic.sh <ManagedServerName> (on UNIX)
   ```

2. To stop the server, execute the following command in your WebLogic domain directory:

   Single Server:

   ```
   stopPIA.cmd (on Windows)
   stopPIA.sh (on UNIX)
   ```


Multi Server or Distributed Server:

```
stopWebLogic.cmd [-url t3://ServerHostName:port | <ManagedServerName>] (on⇒
 Windows)
stopWebLogic.sh [-url t3://ServerHostName:port | <ManagedServerName>] (on UNIX)
```

See *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology.*

Task 10B-5-3: Starting WebSphere

If you are using the WebSphere web server, you need to sign on to WebSphere. If you are using WebLogic instead, you should have used the previous procedure.

To start WebSphere:

1. Change directories to the folder in which WebSphere is installed—the bin directory under the WebSphere home directory.
2. Enter the command

   ```
   ./startServer.sh <server_name>
   ```

   where <server_name> indicates where you have deployed PeopleSoft Pure Internet Architecture.
3. To stop the server, change directories to the folder in which WebSphere is installed and enter the command

   ```
   ./stopServer <server_name>
   ```

   where <server_name> indicates where you have deployed PeopleSoft Pure Internet Architecture.

Task 10B-5-4: Accessing the PeopleSoft Signon

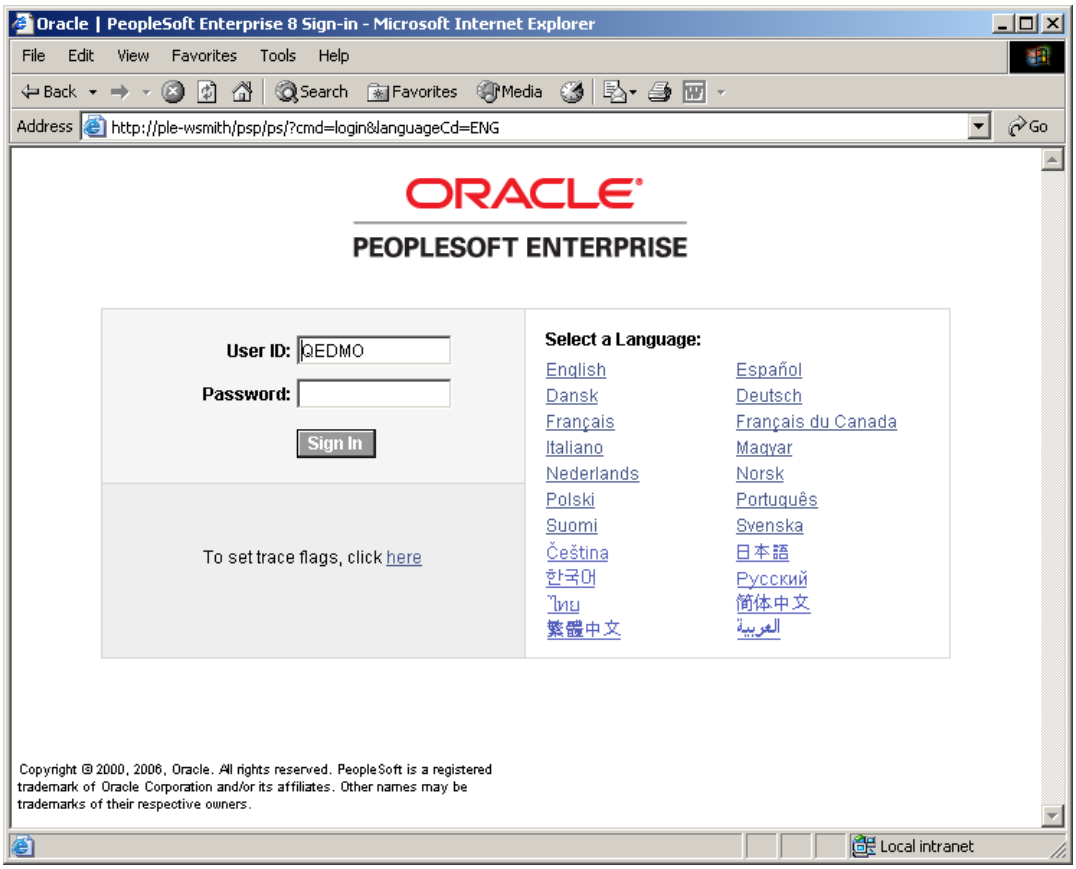
To access the PeopleSoft signon:

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 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 signon screen corresponding to your browser's language preference.



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.

   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.

Note. The user ID and password are case sensitive. You need to enter the user ID and password using UPPERCASE.

Task 10B-5-5: 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.

Task 10B-5-6: Updating PeopleTools Options

You can set the following options on the PeopleTools Options page:

- Multi-Currency — Check this box if you plan to use currency conversion.

  See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Controlling Currency Display Format."

- Base Time Zone — Check this box to set the base time zone for your PeopleTools database.

  See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology* "Setting and Maintaining Time Zones."

- Data Field Length Checking Flag — Check this box if you are using a Japanese EBCDIC (DB2 MBCS) or Japanese Shift-JIS (MBCS) database.

  See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "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 *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Sorting in PeopleTools."

CHAPTER 11A

Setting Up Process Scheduler on Windows

This chapter discusses:

- Prerequisites
- 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

Note. *Windows COBOL Support for z/OS DB2 databases*:

RemoteCall COBOL and batch COBOL are supported for Financials/SCM applications. RemoteCall COBOL and batch COBOL are supported for other applications *only if your host DB2 subsystem's CCSID=37*.

See Also

Enterprise PeopleTools 8.48 Hardware and Software Requirements

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler

PeopleSoft Customer Connection, Supported Platforms (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

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 Customer Connection for the details on whether your application requires COBOL.

  See "PeopleSoft Application COBOL Requirements," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Batch)
- 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.

Task 11A-1: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Changing User Account to Start BEA ProcMGR V8.1
- 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.

Set up BEA ProcMGR V8.1 with a network user ID.

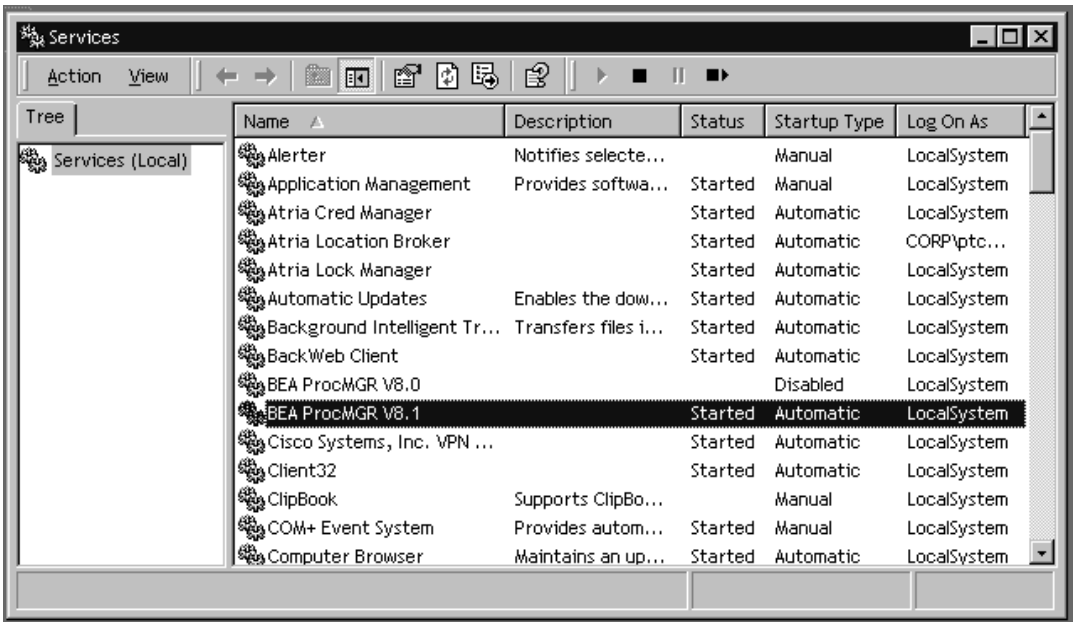
When you install BEA Tuxedo, the BEA ProcMGR V8.1 service is set up by default to be started by local system account—a user account that does not have access to the Windows network. If the Process Scheduler server or processes initiated through Process Scheduler will be using a network printer, accessing 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 BEA ProcMGR with a network user account.

Task 11A-1-1: Changing User Account to Start BEA ProcMGR V8.1

To change User Account to start BEA ProcMGR V8.1:

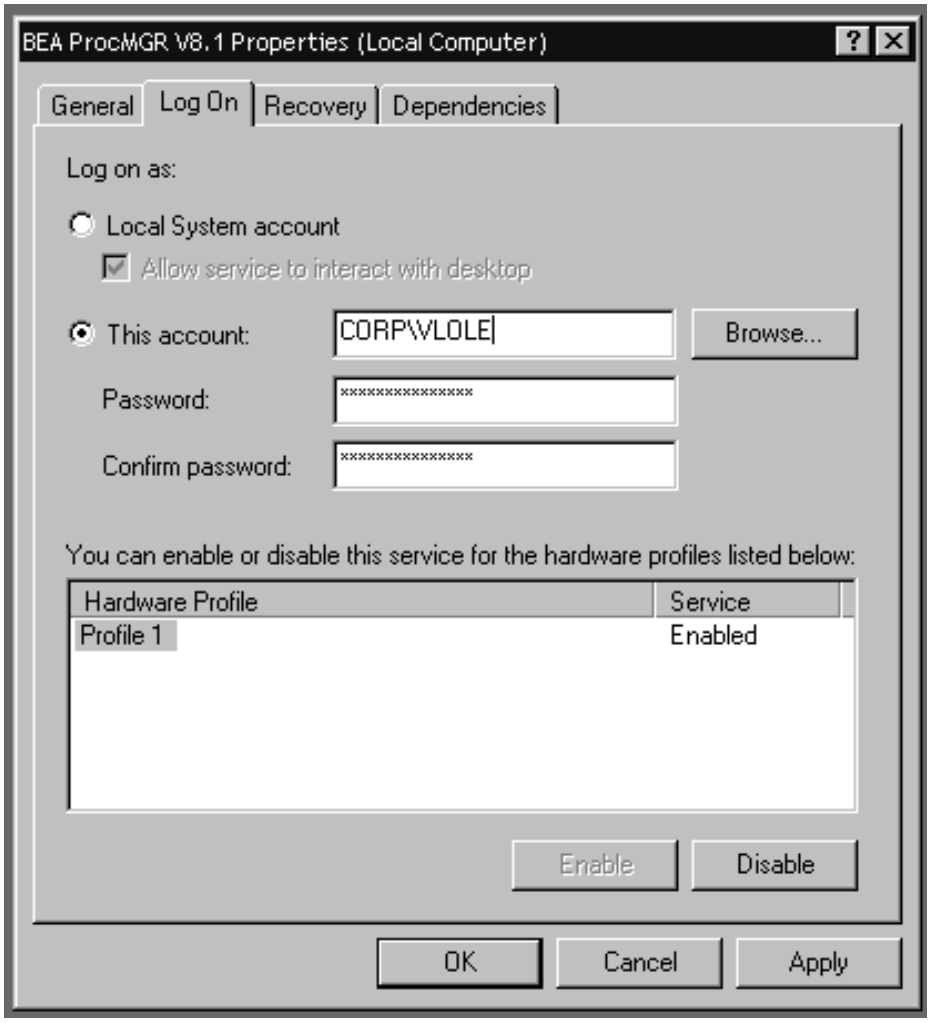
1. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.

In the Services dialog box, find the service labeled *BEA ProcMGR V8.1*. This service is installed automatically when you install Tuxedo.



Services dialog box

2. If the Stop button is enabled, click on it to stop the current BEA ProcMGR V8.1 process. Click Yes when a message informs you of the status change. Then, click BEA ProcMGR V8.1 and click Startup to modify its settings. You see this Service dialog box.



BEA ProcMGR Properties dialog box

3. Choose This Account.

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:\tuxedo.

---

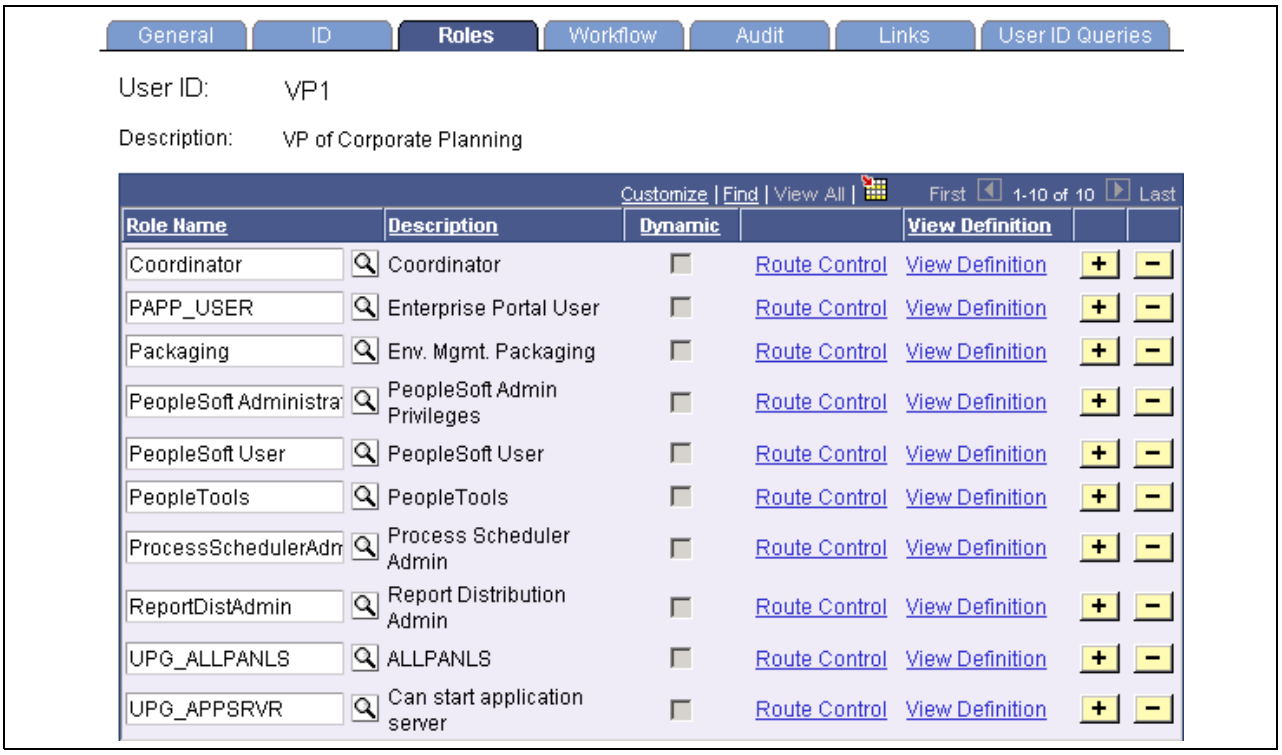
4. Make sure that Startup Type is set to Automatic, and click OK.
5. Click Start. A message in the Services dialog box will indicate the "Started" status. Click Close to return to Control Panel.

Task 11A-1-2: 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.
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 11A-2: 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 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.

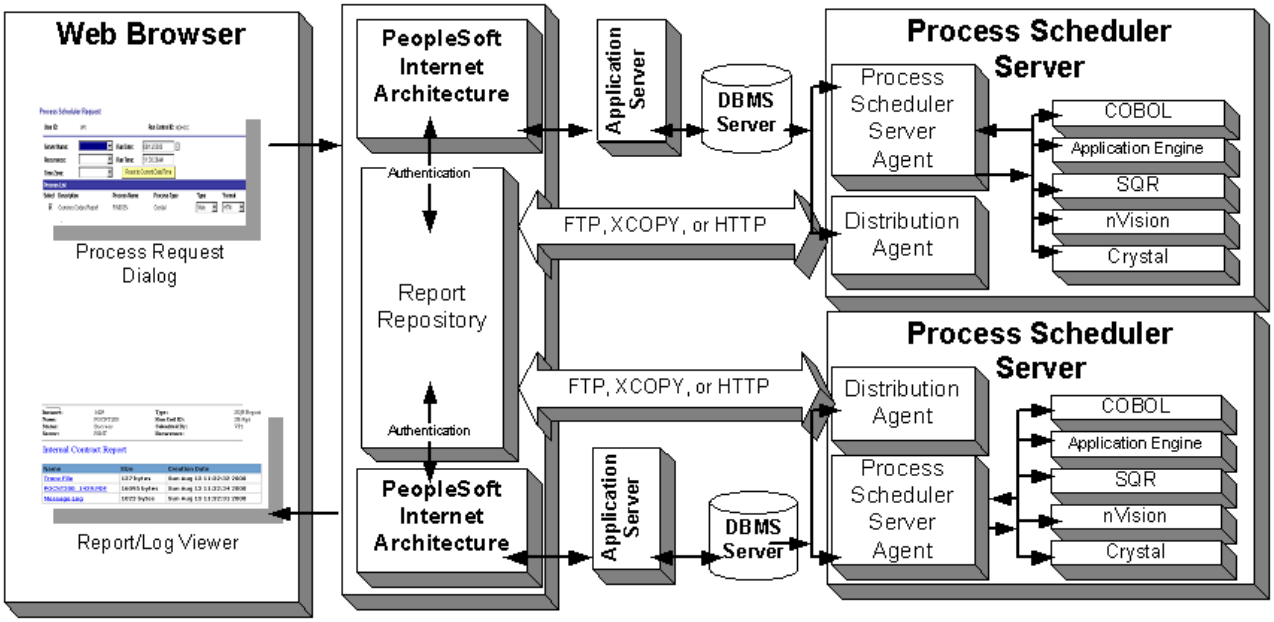
The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- 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 the Distribution Status 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.



Process Scheduler and Report Repository Architecture

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Repository.

Note. Before users can view a report, they are authenticated against the PeopleSoft database.

Note. 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 *Enterprise PeopleTools 8.48 PeopleBook: Security Administration.*

Task 11A-2-1: 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. Here are 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 *Enterprise PeopleTools 8.48 PeopleBook: Security Administration,* "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

Enterprise PeopleTools 8.48 PeopleBook: Security Administration

Task 11A-2-2: 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 11A-2-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another 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 11A-2-4: 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 *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* "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:

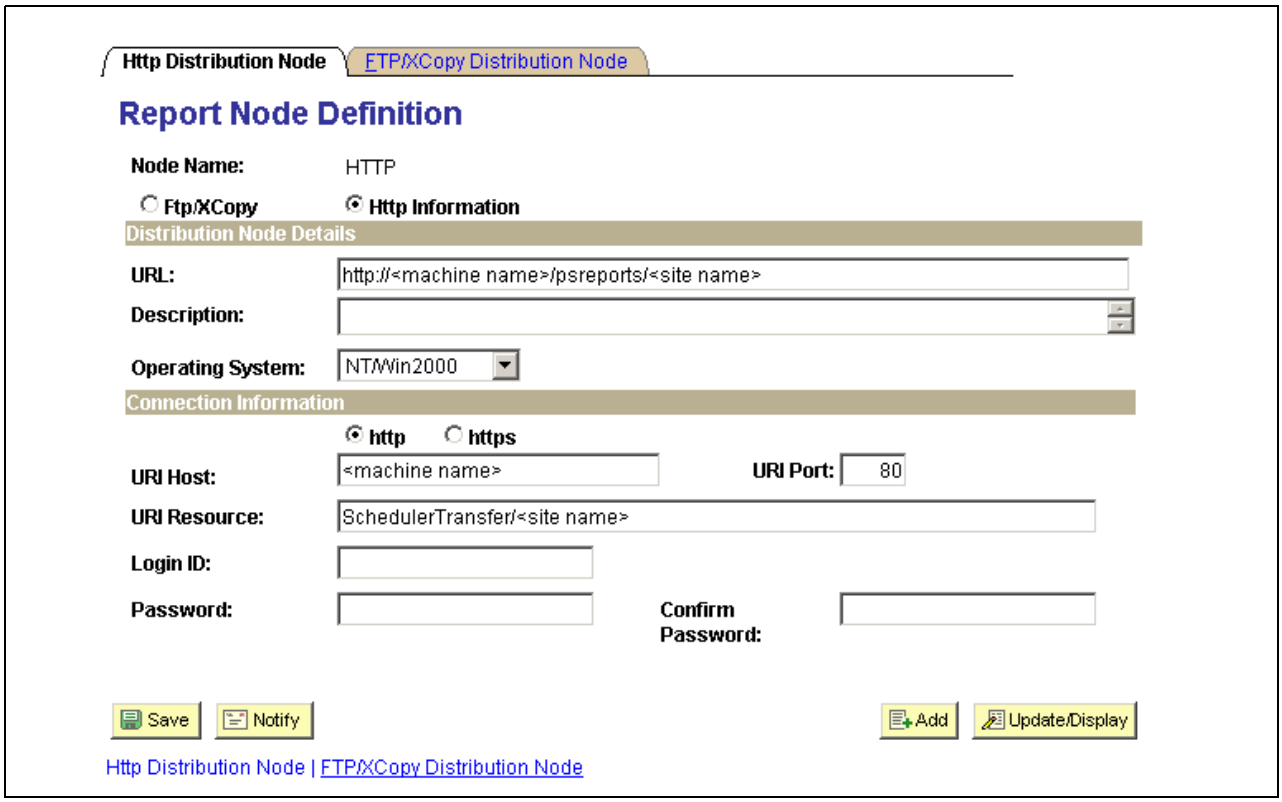
- *Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=/opt/psreports

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 basic authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For detailed instructions on setting up basic authentication on the web server where the Report Repository resides, refer to the appendix "Securing the Report Repository for HTTP."

- *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

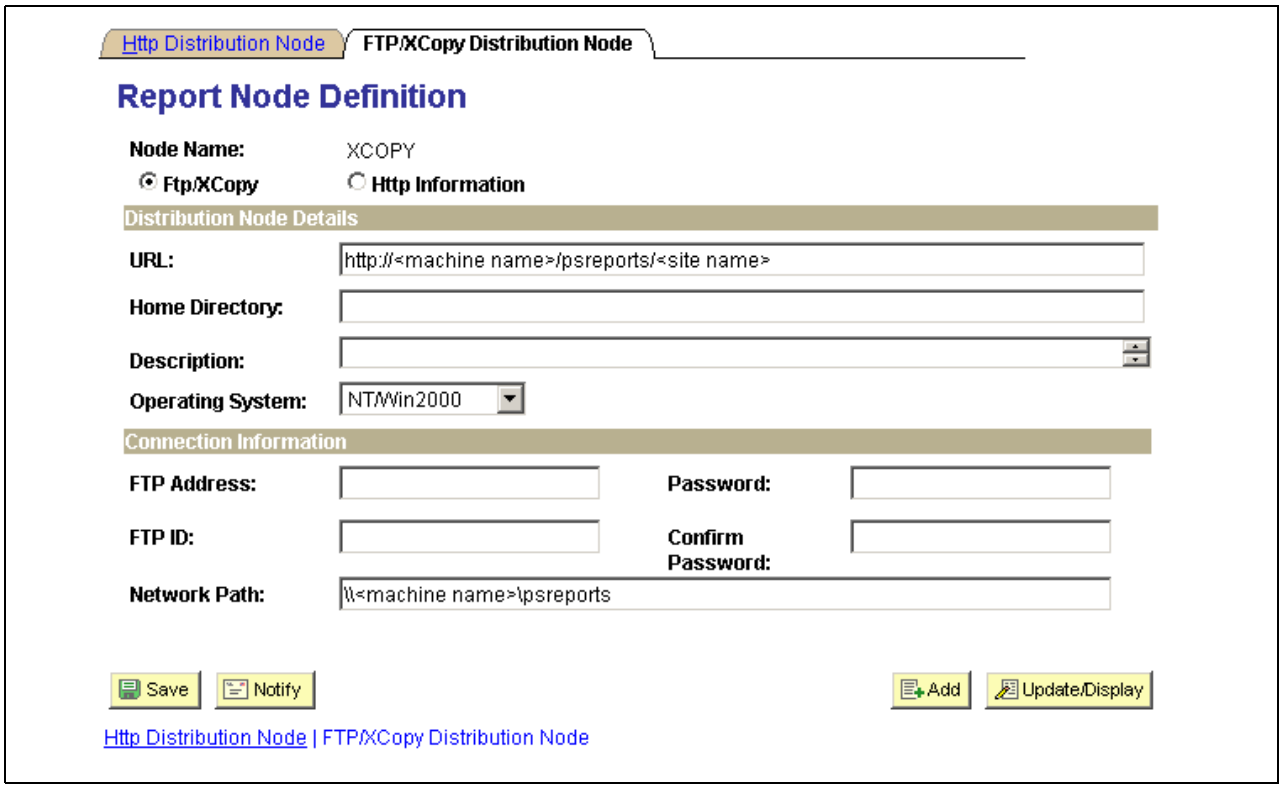
To define the report node to use XCOPY:

Note. 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.

---

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. <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 used to start Process Scheduler. Enter the UNC path that points to your Report Repository share.

6. Select NT/Win2000 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:

JRE must be properly installed from the Process Scheduler server.

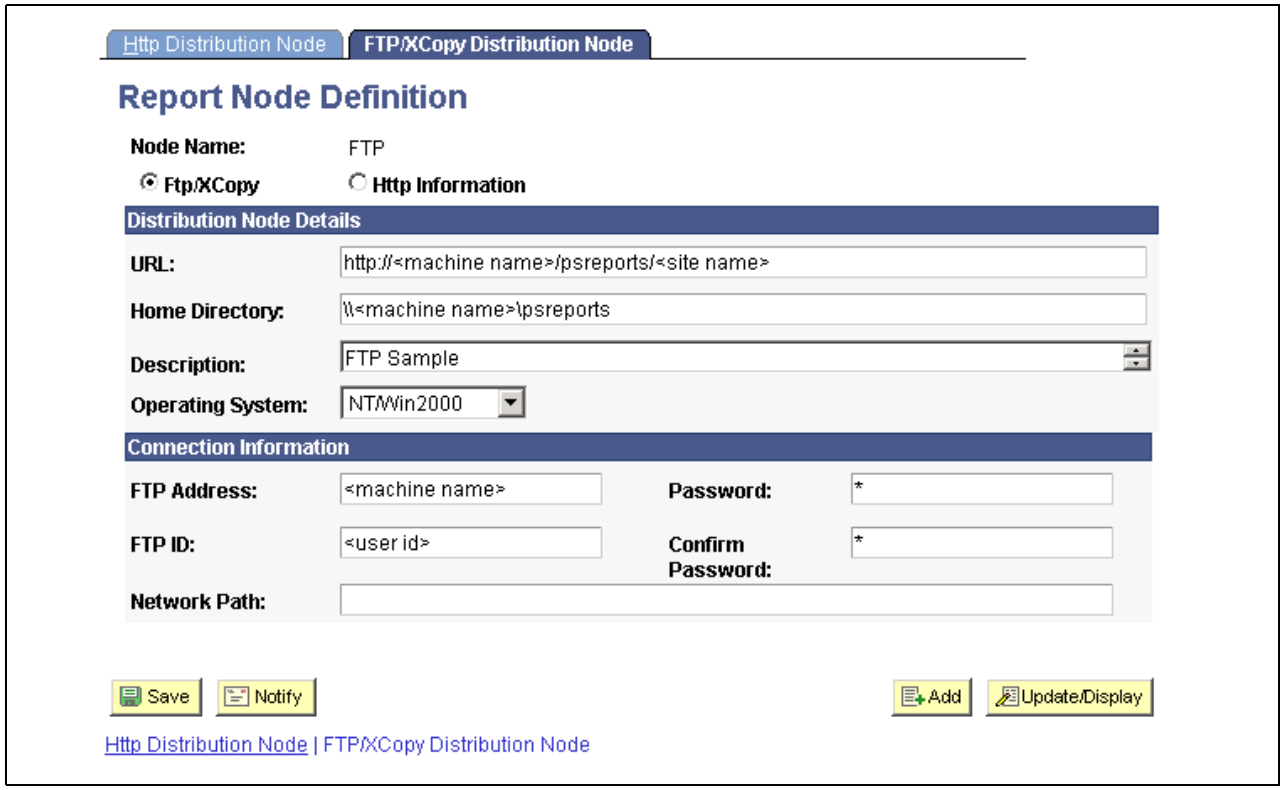
The value entered in the URL must be accurate. Verify that the machine name, port number, and site number are correct.

If either of these tasks are not done, 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.

---

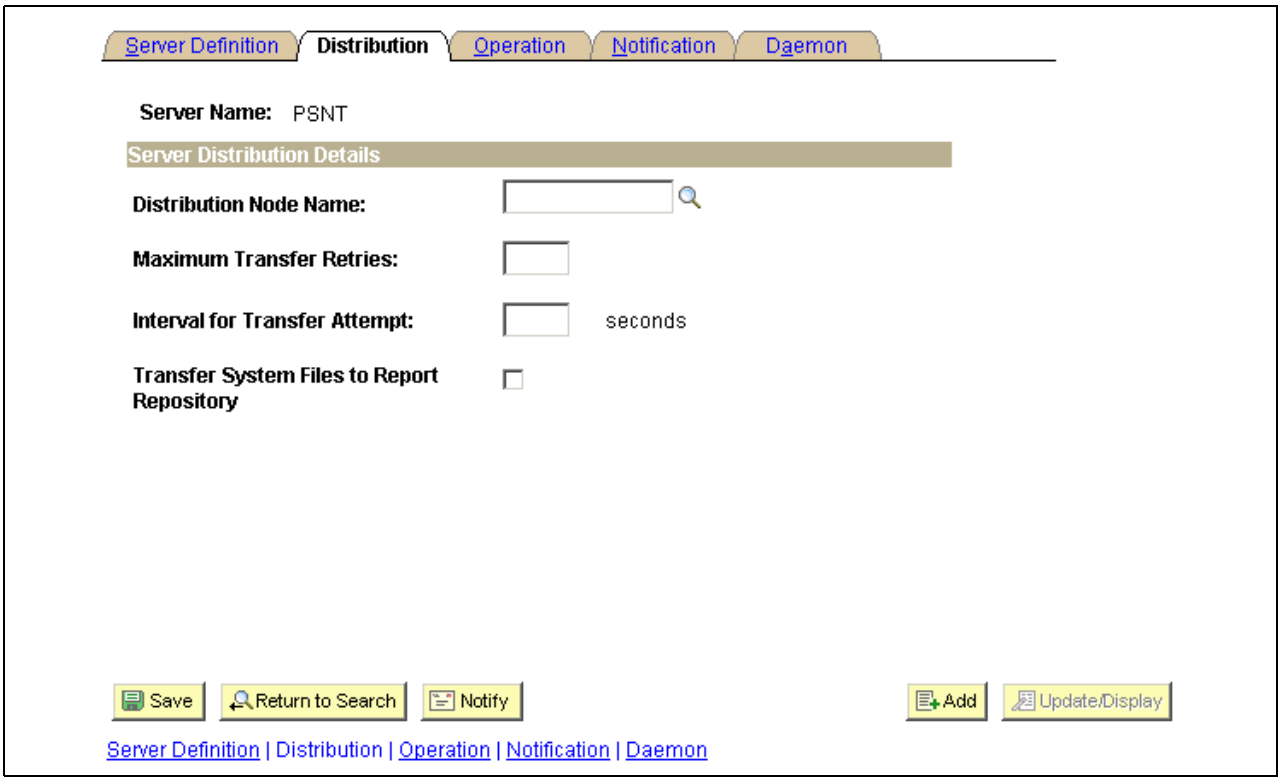
5. Enter the following additional parameters:
   - *Home Directory:* Specify the directory specified during the installation of PeopleSoft Pure Internet Architecture as the Report Repository. The FTP user ID must have write access to this directory. Note that this is not a required field for HTTP transfer, 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 11A-2-5: 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 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 11A-2-6: 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Integration Broker,* "Using the Service Operations Monitor."

Task 11A-3: 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 Tuxedo on 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 BEA/Tuxedo sets NLSPATH in its own registry tree. This value can be displayed using Control Panel, BEA/Tuxedo, on the Environment tab. However, the installation of certain products, such as IBM DB2 connectivity (DB2 UDB for z/OS and DB2 for Linux, UNIX, and Windows) sets NLSPATH to a value that causes Tuxedo to fail. The solution is to either set NLSPATH=c:\tuxedo\locale\c, or to delete it entirely and let 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.

Task 11A-4: 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	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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler*

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 11A-4-1: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure 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_HOME>\appserv\prcs*database name* directory. The following steps assume you are using PSADMIN to specify parameter settings.

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
---------------------------------
1) Application Server
2) Process Scheduler
3) Search Server
4) Service Setup
q) Quit

Command to execute (1-4 q): 2
```

3. Select *4* from the PeopleSoft Process Scheduler Administration menu.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------
1) Start a Process Scheduler Server
2) Stop a Process Scheduler Server
3) Configure a Process Scheduler Server
4) Create a Process Scheduler Server Configuration
5) Delete a Process Scheduler Server Configuration
6) Edit a Process Scheduler Configuration File
7) Import an existing Process Scheduler Configuration
8) Show Status of a Process Scheduler Server
9) Kill a Process Scheduler Server
10) Clean IPC resources of a Process Scheduler Domain
q) Quit

Command to execute (1-9, q) : 4
```

4. When prompted for the name of the database that your server will access

```
Please enter name of Database that server will access :
```

enter the name of the database and press ENTER.

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
  q) Return to previous menu

HINT: Enter 5 to edit DBNAME, then 3 to load

Enter selection (1-16, h, or q):
```

Note. Cognos/Cube Manager Installs: Make sure to specify the proper path for Cognos in the *Add to Path* parameter. By default, that path is C:\Program Files\Cognos\cer2\bin;C:\ODI\OStore\bin. The Cognos and ODI are the important top level directories, and could change depending on the install.

---

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.

Parameter	Description
Master Schdlr	Flag to enable the Master Scheduler Server (PSMSTPRC). Default is to enable the server. See Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.
App Eng Server	Flag to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). Default is set to run AE using PSAESRV. See Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.
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 UDB 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	This value is required for Sybase users.

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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler*.

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* and select the item number corresponding to your database to start.

Note. The correct Crystal and nVision libraries and components are automatically configured when Process Scheduler is booted.

Note. To stop Process Scheduler Server, choose *2*, *Stop a Process Scheduler Server*, from the PeopleSoft Process Scheduler Administration 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) 1996 BEA Systems, Inc.

Portions * Copyright 1986-1997 RSA Data Security, Inc.

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Distributed under license by BEA Systems, Inc.

Tuxedo is a registered trademark.

No bulletin board exists. Entering boot mode.

> TMADMIN_CAT:111: ERROR: No such command.

Task 11A-4-2: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. However, if you want to update the configuration of an existing domain, or carry out a number of other administrative tasks, this handy shortcut is not available. Instead you can use PSADMIN as follows. 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. Start PSADMIN by entering:

   ```
   cd <PS_HOME>\appserv
   psadmin
   ```

2. Select *2* for Process Scheduler in the PeopleSoft Server Administration menu.
3. In the PeopleSoft Process Scheduler Administration menu, select *3* for Configure a Process Scheduler.
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=
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.
- 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.*

Task 11A-4-3: 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, select option *8*.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------
  1) Start a Process Scheduler Server
  2) Stop a Process Scheduler Server
  3) Configure a Process Scheduler Server
  4) Create a Process Scheduler Server Configuration
  5) Delete a Process Scheduler Server Configuration
  6) Edit a Process Scheduler Configuration File
  7) Import an existing Process Scheduler Configuration
  8) Show Status of a Process Scheduler Server
  9) Kill a Process Scheduler Server
 10) Clean IPC resources of a Process Scheduler Domain

  q) Quit

Command to execute (1-10, q) : 8
```

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
```

will verify the status of the Process Scheduler Server for the database HRDMO.

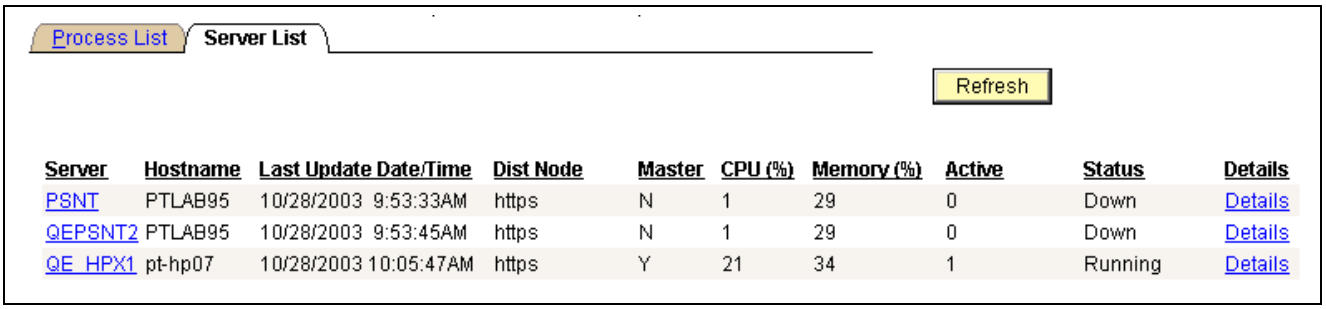
```
Loading command line administration utility ...
tmadmin - Copyright (c) 1996-1999 BEA Systems, Inc.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by BEA Systems, Inc.
Tuxedo is a registered trademark.

> Prog Name       Queue Name  Grp Name       ID RqDone Load Done Current Service
---------       ----------  --------      -- ------ --------- ---------------
BBL.exe         33728       PSSERVER+       0      2       100 (  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 )

> Prog Name       Queue Name  # Serve Wk Queued  # Queued  Ave. Len    Machine
---------       ------------------- ---------  --------  --------    -------
PSDSTSRV.exe    DSTQ               1         -         0         - PSSERVER1+

>
```

Verifying Status

You can also verify the status of the Process Scheduler Server from Process Monitor in PIA. 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.



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 11A-5: 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 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 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 as a Windows service using the instructions provided here.

Note. The following directions assume that the Process Scheduler is already configured on the 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 following variables 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
  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=HR840
  Process Scheduler Databases=HR840

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 take advantage of a new setting when using PSADMIN to set up Process Scheduler Servers or application servers as a Windows service. The Windows Service psntsrv.exe automatically starts application servers and Process Scheduler Servers that reside on the same Windows machine. Occasionally, psntsrv.exe would attempt to initiate a connection between an application server or Process Scheduler Server and a database on the same machine that was not ready to receive requests. As a result the connection would fail. Now when you set up Process Scheduler or an application server as a Windows Service, the Service Start Delay setting lets you specify a delay, in seconds, that elapses before a service attempts to start any application server domains or Process Scheduler 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_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_HOME>
   ```

   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 BEA ProcMGR V8.1 and Tlisten processes. PeopleSoft 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 11A-6: 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 PeopleTools install.

Note. If spaces exist in the WINWORD path in the Process Scheduler configuration file (psprcs.cfg), WinWord 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".

To configure Process Scheduler for Word for Windows:

1. Edit the Process Scheduler configuration file. 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:\Apps\Office2000\Office.

   Note. The Process Scheduler configuration file psprcs.cfg is located in <PS_HOME>\appserv\prcs\database name directory.

2. 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*.

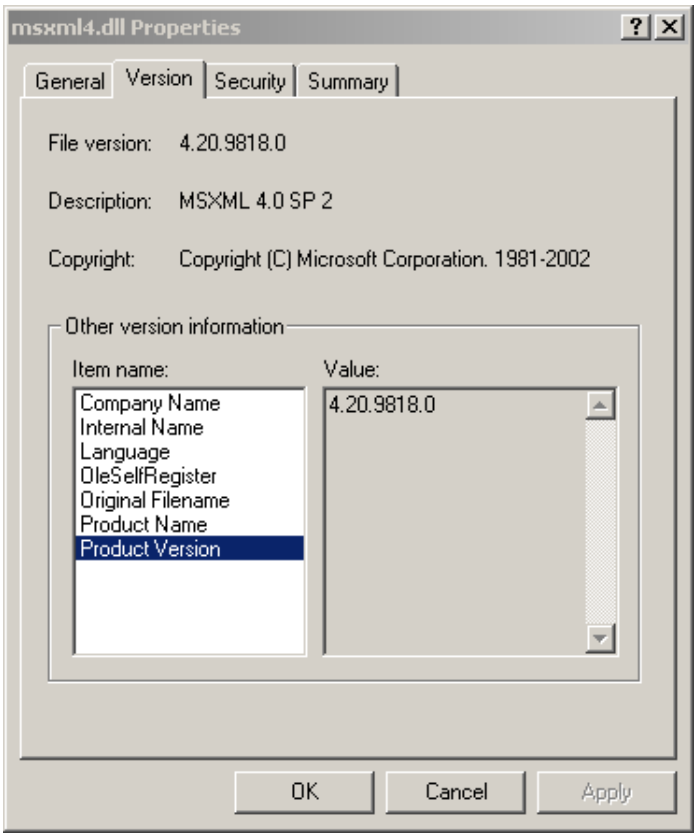
Task 11A-7: Configuring Setup Manager

Before you can use PeopleTools 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 Windows machine.
- Process Scheduler must be running.
- Any Process Scheduler environment variables (especially %PS_FILEDIR%) must be specified.
- Microsoft Office 2000 must be present on the process scheduler server, and Microsoft Excel must be installed.
- The MSXML COM object for Excel, msxml4.dll, must be present on the system.

  For confirmation, navigate to %SystemRoot%\system32\msxml4.dll. Right-click and select Properties, Versions, Product Version. The version number must be 4.20 or above.



msxml4.dll Properties dialog box

See Also

Enterprise PeopleTools 8.48 PeopleBook: Setup Manager

Microsoft support, support.microsoft.com

CHAPTER 11B

Setting Up Process Scheduler on UNIX

This chapter discusses:

- Prerequisites
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Up Process Scheduler Server Agent

Note. If your database runs on UNIX, you need to set up a Windows batch environment on a Windows application server or on a dedicated Windows workstation for Windows-specific batch processes, such as Crystal Reports, nVision reports, Microsoft Word, or Cube Manager. These processes are Windows-specific applications that cannot be executed by the Process Scheduler on UNIX or z/OS.

Note. If you are running DB2 UDB for z/OS, SQR is not supported on UNIX Process Schedulers.

Note. *UNIX COBOL Support for z/OS DB2 (EBCDIC) databases:*

RemoteCall COBOL and Batch COBOL are *only supported* for Financials/SCM Applications. RemoteCall COBOL and Batch COBOL *are not supported* for any other product lines.

UNIX and Windows COBOL support for z/OS DB2 Unicode databases:

RemoteCall Cobol and Batch Cobol *are supported* for Financials/SCM applications. RemoteCall Cobol and Batch Cobol *are also supported* for any other product lines.

See Also

Enterprise PeopleTools 8.48 Hardware and Software Requirements

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

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.
- 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.

Task 11B-1: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

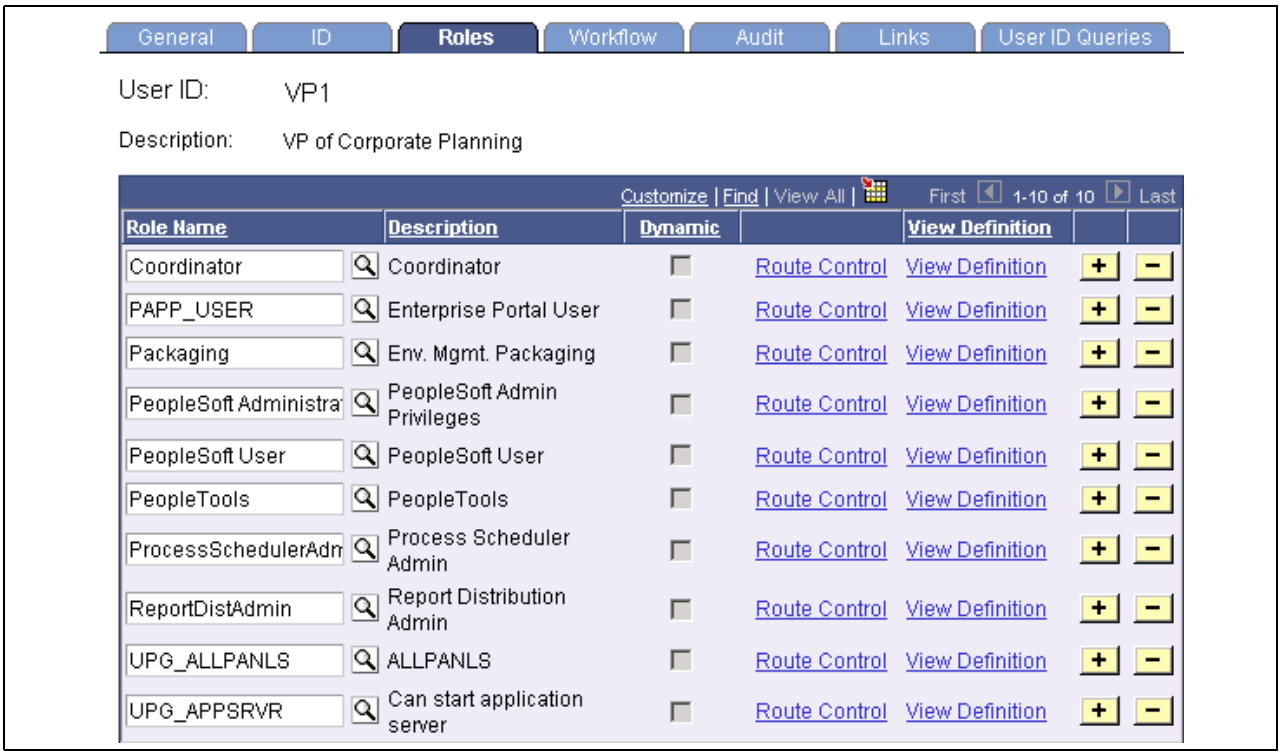
This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

Task 11B-1-1: 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.
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 11B-2: 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 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.

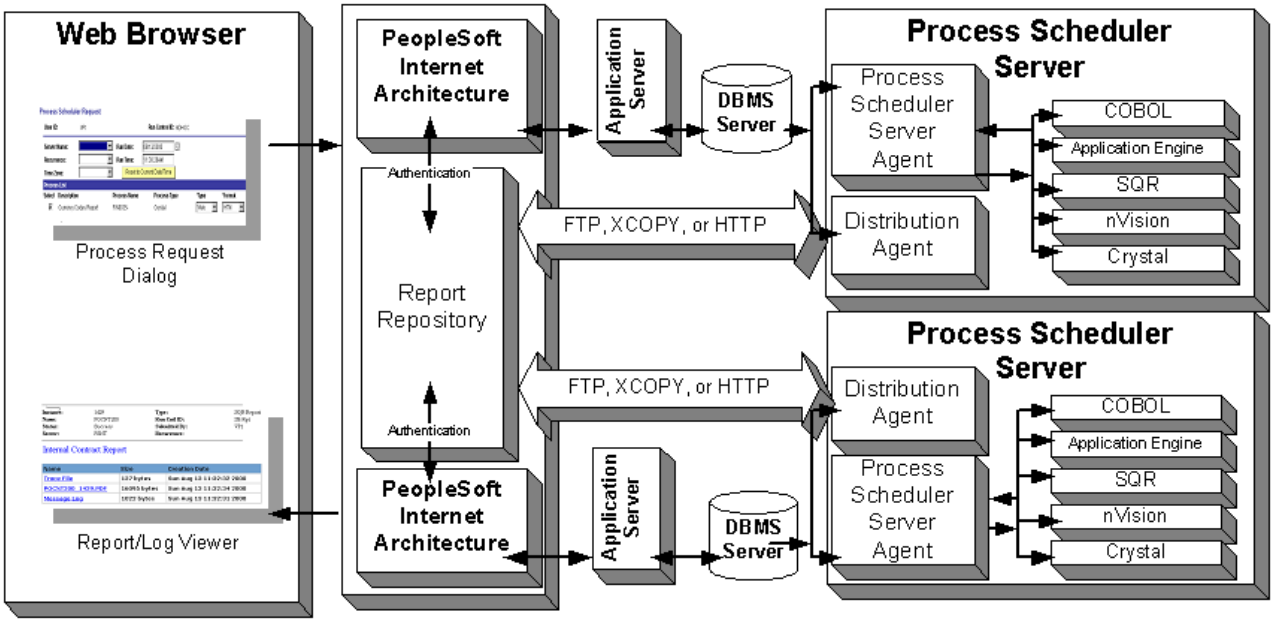
The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- 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 the Distribution Status 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.



Process Scheduler and Report Repository Architecture

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Repository.

Note. Before users can view a report, they are authenticated against the PeopleSoft database.

Note. 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 *Enterprise PeopleTools 8.48 PeopleBook: Security Administration.*

Task 11B-2-1: 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. Here are 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 *Enterprise PeopleTools 8.48 PeopleBook: Security Administration,* "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

Enterprise PeopleTools 8.48 PeopleBook: Security Administration

Task 11B-2-2: 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 11B-2-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another 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 11B-2-4: 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 *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* "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:

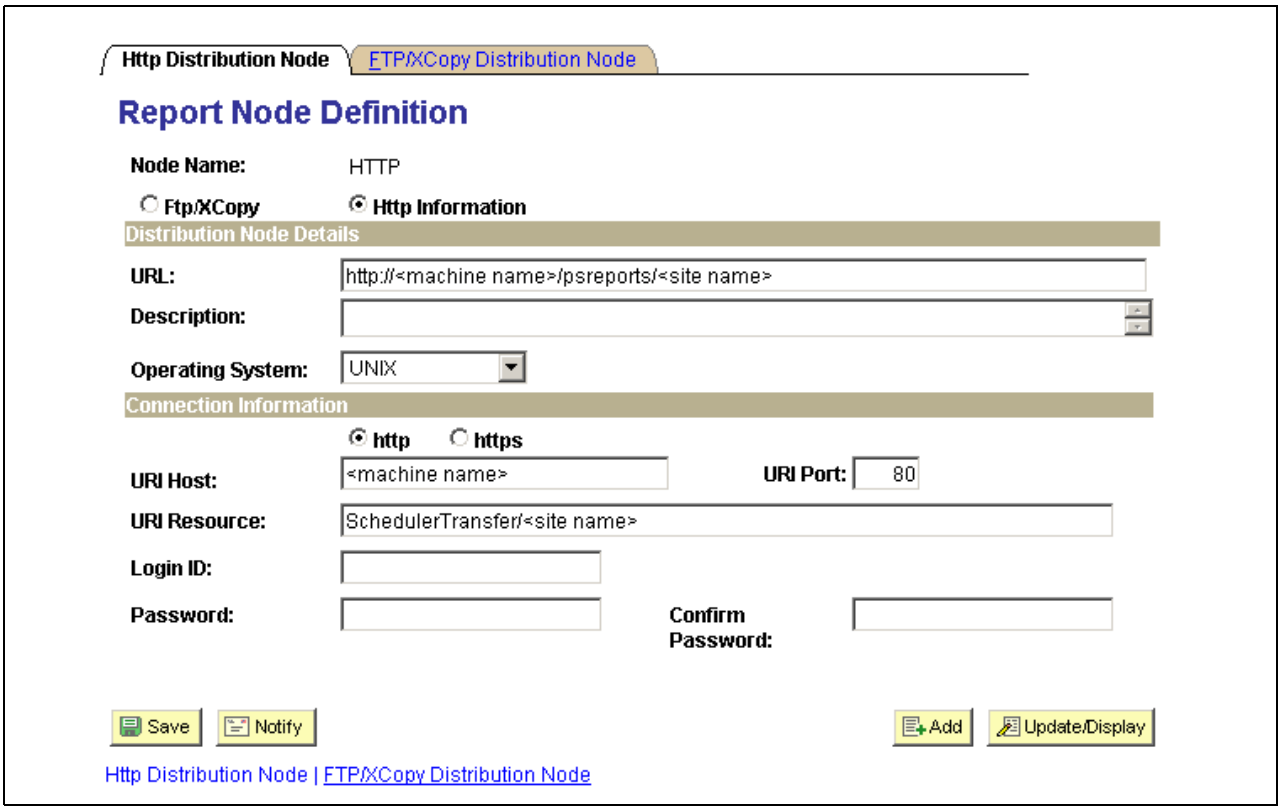
- *Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=/opt/psreports

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 basic authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For detailed instructions on setting up basic authentication on the web server where the Report Repository resides, refer to the appendix "Securing the Report Repository for HTTP."

   - *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:

JRE must be properly installed from the Process Scheduler server.

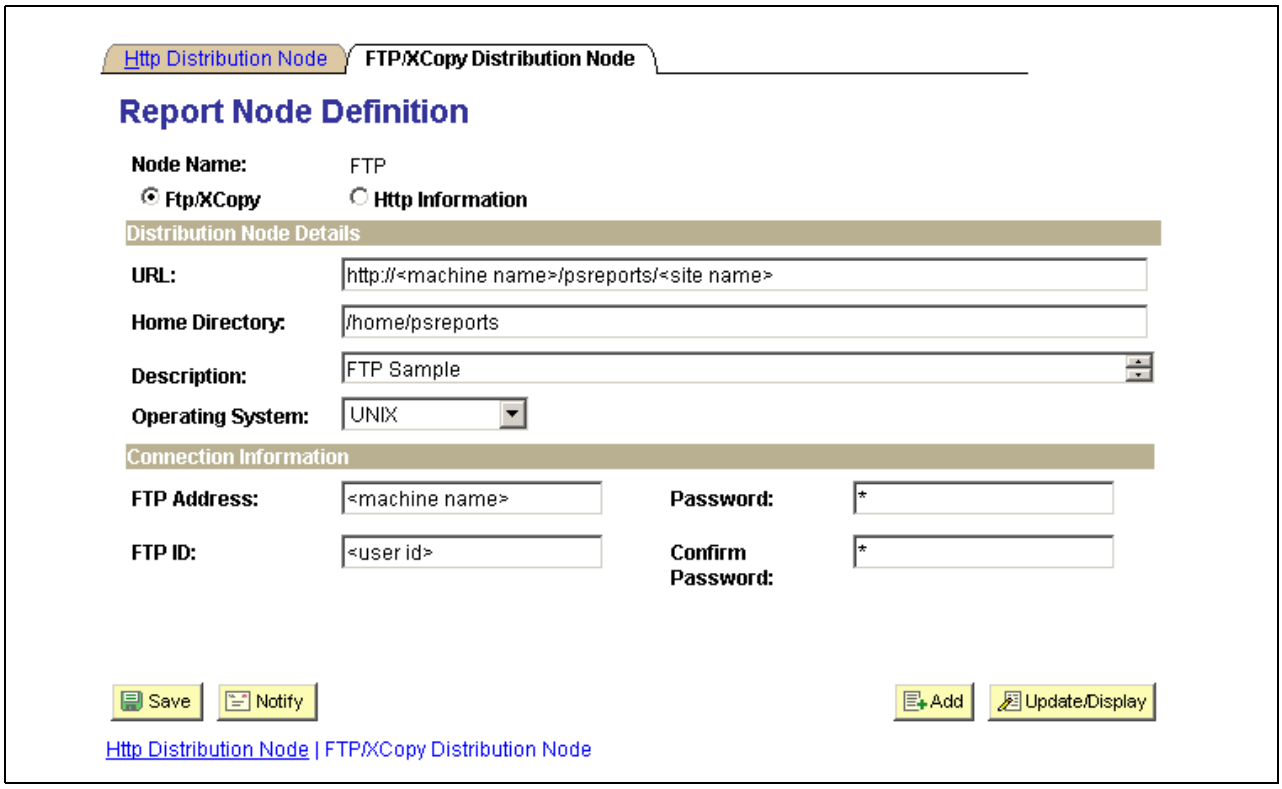
The value entered in the URL must be accurate. Verify that the machine name, port number, and site number are correct.

If either of these tasks are not done, 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:* Specify 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 directory will look like $PS_HOME/psreports/.

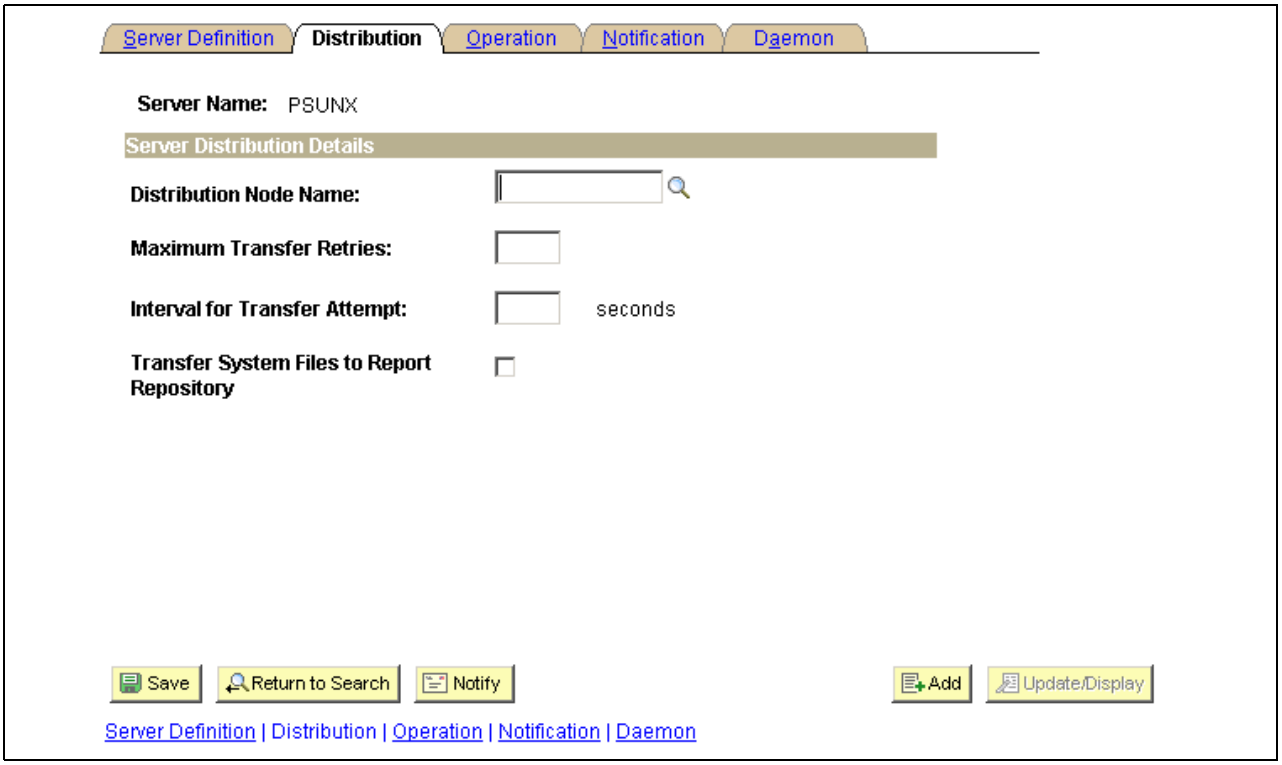
- *Description:* Enter a description of the server (optional).
- *Operating System:* Select the operating system of the Report Repository.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
- *FTP 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 11B-2-5: 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 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 11B-2-6: 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Integration Broker,* "Using the Service Operations Monitor."

Task 11B-3: 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler*

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 11B-3-1: 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 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 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 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. Navigate to 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 11B-3-2: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure 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_HOME>/appserv/prcs/*database name* directory. The following steps assume you are using PSADMIN to specify parameter settings.

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
---------------------------------
1) Application Server
2) Process Scheduler
3) Search Server
```



```
q) Quit

Command to execute (1-3 q): 2
```

3. Select *4* from the PeopleSoft Process Scheduler Administration menu.

```
-----------------------------------------
PeopleSoft Process Scheduler Administration
-----------------------------------------
1) Start a Process Scheduler Server
2) Stop a Process Scheduler Server
3) Configure a Process Scheduler Server
4) Create a Process Scheduler Server Configuration
5) Delete a Process Scheduler Server Configuration
6) Edit a Process Scheduler Configuration File
7) Import an existing Process Scheduler Configuration
8) Show Status of a Process Scheduler Server
9) Kill a Process Scheduler Server
10) Clean IPC resources of a Process Scheduler Domain
q) Quit

Command to execute (1-9, q) : 4
```

4. When prompted for the name of the database that your server will access

```
Please enter name of Database that server will access :
```

enter the name of the database and press ENTER.

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.

Parameter	Description
Master Schdlr	Flag to enable the Master Scheduler Server (PSMSTPRC). Default is to enable the server. See Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.
App Eng Server	Flag to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). Default is set to run AE using PSAESRV. See Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.
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 UDB 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	This value is required for Sybase users.

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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler*.

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* and select the item number corresponding to your database to start.

Note. To stop Process Scheduler Server, choose *2*, *Stop a Process Scheduler Server*, from the PeopleSoft Process Scheduler Administration 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) 1996 BEA Systems, Inc.

Portions * Copyright 1986-1997 RSA Data Security, Inc.

All Rights Reserved.

Distributed under license by BEA Systems, Inc.

Tuxedo is a registered trademark.

No bulletin board exists. Entering boot mode.

> TMADMIN_CAT:111: ERROR: No such command.

Task 11B-3-3: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. However, if you want to update the configuration of an existing domain, or carry out a number of other administrative tasks, this handy shortcut is not available. Instead you can use PSADMIN as follows. 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. Start PSADMIN by entering:

   ```
   cd <PS_HOME>/appserv
   psadmin
   ```

2. Select *2* for Process Scheduler in the PeopleSoft Server Administration menu.
3. In the PeopleSoft Process Scheduler Administration menu, select *3* for Configure a Process Scheduler.
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=
   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.
   - 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.*

Task 11B-3-4: 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, select option *8*.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------
  1) Start a Process Scheduler Server
  2) Stop a Process Scheduler Server
  3) Configure a Process Scheduler Server
  4) Create a Process Scheduler Server Configuration
  5) Delete a Process Scheduler Server Configuration
  6) Edit a Process Scheduler Configuration File
  7) Import an existing Process Scheduler Configuration
  8) Show Status of a Process Scheduler Server
  9) Kill a Process Scheduler Server
 10) Clean IPC resources of a Process Scheduler Domain

  q) Quit

Command to execute (1-10, q) : 8
```

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
```

   will verify the status of the Process Scheduler Server for the database HRDMO.


```
Loading command line administration utility ...
tmadmin - Copyright (c) 1996-1999 BEA Systems, Inc.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by BEA Systems, Inc.
Tuxedo is a registered trademark.

> Prog Name      Queue Name  Grp Name      ID RqDone Load Done Current Service
---------       ----------  --------      -- ------ --------- ---------------
BBL             59013       pt-ibm20       0      1        50 (  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 )

> Prog Name      Queue Name  # Serve Wk Queued  # Queued  Ave. Len    Machine
---------       ------------------ ---------  --------  --------    -------
PSDSTSRV        DSTQ              1         -         0         -   pt-ibm20

>
```

Verifying Status

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 PIA. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

CHAPTER 11C

Setting Up Process Scheduler on z/OS

This chapter discusses:

- Prerequisites
- 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

Note. If your database runs on UNIX or z/OS, you need to set up a Windows batch environment on a Windows application server or on a dedicated Windows workstation for Windows-specific batch processes, such as Crystal Reports, nVision reports, Microsoft Word, or Cube Manager. These processes are Windows-specific applications that cannot be executed by the Process Scheduler on UNIX or z/OS.

See Also

Enterprise PeopleTools 8.48 Hardware and Software Requirements

Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

Prerequisites

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 Customer Connection for the details on whether your application requires COBOL.

See “PeopleSoft Application COBOL Requirements,” PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Batch)

- Install the appropriate version of SQR.

  See “Creating a Database.”

- Install JDK/JRE 1.4.1 (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 OS390 and z/OS."

  See “Important PTFs for the PeopleSoft on DB2 for OS390 and z/OS,” PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Platforms - DB2 UDB for DB2 OS/390 and z/OS)

- Set up your database connectivity to access the PeopleSoft database from UNIX System Services via 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 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.

Task 11C-1: Granting Required Authorization in DB2 and UNIX System Services

This section discusses:

- Setting UNIX System Services Authorization
- Setting DB2 Authorization

Task 11C-1-1: 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 11C-1-2: 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 11C-2: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

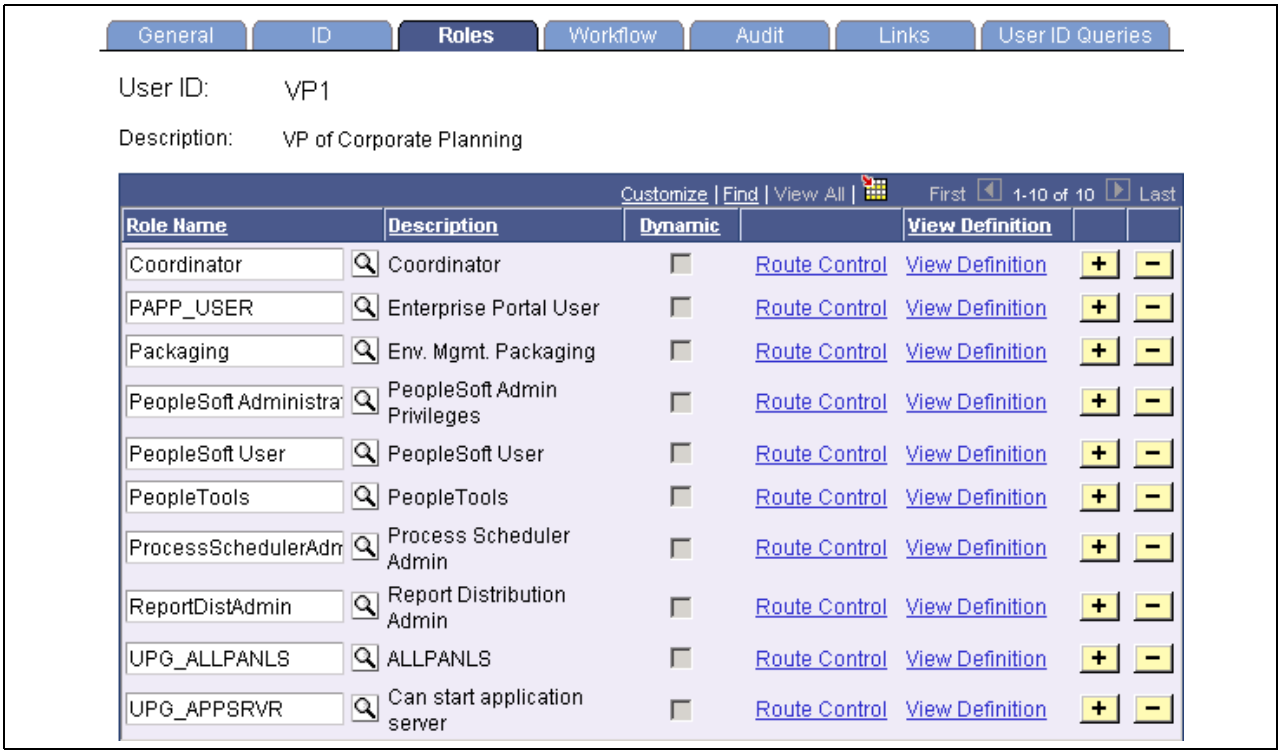
This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

Task 11C-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.

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 11C-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 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.

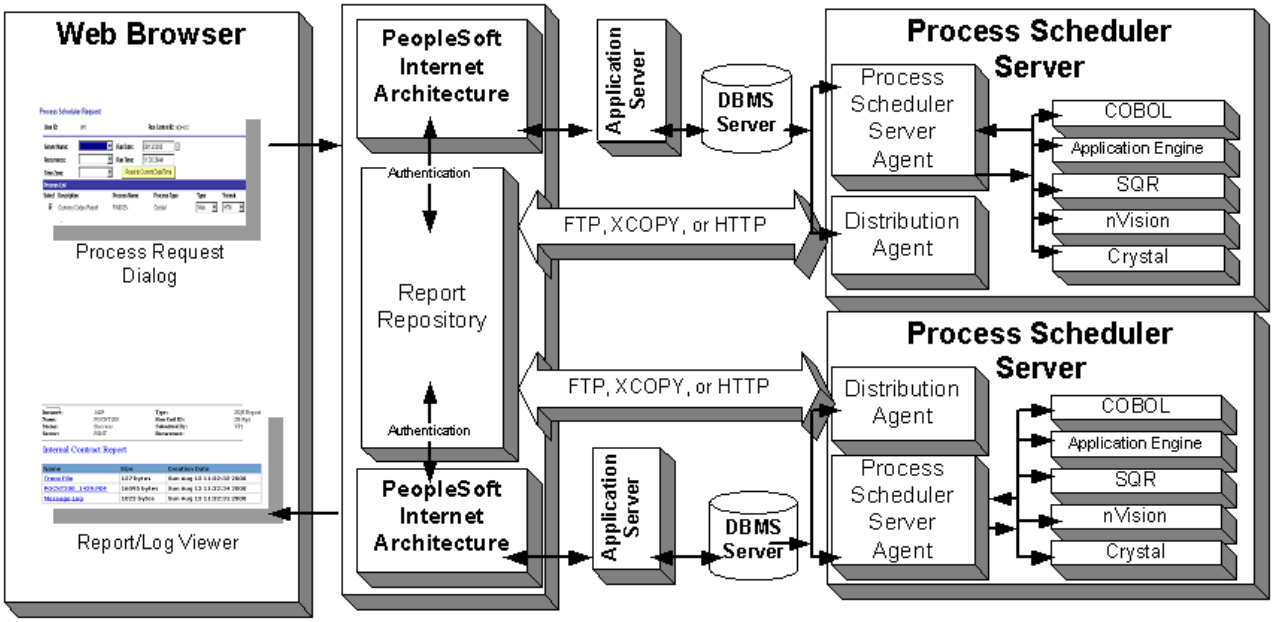
The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- 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 the Distribution Status 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.



Process Scheduler and Report Repository Architecture

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Repository.

Note. Before users can view a report, they are authenticated against the PeopleSoft database.

Note. 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 *Enterprise PeopleTools 8.48 PeopleBook: Security Administration.*

Task 11C-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. Here are 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 *Enterprise PeopleTools 8.48 PeopleBook: Security Administration,* "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

Enterprise PeopleTools 8.48 PeopleBook: Security Administration

Task 11C-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 on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

Task 11C-3-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another 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 11C-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 *Enterprise PeopleTools 8.48 PeopleBook: Internet Technology,* "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=/opt/psreports

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 basic authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For detailed instructions on setting up basic authentication on the web server where the Report Repository resides, refer to the appendix "Securing the Report Repository for HTTP."

- *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:

JRE must be properly installed from the Process Scheduler server.

The value entered in the URL must be accurate. Verify that the machine name, port number, and site number are correct.

If either of these tasks are not done, 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.

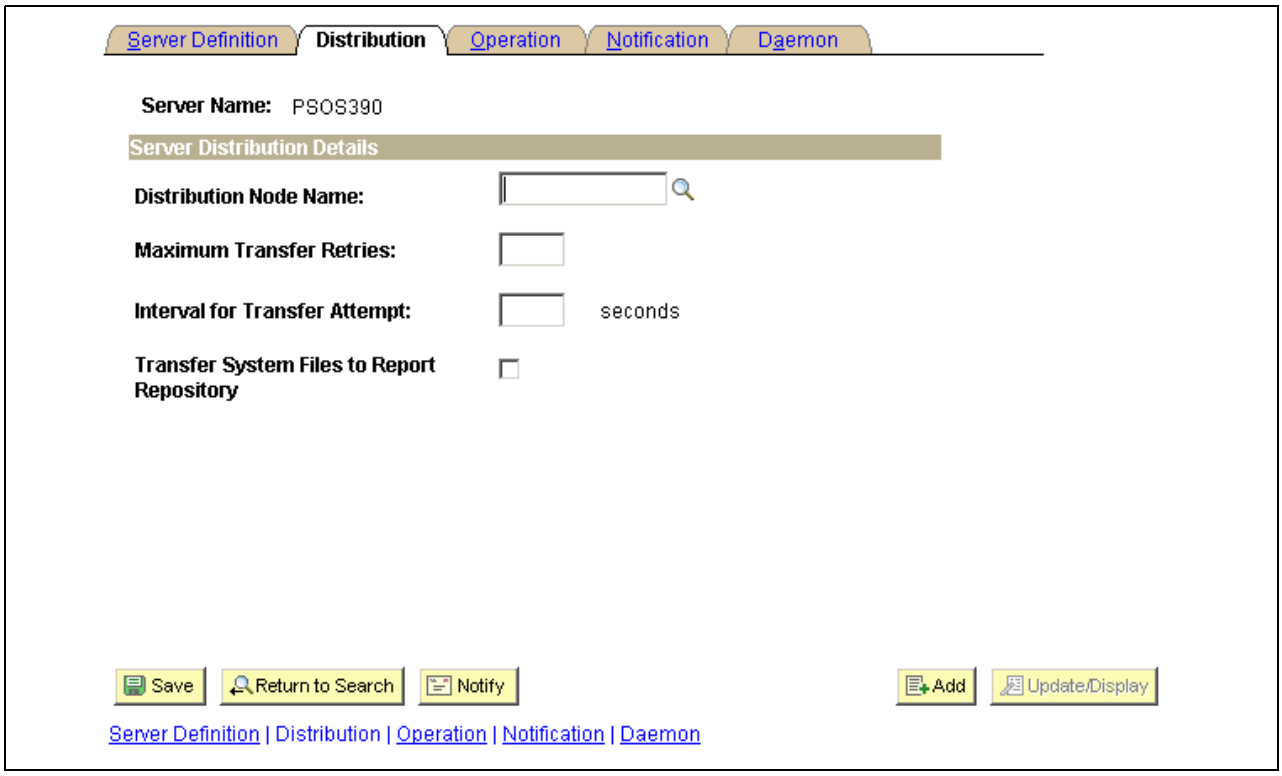
   Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.
5. Enter the following additional parameters:
   - *Home Directory:* Specify 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 11C-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 PSOS390). The Server Definition page appears.
3. Select the Distribution tab.



Server Definition page: Distribution tab

4. Click the lookup button 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 11C-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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Integration Broker,* "Using the Service Operations Monitor."

Task 11C-4: 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 and Configuring 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler*

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 11C-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 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 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 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. Navigate to 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 11C-4-2: Setting Up Your Environment

Run psconfig.sh file from <PS_HOME>:

```
. ./psconfig.sh
```

Task 11C-4-3: 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 11C-4-4: Creating and Configuring 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_HOME>/appserv/prcs/*database name* directory. The following steps assume you are using PSADMIN to specify parameter settings.

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 *4* from the PeopleSoft Process Scheduler Administration menu.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
-------------------------------------------
1) Start a Process Scheduler Server
2) Stop a Process Scheduler Server
3) Configure a Process Scheduler Server
4) Create a Process Scheduler Server Configuration
5) Delete a Process Scheduler Server Configuration
6) Edit a Process Scheduler Configuration File
7) Import an existing Process Scheduler Configuration
8) Show Status of a Process Scheduler Server
9) Kill a Process Scheduler Server
10) Edit a Shell JCL
q) Quit

Command to execute (1-10, q) : 4
```

3. When prompted for the name of the database that your server will access

```
Please enter name of Database that server will access :
```

enter the name of the database and press ENTER.

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'll be returned to the PeopleSoft Process Scheduler Administration menu.

Task 11C-4-5: 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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler,* "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, enter:

```
cd <PS_HOME>/appserv
psadmin
```

2. From the PeopleSoft Process Scheduler Administration menu, select option *3*:

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
 -------------------------------------------
  1) Start a Process Scheduler Server
  2) Stop a Process Scheduler Server
  3) Configure a Process Scheduler Server
  4) Create a Process Scheduler Server Configuration
  5) Delete a Process Scheduler Server Configuration
  6) Edit a Process Scheduler Configuration File
  7) Import an existing Process Scheduler Configuration
  8) Show Status of a Process Scheduler Server
  9) Kill a Process Scheduler Server
  10) Edit a Shell JCL

   q) Quit

Command to execute (1-10, q) : 3
```


3. Select the database for which the Process Scheduler needs to be configured.

```
Database list:
  1)  HRDMO
Select item number to configure:
```

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 *Enterprise PeopleTools 8.48 PeopleBook: PeopleSoft Process Scheduler.*

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

    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 UDB 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 UDB 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

Parameter	Description
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 11C-4-6: 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 JCL's 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. To edit a shell JCL template, select option *10* from the PeopleSoft Process Scheduler Administration menu:

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
 -------------------------------------------
   1) Start a Process Scheduler Server
   2) Stop a Process Scheduler Server
   3) Configure a Process Scheduler Server
   4) Create a Process Scheduler Server Configuration
   5) Delete a Process Scheduler Server Configuration
   6) Edit a Process Scheduler Configuration File
   7) Import an existing Process Scheduler Configuration
   8) Show Status of a Process Scheduler Server
   9) Kill a Process Scheduler Server
   10) Edit a Shell JCL
   q) Quit

Command to execute (1-10, q) : 10
```

2. Select the database for which the Process Scheduler needs to be configured.

```
Database list:
```



```
  1) HRDMO

Select item number to edit: 1
```

3. 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
```

4. Modify the JCL using vi commands
5. Save your changes by using the vi command *:wq*

If you are not familiar with the vi editor and would prefer to edit the JCL's 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. Please consult your OS390 system administrator for using the *oedit* command at your site.

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 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*.
%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.

Meta-Strings	Description
%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 11C-4-7: 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*.

```
-------------------------------------------
PeopleSoft Process Scheduler Administration
 -------------------------------------------
1) Start a Process Scheduler Server
2) Stop a Process Scheduler Server
3) Configure a Process Scheduler Server
4) Create a Process Scheduler Server Configuration
5) Delete a Process Scheduler Server Configuration
6) Edit a Process Scheduler Configuration File
7) Import an existing Process Scheduler Configuration
8) Show Status of a Process Scheduler Server
9) Kill a Process Scheduler Server
10) Edit a Shell JCL
 q) Quit

Command to execute (1-10, q) : 1
```

2. To start the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

   For example (to start Process Scheduler Server for the database HRDMO):


```
Database list:
1)  HRDMO
Select item number to start: 1
```

This will launch the Process Scheduler program.

```
Starting Process Scheduler Server PSOS390 for Database HRDMO ...
PeopleSoft Process Scheduler Started Normally
```

Task 11C-4-8: 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, select option *8*.

```
-----------------------------------------
PeopleSoft Process Scheduler Administration
-----------------------------------------
  1) Start a Process Scheduler Server
  2) Stop a Process Scheduler Server
  3) Configure a Process Scheduler Server
  4) Create a Process Scheduler Server Configuration
  5) Delete a Process Scheduler Server Configuration
  6) Edit a Process Scheduler Configuration File
  7) Import an existing Process Scheduler Configuration
  8) Show Status of a Process Scheduler Server
  9) Kill a Process Scheduler Server
 10) Edit a Shell JCL

  q) Quit

Command to execute (1-10, q) : 8
```

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
```

will verify the status of the Process Scheduler Server for the database HRDMO.

```
Process Scheduler Server PSOS390 for Database PT84x is currently running

   Process Agents          PID
   --------------          ----
```



```
  Process Scheduler        1144
  Distribution Agent       35163243
```

Note. You can also verify the status of the Process Scheduler Server from Process Monitor in PIA. 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 11C-4-9: Stopping the Process Scheduler Server

You can stop the Process Scheduler Server as follows.

To stop the Process Scheduler Server:

1. From the PeopleSoft Process Scheduler Administration menu, select option *2*.

```
--------------------------------------------
PeopleSoft Process Scheduler Administration
 --------------------------------------------
  1) Start a Process Scheduler Server
  2) Stop a Process Scheduler Server
  3) Configure a Process Scheduler Server
  4) Create a Process Scheduler Server Configuration
  5) Delete a Process Scheduler Server Configuration
  6) Edit a Process Scheduler Configuration File
  7) Import an existing Process Scheduler Configuration
  8) Show Status of a Process Scheduler Server
  9) Kill a Process Scheduler Server
  10) Edit a Shell JCL
  q) Quit

Command to execute (1-10, 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.
```


CHAPTER 12

Installing and Configuring Software for Crystal Reports

This chapter discusses:

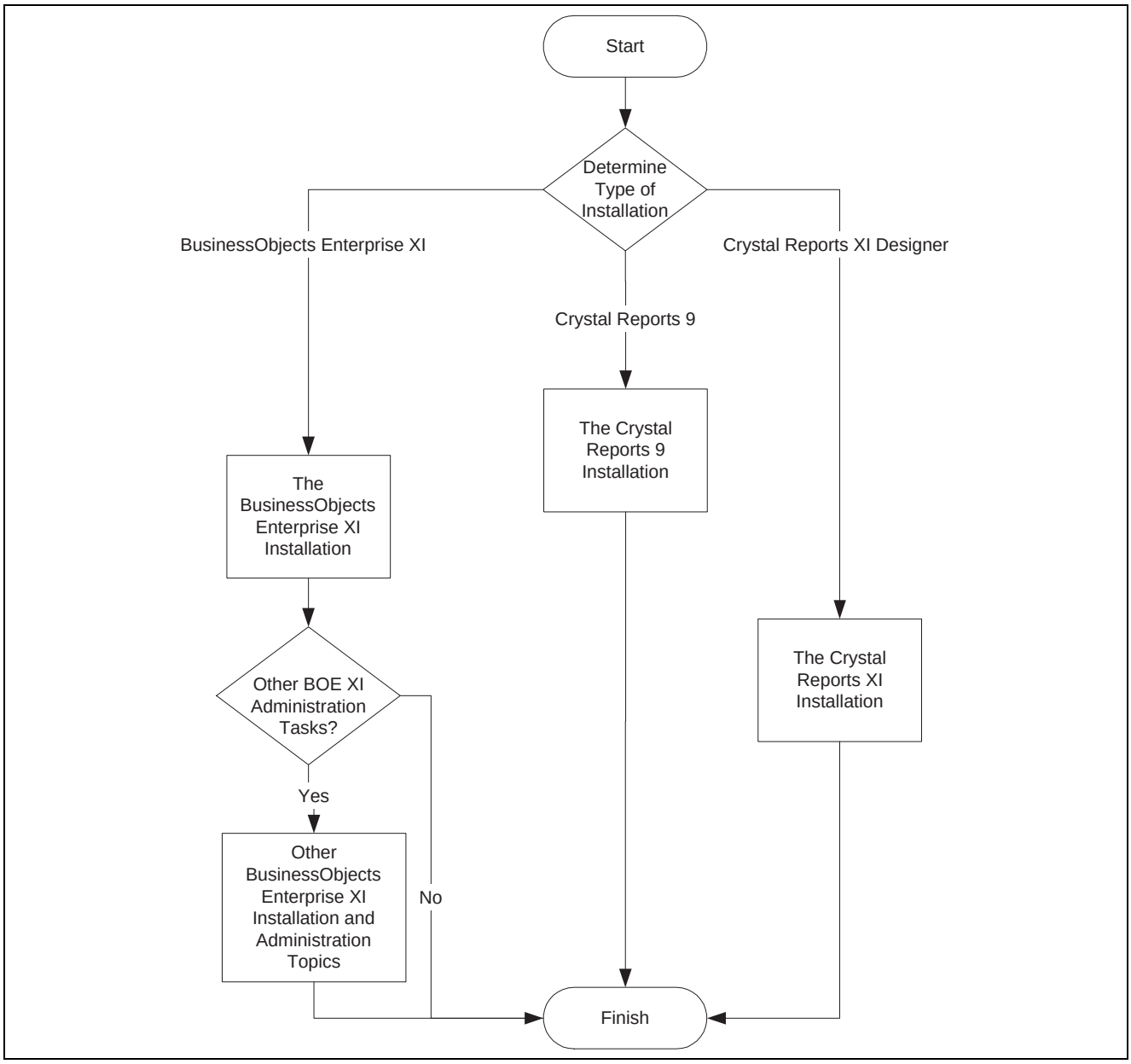
- Understanding Crystal Reports Software Installation and Configuration
- Determining the Crystal Reports Runtime Environment
- Installing Crystal Reports 9
- Installing BusinessObjects Enterprise XI
- Migrating your BusinessObjects Enterprise XI Installation to a New Version of PeopleTools
- Installing Crystal Reports XI
- Removing Crystal Reports XI
- Administering and Using BusinessObjects Enterprise XI
- Converting Crystal Reports

Understanding Crystal Reports Software Installation and Configuration

This chapter addresses the installation and administration of your Crystal Reports environment. Depending on the type of installation that you have some parts of the chapter will not be relevant to you.

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:



Chapter navigation

See Also

Enterprise PeopleTools 8.48 PeopleBook: Crystal Reports for PeopleSoft

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

Task 12-1: Determining the Crystal Reports Runtime Environment

PeopleSoft applications are delivered to work with the Crystal Reports 9 runtime environment. Process scheduler report definitions are configured to use the Crystal Reports 9 print engine, and the Crystal report definition files delivered by PeopleSoft are in the Crystal 9 format. You use the Crystal Reports 9 product to create and edit report definitions.

If you are using PeopleTools 8.48 *and* are using PeopleSoft applications at Release 9 or higher, you can optionally use the BusinessObjects Enterprise XI runtime environment to run and view your reports. You use the Crystal Reports XI product to create and edit report definitions.

For any particular PeopleSoft application you must use either Crystal 9 or BusinessObjects Enterprise XI—you cannot run a "mixed" environment where some reports are run using Crystal 9 and some reports are run using BusinessObjects Enterprise XI.

If you decide to use BusinessObjects Enterprise XI, you can run a PeopleSoft supplied conversion program to convert report definitions from Crystal 9 format to Crystal XI format. There is no conversion program to convert from Crystal XI format to Crystal 9 format.

The advantages of BusinessObjects Enterprise XI (compared to Crystal Reports 9) are:

- Runs on other operating systems (Solaris, AIX, Linux) besides Windows
- Runs on a scalable server platform; that is, you can scale across machines
- Users can view interaction reports over the web (such as search, filter, or table of contents).

The restrictions of the PeopleSoft Integration with BusinessObjects Enterprise XI are:

- The PeopleSoft Process Scheduler that you use to run reports on the BusinessObjects Enterprise XI server can run only on one of the operating systems that BusinessObjects Enterprise XI runs on.
- You need to convert all your reports from Crystal 9 format to Crystal XI format to run them using BusinessObjects Enterprise XI.
- The PeopleSoft Integration does not support some platforms that a standalone BusinessObjects Enterprise XI installation supports.

  That is, not all platforms that BusinessObjects Enterprise XI runs on were tested in the integrated BusinessObjects Enterprise XI/PeopleSoft solution. For example, while standalone BusinessObjects Enterprise XI support Tomcat as a web server, the integrated BusinessObjects Enterprise XI/PeopleSoft solution does not.

The advantages of using Crystal Reports 9 are:

- Works the same as previous releases of PeopleTools
- Requires little configuration and administration
- Run to Crystal Reports 9 from Windows Query Designer is available
- Does not require a database management system for report management
- Report output is smaller in size compared to BusinessObjects Enterprise XI, as the latter contains more internal information about the report.

  The observed difference in tests indicates that report output generated from BusinessObjects Enterprise XI will be 30 to 40% larger. This may vary by report and by the amount of business data in the report.

One restriction on Crystal Reports 9 is that it runs only on Windows.

Task 12-2: Installing Crystal Reports 9

This section discusses:

- Understanding the Crystal Reports 9 Installation
- Installing Crystal Reports 9

Understanding the Crystal Reports 9 Installation

Crystal Reports 9 is packaged with PeopleSoft. The Crystal Reports installation is required for Windows-based workstations (also referred to as the PeopleTools Development Environment) where reports will be designed. Workstations that will only run existing reports via Process Scheduler do not need Crystal Reports. The functionality for running these reports on the client is provided in DLLs that are installed when you run Client Setup in Configuration Manager.

Note. Depending upon the languages you licensed from PeopleSoft, you may receive more than one Crystal Reports CD-ROM. You should repeat the following installation instructions for each language of Crystal Reports that you plan to use in the PeopleTools Development Environment.

Note. Although some versions of Crystal Reports include web server applications such as Web Component Server, they are not tested, certified, or supported by PeopleSoft.

You can install Crystal Reports 9 locally on a workstation where reports will be designed, or on a Windows batch server where Crystal Reports will be executed by Process Scheduler. You can also install Crystal Reports to a network file server; typically it would be installed to a subdirectory of the <PS_HOME> directory. If you install Crystal Reports to a network file server, you need to run a Crystal Reports setup on each Windows-based workstation or batch server where Crystal Reports will be run. To do so, make sure to select the Complete installation when running the CD setup program.

Note. When installing Crystal Reports to a Netware file server, the ideal solution is to use Windows as the installation workstation environment. If, however, you are installing Crystal under Windows 95 to a Novell file server, install Crystal on a local drive and then copy the Crystal directory to the Novell server from an MS-DOS command prompt.

See Also

Enterprise PeopleTools 8.48 PeopleBook: Crystal Reports for PeopleSoft, “Using Crystal Reports 9”

Task 12-2-1: Installing Crystal Reports 9

To install Crystal Reports 9:

1. Insert the Crystal CD into your CD-ROM drive and run the setup program from the root of the drive.

   Note. If you are installing to a network, you must run `setup.exe` from the command prompt with the /a option, as in `<path>setup.exe /a`.

The install program will search for any previous version of Crystal and then present a Welcome message.

2. Click Next.

   A license dialog box appears.

3. Select the I accept the License Agreement radio button and click Next.

   A window appears with the possible installation types.

4. Select the Typical radio button. If necessary, use the Browse button to set your destination folder.
5. Click Next.

   A screen appears displaying the features you have selected. Review and modify your selections if necessary.

6. Click Next.

   You are prompted to start the installation or go back to modify any of the information added.

7. Select Next to begin the installation.

   A progress screen appears.

8. Select Finish to complete the installation.

Note. For additional instructions on installing the Crystal Reports CD-ROM, see the Crystal installation documentation, which is delivered in the \DOCS directory of the Crystal Reports CD as install.rtf.

Note. To install Crystal on a local machine but run it from the network, consult the Crystal documentation.

Note. If you are upgrading your system to PeopleTools 8.48 from a version of PeopleTools earlier than an 8.x version, you may have to convert your custom Crystal report definitions to Crystal 9. Please see the section Converting Crystal Reports for additional information and tasks.

If this is not the case, at this point if you are using Crystal 9 you are finished. Ignore the rest of the chapter as it addresses BusinessObjects Enterprise XI exclusively.

Task 12-3: Installing BusinessObjects Enterprise XI

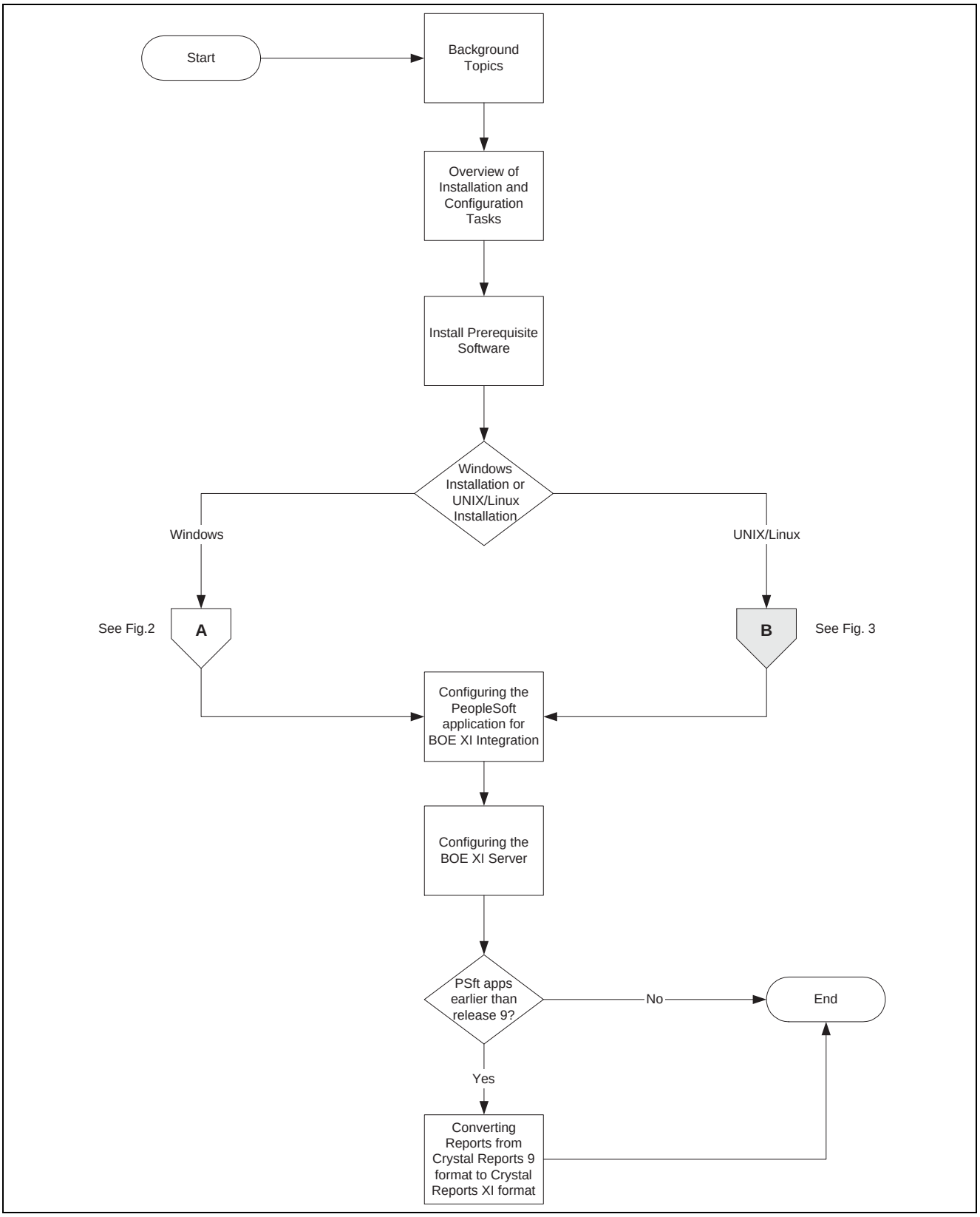
This section discusses:

- Understanding the BusinessObjects Enterprise XI Installation
- Understanding Integration Between BusinessObjects Enterprise XI and PeopleSoft Enterprise
- Understanding Query Access Services
- Reviewing Key BusinessObjects Enterprise XI Components
- Planning your BusinessObjects Enterprise XI Integration
- Installing the PeopleSoft Application Environment
- Installing BusinessObjects Enterprise XI on Windows
- Installing BusinessObjects Enterprise XI Integration on Windows
- Installing Patches Required at Installation Time

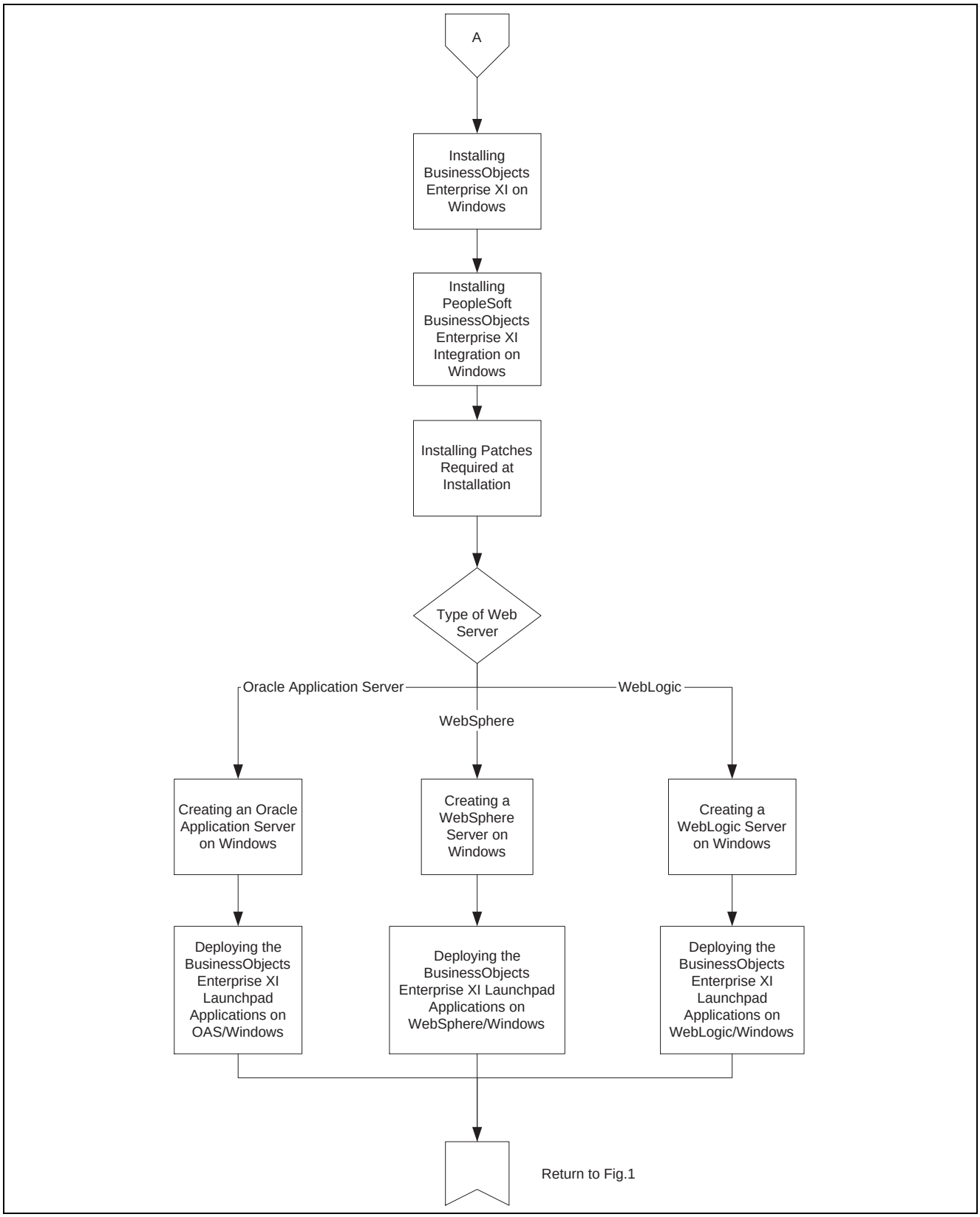
- Creating a Web Server for BusinessObjects Enterprise XI on Windows
- Installing BusinessObjects Enterprise XI on UNIX or Linux
- Installing PeopleSoft BusinessObjects Enterprise XI Integration on UNIX or Linux
- Installing Patches Required at Installation
- Creating a Web Server for BusinessObjects Enterprise on UNIX or Linux
- Confirming Access to the BusinessObjects Enterprise XI Administration and User Launchpad Applications
- Configuring the PeopleSoft Application for BusinessObjects Enterprise XI Integration
- Configuring the BusinessObjects Enterprise XI Server
- Verifying the PeopleSoft to BusinessObjects Enterprise XI Integration

Understanding the BusinessObjects Enterprise XI Installation

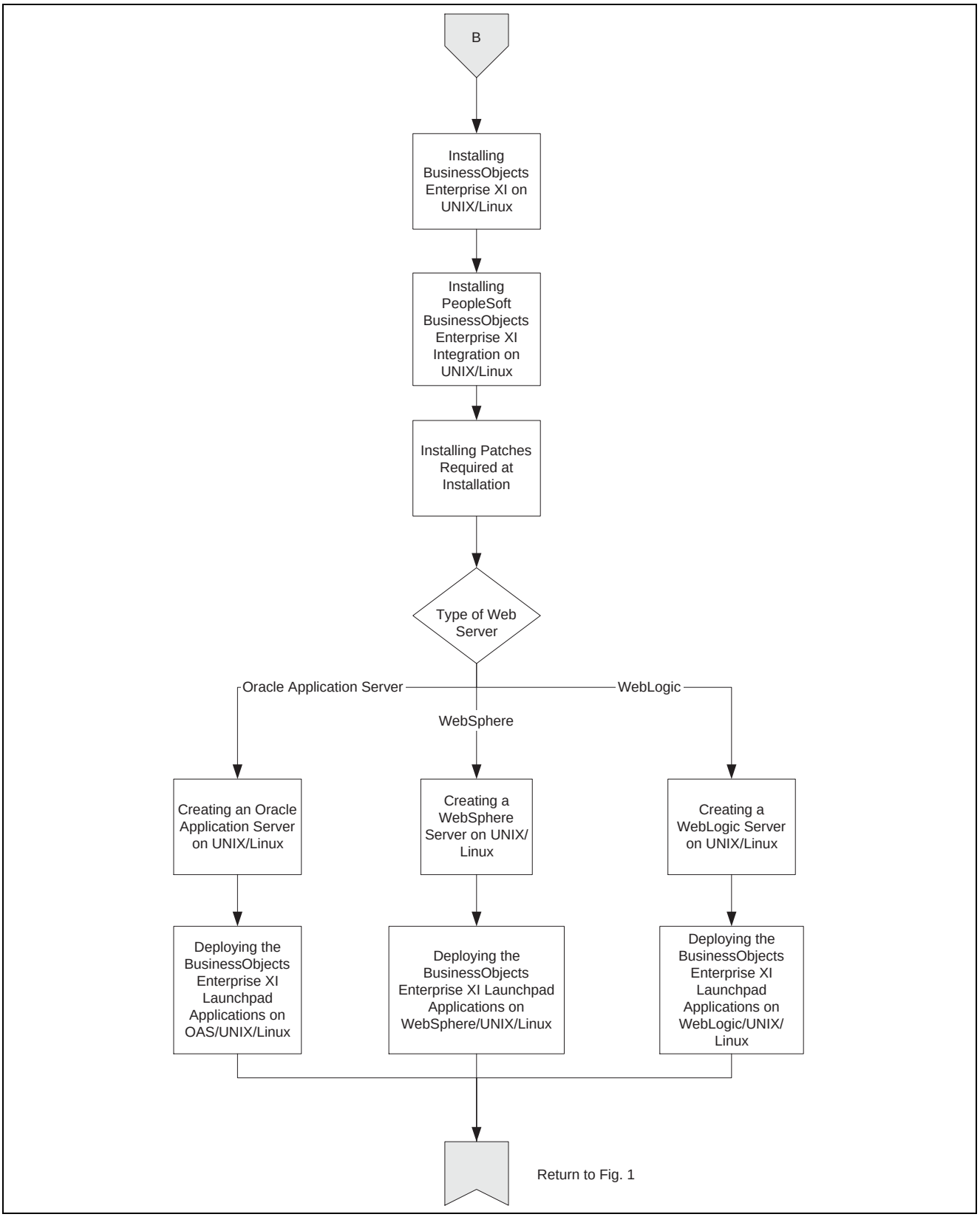
Use the following flowcharts to understand which parts of this section are relevant to your particular circumstances.



Navigating the BOE XI installation and configuration - Figure 1



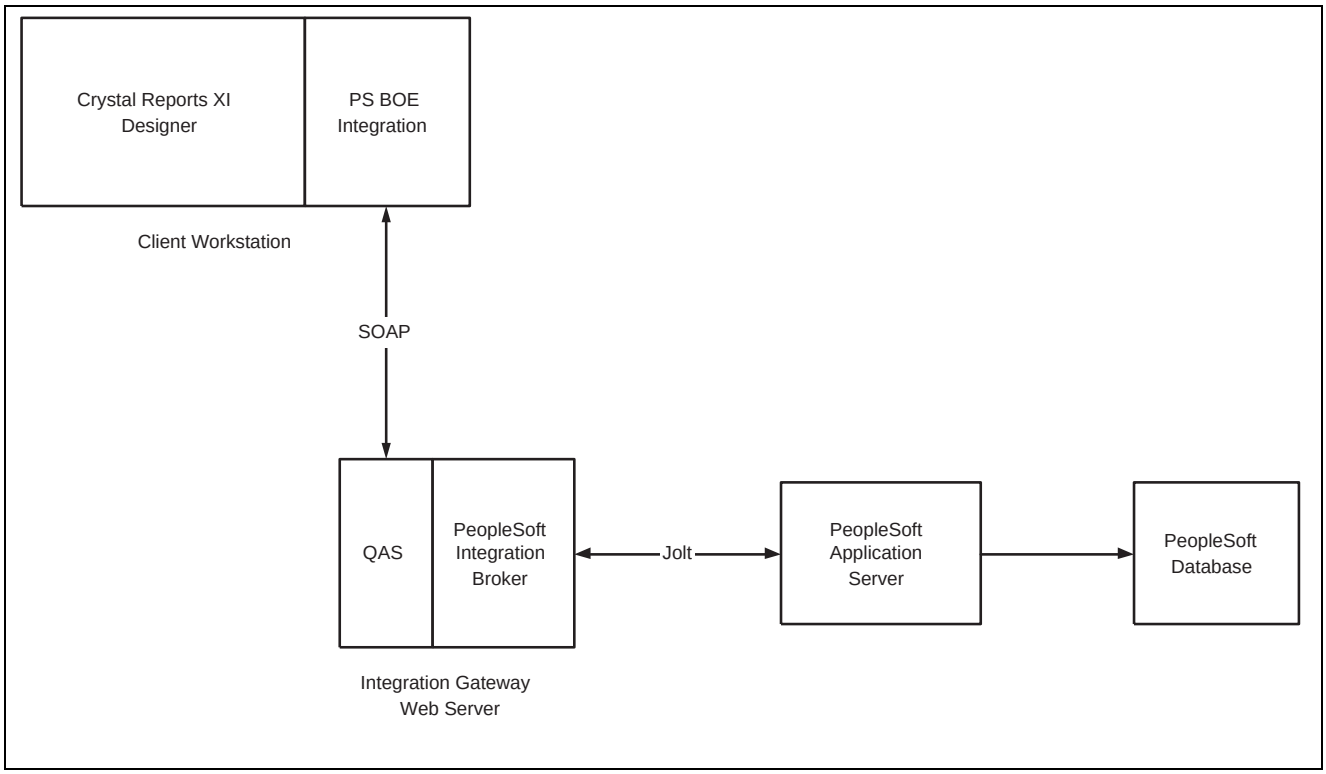
Navigating the BOE XI installation and configuration - Figure 2



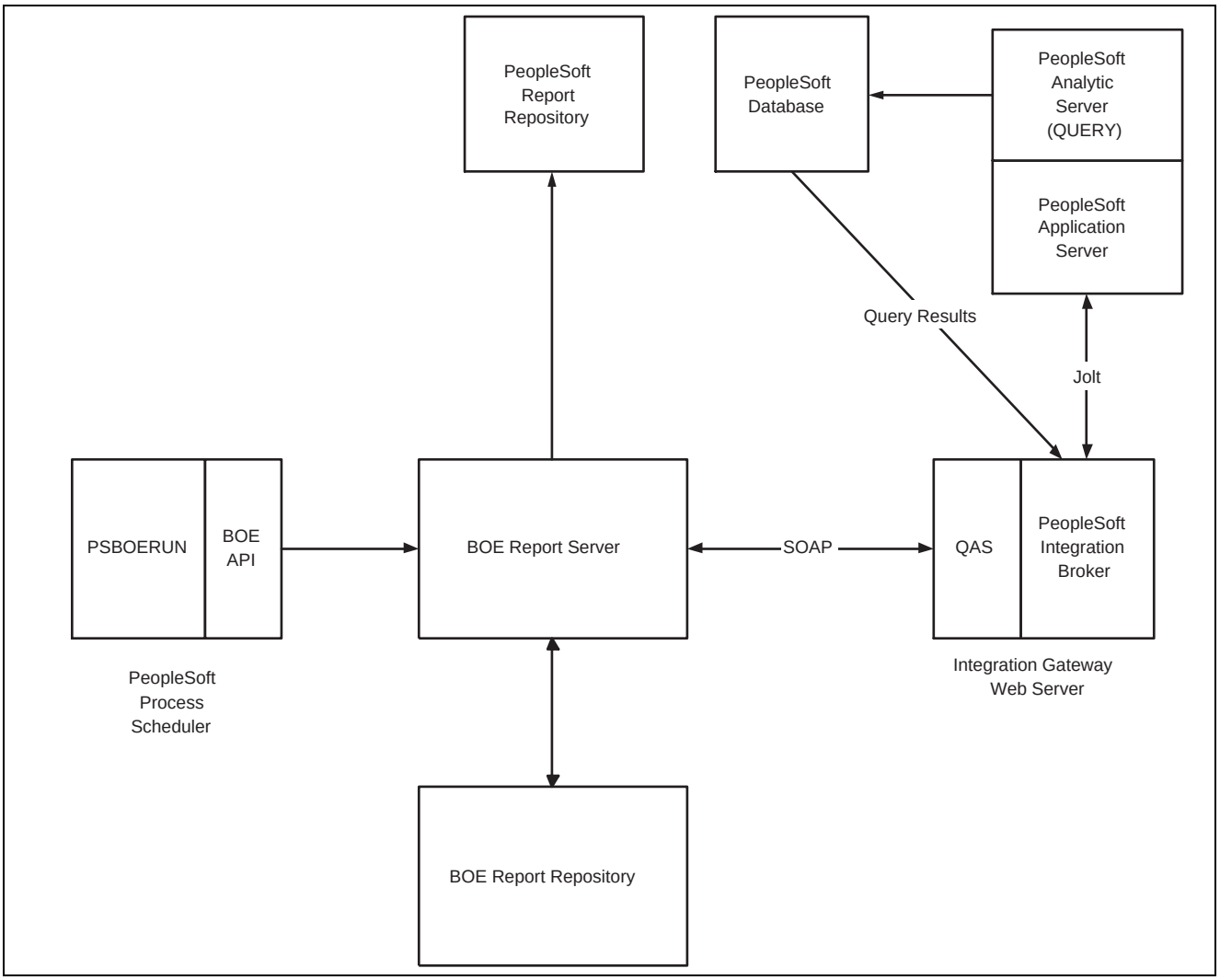
Navigating the BOE XI installation and configuration - Figure 3

Understanding Integration Between BusinessObjects Enterprise XI and PeopleSoft Enterprise

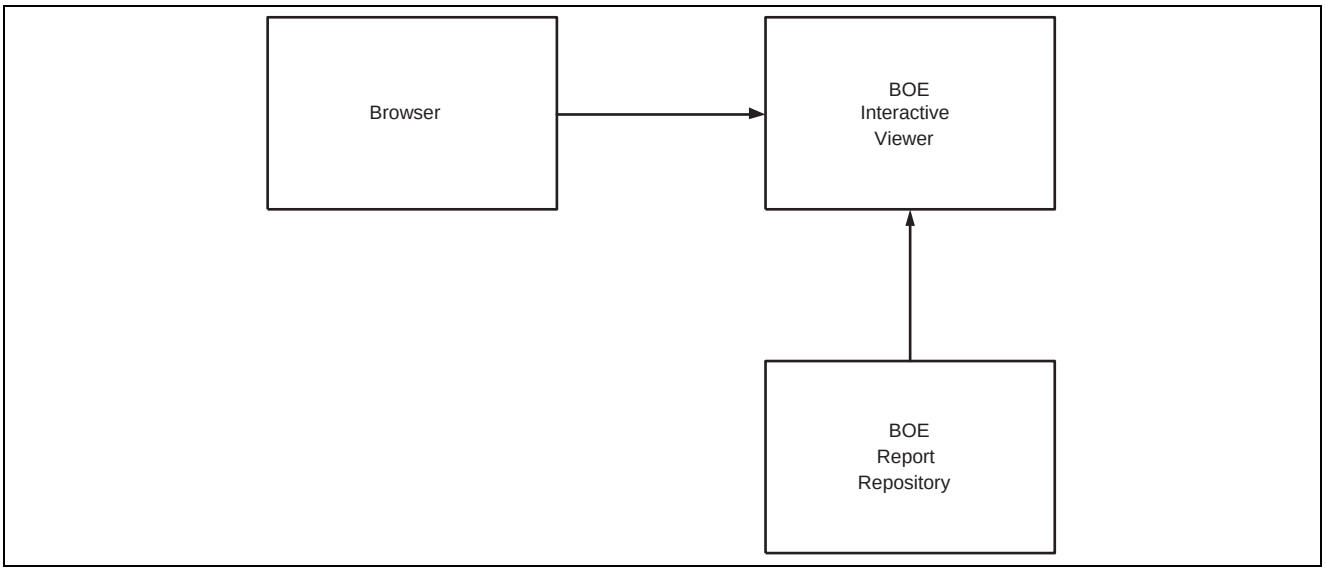
PeopleSoft Enterprise, together with Business Objects, provides a robust suite of reporting tools to be used with PeopleSoft products. The diagrams below illustrates how BusinessObjects Enterprise XI integrates with PeopleSoft Enterprise.



Design a report



Run a report



View a report stored in the BusinessObjects Enterprise XI Repository

Implementation of this integration requires:

- installation of BusinessObjects Enterprise XI server
- installation of PeopleSoft-specific components on the BusinessObjects Enterprise server
- configuration tasks in your PeopleSoft database
- configuration tasks in your BusinessObjects Enterprise XI server
- conversion of Crystal report definitions from Crystal 9 format to Crystal XI format.

BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI. Using a data driver that calls the Query Access Services, BusinessObjects Enterprise receives data from PS Query and builds a report using Report Application Server (RAS) API.

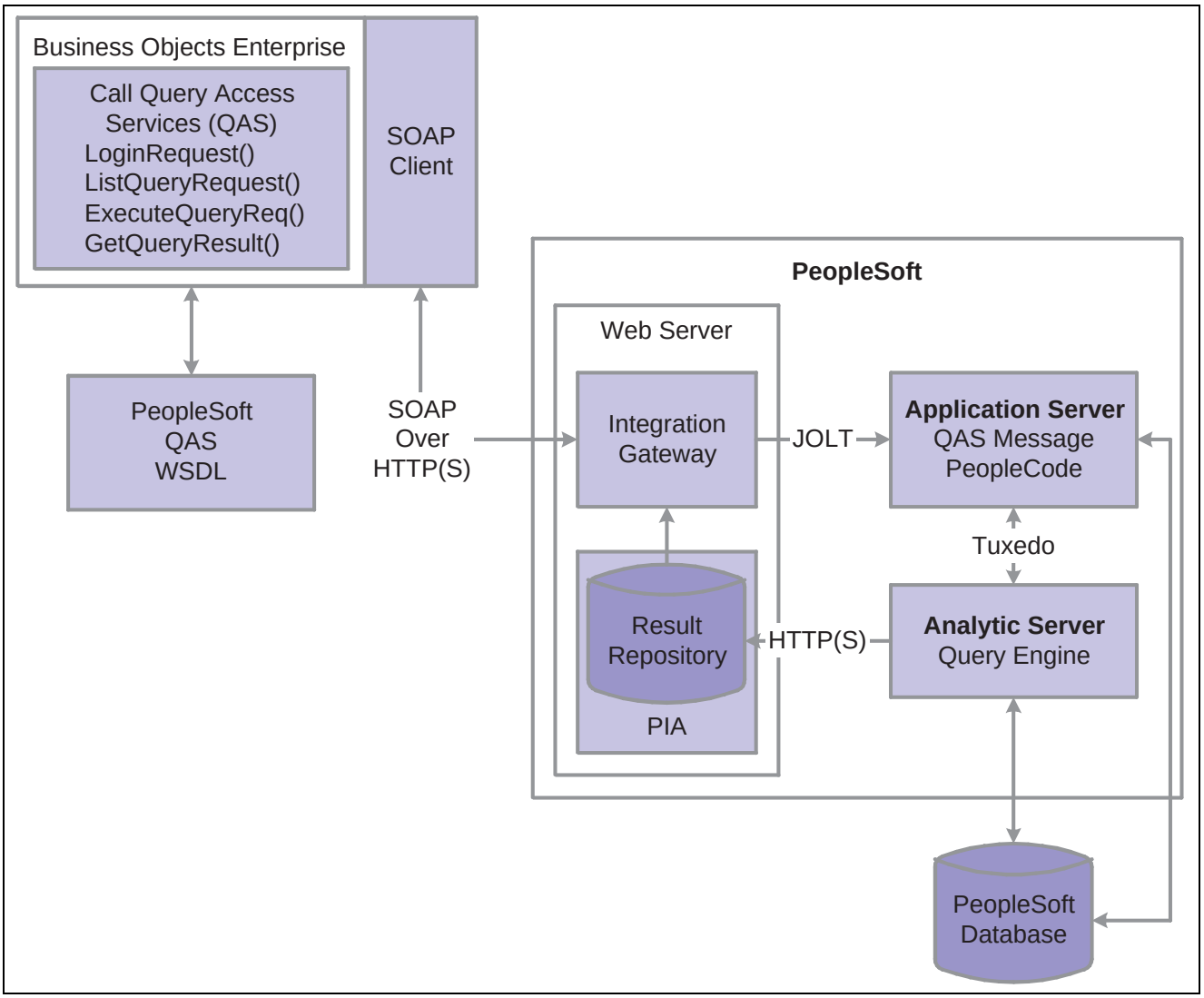
Understanding Query Access Services

The primary goal of Query Access Services (QAS) is to provide streaming PeopleSoft query results to BusinessObjects Enterprise over the web to create Crystal reports.

QAS plays the following roles in BusinessObjects Enterprise XI for PeopleSoft Enterprise:

- Provides a mechanism for the BusinessObjects Enterprise XI to access Query metadata so that users can design Crystal Reports based on the queries.
- Provides a mechanism for the BusinessObjects Enterprise XI to obtain results for a query to be used in report definitions.

The following diagram illustrates the QAS architecture:



Query Access Services architecture

The following sections describe the components in the Query Access Services architecture:

- Integration Gateway

  The Integration Gateway receives every Simple Object Access Protocol (SOAP) request coming from BusinessObjects Enterprise XI. The Gateway forwards the request to the integration engine running on the web server.

- Web Server

  The Integration Gateway 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. Using the QueryListening Connector class, results are received directly from the report repository.

- Application Server

  PeopleCode running on the application server implements most of the QAS services and generates the required response. The integration engine is installed on an application server as part of the PeopleSoft application.

- Analytic Server

The Analytic server provides asynchronous query execution. The query engine is embedded in the analytic server. When a query execution request arrives, the PeopleCode delegates the request to one of the available analytic servers running within the same application server domain. The query engine starts executing the query based on the input parameters.

- Result Repository

  Once the query engine fetches the first block of results, it encapsulates the results in a well-defined XML format and posts the XML data in the Result Repository.

- BusinessObjects Enterprise XI

  When BusinessObjects Enterprise XI makes a request to obtain the XML data from the Report Repository, the request is authenticated and the data is sent directly from the report repository.

Reviewing Key BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI. The user names and passwords are authenticated against the BusinessObjects Enterprise XI user list that is synchronized with the users and roles in the PeopleSoft database.

Task 12-3-1: Planning your BusinessObjects Enterprise XI Integration

This section discusses:

- Installing Prerequisite Software
- Configuring UNIX Environment Variables

Note. These are steps that should be done prior to starting the installation and configuration of PeopleTools and BusinessObjects Enterprise XI. Completing these tasks will make the installation and configuration process proceed smoothly.

Installing Prerequisite Software

Several different alternative software packages are supported for BusinessObjects Enterprise XI. These alternatives are listed in the PeopleTools 8.48 Hardware and Software guide. Additional detailed information on specific release levels supported is available online on Customer Connection.

See *Enterprise PeopleTools 8.48 Hardware and Software Requirements.*

- Operating System

  Before you begin to install BusinessObjects Enterprise XI on UNIX or Linux operating systems using terminal emulation, make sure that you are using an X-Windows terminal emulation program.

Note. You can install BusinessObjects Enterprise XI 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.

- Database Software

  BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI

  Before you begin to install BusinessObjects Enterprise XI, 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 BusinessObjects Enterprise XI 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 PeopleTools and BusinessObjects Enterprise XI.

- Database Connectivity Software

  BusinessObjects Enterprise XI runs under a web server and requires a database, which stores report definitions as well as report output. In order for BusinessObjects Enterprise XI to communicate with the database software, the appropriate database client connectivity software must be installed on the server running BusinessObjects Enterprise XI.

  Before you begin to install BusinessObjects Enterprise XI, install the appropriate database connectivity software on the server where BusinessObjects Enterprise XI 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

  BusinessObjects Enterprise XI runs under a web application server, either Oracle Application Server (OAS), BEA WebLogic, or IBM WebSphere. Before you begin to install BusinessObjects Enterprise XI, install the appropriate web server software on the server where BusinessObjects Enterprise XI will reside.

  Note. You must install BusinessObjects Enterprise XI with the same user account as that used to install the web server software.

  See "Installing Web Server Products."

The instructions in this section assume BusinessObjects Enterprise XI is installed on one server machine that is separate from the machine on which you have installed (or will install) the PeopleSoft software.

Configuring UNIX 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 LC_ALL and LANG environment variable to your preferred locale in your login environment. For example:

```
LANG=en_US.UTF-8
LC_ALL=en_US.UTF-8
```

3. Run the `locale` command to verify that all of the related locale environment variables were properly set by LC_AL. For example:

```
st-sun17:$ locale
LANG=en_US.UTF-8
LC_CTYPE="en_US.UTF-8"
LC_NUMERIC="en_US.UTF-8"
LC_TIME="en_US.UTF-8"
LC_COLLATE="en_US.UTF-8"
LC_MONETARY="en_US.UTF-8"
LC_MESSAGES="en_US.UTF-8"
LC_ALL=en_US.UTF-8
```

Note. If the `locale` command does not return values exactly like this, contact your system administrator to set the values properly.

Task 12-3-2: Installing the PeopleSoft Application Environment

Install 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 PeopleSoft with BusinessObjects Enterprise XI.

Note. In order for the integration between PeopleSoft and BusinessObjects Enterprise XI to work, the PeopleSoft Process Scheduler must be installed on an operating system that BusinessObjects Enterprise XI supports. This is because PSBOERUN.EXE, the PeopleSoft process that calls BusinessObjects Enterprise XI, uses Business Objects-supplied APIs.

Task 12-3-3: Installing BusinessObjects Enterprise XI on Windows

You must log on to the Windows machine as a user included in the Administrator group.

To install BusinessObjects Enterprise XI from the CD:

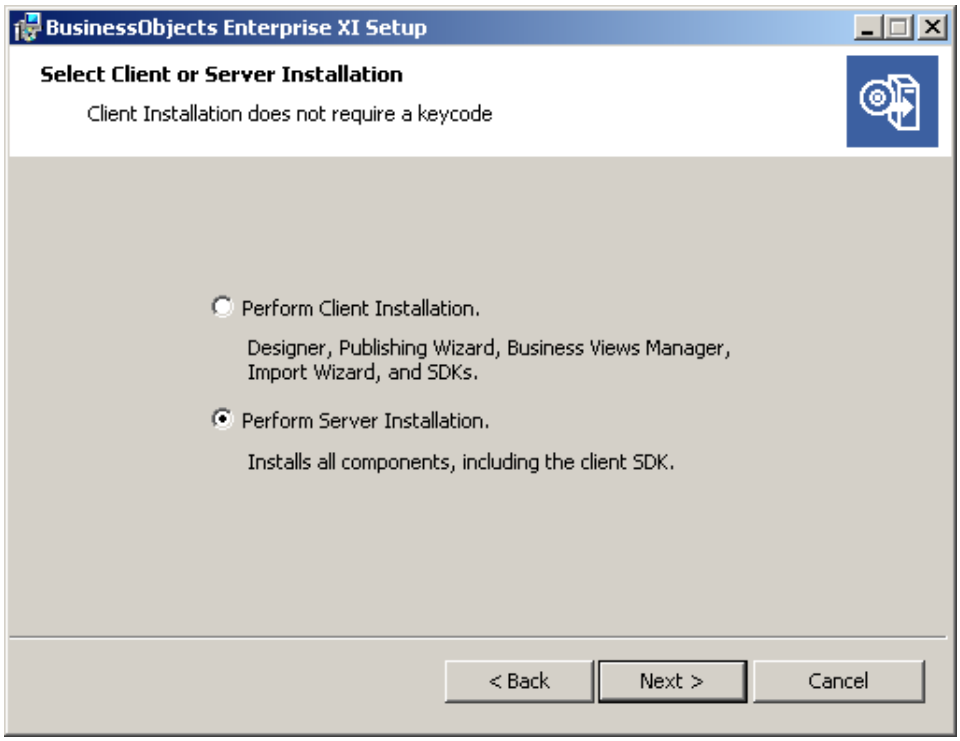
1. Insert the BusinessObjects Enterprise XI CD into the server machine's CD-ROM drive.
2. Navigate to the CD-ROM's root directory and run setup.exe.

   Note. If you are installing from a network, you must run setup.exe from the network location.

   The install program will search for any previous version of BusinessObjects Enterprise XI and then present a Welcome message.
3. Click Next.

   A license dialog box appears.
4. Accept the license agreement.

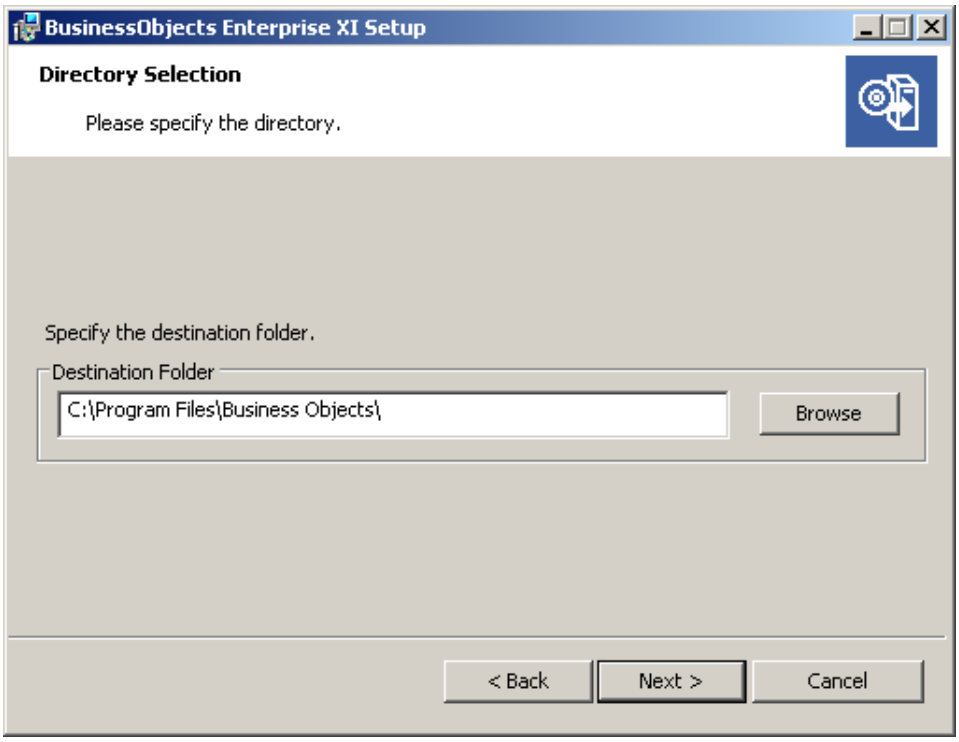
5. Select Perform Server Installation.



Select Client or Server Installation window

6. Accept the default location for the installation directory or use the Browse button to select another location.

Note. The folder that you enter here is referred to as the <BOE_DIR> later in this document.



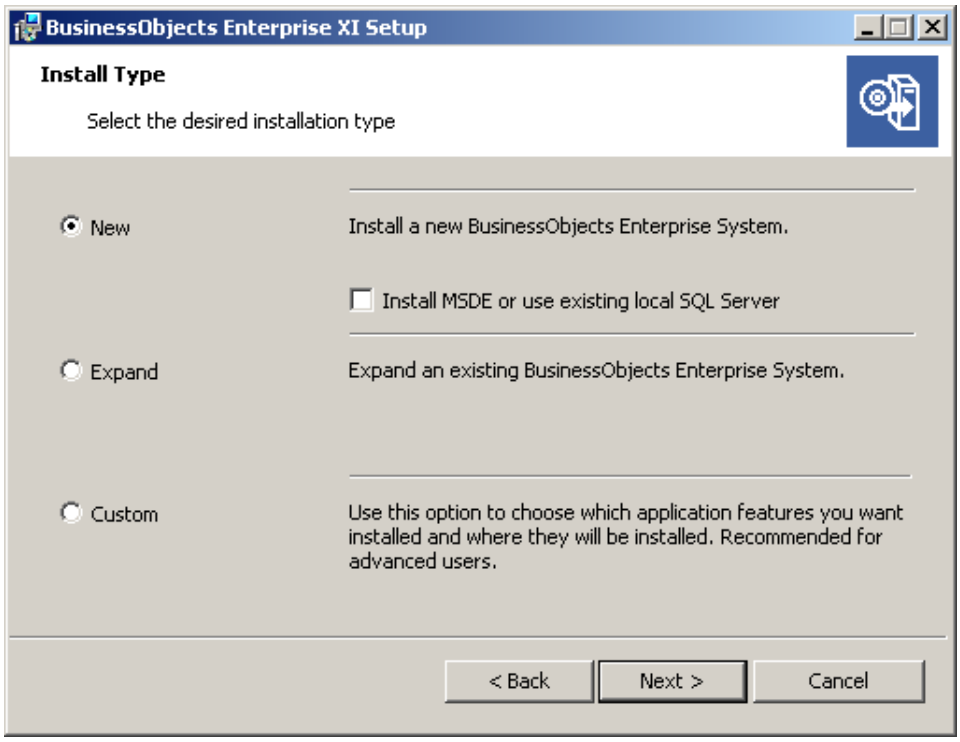
Directory Selection window

7. On the Install Type dialog, select *New* as the installation type.

   If you are using the MS SQL Server *and* it is located on the same machine on which you are installing BusinessObjects Enterprise XI, select the Install MSDE or use existing local SQL Server check box.

Note. MSDE is not supported in the PeopleSoft integration with BusinessObjects Enterprise XI, although SQL Server is supported.

Note. This database will become the BusinessObjects Server database. If Microsoft SQL Server is to be used, the installation wizard creates the BusinessObjects Server database automatically. If you are using another database management system, you must create the database manually prior to installing BusinessObjects Enterprise.



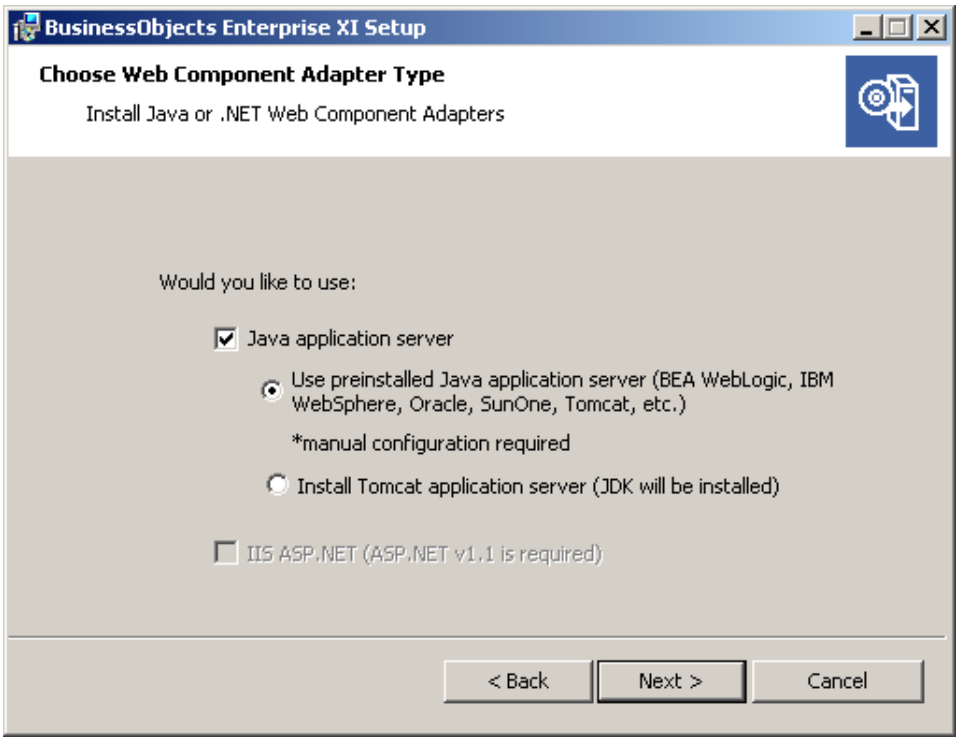
Install type window

8. Select Use preinstalled Java application server

Note. You may see a warning message if the installer is unable to detect a web application server. If you get this message, you should cancel the installation, configure the web server, and then re-start the installation.

Note. The Tomcat application server is *not* supported in the PeopleSoft integration with BusinessObjects Enterprise XI.

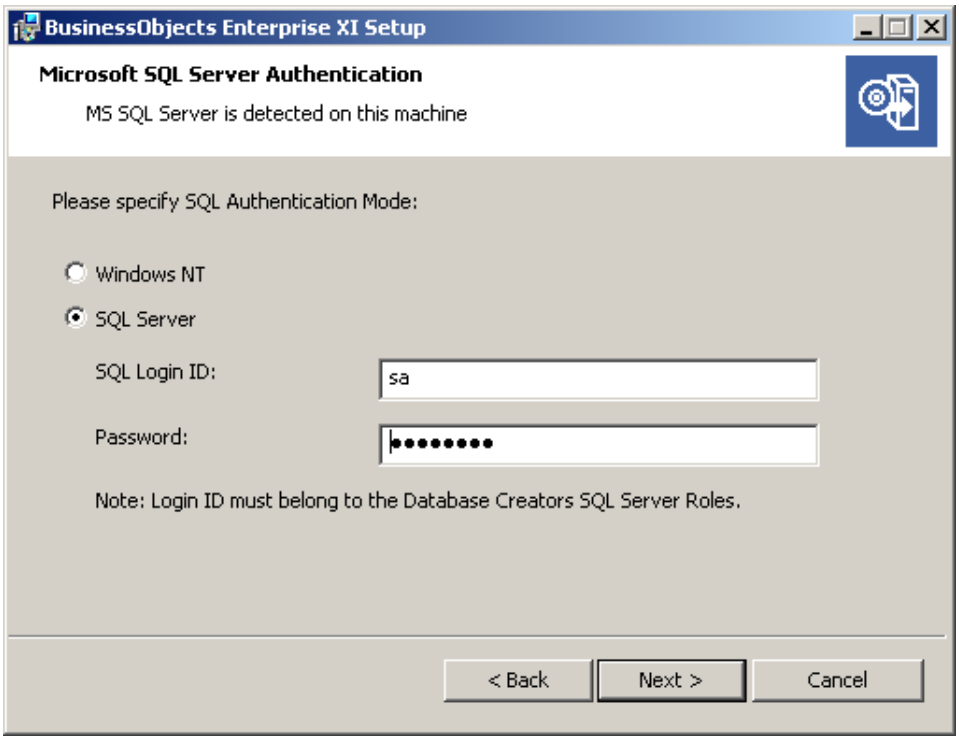
Note. The IIS server is not supported in the PeopleSoft integration with BusinessObjects Enterprise XI.



Choose Web Component Adapter Type window

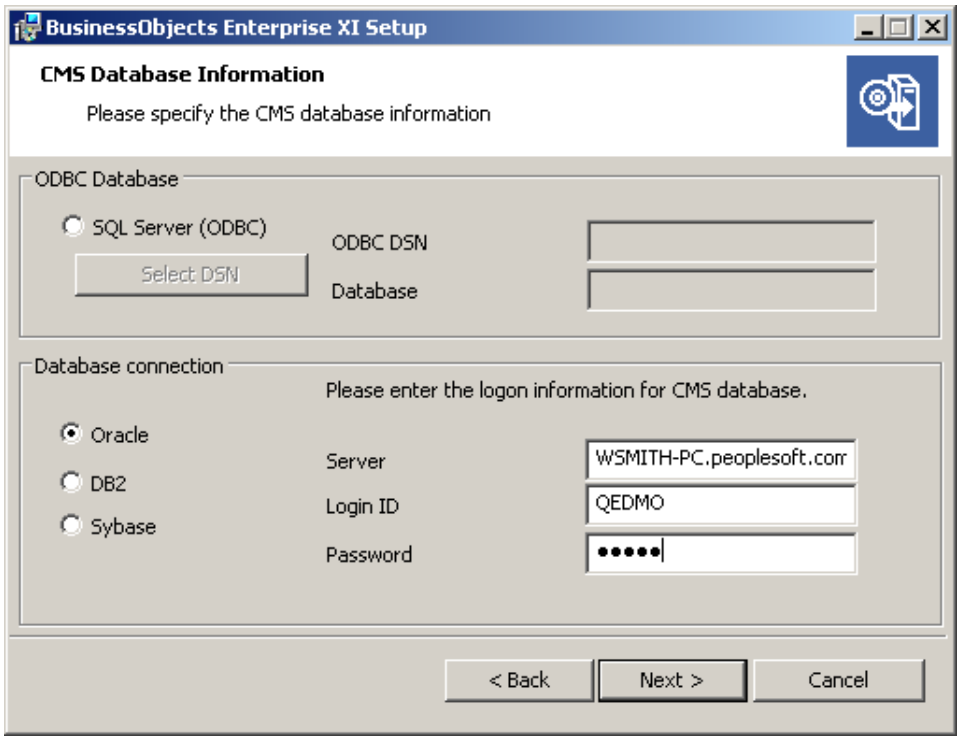
9. If you chose as your database a local SQL Server database, you will be prompted for SQL Server Authentication information. Enter the SQL Server Login ID and password.

   If a RDBMS other than MS SQL Server is used, proceed to the next step.



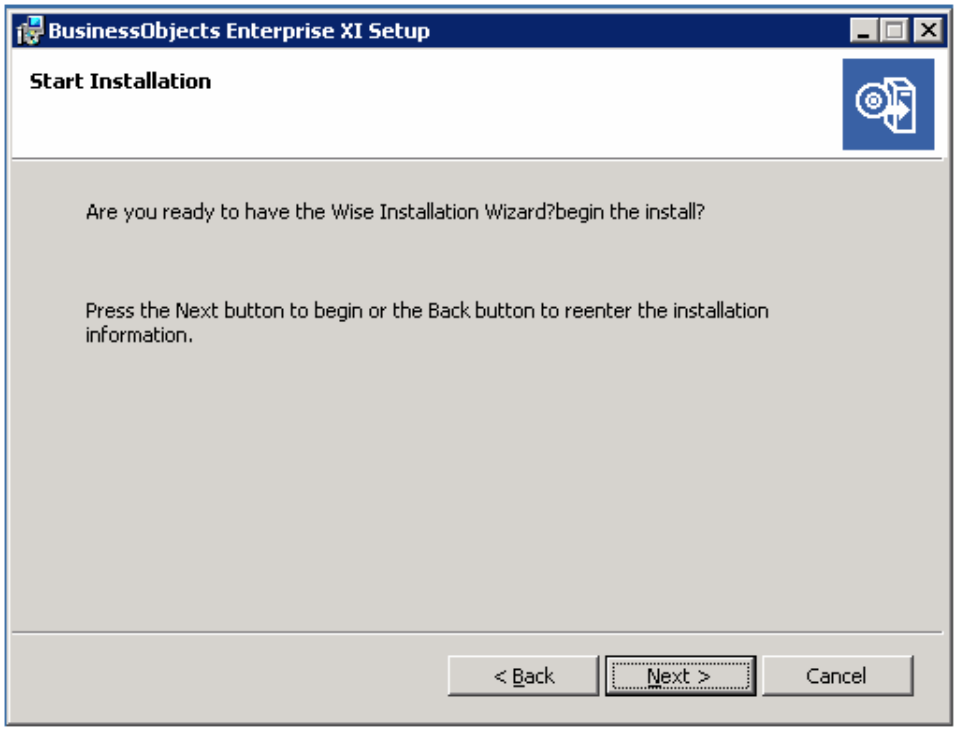
Specifying MS SQL Server Authentication

10. If a database other than a local SQL Server database is used, select the appropriate database connection radio button and provide connection information.



CMS Database Information window

11. Click Next on the Start Installation dialog box.

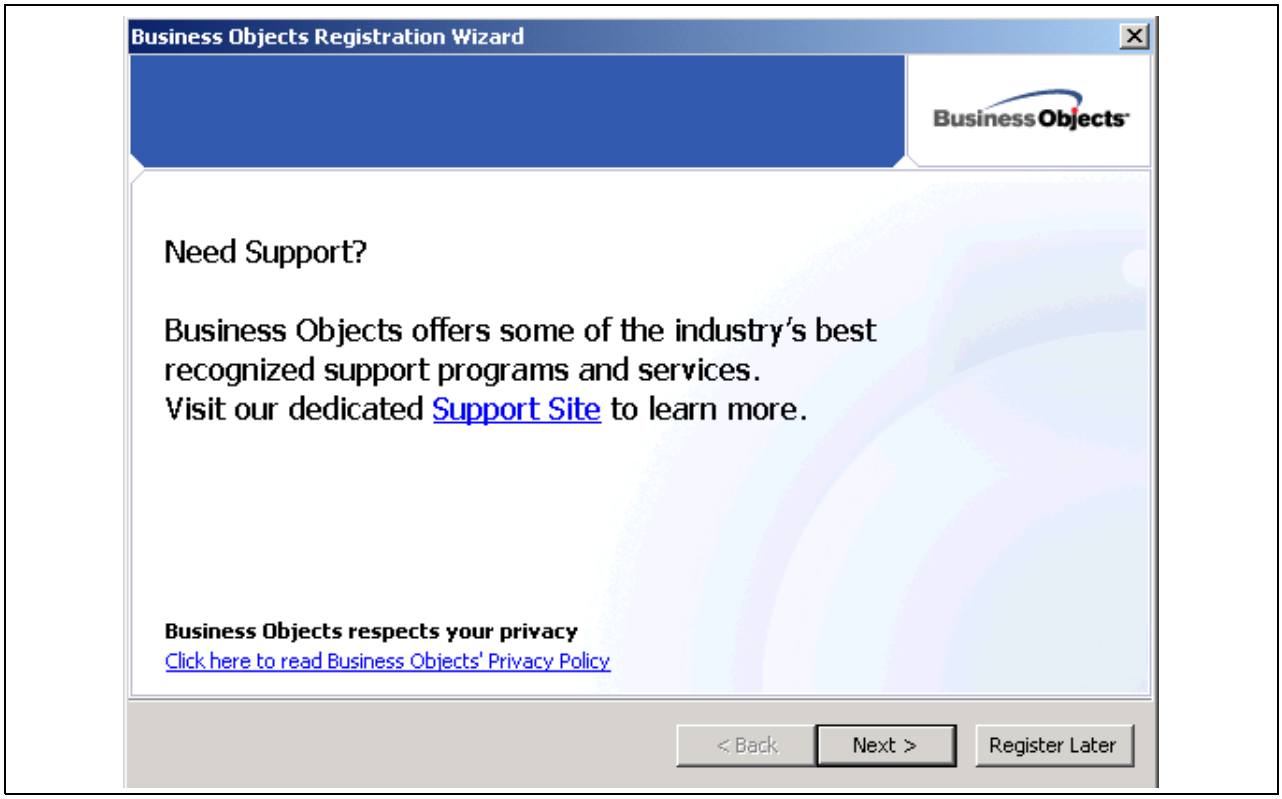


BusinessObject Enterprise XI Start Installation window

12. If you are installing BusinessObjects Enterprise XI from CDs, you will be prompted to insert additional CDs to proceed.

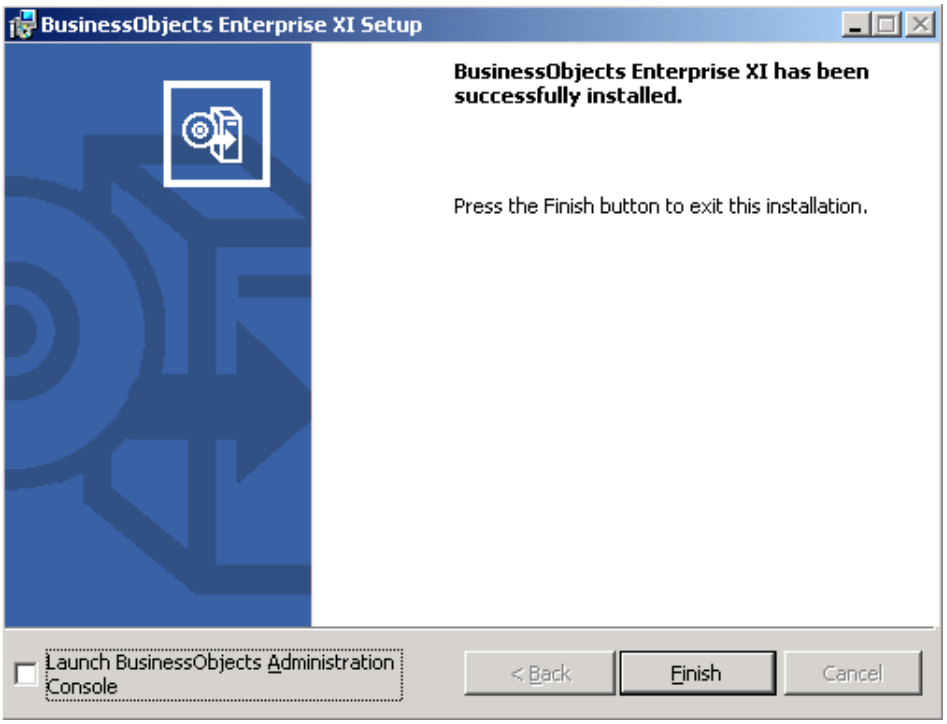
    If you are installing from a network location, you will not receive these prompts.

    The installation proceeds for several minutes.



Installation window

13. When the dialog box appears saying the installation is complete, deselect the check box Launch BusinessObjects Administration Console and click Finish.



Installation complete window

14. Select Start, Programs, Business Objects XI, Business Objects Enterprise, Central Configuration Manager.
15. Highlight Central Management Server and ensure that it is started.

    If it is not started, start the server by clicking the start arrow.

    After each machine reboot, you may have to start the Central Management Server in the Central Configuration Manager manually.
16. Set the following environment system variables after the BusinessObjects Enterprise XI 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_DIR> refers to the folder in which you installed BusinessObjects Enterprise XI (for example, C:\Program Files\BusinessObjects\). Substitute your path in the following.

    - The PATH environment system variable should include:

      <BOE_DIR>\BusinessObjects Enterprise 11\win32_x86
    - The CLASSPATH environment system variable should include:

      <BOE_DIR>\BusinessObjects Enterprise 11\java\applications\cewcanative.jar
17. Reboot your machine.

Task 12-3-4: Installing BusinessObjects Enterprise XI Integration on Windows

This task installs the PeopleSoft Security Plugin, Data Driver, and four web application files:

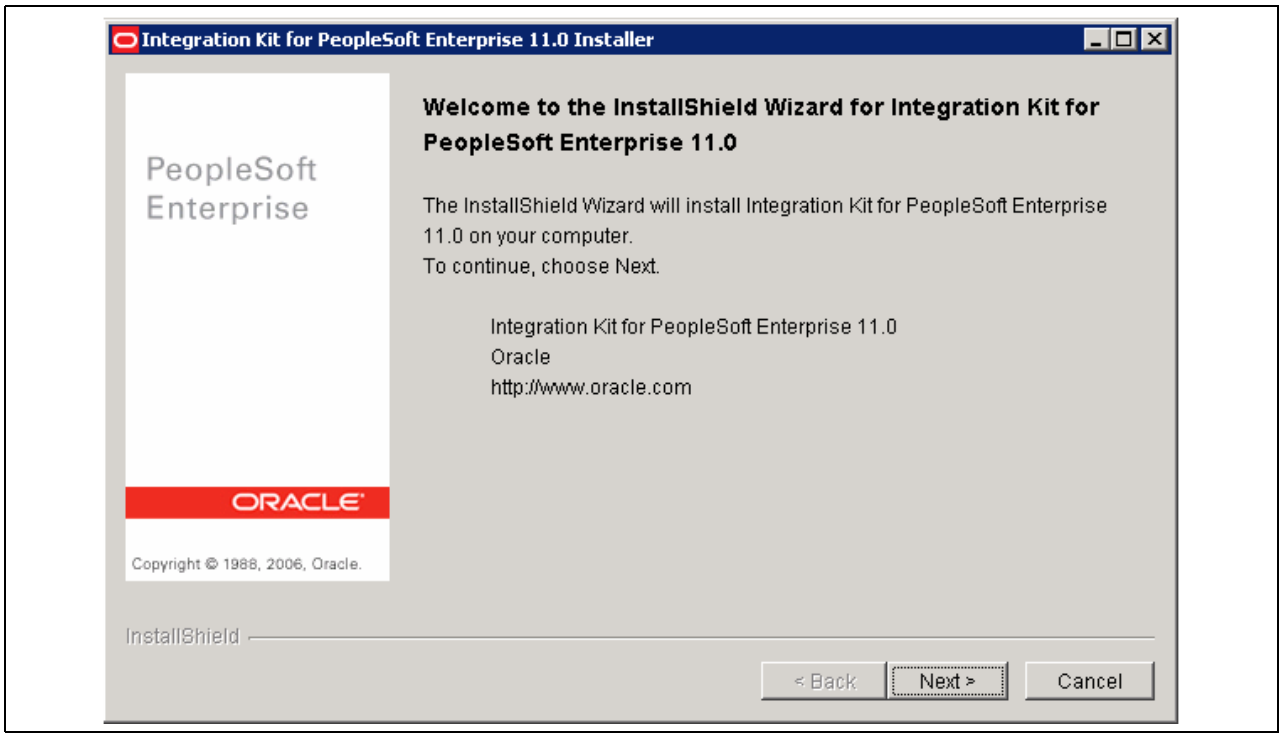
- psadmin.war
- psdesktop.war
- psadhoc.war
- pswebcompadapter.war

This installation takes place on the machine on which you have installed BusinessObjects Enterprise XI.

To install PeopleSoft BusinessObjects Enterprise XI Integration:

1. Log on to your machine as an administrator.
2. Navigate to <PS_HOME>\setup\PSCrystal and double-click setup.exe.

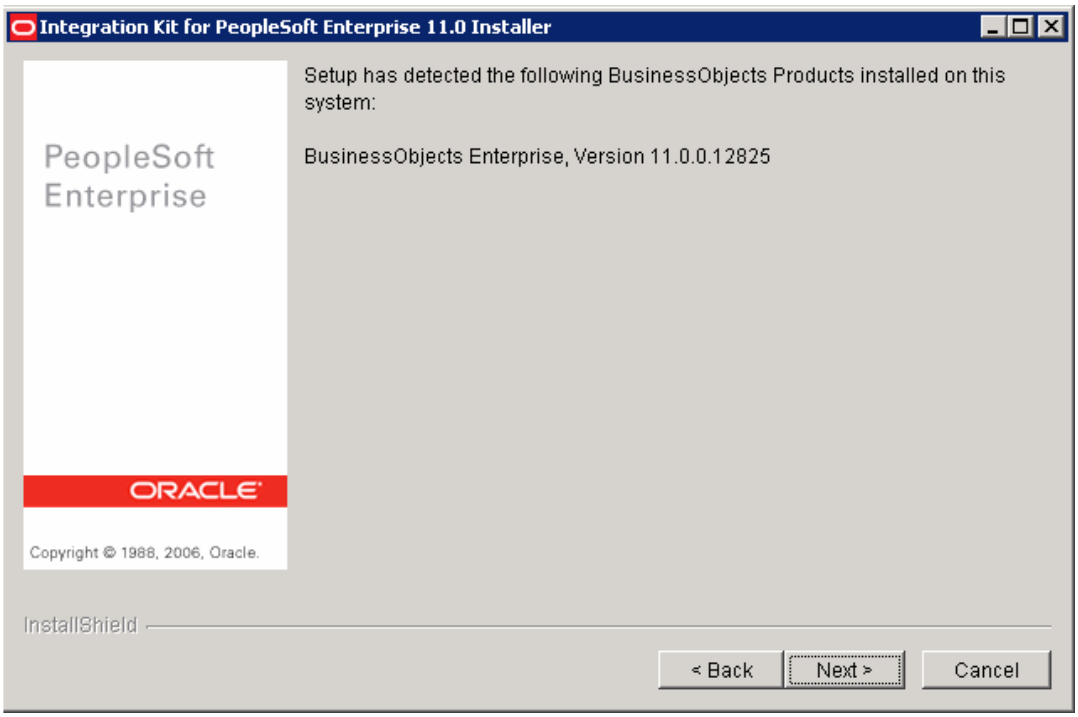
   A welcome window appears:



BusinessObjects Enterprise XI for PeopleSoft Enterprise Integration Installer window

3. Click Next.

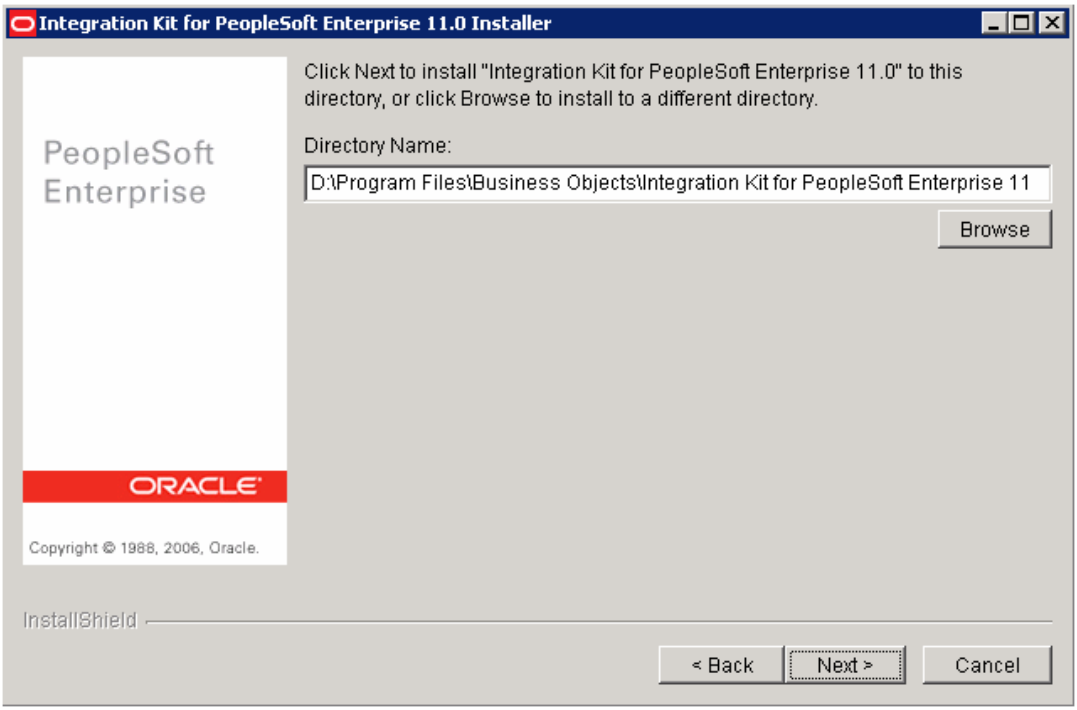
   If the installer finds Crystal Report or BusinessObjects Enterprise XI installed on your system, it displays the name and version number:



Confirming BusinessObjects Products

Note. If the installer cannot find Crystal Reports or BusinessObjects Enterprise XI on your system, it displays an error message. You must exit and install one of these products to continue.

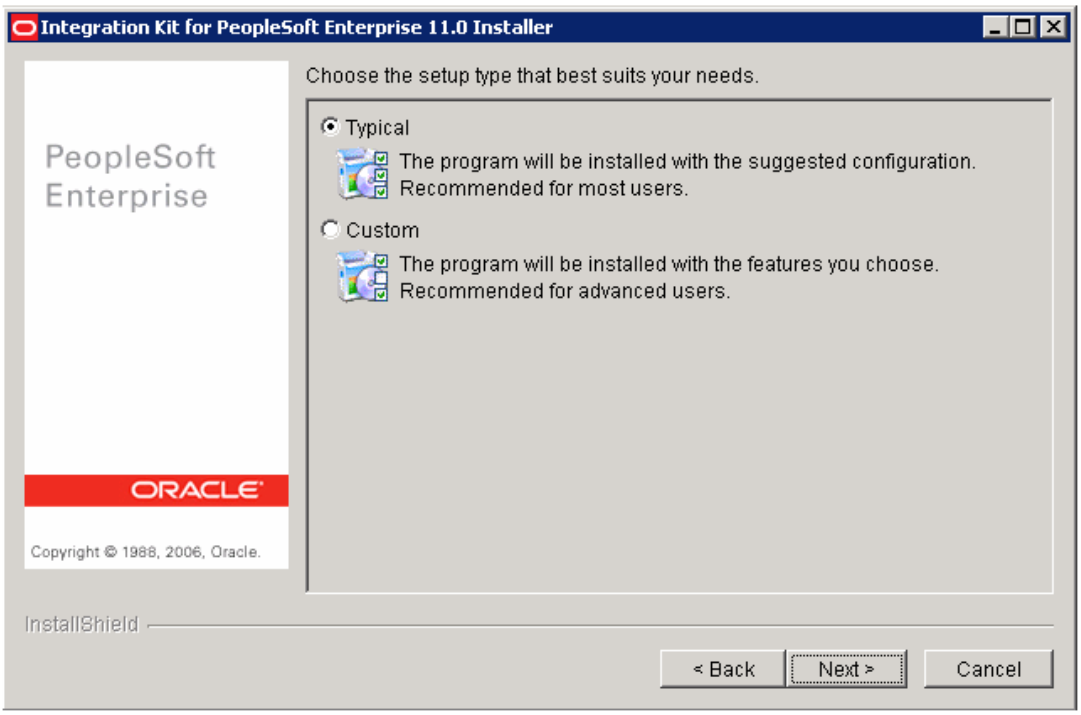
4. Accept the default installation directory on the next window, or click Browse to find another installation directory:



Selecting installation directory for BusinessObjects Enterprise XI Integration

Click Next to continue.

5. Select Typical for the setup type, and click Next to continue:



Selecting setup type on the BusinessObjects Enterprise XI for PeopleSoft Enterprise Integration Installer

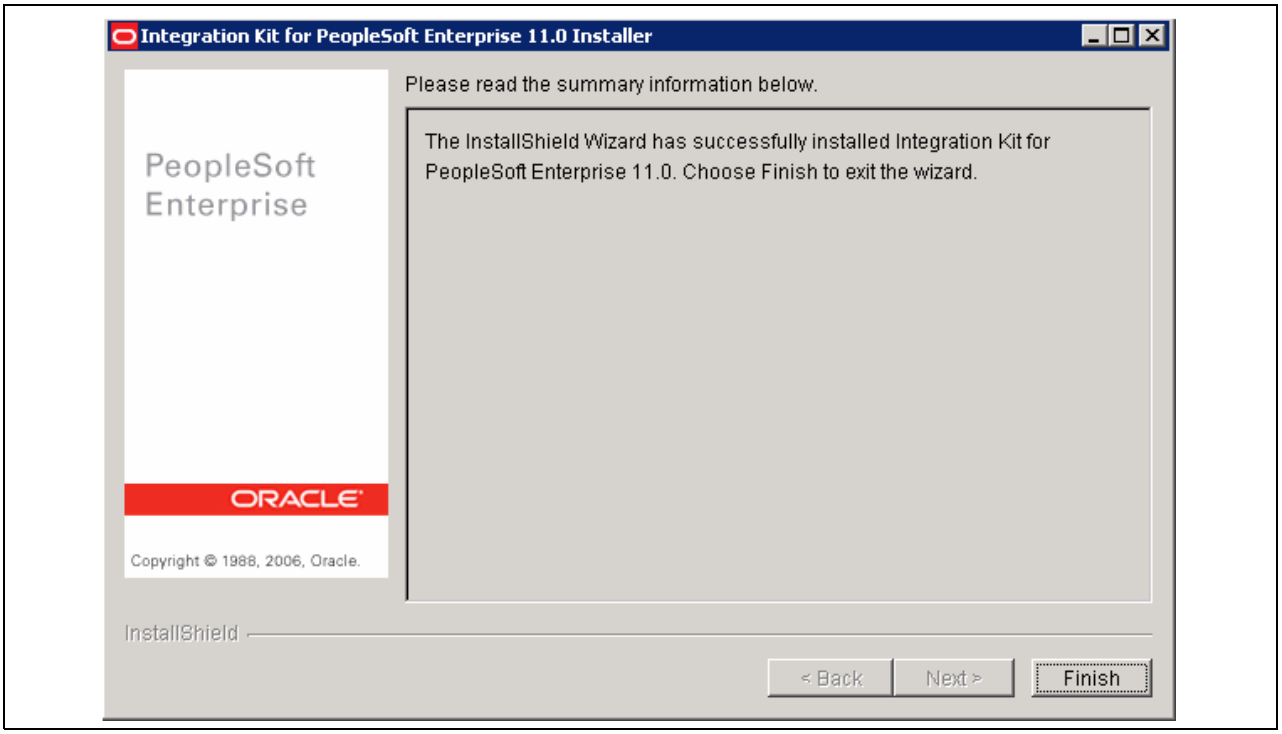
6. Confirm that the installation summary is correct, and click Next to continue:

Summary information on the BusinessObjects Enterprise XI for PeopleSoft Enterprise Integration Installer

7. Click Next.

   An indicator shows the progress of your installation.

8. Click Finish to complete the installation:



Completion message on the BusinessObjects Enterprise XI for PeopleSoft Enterprise Integration Installer window

Task 12-3-5: Installing Patches Required at Installation Time

There may be patches for BusinessObjects Enterprise XI as well as the PeopleSoft Integration for BusinessObjects Enterprise XI that must be installed at installation.

Log onto Customer Connection to check using the Required for Install or Upgrade search page. You can search using the following criteria:

Product Line	PeopleTools
Product	PeopleTools
Release	the release of PeopleTools that you are using

Task 12-3-6: Creating a Web Server for BusinessObjects Enterprise XI on Windows

This section discusses:

- Creating an Oracle Application Server (OAS) Server on Windows
- Deploying the BusinessObjects Enterprise XI Launchpad Applications for OAS on Windows
- Creating a WebLogic Server on Windows
- Deploying the BusinessObjects Enterprise XI Launchpad Applications for WebLogic on Windows

- Creating a WebSphere Server on Windows
- Deploying the BusinessObjects Enterprise XI Launchpad Applications for WebSphere on Windows

Creating an Oracle Application Server (OAS) Server on Windows

Before beginning this procedure you must have installed OAS on the server where BusinessObjects Enterprise XI is installed.

1. Change the deployment values for the Java WCA, if you are using Oracle 10g server.
   a. Stop java application server.

   Note. To stop OAS, use the command `<OAS_HOME>\opmn\bin\opmnctl stopall`.

   b. Extract web.xml from pswebcompadapter.war using a tool such as WinZip.

      The default location for pswebcompadapter.war is C:\Program Files\Business Objects\BusinessObjects Enterprise 11\java\applications.

   c. Open web.xml with a text editor.
   d. Change “false” to “true” in the following entry:

```
<!-- if you are using oracle10g, turn this flag to true -->
    <context-param>
       <param-name>was.oracle</param-name>
       <param-value>false</param-value>
       <description>Reserved.</description>
    </context-param>
```

   e. Save web.xml and reinsert into WEB-INF in pswebcompadapter.war.

   Note. Tip: To insert web.xml to WEB-INF using WinZip. Open WinZip. From the Option menu, select Configuration. In the View tab of the Configuration dialog box, ensure that the “Allow all upper case file names” check box is selected. Return to your file directory, right-click the WEB-INF directory that contains your edited web.xml file and select Add to Zip File. Adding the file in this way ensures that it is placed in the correct directory inside the archive.

2. Open a browser window and enter the following URL to verify that the OAS server is running correctly:

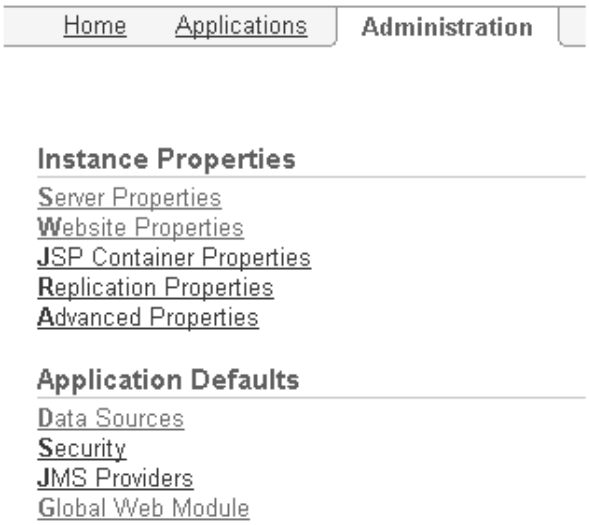
   http://<machine_name>:<port>

   where <machine name> is the name of the machine on which OAS is installed and <port> is the OAS port number (1810 is the default).

   Enter the administrator user name (ias_admin is the default) and the password that was set during the install.

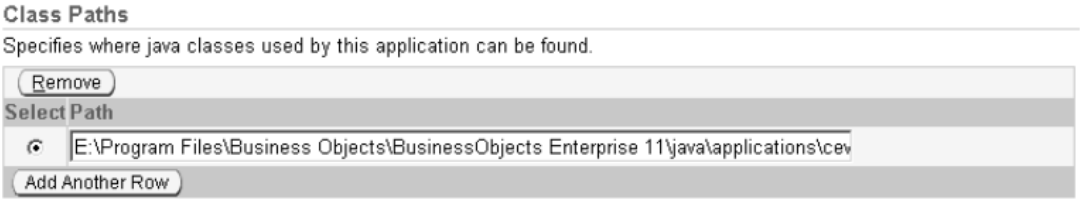
OAS login dialog box

3. Click on the Start button to launch the server “home”.
4. Click OK after you receive a message that server has been started.
5. Select the Administration tab.



Administration tab

6. Configure the class path:



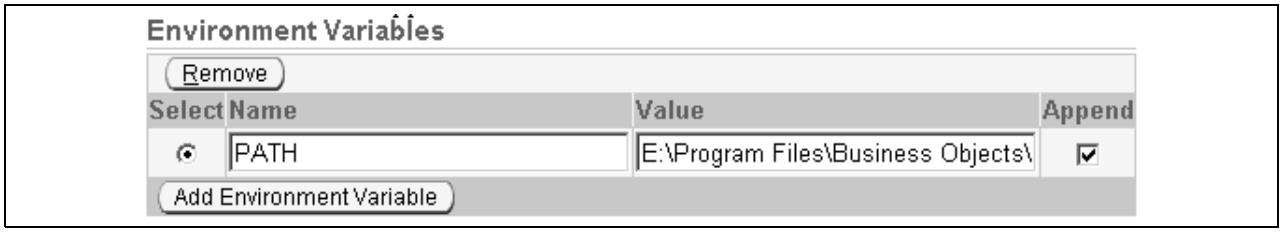
Class Paths page

a. Click Global Web Module.
b. Click the General link under Properties.
c. Click Add Another Row in the Class Paths section.

d. Enter the full path, including the filename, for the cewcanative.jar file in the path field.

   For example, <BOE_DIR>\BusinessObjects Enterprise 11\java\applications\cewcanative.jar, where is the location where you installed BusinessObjects Enterprise XI.

7. Click the Apply button at the bottom of the page, and click OK.
8. On the Administration tab, click the Server Properties link.
9. In the Environment Variables section, click the Add Environment Variable button.
10. To configure the PATH:



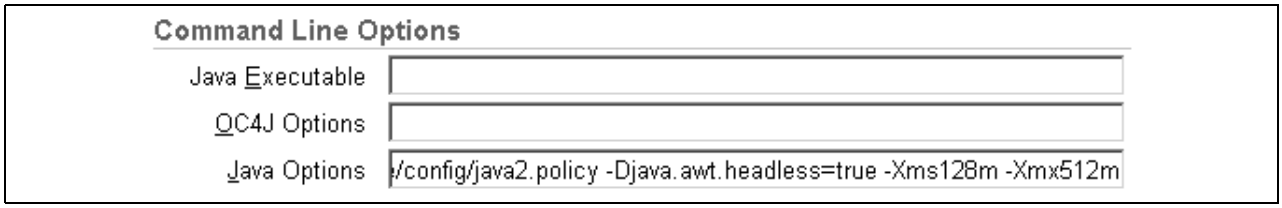
Environment Variables page

a. Enter *PATH* in the Name field.
b. Enter the absolute path to the BusinessObjects Enterprise XI win32_86 directory in the Value field.

   If you have not changed the default directory for Business Objects, the setting for this field would be "C:\Program Files\Business Objects\BusinessObjects Enterprise 11\win32_x86". If the default path was changed for your installation of BusinessObjects Enterprise XI, modify the path accordingly.

c. Select the Append check box.
d. Click Apply.
e. Click No when you receive the message that the application server must be restarted before the changes take affect. You can restart the server later.

11. On the Administration tab, click the Server Properties link.
12. To change the memory allocation:



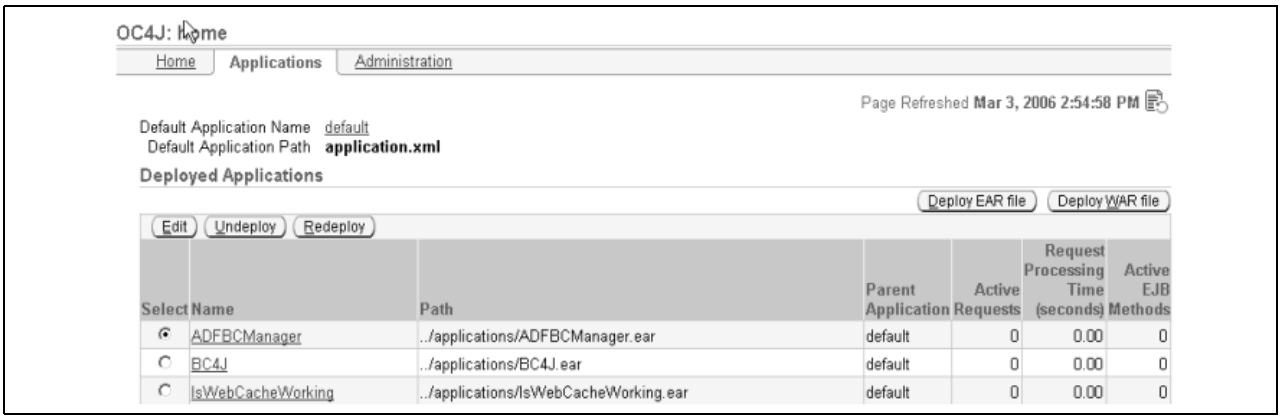
Command Line Options page

a. In the Java Options box, add a space, then append *-Xms128m -Xmx512m* to the existing entry.
b. Click Apply.
c. Click Yes when you receive the message that the application server must be restarted before the changes take affect.

Deploying the BusinessObjects Enterprise XI Launchpad Applications for OAS on Windows

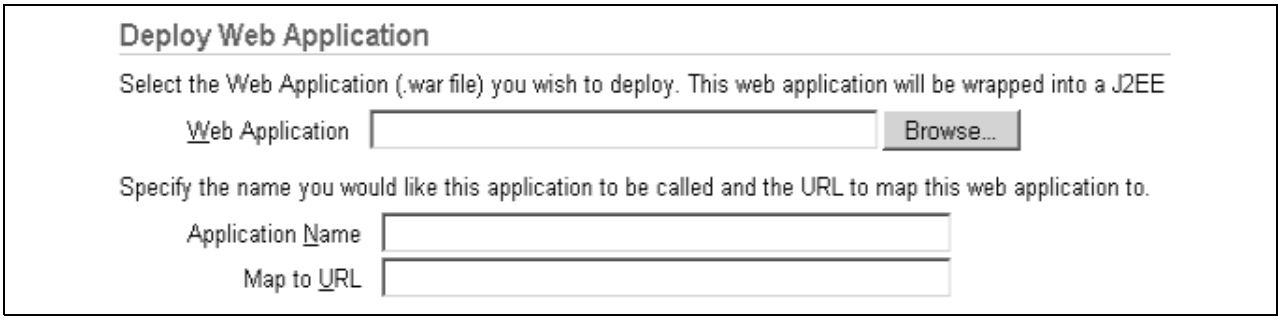
To deploy the Launchpad applications for OAS on Windows:

1. Click the Applications tab from the server home.



Deployed Applications page

2. Click the Deploy WAR file button.
3. Click the Browse button and locate the file <BOE_DIR>\Enterprise 11\java\applications \pswebcompadapter.war, where <BOE_DIR> is the location where you installed BusinessObjects Enterprise XI.



Deploy Web Application page

4. Enter *pswebcompadapter* in the Application Name field.
5. Enter */businessobjects* as context root in the Map to URL field.
6. Click Deploy.
7. Repeat steps 1 through 6, but use the following values:

File	<BOE_DIR>\Enterprise 11\java\applications\jsfadmin.war
Application name	jsfadmin
Context root (Map to URL)	/jsfadmin

8. Repeat steps 1 through 6, but use the following values:

File	<BOE_DIR>\Enterprise 11\java\applications\psadmin.war
Application name	psadmin
Context root (Map to URL)	/businessobjects/enterprise11/adminlaunch

9. Repeat steps 1 through 6, but use the following values:

File	<BOE_DIR>\Enterprise 11\java\applications\psdesktop.war
Application name	psdesktop
Context root (Map to URL)	/businessobjects/enterprise11/desktoplaunch

10. Repeat steps 1 through 6, but use the following values:

File	<BOE_DIR>\Enterprise 11\java\applications\ psadhoc.war
Application name	psadhoc
Context root (Map to URL)	/businessobjects/enterprise11/adhoc

---

Note. The file pswebcompadapter.war has to be deployed first, followed by jsfadmin.war and then psadmin.war. The files psdesktop.war and psadhoc.war don't depend on other war files, so they can be deployed at any time.

---

11. To verify the OAS configuration:
    a. Open a new browser window.
    b. Enter the following URL:

    http://<machine_name>:<port>/businessobjects/enterprise11/adminlaunch

    For <machine_name> and <port> substitute the name of your machine and port.

BusinessObjects Enterprise Administration Launchpad window

    c. Select Central Management Console and log on as administrator (no password) to confirm that you can log in.

Creating a WebLogic Server on Windows

Before beginning this procedure, you must have installed BEA WebLogic on the server where BusinessObjects Enterprise XI is installed.

Note. The web server that you create in this section is not the same as the PeopleSoft Pure Internet Architecture web server. If you want to run both web servers on the same machine, be sure to assign a non-default port number to the BusinessObjects Enterprise XI web server as described below.

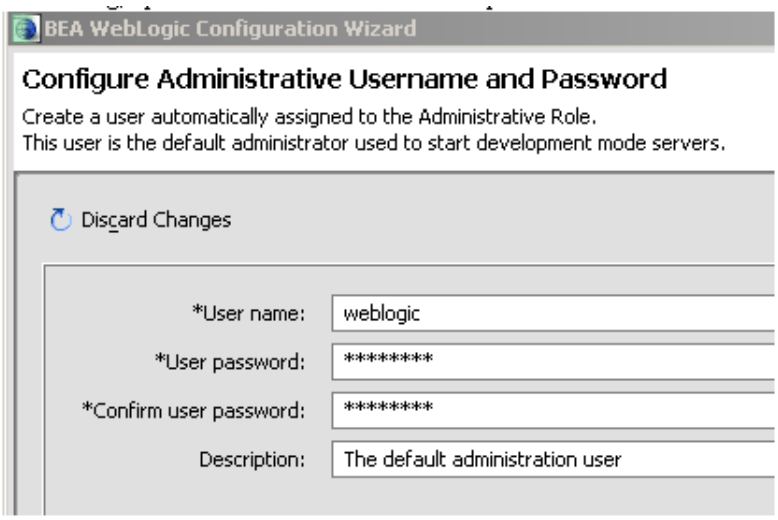
---

1. Select Start, Programs, BEA WebLogic Platform 8.1, Configuration Wizard.

2. Verify that Create a new Weblogic configuration is selected and click Next.

   The Select a Configuration Template window appears.
3. Verify that Basic WebLogic Server Domain is highlighted and click Next.
4. Verify that the Express radio button is selected and click Next.
5. Accept the default user name, enter a password, confirm the password, and click Next.

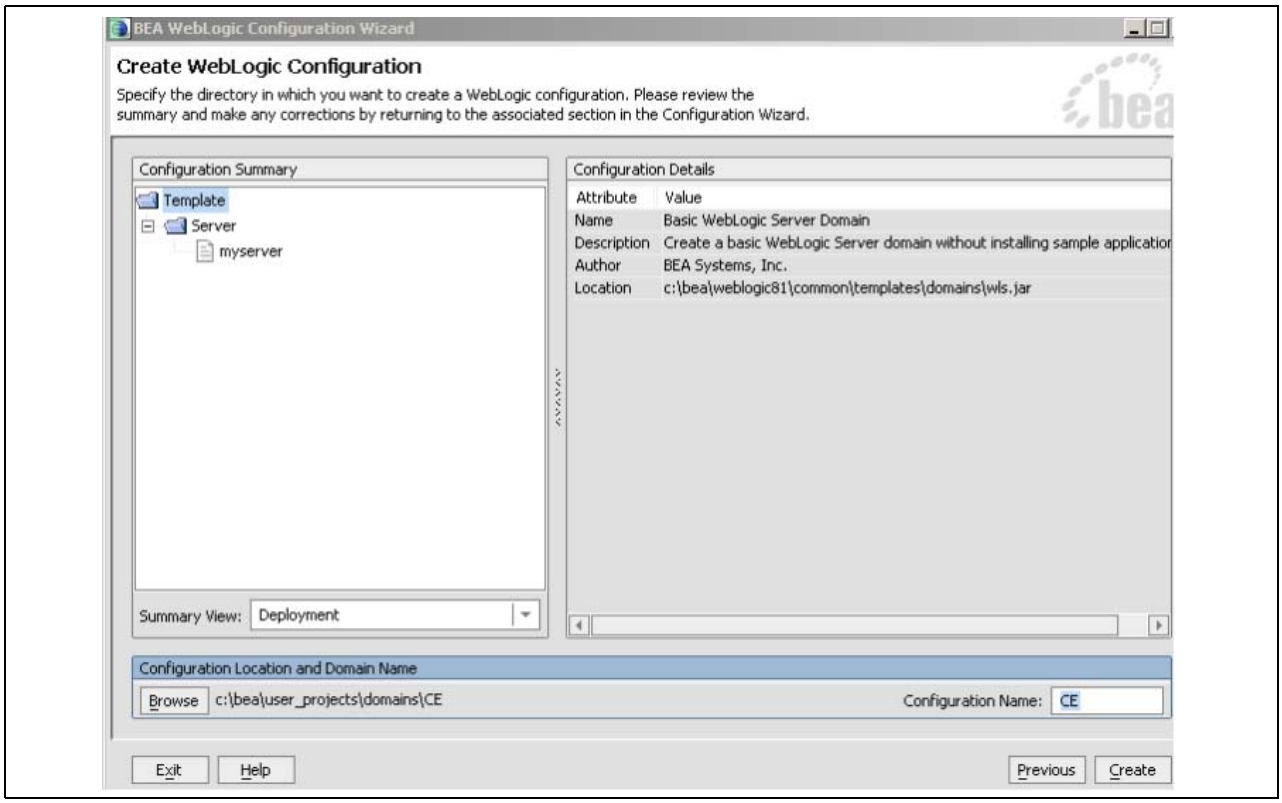
   For testing, “password” is often used as the password.



Configure Administrative Username and Password window

   The Configure Server Start Mode and Java SDK window appears.
6. Accept the defaults and click Next.
7. Enter a meaningful Configuration Name, such as BOE, and click Create.

   A progress indicator appears.



BEA WebLogic Configuration Wizard window

8. Select Done to complete the wizard.

   You have now created a web server at the default port 7001. If you want to use a port other than the default port 7001, perform the following steps. This may be useful if you want to run both a PeopleSoft Pure Internet Architecture web server and the BusinessObjects Enterprise XI web server on the same machine.

   a. Open the file C:\BEA\user_projects\domains\<*mydomain*>\config.xml in Notepad.

      For <*mydomain*>, use the value for Configuration Name in step 7 above.

   b. Find the text 7001 and replace it with the desired port number.

   c. Save and exit.

   d. <BEA_port> will be used to refer to the port number that you are now using. Substitute your specific port number for the default port number 7001 in the following steps.

9. Select Start, Programs, BEA Weblogic Platform 8.1, User Projects, <*mydomain*> (BOE in this example), Start Server.

   An MS-DOS window opens. Wait until a message containing the phrase "listening on port <*BEA_port*>" appears, indicating that the web server is active.

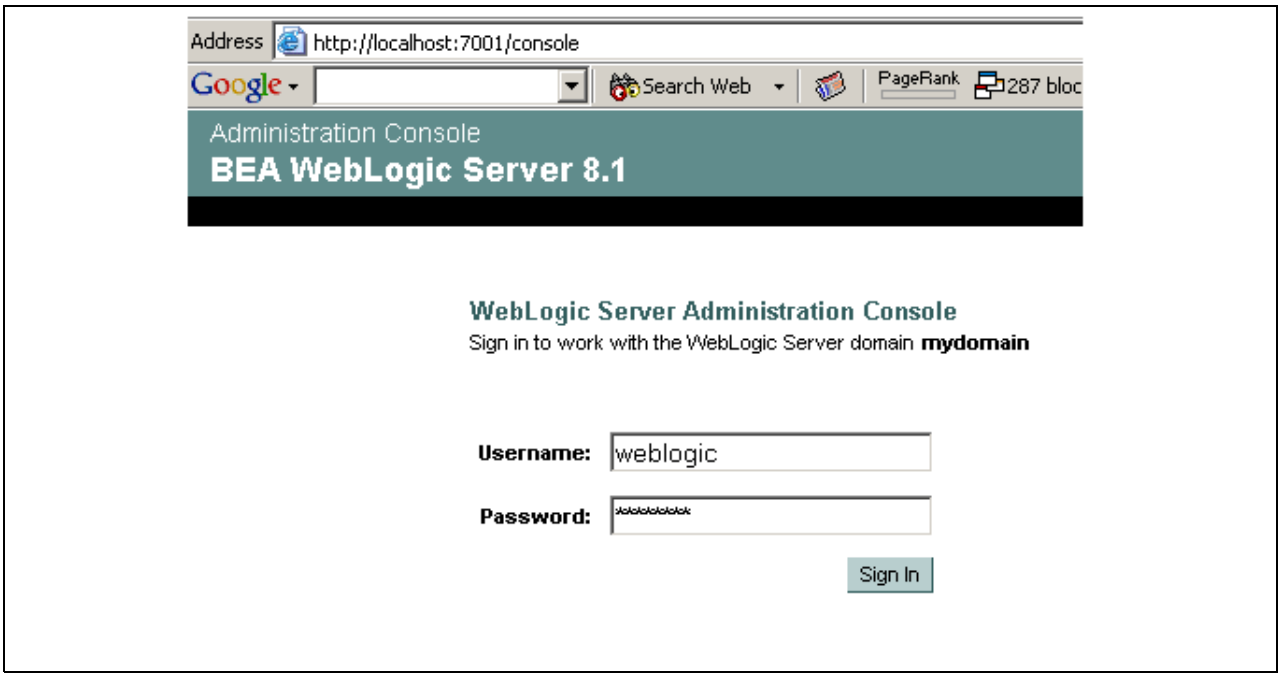
   Note. You perform this step to start the web server. You will need to perform this step after you reboot the machine or close down the WebLogic web server.

   ---

10. To confirm that you can log in to the web server, enter the URL *http://localhost:<BEA_port>/console* in a browser.

11. Enter the user name and password for the WebLogic Admin that you entered during your installation of WebLogic.

Click the Sign In button.

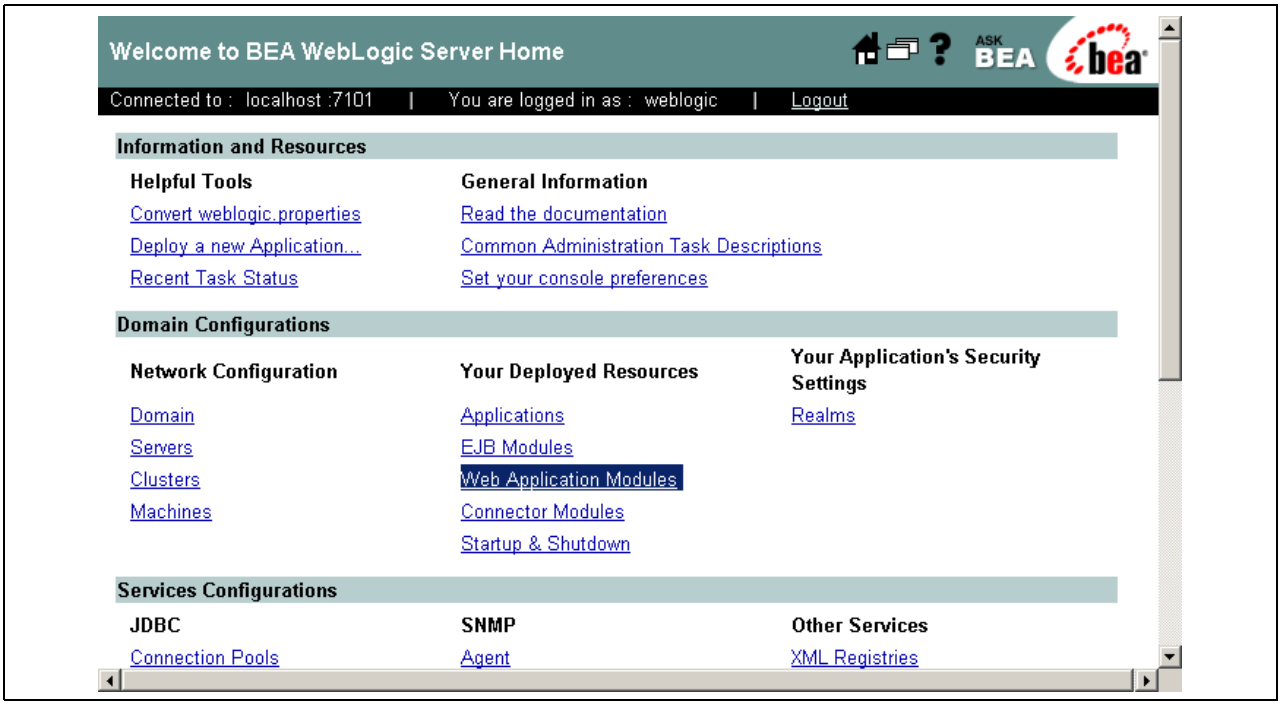


WebLogic Server sign in

Deploying the BusinessObjects Enterprise XI Launchpad Applications for WebLogic on Windows

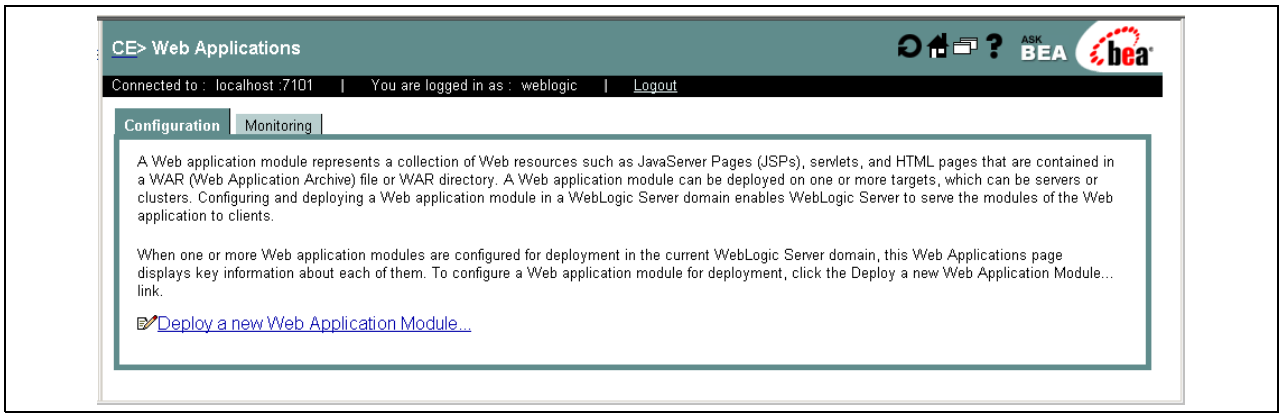
This procedure assumes that you have logged into the WebLogic web server in a browser.

1. Select the Web Application Modules link.



BEA WebLogic Server home

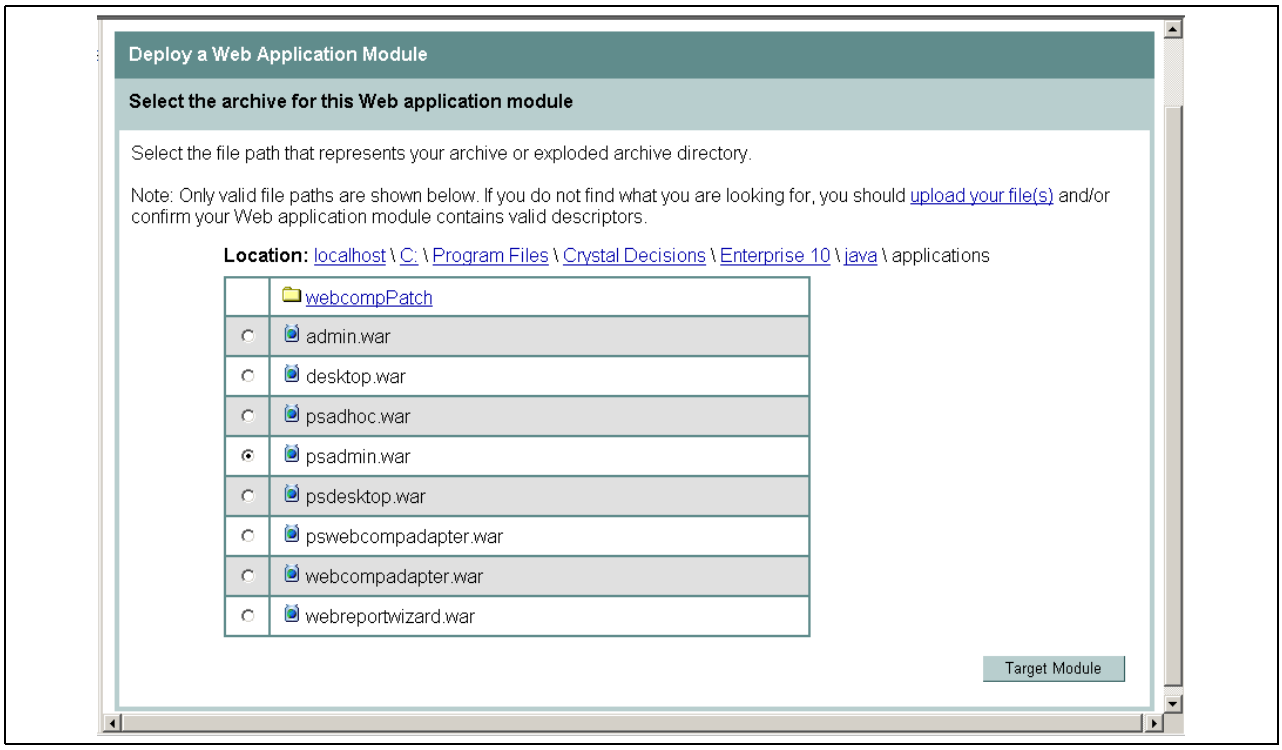
2. Select Deploy a new Web Application.



Web Applications window

3. Navigate to <BOE_DIR>\Enterprise 11\java\applications, where <BOE_DIR> is the location where you installed BusinessObjects Enterprise XI.
4. Select the psadmin.war radio button and click the Target Module button.

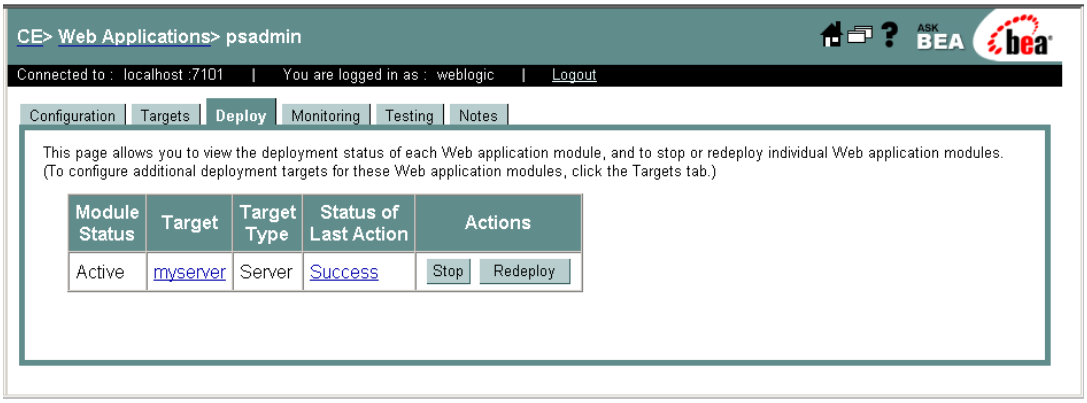
   This deploys the Administrator Launchpad application.



Deploy a Web Application Module window

5. Accept the defaults on the confirmation window and click Deploy.

   The process is complete when the status is shown as “Success.”



Deploy tab on the Web Applications window

6. Select Home to return to the WebLogic web server home page.
7. Repeat steps 1 through 6, but in step 3, select the psdesktop.war radio button to deploy the User Launchpad application.
8. Repeat steps 1 through 6, but in step 3, select the pswebcompadapter.war radio button to deploy the pswebcompadapter.war application.
9. Repeat steps 1 through 6, but in step 3, select the psadhoc.war radio button to deploy the Crystal Reports Explorer application.
10. Repeat steps 1 through 6, but in step 3, select the jfsadmin.war radio button to deploy the Crystal Reports Explorer application.
11. Select Home to return to the WebLogic web server home page.
12. To test the installation, stop and start the web server:
    a. To stop the server, navigate to C:\BEA\user_projects\domains\<*mydomain*>, where <*mydomain*> is the name you entered in the task Creating a WebLogic Server, and double-click stopWebLogic.cmd.
    b. To start the server, navigate to C:\BEA\user_projects\domains\<*mydomain*>, and double-click startWebLogic.cmd.
13. In a new browser window, enter the following URL:

    http://<*machine_name*>:<*port*>/businessobjects/enterprise11/adminlaunch/.

BusinessObjects Enterprise Administration Launchpad window

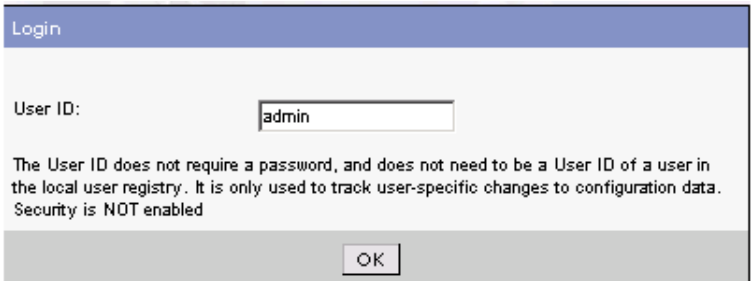
Creating a WebSphere Server on Windows

Before beginning this procedure, you must have installed IBM WebSphere on the server where BusinessObjects Enterprise XI is installed.

1. Select Start, Programs, IBM WebSphere, Application Server 5.1, Start the Server.

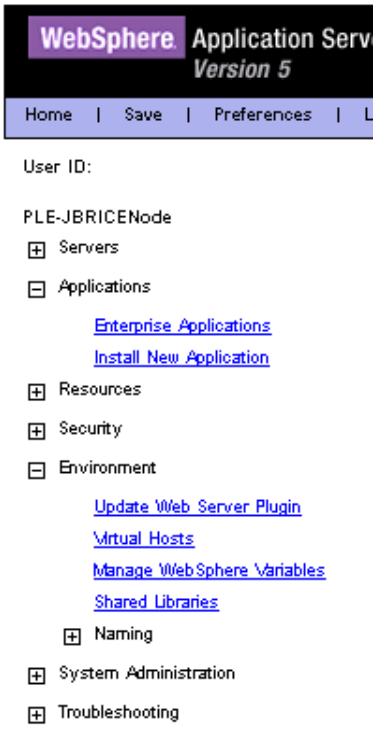
   Wait until the server finishes starting.

2. Select Start, Programs, IBM WebSphere, Application Server 5.1, Administrative Console.
3. Enter *admin* as the User ID and select OK.



WebSphere Application Server login window

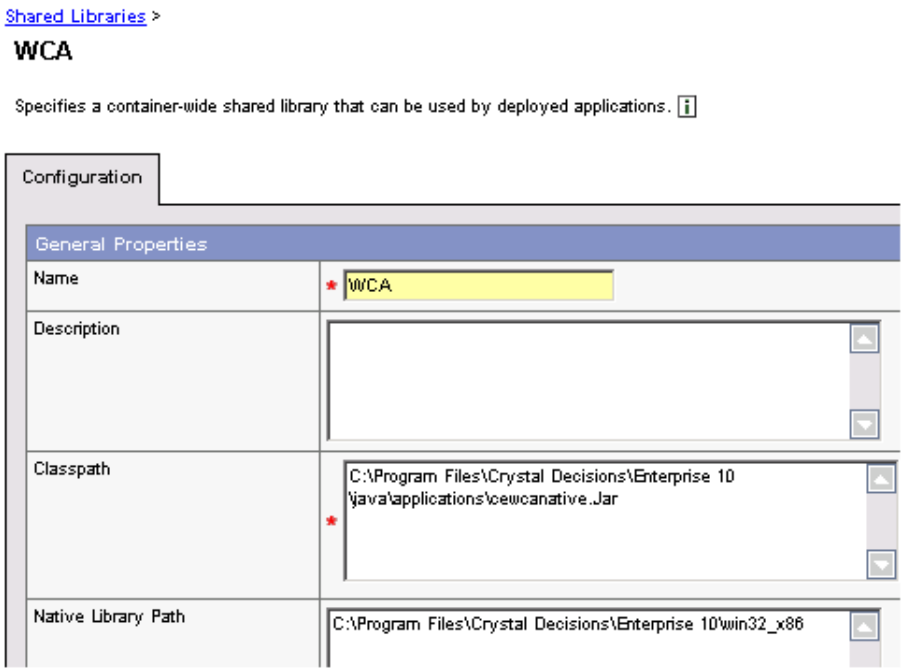
4. Expand the Environment node and select the Shared Libraries link:



Selecting Shared Libraries

5. Select New to add a new library.

   Enter values for the Name, Classpath and Native Library Path as shown. Then click OK.



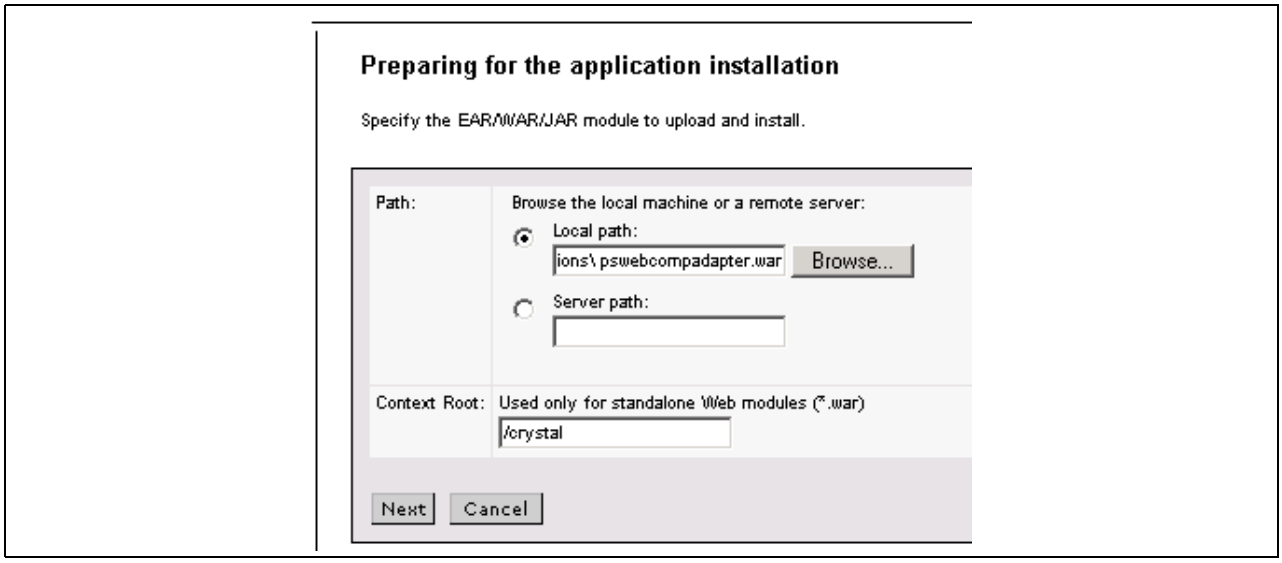
Setting up shared libraries for WebSphere web server

Note. Remember that before you can use BusinessObjects Enterprise XI, you must complete additional installation and configuration procedures.

Deploying the BusinessObjects Enterprise XI Launchpad Applications for WebSphere on Windows

This procedure assumes that you have logged into the WebSphere Administrative Console.

1. From the menu on the left, select Applications, Install New Application.
2. Browse to find the file *<BOE_DIR>\Enterprise\java\applications\pswebcompadapter.war,* where <BOE_DIR> is the location where you installed BusinessObjects Enterprise XI.
3. Enter */businessobjects* in the Context Root area.



Preparing for the application installation for pswebcompadapter.war

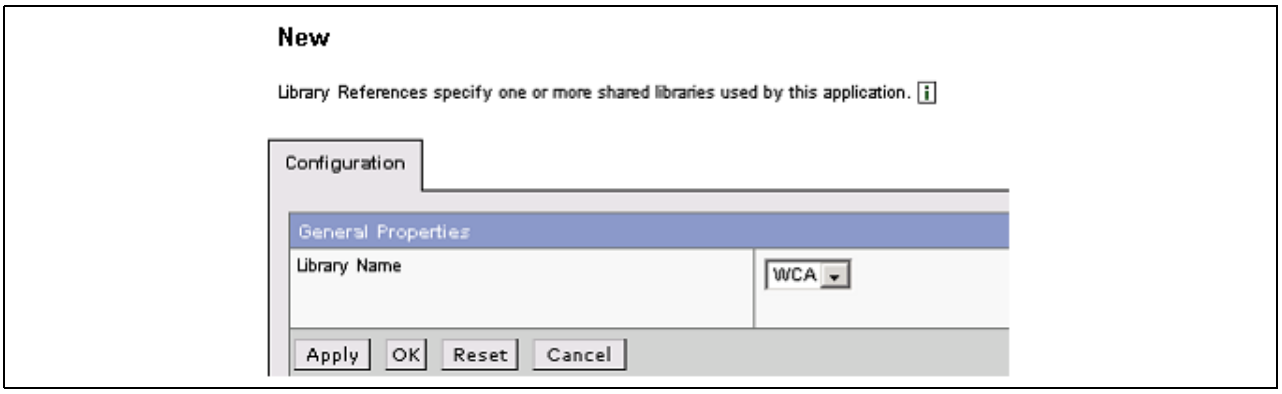
   Click Next.

4. Accept all defaults on the next several windows and continue until you see a window with a Finish button.
5. Click the Finish button.

   A confirmation window appears with a message similar to the following: "Application pswebcompadapter_war installed successfully."

6. Select Manage Applications to see the list of applications.
7. Select the link pswebcompadapter_war to open its configuration page.
8. Near the bottom, select Libraries.
9. Select Add to add a new library.

   WCA should appear automatically. Just select OK to save it.



Adding a new shared library

10. Repeat steps 2 through 9, but use these parameters:

    File <BOE_DIR>\Enterprise\java\applications\psadmin.war

    Context Root /businessobjects/enterprise11/adminlaunch

11. Repeat steps 2 through 9 with these parameters:

    File <BOE_DIR>\Enterprise\java\applications\psdesktop.war

    Context Root /businessobjects/enterprise11/desktoplaunch

12. Repeat steps 2 through 9 with these parameters:

    File <BOE_DIR>\Enterprise\java\applications\psadhoc.war

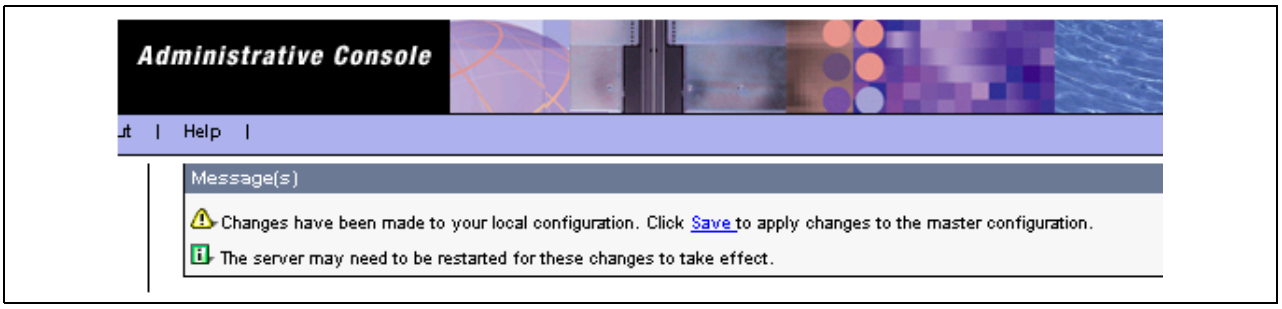
    Context Root /adhoc

13. Repeat steps 2 through 9 with these parameters:

    File <BOE_DIR>\Enterprise\java\applications\jfsadmin.war

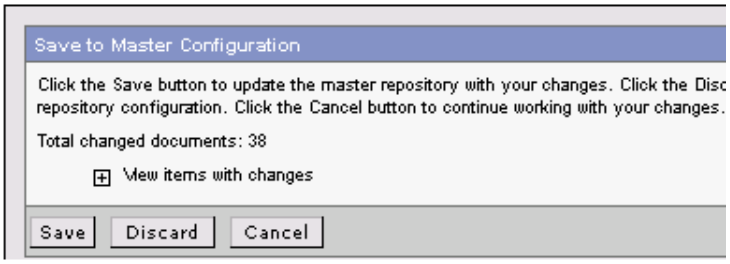
    Context Root /jfsadmin

14. Select the link Save to permanently save all changes.



Saving changes on WebSphere Administrative Console

15. Click the Save button on the confirmation window and wait for the changes to be saved.

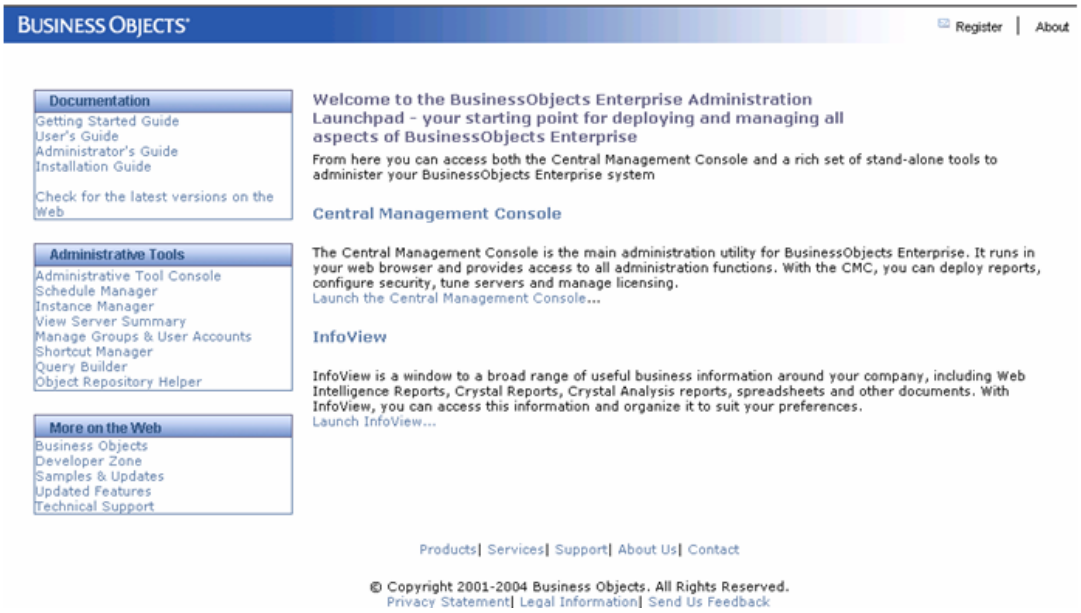


Saving changes on the Master Configuration window

To stop the server, select Start, Programs, IBM WebSphere, Application Server 5.1, Stop the Server.

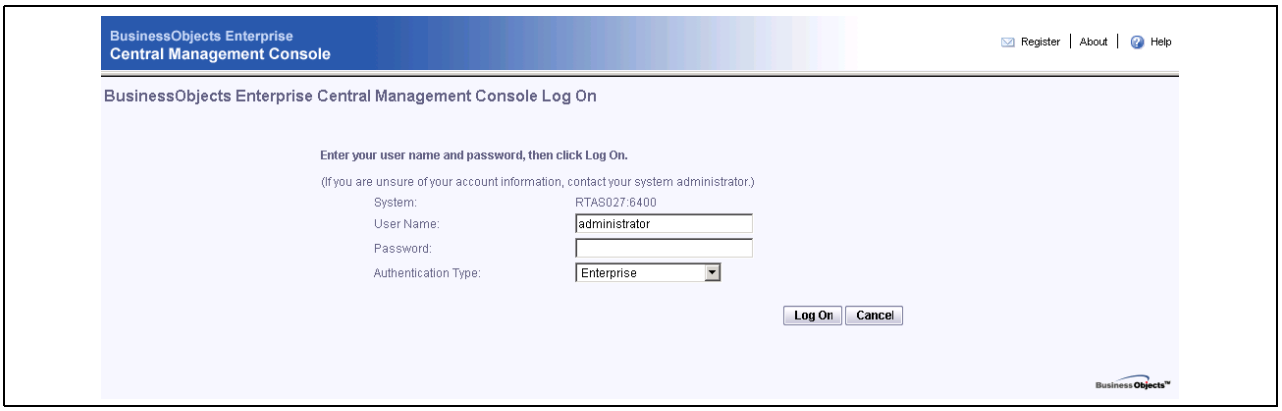
16. To restart the server, select Start, Programs, IBM WebSphere, Application Server 5.1, Start the Server.
17. In a new browser window, enter the following URL for the admin launchpad (where <*machine_name*> is the computer name):

    http://<*machine_name*>:9080/businessobjects/enterprise11/adminlaunch/



BusinessObjects Enterprise Administration Launchpad window

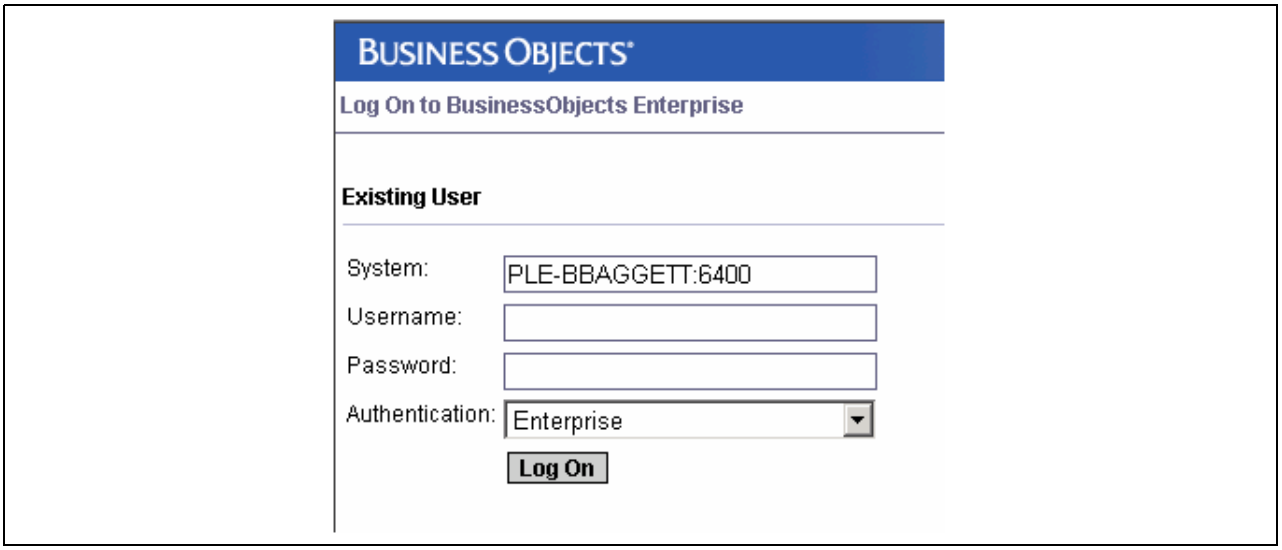
18. Select the Central Management Console link and enter *administrator* (no password) to confirm that you can log in.



BusinessObject Enterprise Central Management Console Log on window

19. Enter the following URL for the user launchpad (where <*machine_name*> is the computer name):

    http://<*machine_name*>:9080/businessobjects/enterprise11/desktoplaunch/



BusinessObjects Enterprise XI log on window

20. Select the link BusinessObjects Enterprise XI and enter *Administrator* (no password) to confirm that you can log in.

Task 12-3-7: Installing BusinessObjects Enterprise XI on UNIX or Linux

To install BusinessObjects Enterprise XI on UNIX or Linux:

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. Insert the BusinessObjects Enterprise XI CD into the server machine's CD-ROM drive and run the setup program, `winstall`, from the root of the drive.
2. The install program checks for all required components and displays the missing ones.

```
******************************
SunOS: Your system is missing required components:
```



```
******************************

Missing package: SUNWeu8os (American English/UTF-8 L10N For OS Environment User⇒
 Files)
Missing package: SUNWeuluf (UTF-8 L10N For Language Environment User Files)

If you continue your installation may not work correctly.
Please press Enter to continue...
```

Ensure all missing components are installed before proceeding.

3. Select the language that you want to install.

```
BusinessObjects Enterprise XI Setup
Please select the current language for the installation
  1   -   Dutch
  2   -   English
  3   -   French
  4   -   German
  5   -   Italian
  6   -   Japanese
  7   -   Korean
  8   -   Simplified Chinese
  9   -   Spanish
  10  -   Traditional Chinese
```

4. Select New Installation.
5. Read and accept the license agreement.
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. Choose User Install at the Install Option prompt.
8. Select New for the Installation Type.
9. The next page prompts you to choose between using an existing database as CMS repository, or installing MySQL as the default repository. Select Use an existing database and press Enter.

Note. MySQL is not supported in the PeopleSoft integration with BusinessObjects Enterprise XI.

---

10. Choose the type of database (Oracle, DB2 or Sybase) from the list and press Enter.

    If prompted, provide the location and connection information for the database, and press Enter.

    If prompted “Overwrite existing configuration?”, reply *Y*.

    If prompted “Re-initialize database?”, reply *Y*.
11. Select Use an existing Java application server and press Enter.

    You will need to configure your web application server after the installation is complete.
12. The final page of the setup program displays the installation directory. Press Enter to complete the installation.


```
                    BusinessObjects Enterprise XI Setup

                                Operation CompletePress [Enter] to go to the⇒
 next screen

Business Objects products have been successfully installed :

 /ds2/home/bobje/install

Please read installation guide for information on how to manually configure⇒
 your java application server
```

13. You must manually set the following environment variables after BusinessObjects Enterprise XI is installed. Then run `env.sh`, so that the updated environment variables take effect

```
export CLASSPATH=$CLASSPATH:/$bobje_home/bobje/enterprise11/java/applications⇒
/cewcanative.jar

export PATH= /$bobje_home /bobje/enterprise11/solaris_sparc:$PATH

cd /$bobje_home /bobje/setup
. ./env.sh
```

Important! If these system variables are not set, the deployment of BusinessObjects Enterprise XI web applications will fail as they are dependent on these environment settings.

The `ccm.sh` script provides you with a command-line interface to the various BusinessObjects Enterprise XI server components. The installation setup program starts and enables servers automatically. The following information is included for reference.

Action	Command
Go to bobje directory that was created by the installation	cd <*BOE_DIR*>/bobje **Note.** The commands below are run from this directory.
Start all BusinessObjects Enterprise XI servers as daemons	./ccm.sh –start all
Enable all BusinessObjects Enterprise XI servers using default ports	./ccm.sh –enable all
Stop all BusinessObjects Enterprise XI servers	./ccm.sh –stop all
View the help on ccm.sh	./ccm.sh –help | more

This completes the installation of BusinessObjects Enterprise XI on UNIX or Linux.

Task 12-3-8: Installing PeopleSoft BusinessObjects Enterprise XI Integration on UNIX or Linux

This task installs the PeopleSoft Security Plugin, Data Driver, and four web application files:

- psadmin.war

- psdesktop.war
- psadhoc.war
- pswebcompadapter.war

To install BusinessObjects Enterprise XI Integration in console mode:

Note. The console mode installation is typically used on UNIX platforms.

---

1. Enter the following commands, where <*PS_HOME*> is the main PeopleSoft directory, and <*OS*> is the UNIX operating system:

   Note. The notation at the beginning of the second line is “dot-space-dot,” not “dot-dot.”

   ```
   cd <PS_HOME>
   . ./psconfig.sh
   cd setup/PSCrystal
   setup.<OS> -console
   ```

   See “Using the PeopleSoft Installer,” Starting the PeopleSoft Installer.

   You see the following message:

   ```
   Welcome to the InstallShield Wizard for BusinessObjects Enterprise for People⇒
   Soft Enterprise Integration

   The InstallShield Wizard will install BusinessObjects Enterprise for PeopleSoft⇒
    Enterprise Integration on your computer.
   To continue, choose Next.

   BusinessObjects Enterprise for PeopleSoft Enterprise Integration
   PeopleSoft, Inc
   http://www.peoplesoft.com
   Press 1 for Next, 3 to Cancel or 4 to Redisplay [1]
   ```

2. Enter *1* for Next to continue.
3. At the prompt:

   ```
   Please enter the BusinessObjects Enterprise XI installation directory [/opt⇒
   /crystal] /home/jwong/BOE_AIX/enterprise

   Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
   ```

   Enter the directory where BusinessObjects Enterprise is installed and then enter *1*.

4. At the prompt:

   ```
   BusinessObjects Enterprise for PeopleSoft Enterprise Integration Install⇒
    Location

   Please specify a directory or press Enter to accept the default directory.

   Directory Name: [/home/BusinessObjects/enterprise/PeopleSoft_BOE]
   ```



```
Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
```

Accept the default location for the BusinessObjects Enterprise Integration installation by pressing ENTER, or enter a new location, then enter *1* to continue.

5. At the prompt, choose the Typical setup type:

```
Choose the setup type that best suits your needs.

[X] 1 - Typical
        The program will be installed with the suggested configuration.
        Recommended for most users.
[ ] 2 - Custom
        The program will be installed with the features you choose.
        Recommended for advanced users.

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 4 to Redisplay [1]
```

Press ENTER twice to accept the default, Typical installation, and continue.

6. Confirm that the installation summary is correct:

```
BusinessObjects Enterprise for PeopleSoft Enterprise Integration will be⇒
 installed in
the following location:

/home/BusinessObjects/enterprise/PeopleSoft_BOE

with the following features:

Native Drivers
Security Plug-in (Server Side)
Security Plug-in (Web Content)
Security Plug-in (Client Side Java Version)

for a total size:

 15.8 MB

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
```

Enter *1* to continue and begin the installation.

7. You see a message showing the progress of the installation.
8. When the installation is complete, you see the following message:

```
The InstallShield Wizard has successfully installed BusinessObjects Enterprise⇒
 for
PeopleSoft Enterprise Integration. Choose Finish to exit the wizard.
```



```
Press 3 to Finish or 4 to Redisplay [3]
```

Enter *3* to finish and exit the installation.

Task 12-3-9: Installing Patches Required at Installation

There may be patches for BusinessObjects Enterprise XI as well as the PeopleSoft Integration for BusinessObjects Enterprise XI that must be installed at installation.

Log onto Customer Connection to check using the Required for Install or Upgrade search page. You can search using the following criteria:

Product Line	PeopleTools
Product	PeopleTools
Release	the release of PeopleTools that you are using

Task 12-3-10: Creating a Web Server for BusinessObjects Enterprise on UNIX or Linux

This section discusses:

- Creating an Oracle Application Server on UNIX or Linux
- Deploying the BusinessObjects Enterprise XI Launchpad Applications for OAS on UNIX or Linux
- Creating a WebLogic Server on UNIX or Linux
- Deploying the BusinessObjects Enterprise XI Launchpad Applications for WebLogic on UNIX or Linux
- Creating a WebSphere Server on UNIX or Linux
- Deploying the BusinessObjects Enterprise XI Launchpad Applications on WebSphere

Creating an Oracle Application Server on UNIX or Linux

Before beginning this procedure you must have installed OAS on the server where BusinessObjects Enterprise XI is installed. You must use the same user account to install OAS and BusinessObjects Enterprise XI.

To create an Oracle Application Server on UNIX or Linux:

1. Change the deployment values for the Java WCA, if you are using Oracle 10g server.
   a. Stop the java application server if it is running.

   Note. To stop OAS, use the command `<OAS_HOME>/opmn/bin/opmnctl stopall`.

   b. Extract web.xml from pswebcomadapter.war with the following command:

   ```
   jar -xf pswebcomadapter.war WEB-INF/web.xml
   ```

   The default location for pswebcompadapter.war is *$bobje_home*/bobje/enterprise11/java/applications.

   c. Open web.xml with a text editor.
   d. Change “false” to “true” in the following entry:

   ```
   <!-- if you are using oracle10g, turn this flag to true -->
       <context-param>
   ```



```
        <param-name>was.oracle</param-name>
        <param-value>false</param-value>
        <description>Reserved.</description>
    </context-param>
```

e. Save web.xml and reinsert it into WEB-INF in pswebcomadapter.war.

   To reinsert the updated web.xml, use the following command:

```
jar -uf pswebcomadapter.war WEB-INF/web.xml
```

2. Open a browser window and enter the following URL to verify that the OAS server is running correctly:

   http://<machine_name>:<port>

   where <machine_name> is the name of the machine on which OAS is installed and <port> is the OAS port number (1810 is the default).

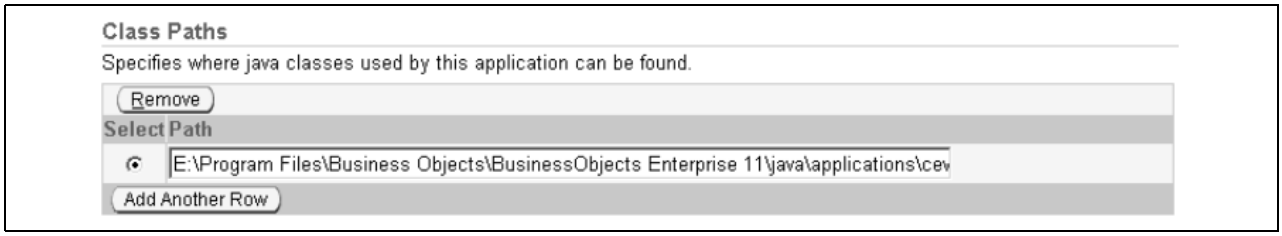
   Enter the administrator user name (ias_admin is the default) and the password that was set during the installation.

OAS login dialog box

3. Click on the Start button to launch the server “home”:
4. Click OK after you receive a message that the server has been started.
5. Select the Administration tab.

Administration tab

6. Configure the class path:

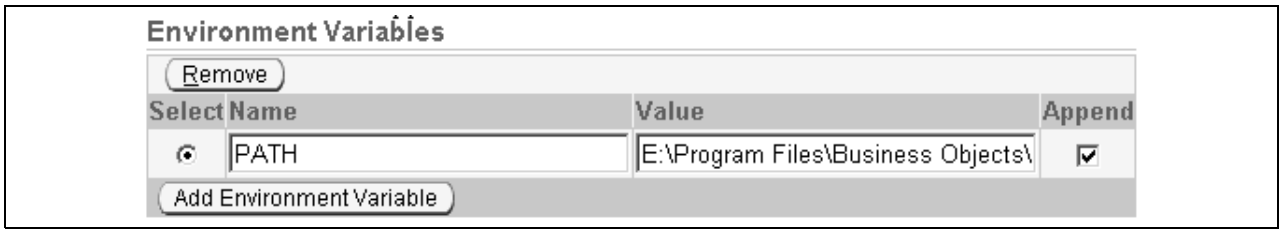


Class Paths page

   a. Click Global Web Module.
   b. Click the General link under Properties.
   c. Click Add Another Row in the Class Paths section.
   d. Enter the full path, including the filename, for the cewcanative.jar file in the path field.

      For example, *$bobje_home*/bobje/enterprise11/java/applications/cewcanative.jar, where $bobje_home is the directory where you installed BusinessObjects Enterprise XI.

7. Click the Apply button at the bottom of the page, and click OK.
8. On the Administration tab, click the Server Properties link.
9. In the Environment Variables section, click the Add Environment Variable button.
10. To configure the PATH:



Environment Variables page

   a. Enter *PATH* in the Name field.

b. Enter the absolute path to the BusinessObjects Enterprise XI win32_86 directory in the Value field.

   If you have not changed the default directory for Business Objects, the setting for this field would be “$bobje_home/bobje/enterprise11/<OS>”. if the default path was changed for your installation of BusinessObjects Enterprise XI, modify the path accordingly.

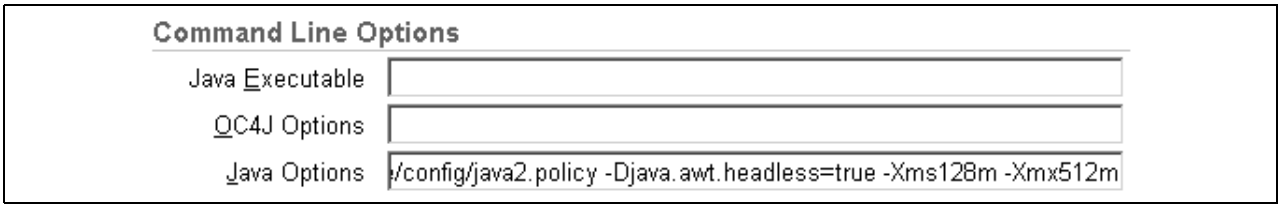
c. Select the Append check box.

d. Click Apply.

e. Click No when you receive the message that the application server must be restarted before the changes take affect. You can restart the server later.

11. On the Administration tab, click the Server Properties link.

12. To change the memory allocation:



Command Line Options page

a. In the Java Options box, add a space, then append *-Xms128m -Xmx512m* to the existing entry.

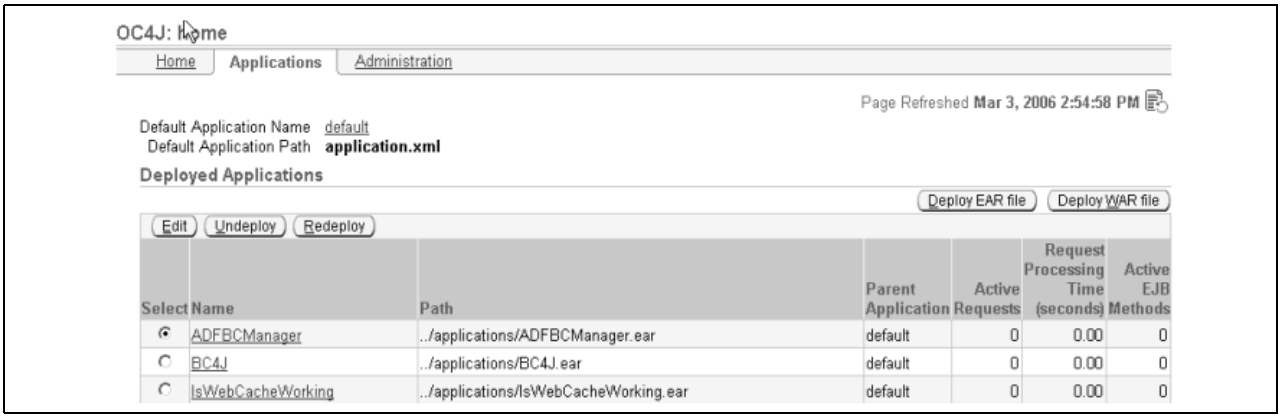
b. Click Apply.

c. Click Yes when you receive the message that the application server must be restarted before the changes take affect.

Deploying the BusinessObjects Enterprise XI Launchpad Applications for OAS on UNIX or Linux

To deploy the Launchpad applications for OAS on UNIX or Linux:

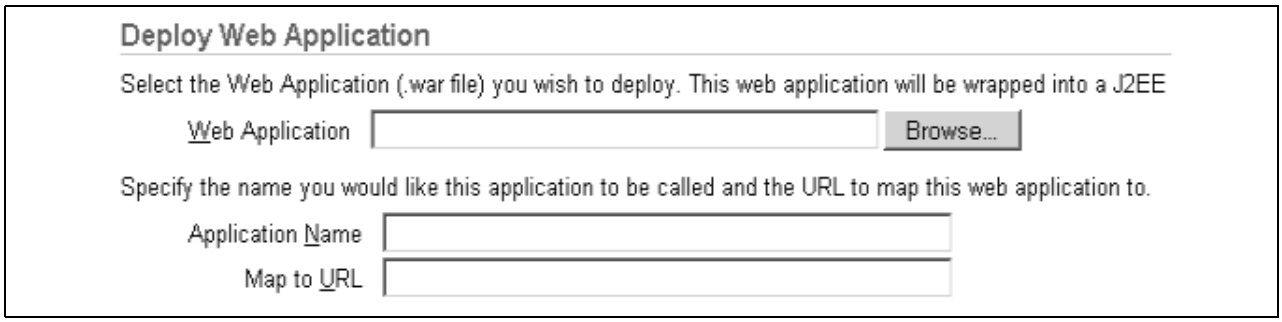
1. Click the Applications tab from the server home.



Deployed Applications page

2. Click Deploy WAR file.

3. Click the Browse button and locate the file *$bobje_home*/bobje/enterprise11/java/applications /pswebcompadapter.war, where $bobje_home is the location where you installed BusinessObjects Enterprise XI.



Deploy Web Application page

4. Enter *pswebcompadapter* in the Application Name field.
5. Enter */businessobjects* as context root in the Map to URL field.
6. Click Deploy.
7. Repeat steps 1 through 6, but use the following values:

   File *$bobje_home*/bobje/enterprise11/java/applications/jsfadmin.war

   Application name jsfadmin

   Context root (Map to URL) /jsfadmin
8. Repeat steps 1 through 6, but use the following values:

   File *$bobje_home*/bobje/enterprise11/java/applications/psadmin.war

   Application name psadmin

   Context root (Map to URL) /businessobjects/enterprise11/adminlaunch
9. Repeat steps 1 through 6, but use the following values:

   File *$bobje_home*/bobje/enterprise11/java/applications/psdesktop.war

   Application name psdesktop

   Context root (Map to URL) /businessobjects/enterprise11/desktoplaunch
10. Repeat steps 1 through 6, but use the following values:

    File *$bobje_home*/bobje/enterprise11/java/applications/psadhoc.war

    Application name psadhoc

    Context root (Map to URL) /businessobjects/enterprise11/adhoc

---

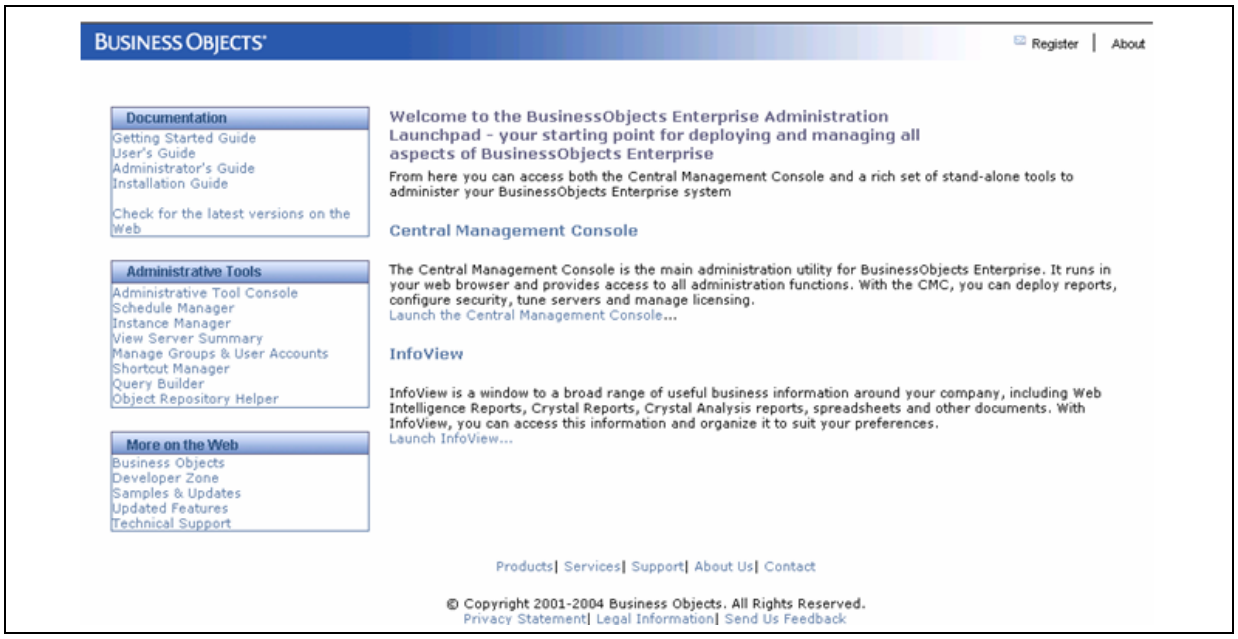
Note. pswebcompadapter.war has to be deployed first, followed by jsfadmin.war and then psadmin.war. psdesktop.war and psadhoc.war don't depend on other war files, so they can be deployed at any time.

---

11. To verify the OAS configuration:
    a. Open a new browser window.
    b. Enter the following URL:

       http://<machine_name>:<port>/businessobjects/enterprise11/adminlaunch

       For <machine_name> and <port> substitute the name of your machine and port.



BusinessObjects Enterprise XI Admin Launchpad window

c. Click Central Management Console and log on as administrator (no password) to confirm that you can log in.

Creating a WebLogic Server on UNIX or Linux

Before beginning this procedure, you must have installed BEA WebLogic 8.1 on the server where BusinessObjects Enterprise XI is installed. You must use the same user account to install WebLogic and BusinessObjects Enterprise XI.

1. On the machine where BEA Weblogic 8.1 is installed, run `config.sh` from the <*WEBLOGIC_HOME*>/weblogic81/common/bin directory.
2. Select Create a new WebLogic configuration and press Enter.
3. Select Basic WebLogic Server Domain and press Enter.
4. Run the wizard in express mode.
5. Enter User name and User password on the next page.

   The default value is weblogic/password. Press Enter.
6. Select Development mode on Domain Mode Configuration page.
7. Select the Java SDK you installed.
8. Accept the default Target Location and press Enter.
9. Specify the domain name on the final page.

   The web server has been created at the default port 7001.

Note. If you want to use a port other than the default port of 7001, follow the step below. This may be useful if you want to run both a PIA web server and the BusinessObjects Enterprise XI web server on the same machine.

---

a. Edit the file: <*WEBLOGIC_HOME*> /user_projects/domains/<mydomain>/config.xml

b. Find the text 7001 and replace it with the port number you want.

c. Then save the config.xml file and exit.

   <BEA_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.

10. Start the web server by running `startWebLogic.sh` from <WEBLOGIC_HOME>/user_projects /domains/<mydomain>

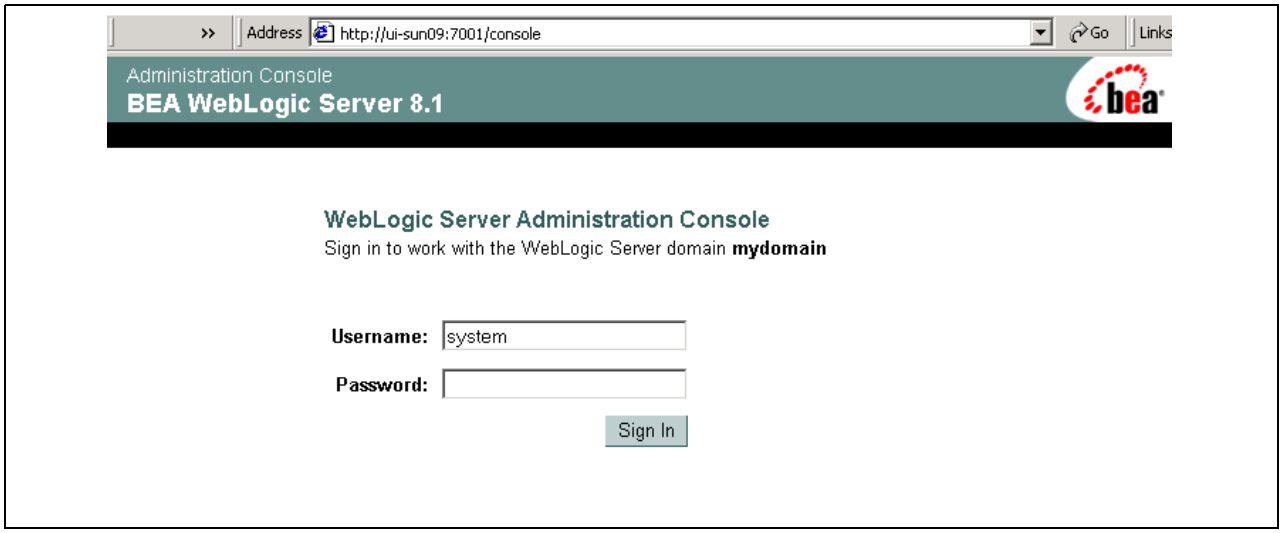
    Wait until a message containing "listening on port <BEA_port>" appears. The web server is now started.

11. Confirm that you can log in to the web server. In a browser, enter the URL:

    http://<machine_name>:<BEA_port>/console

12. At the login page, enter the user name and password for the WebLogic admin that you entered during the WebLogic installation, for example, weblogic and password.

    Click the Sign In button.



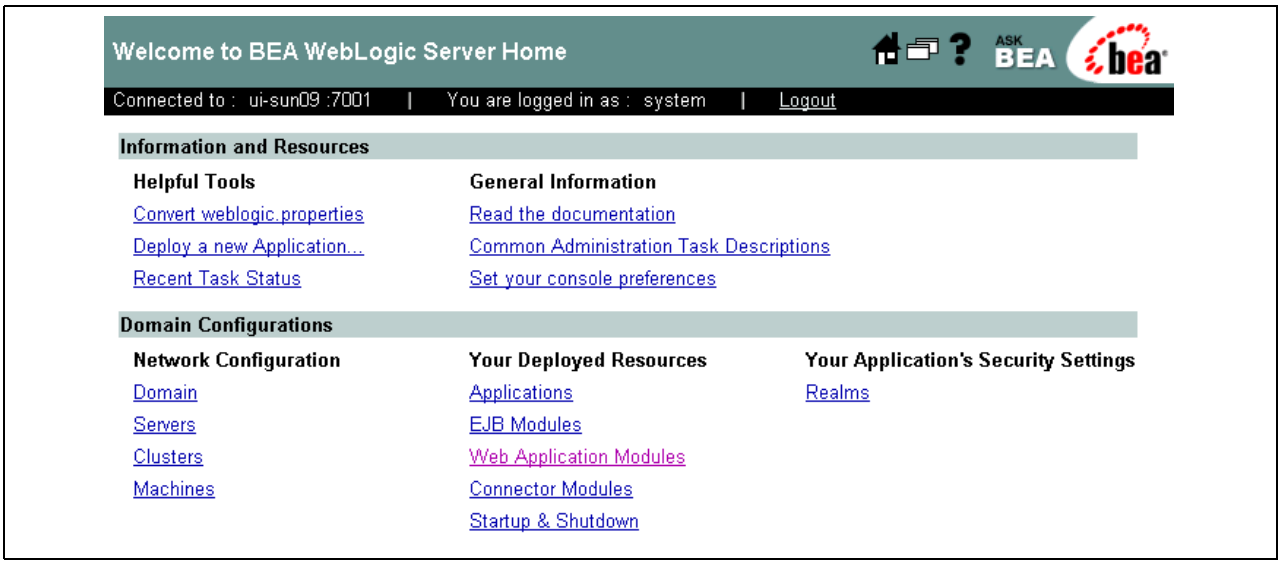
BEA WebLogic Administration Console window for UNIX

If you are logged in this verifies your WebLogic server set up was successful.

Deploying the BusinessObjects Enterprise XI Launchpad Applications for WebLogic on UNIX or Linux

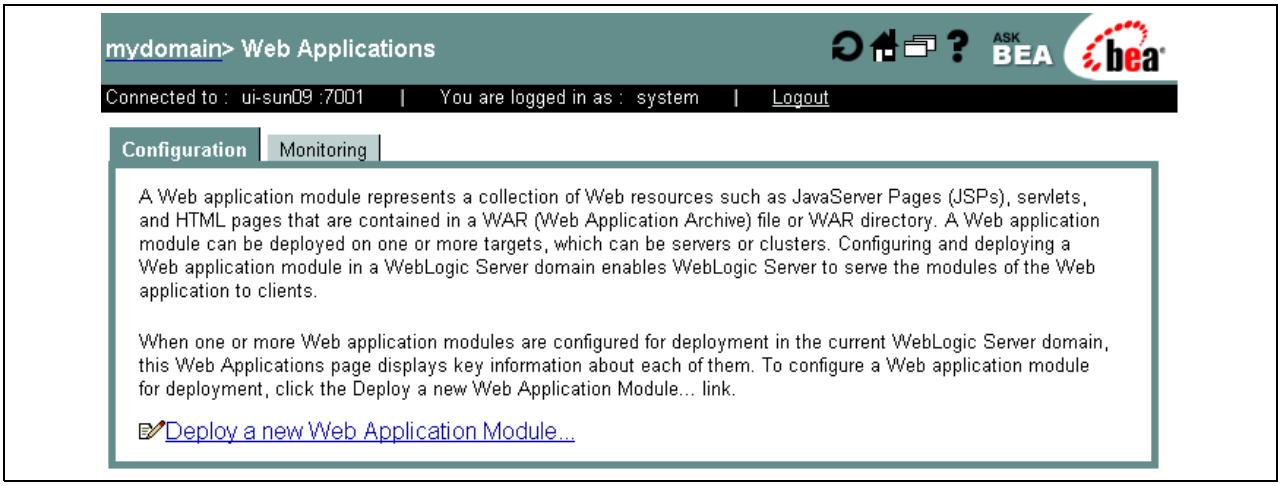
To deploy the BusinessObjects Enterprise XI Launchpad applications:

1. Click the Web Application Modules link on the BEA WebLogic Server home page:



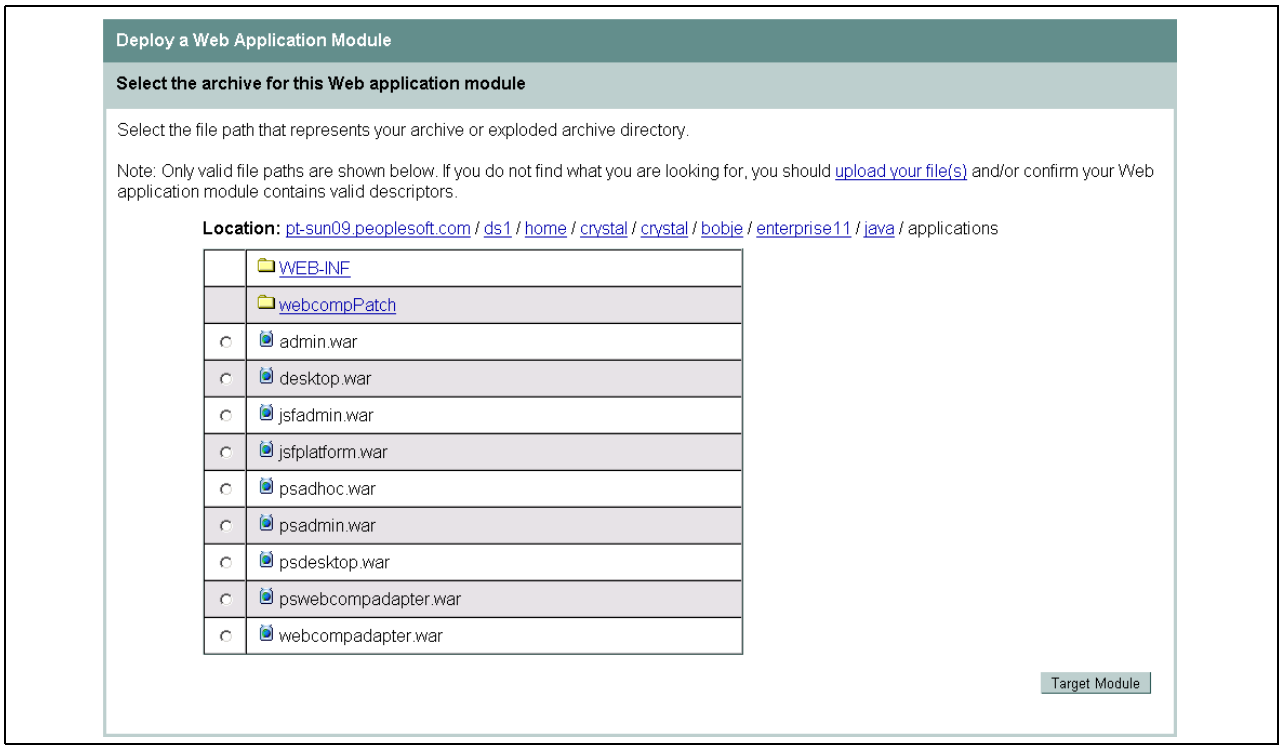
BEA WebLogic Server Home window for UNIX

2. On the Configuration tab, click the Deploy a new Web Application link:



Web Applications window for UNIX: Configuration tab

3. Navigate to <*BOE_DIR*>/enterprise/java/applications, where <BOE_DIR> is the location where you installed BusinessObjects Enterprise XI.



Deploy a Web Application Module window for UNIX

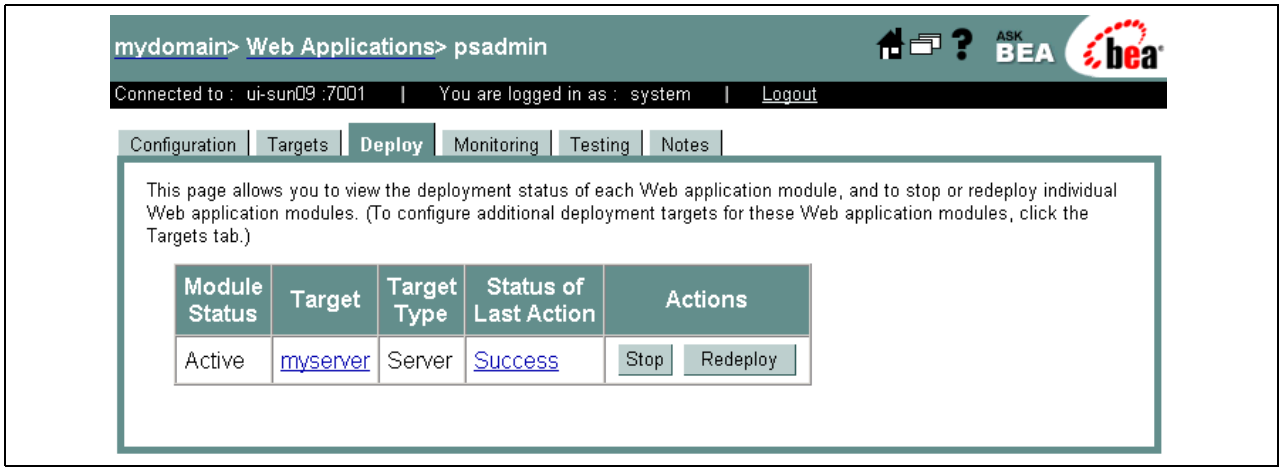
A confirmation window appears.

4. Select the psadmin.war radio button and click the Target Module button.

   This deploys the Administrator Launchpad application.

5. Accept the defaults and click Deploy.

   The deployment is complete when *Success* is displayed in the Status of Last Action field on the Deploy tab:



Verifying the status on the Web Applications window for UNIX

6. Click the Home button (the house icon at the top).
7. From the BEA WebLogic Server home page repeat steps 1 through 6, but in step 4, select the psdesktop.war radio button to deploy that application.
8. Repeat steps 1 through 6, but in step 4, select the pswebcompadapter.war radio button to deploy that application.

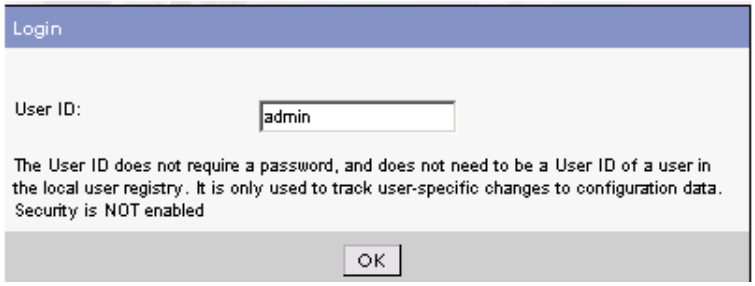
9. Repeat steps 1 through 6, but in step 4, select the psadmin.war radio button to deploy that application.
10. Repeat steps 1 through 6, but in step 4, select the psadhoc.war radio button to deploy that application.
11. Repeat steps 1 through 6, but in step 4, select the jfsadmin.war radio button to deploy that application.
12. Select the Home button.
13. To test the BusinessObjects Enterprise installation, stop and start the web server as follows:
    a. Navigate to <*BEA_HOME*>/user_projects/domain/<*mydomain*>, where <mydomain> is the name you entered in Creating a WebLogic Server, and run `stopWebLogic.sh`.
    b. Navigate to <*BEA_HOME*>/user_projects/domain/<*mydomain*> and run `startWebLogic.sh`.

Creating a WebSphere Server on UNIX or Linux

Before beginning this procedure, you must have installed IBM WebSphere on the server where BusinessObjects Enterprise XI is installed. You must use the same user account to install WebSphere and BusinessObjects Enterprise XI.

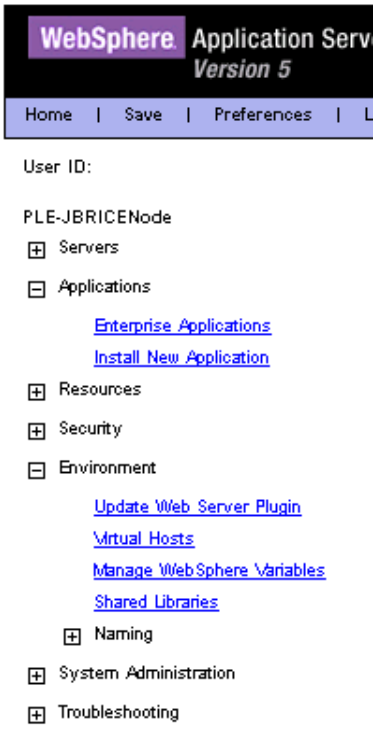
1. Start the WebSphere server by running the command `./startServer.sh` *`server_name`*
2. Enter this URL in a browser to invoke the WebSphere Administrative Console:

   http://<machine_name>:9090/admin/
3. In the WebSphere Administrative Console window, enter *admin* (or another User ID) and press OK.



WebSphere Application Server login window for UNIX

4. Expand the Environment node and select the Shared Libraries link:



Selecting shared libraries for UNIX

5. Click the New button to add a new library

   Enter values for Name, Classpath, and Native Library Path, and click OK. The values for Classpath and Native Library Path will vary depending upon your platform.

Name	WCA
Classpath	*$bobje_home*/bobje/enterprise11/java/applications/cewcanative.jar
Native Library Path	*$bobje_home*/bobje/enterprise11/solaris_sparc

Deploying the BusinessObjects Enterprise XI Launchpad Applications on WebSphere

This task assumes that you have logged into the WebSphere Administrative Console as described in the previous section.

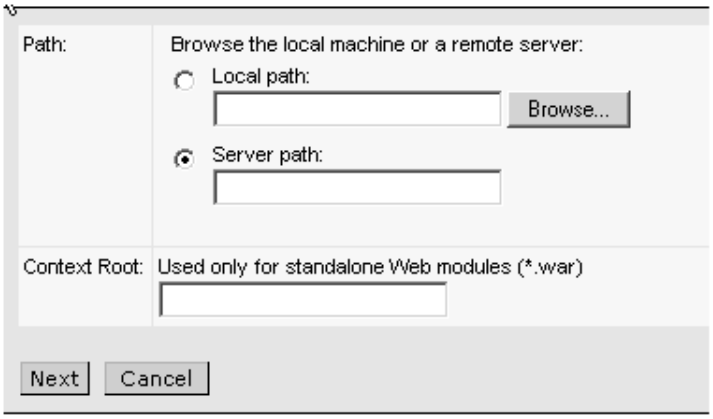
1. From the menu on the left, select the Applications, Install New Applications link.

WebSphere Administrative Console

2. Select Server path, and specify the war file to install:

   $bobje_home/bobje/enterprise11/java/applications/webcompadapter.war

3. Enter */businessobjects* in the context root area, and click Next.

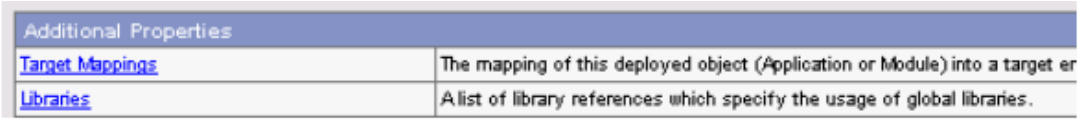


Preparing for the application installation for webcompadapter.war

4. Accept all defaults on the next several windows and continue until you see a window with a Finish button.
5. Click the Finish button.

   A confirmation window appears with a message similar to the following: "Application webcompadapter_war installed successfully."

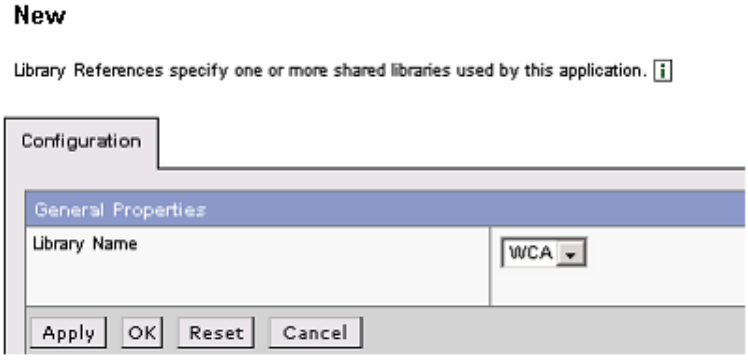
6. Click Manage Applications to see the list of applications.
7. Select the webcompadapter_war link to open its configuration page.
8. Near the bottom, select the Libraries link.



Additional Properties page

9. Click the Add button to add a new library.

   WCA should appear automatically. Just click OK to save it.



Adding a new shared library for UNIX

10. Repeat steps 2 through 9, but use these parameters:

File *$bobje_home*/bobje/enterprise11/java/applications/psadmin.war

Context Root /businessobjects/enterprise11/adminlaunch

11. Repeat steps 2 through 9 with these parameters:

    File *$bobje_home*/bobje/enterprise11/java/applications/psdesktop.war

    Context Root /businessobjects/enterprise11/desktoplaunch

12. Repeat steps 2 through 9 with these parameters:

    File *$bobje_home*/bobje/enterprise11/java/applications/psadhoc.war

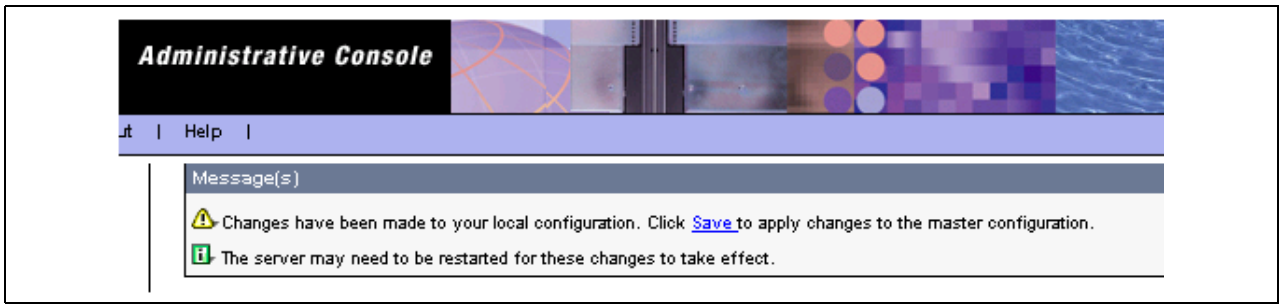
    Context Root /adhoc

13. Repeat steps 2 through 9 with these parameters:

    File *$bobje_home*/bobje/enterprise11/java/applications/jfsadmin.war

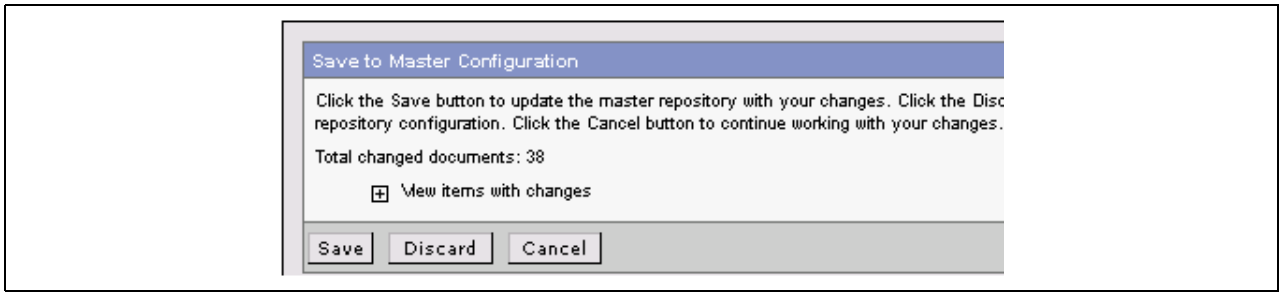
    Context Root /jfsadmin

14. Select the Save link to permanently save all changes.



Saving changes on WebSphere Administrative Console for UNIX

15. Click the Save button on the confirmation window and wait for the changes to be saved.



Saving changes on the Master Configuration window for UNIX

16. Stop and start the WebSphere server.

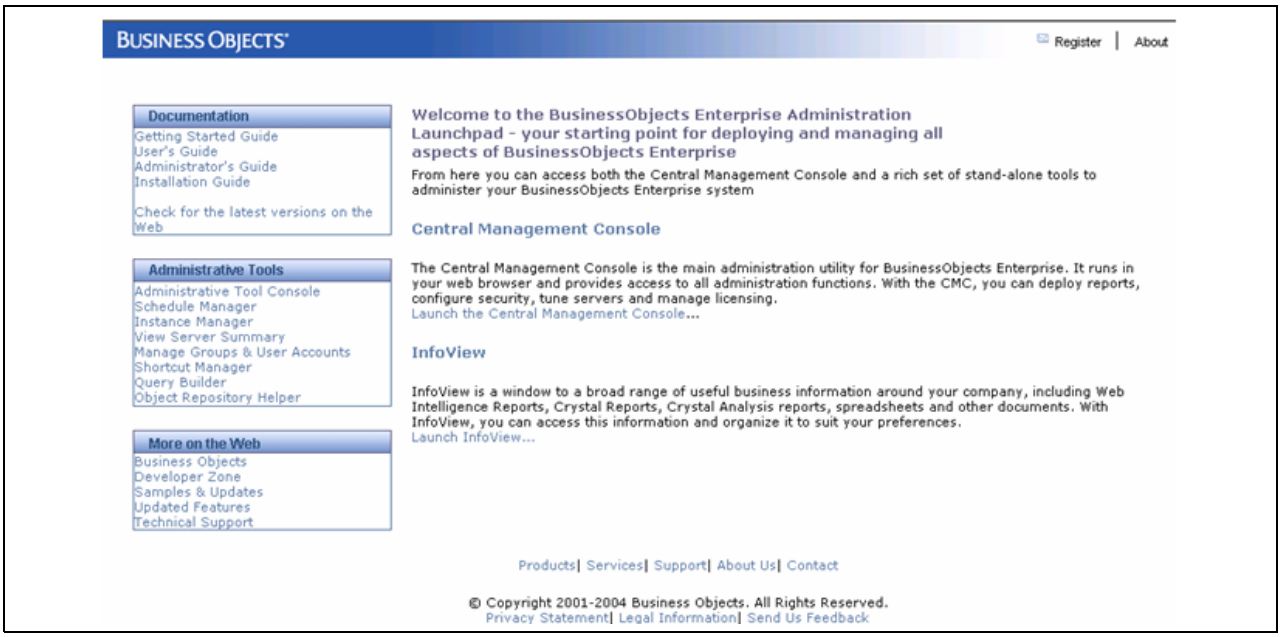
Task 12-3-11: Confirming Access to the BusinessObjects Enterprise XI Administration and User Launchpad Applications

After you have completed the installations, you should confirm that you can access the administration console and User Launchpad. Use this procedure for both the Windows and UNIX/Linux installations.

Before beginning this task, start the web server software under which you installed BusinessObjects Enterprise XI.

1. In a new browser window, enter the following URL for the admin launchpad (where <*machine_name*> is the computer name and <*port*> is the web server port):

   http://<*machine_name*>:<*port*>/businessobjects/enterprise11/adminlaunch/



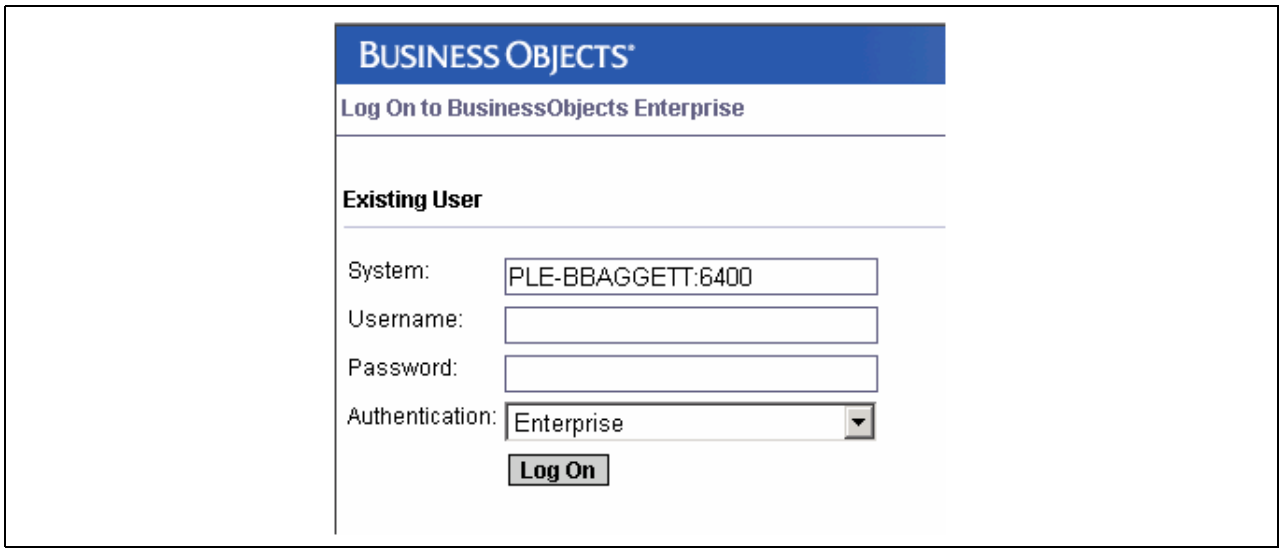
BusinessObjects Enterprise XI Admin Launchpad window

2. Select the Central Management Console link and enter *administrator* (no password) to confirm that you can log in.
3. To confirm that you can access the user launch, enter the following URL in the browser address line for the user launchpad (where <*machine_name*> is the computer name and <*port*> is the web server port):

   http://<*machine_name*>:<*port*>/businessobjects/enterprise11/desktoplaunch

4. Select the link BusinessObjects Enterprise XI and enter the following to confirm that you can log in:

System	<machine_name>:6400
Username	administrator
Password	(none)
Authentication	Enterprise



BusinessObjects Enterprise XI logon window

Note. Remember that before you can use BusinessObjects Enterprise XI, you must complete additional installation and configuration procedures

Task 12-3-12: Configuring the PeopleSoft Application for BusinessObjects Enterprise XI Integration

This section discusses:

- Preparing the PeopleSoft Application to Integrate with BusinessObjects Enterprise XI
- Running the Data Mover Script and Database Project
- Configuring the PeopleSoft Application Server
- Configuring the PeopleSoft Pure Internet Architecture
- Adding PeopleSoft Users for Integration
- Identifying the Local Default Node in your System
- Adding the Local Default Node as a Message Node to your Gateway
- Configuring Query Access Services
- Configuring Query Access Services Node Security

Preparing the PeopleSoft Application to Integrate with BusinessObjects Enterprise XI

In the PeopleSoft application that you wish to integrate with BusinessObjects Enterprise XI, you will have to configure settings in the following areas:

- PeopleSoft Application Server
- PeopleSoft Web Server
- PeopleSoft Integration Broker
- Query Access Services (QAS)

Running the Data Mover Script and Database Project

The PeopleSoft database as delivered is configured to run reports using Crystal 9. In order to use BusinessObjects Enterprise XI you need to run a data mover script and a project.

This will add pertinent roles and change the Crystal process types to use the BusinessObjects Enterprise XI executable.

1. Run Data Mover script CRTOBOE.
2. Run Project CRTOBOE.

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. Set Analytic Servers (Feature 11) to Yes.

```
-------------------------------------------------------
Quick-configure menu -- domain: HR84
-------------------------------------------------------
       Features                     Settings
      ==========                   ==========
 1) Pub/Sub Servers     : No    15) DBNAME      :[HR84]
 2) Quick Server        : No    16) DBTYPE      :[MICROSFT]
 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   :[c:\Program Files\Microsoft⇒
 SQL Server\80\Tools\Binn]
 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

Enter selection (1-26, h, or q):
```


4. Open psappsrv.cfg, the PeopleSoft Application Server configuration file, from the <PS_HOME>\appserv\<DOMAIN> directory.
5. Change the MIN Instances and MAX Instances for the Application Server and Analytic Server to be greater than 1. (Of course, the MAX setting should be no less than the MIN setting.)

```
[PSAPPSRV]
;=====================================================
; Settings for PSAPPSRV
;=====================================================

;-----------------------------------------------------
; UBBGEN settings
Min Instances=2
Max Instances=4
```

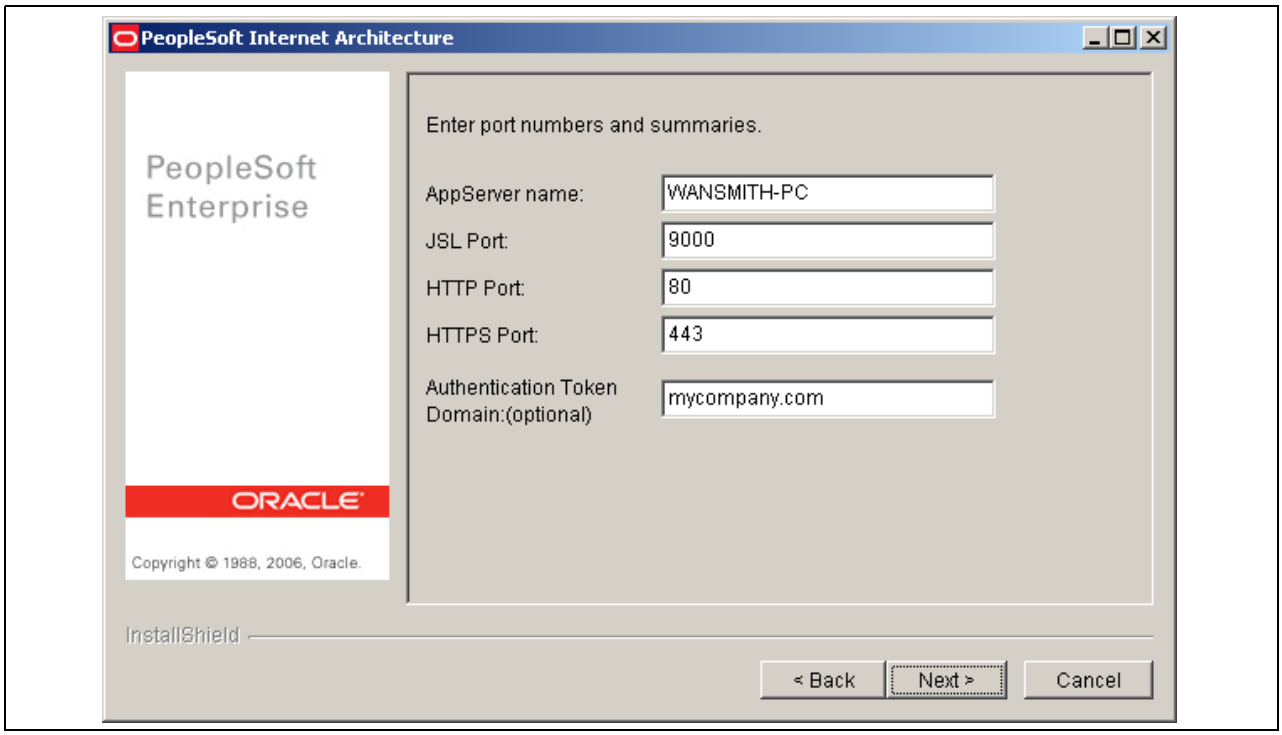
6. Re-start the application server.

Configuring the PeopleSoft Pure Internet Architecture

To ensure that single sign-on works properly in the integration between PeopleSoft and BusinessObjects Enterprise XI the Authentication Token Domain in the PIA architecture must be configured and the PeopleSoft Integration Gateway properties must be set.

1. Run <PS_HOME>\setup\mpinternet\setup.exe.
2. Enter a value for the Authentication Token Domain.

   See “Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode,” Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.



Specifying the Authentication Token Domain

Adding PeopleSoft Users for Integration

To add User QAS_Admin:

1. Navigate to PeopleTools, Security, User Profiles, User Profiles.
2. Select the Add a New Value tab.
3. Enter QAS_Admin, and click the Add button.
4. Choose a symbolic id from the drop-down list.
5. Enter QAS_Admin for password.
6. Select the ID tab.
7. Select *none* for the ID Type.
   Enter “QAS administrative user” for description.
8. Select the Roles tab.
9. Enter QAS Admin, and click the Save button.

To add User BOE_Admin:

1. Return to the Add a New User page.
2. Select the Add a New Value tab.
3. Enter BOE_Admin, and click the Add button.
4. Choose a symbolic id from the drop-down list.
5. Enter BOE_Admin for password.
6. Select the ID tab.
7. Select *none* for ID Type.
   Enter “BOE administrative user” for description.
8. Select the Roles tab.
9. Enter BOE Admin, and QAS Admin, and click the Save button.

To add User BOE_Viewing:

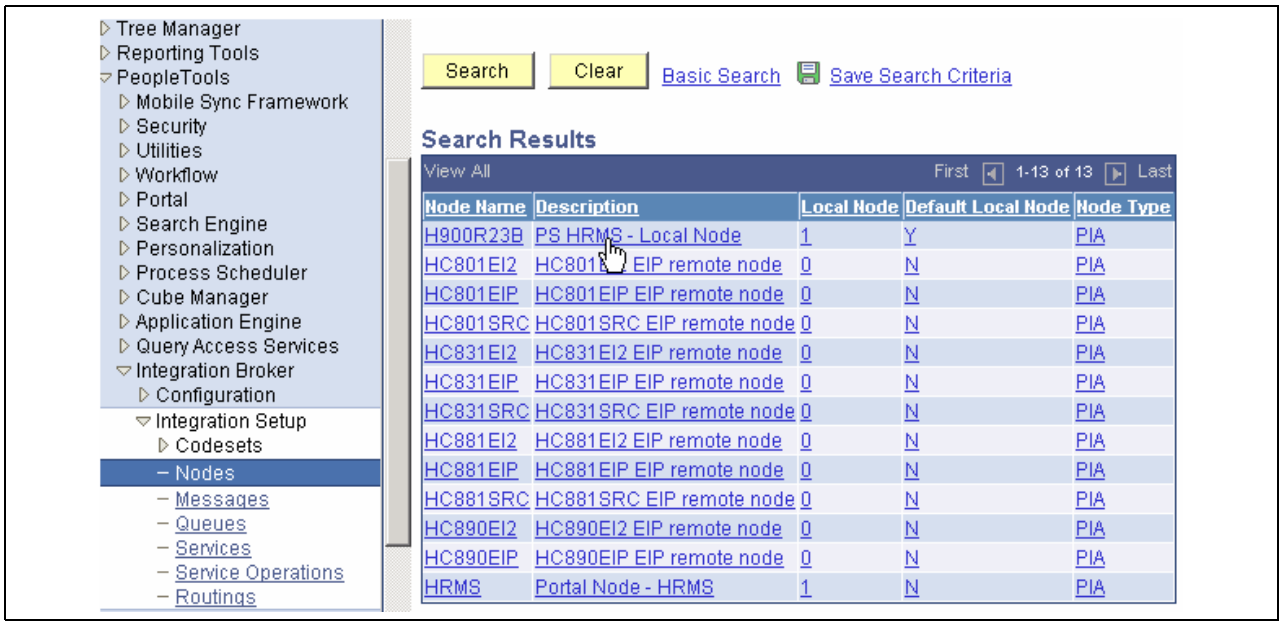
1. Return to the Add a New User page.
2. Select the Add a New Value tab.
3. Enter BOE_Viewing, and click the Add button.
4. Choose a symbolic id from the drop-down list.
5. Enter BOE_Viewing for password.
6. Select the ID tab.
7. Select *none* for ID Type.
   Enter “BOE viewing user” for description.
8. Select the Roles tab.
9. Enter BOE Viewing, and click the Save button.

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.



Finding the Default Local Node

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.

Adding the Local Default Node as a Message Node to your Gateway

You must update the PeopleSoft Integration Broker Gateway to recognize your PeopleSoft application server.

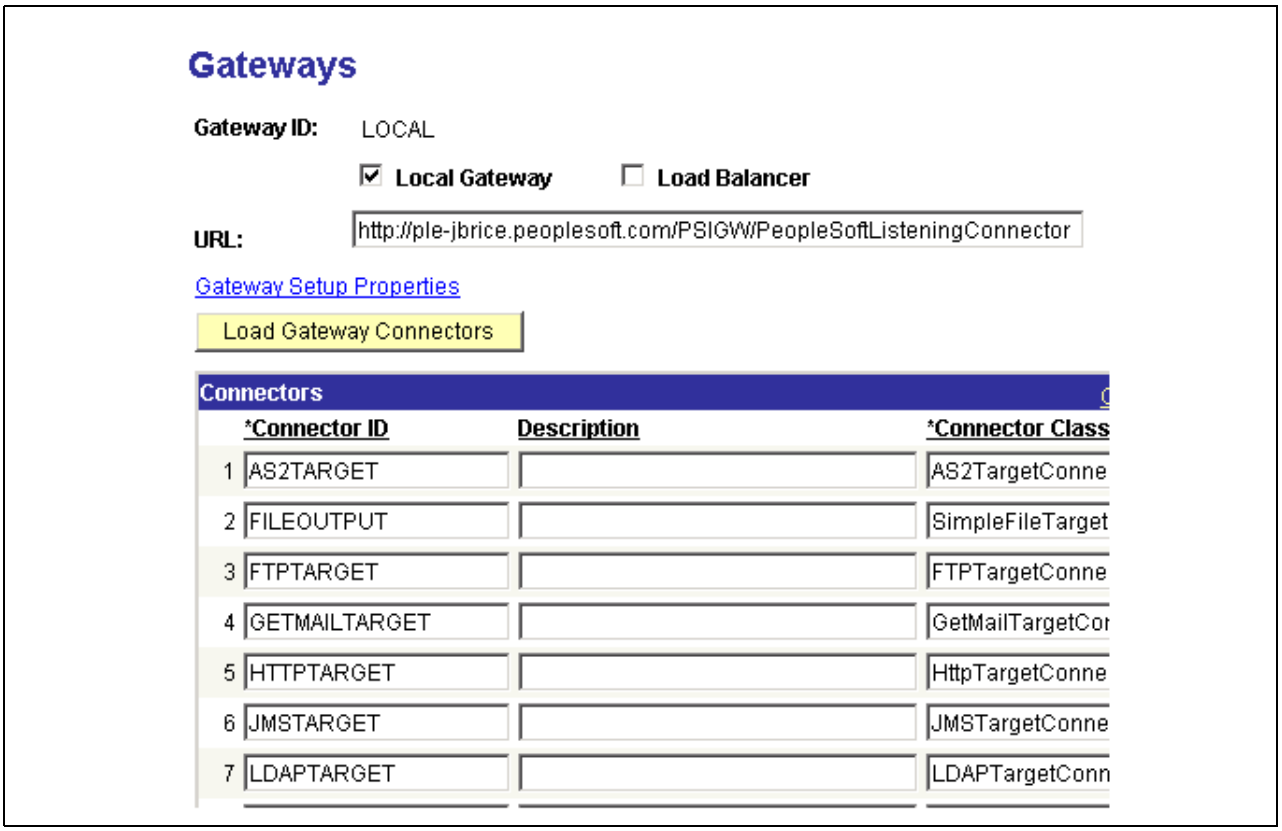
To add the Local default node:

1. Log onto your PeopleSoft system with a user ID that has rights to access PeopleTools.
2. Select PeopleTools, Integration Broker, Configuration, Gateways.
3. Search and select the Gateway that is designated as the Local Gateway (that is, the Local Gateway check box is selected).
4. In the 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:

   http://<machine_name>:<port>/PSIGW/PeopleSoftListeningConnector
5. Click Save.

   You should get a "Loading Process was successful" message.

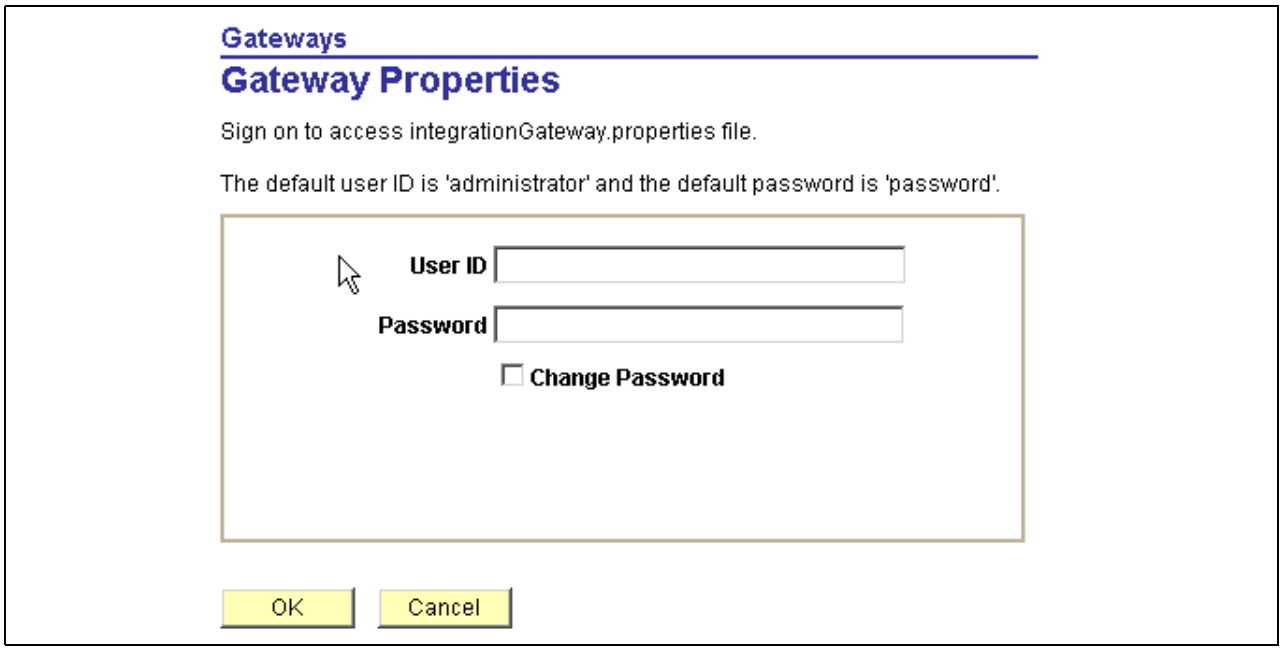
Note. If you are configuring the Gateway for the first time, you get a message prompting you to load connectors. Click OK. You get a confirmation message. click OK again.



Gateways page

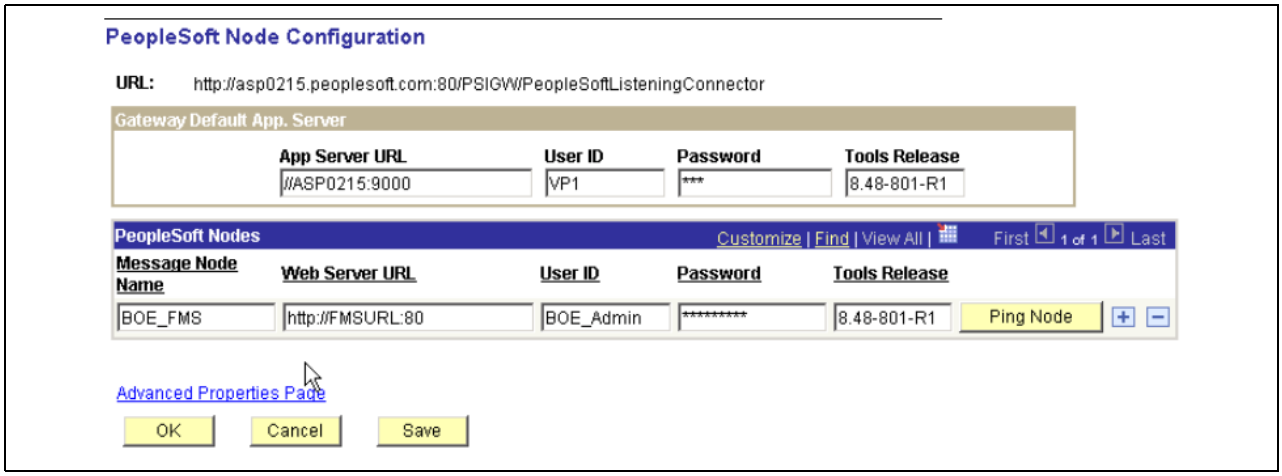
6. Select the Gateway Setup Properties link on this page.

   This will take you to a page where you must enter the administrator userid and password.



Gateway Properties sign on window

7. Add a new node in the PeopleSoft Node Configuration page and save.



PeopleSoft Node Configuration page

Note. If the proper message node name already exists, you do not have to add it.

Enter the following values:

Message Node Name	The name of the Default Local Node that you had copied to your text editor earlier.
Web 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
Tools Release	Provide the precise PeopleTools release that your application server is using.

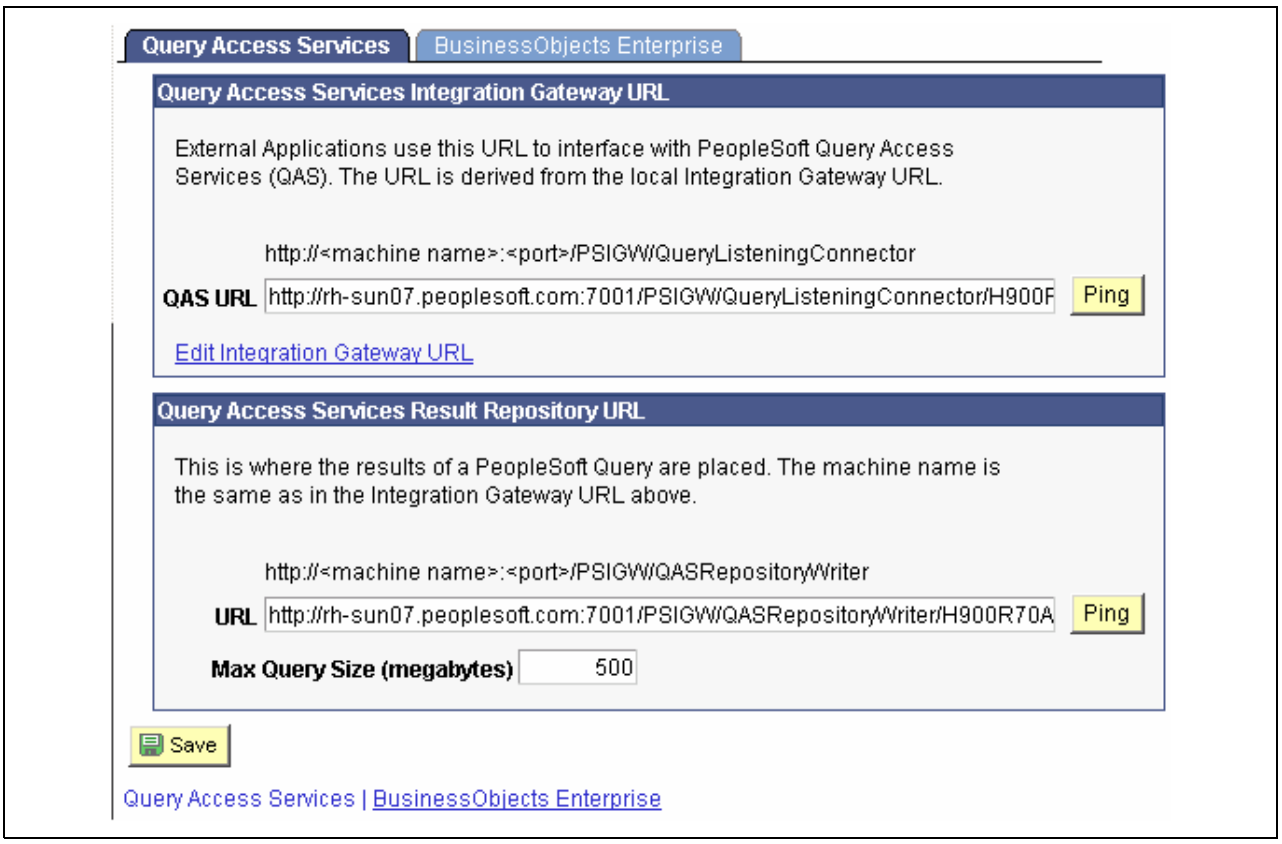
8. Click Save.

   Click the Ping Node button beside the message node name that you added to confirm success.
9. Click OK.
10. Restart the PeopleSoft web server in order for the configuration file changes to take effect.

Configuring Query Access Services

To configure Query Access Services (QAS):

1. Select PeopleTools, Query Access Services, Configure.
2. All of the information on the screen is automatically pre-populated.
3. Click the Save button to save the information.



Query Access Services page

4. Copy the QAS URL entry into a text editor.

   Later when you configure the BusinessObjects Enterprise XI server, you will need to paste this text.
5. Select the BusinessObjects Enterprise tab.
6. Enter the user BOE_Admin as the Administrative User, and enter its password.

Specifying Administrative and Viewing users

7. Enter the user BOE_Viewing as the Viewing User, and enter its password.

Note. The Administrative User is used by BusinessObjects Enterprise XI to schedule reports. The Viewing User is used to view reports.

---

8. Enter the URL for the BOE web server.
9. Enter the <machine_name>:<port> for the CMS machine name.
10. Enter a meaningful name for the BOE Domain Name. Use UPPERCASE and do not use spaces.

    Copy this to a text editor as you will use this value in the BOE server setup.
11. Click Save to save your settings.

Configuring Query Access Services Node Security

To configure QAS node security:

1. Navigate to PeopleTools, Integration Setup, Node Definition. Search for node QAS_REMOTE.
2. Enter user QAS_Admin and save.
3. Navigate to PeopleTools, Integration Setup, Node Definition. Search for the default local node.
4. Enter user QAS_Admin and save.

Task 12-3-13: Configuring the BusinessObjects Enterprise XI Server

To enter PeopleSoft authentication information in BusinessObjects Enterprise XI:

1. In a browser, enter the following URL, substituting the name of your BusinessObjects Enterprise XI server for <machine_name>, and the BusinessObjects Enterprise XI port number for <BOE_port>:

   http://<machine_name>:<BOE_port>/businessobjects/enterprise11/adminlaunch/

   Note. You can also click the Webserver Ping button on the QAS admin page to open the Central Manager Console.

2. Log on with *administrator* and no password.

Central Management Console log on

3. On the CMC Home page, click Authentication.

CMC Home page

4. Click the PeopleSoft Enterprise tab.

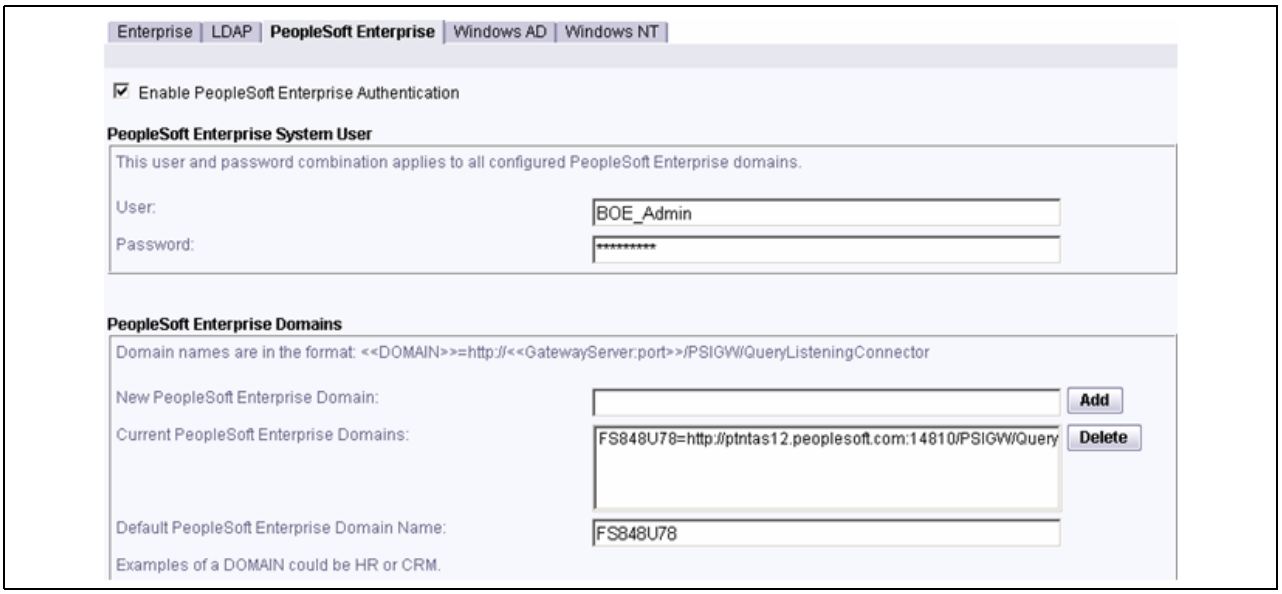
Note. If this tab is not present, it means the PeopleSoft Data Driver and Security Plugin have not been installed.

See Installing BusinessObjects Enterprise XI Integration on Windows.

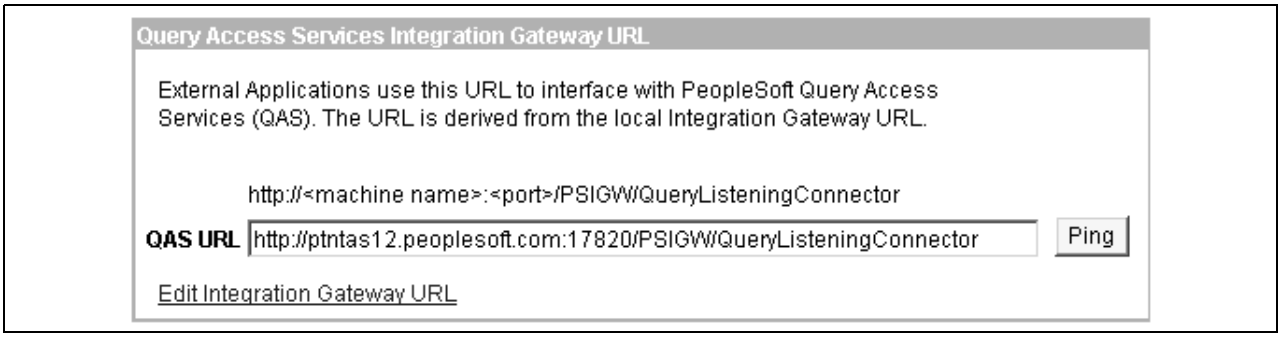
See Installing BusinessObjects Enterprise XI Integration on UNIX or Linux.

Authentication page

5. Enter information on this page, then press the Update button at the bottom.



PeopleSoft Enterprise page



Query Access Services Integration Gateway URL page

- Select the check box Enable PeopleSoft Enterprise Authentication.
- In the PeopleSoft Enterprise System User field, enter BOE_Admin as the user, and enter its password.
- Enter PeopleSoft Enterprise Domain information.

  You can have up to one PeopleSoft Enterprise domain listed in the Current PeopleSoft Enterprise Domain box. To add a domain to this box enter the information into the New PeopleSoft Enterprise Domain box and click the Add button.

  The value you enter here has two components separated by an equal ("=") sign. The left-hand side is the name of the domain. This must be the same as the BOE Domain Name that you entered on the QAS configuration page, and that you copied to a text editor.

  See Configuring the PeopleSoft Application for BusinessObjects Enterprise XI Integration, Configuring Query Access Services.

  The right-hand side is the Query Access Services Integration Gateway URL that you copied into a text editor earlier when you configured the PeopleSoft application (see the second screen immediately above).

- Enter a value in the Default PeopleSoft Enterprise Domain Name field.

  This value should match the Domain name specified in the Current PeopleSoft Enterprise Domain (that is, the characters that appear before the equal sign).

Note. The following three values must be exactly the same for proper configuration:

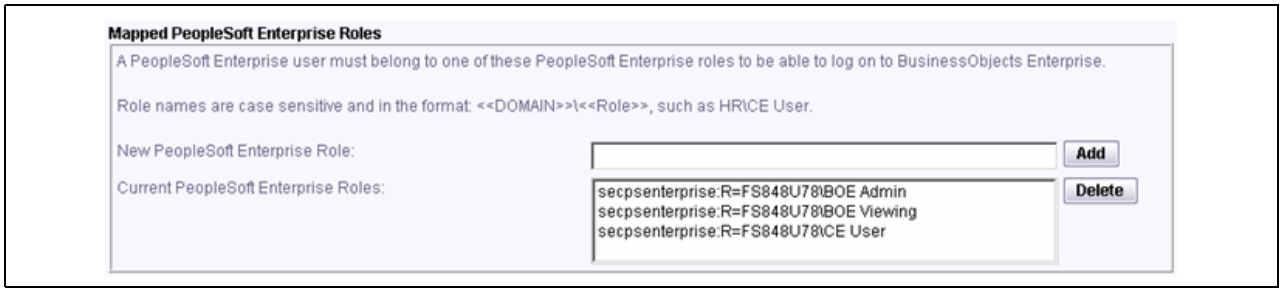
The BOE Domain Name on the PeopleSoft QAS Configuration page.

The domain portion of the Current PeopleSoft Enterprise Domain in the BOE XI CMC PeopleSoft Enterprise Authentication page.

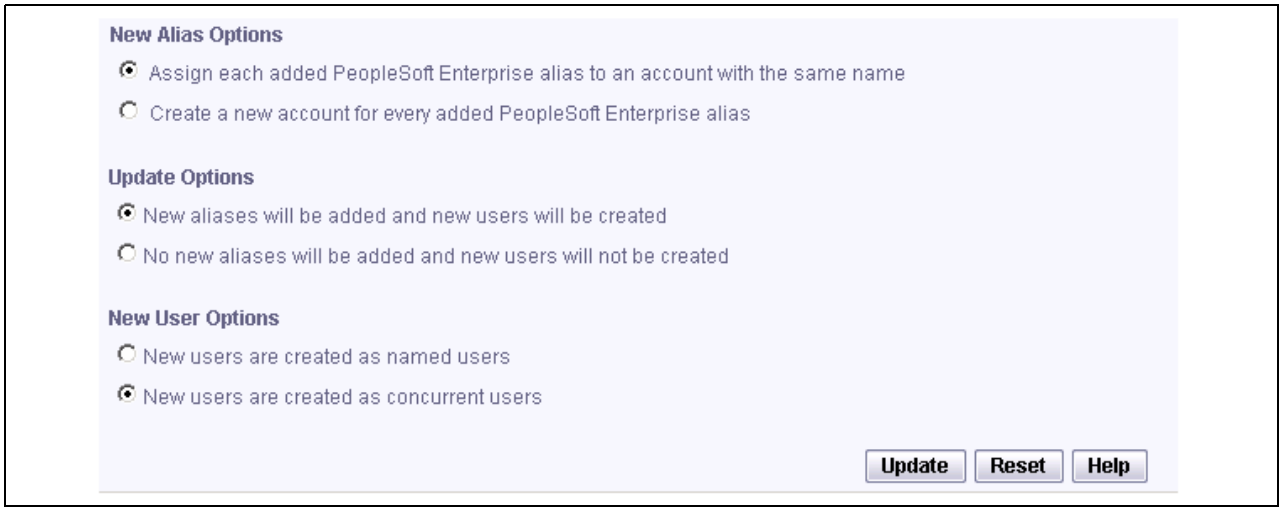
The Default PeopleSoft Enterprise Domain Name in the BOE XI CMC PeopleSoft Enterprise Authentication page.

---

6. Use the information in the table to fill out these screens:



Mapped PeopleSoft Enterprise Roles page



Options for PeopleSoft Users

PeopleSoft Role	New Alias Options	Update Options	New User Options
BOE Admin	(Choice 1) Assign each added PeopleSoft Enterprise alias to an account with the same name	(Choice 1) New aliases will be added and new users will be created	(Choice 1) New users are created as named users
BOE Viewing	(Choice 1) Assign each added PeopleSoft Enterprise alias to an account with the same name	(Choice 1) New aliases will be added and new users will be created	(Choice 2) New users are created as *concurrent* users

For each PeopleSoft role in the table:

a. Enter the role name.

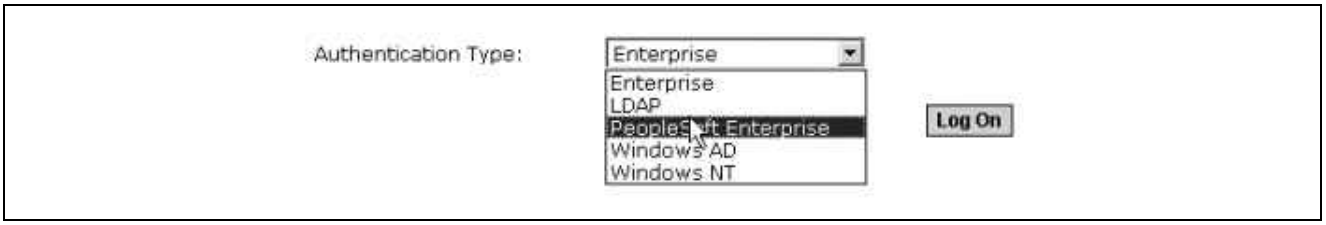
Note. Enter the role name only. The remaining information (for example, secpsenterprise:R=PSIGW\) will be pre-pended after you click the Update button at the bottom of the page.

b. Click the Add button.

c. Select the options indicated in the table.

d. Click the Update button.

After you add the PeopleSoft roles and update, you will see PeopleSoft Enterprise as a new Authentication Type when you log into the BusinessObjects Enterprise XI Central Management Console:



Authentication Type list

Also, User IDs from the PeopleSoft database with the given roles have been automatically added into BusinessObjects Enterprise XI.

You have completed the installation and configuration. Proceed to run the verification tests in the next section.

Task 12-3-14: Verifying the PeopleSoft to BusinessObjects Enterprise XI Integration

Use these tests to ensure that the various features of BusinessObjects Enterprise XI are functional:

Note. Prior to running your verification tests, you need to convert your Crystal Reports from Crystal 9 format to Crystal 11 format. See Converting Crystal Reports for details.

1. Schedule and run a Crystal Report

   a. Login to PeopleSoft 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 *CE 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 from step 2.

d. Click the Details link next to the report, then the .RPT link to view the report in the BusinessObjects Enterprise XI report viewer.

Task 12-4: Migrating your BusinessObjects Enterprise XI Installation to a New Version of PeopleTools

You must complete several steps in order to ensure that your new version of PeopleTools integrates properly with your BusinessObjects Enterprise XI installation.

Important! If you fail to perform these steps in the correct order, you could compromise the installation.

1. Delete all PeopleSoft Users from the BusinessObjects Enterprise XI 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. Click the check box next to all PeopleSoft Users (not administrator or guest) and delete them.

2. Delete Roles in the BusinessObjects Enterprise XI server:

a. Login to the Central Management Console.

b. Click on the PeopleSoft Authentication tab.

c. Delete All the roles. Click Update.

3. Delete the Domains:

a. Delete All the Domains. 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 BusinessObjects Enterprise XI Web Server and all the BusinessObjects Enterprise XI services.

5. Uninstall the PeopleSoft Integration for BusinessObjects Enterprise XI from the server.

This is the integration that was installed for the old version of PeopleTools.

6. Install the PeopleSoft Integration for BusinessObjects Enterprise XI for the new version of PeopleTools.
7. Run the PeopleSoft Integration installer from the PeopleTools build you installed.
8. Run the verification steps in the task Installing BusinessObjects Enterprise XI, Verifying the PeopleSoft to BusinessObjects Enterprise XI Integration

Task 12-5: Installing Crystal Reports XI

Install Crystal Reports XI only on workstations of those people who:

- will be creating or modifying report definitions
- will be running the conversion program to convert reports from Crystal 9 format to Crystal XI format

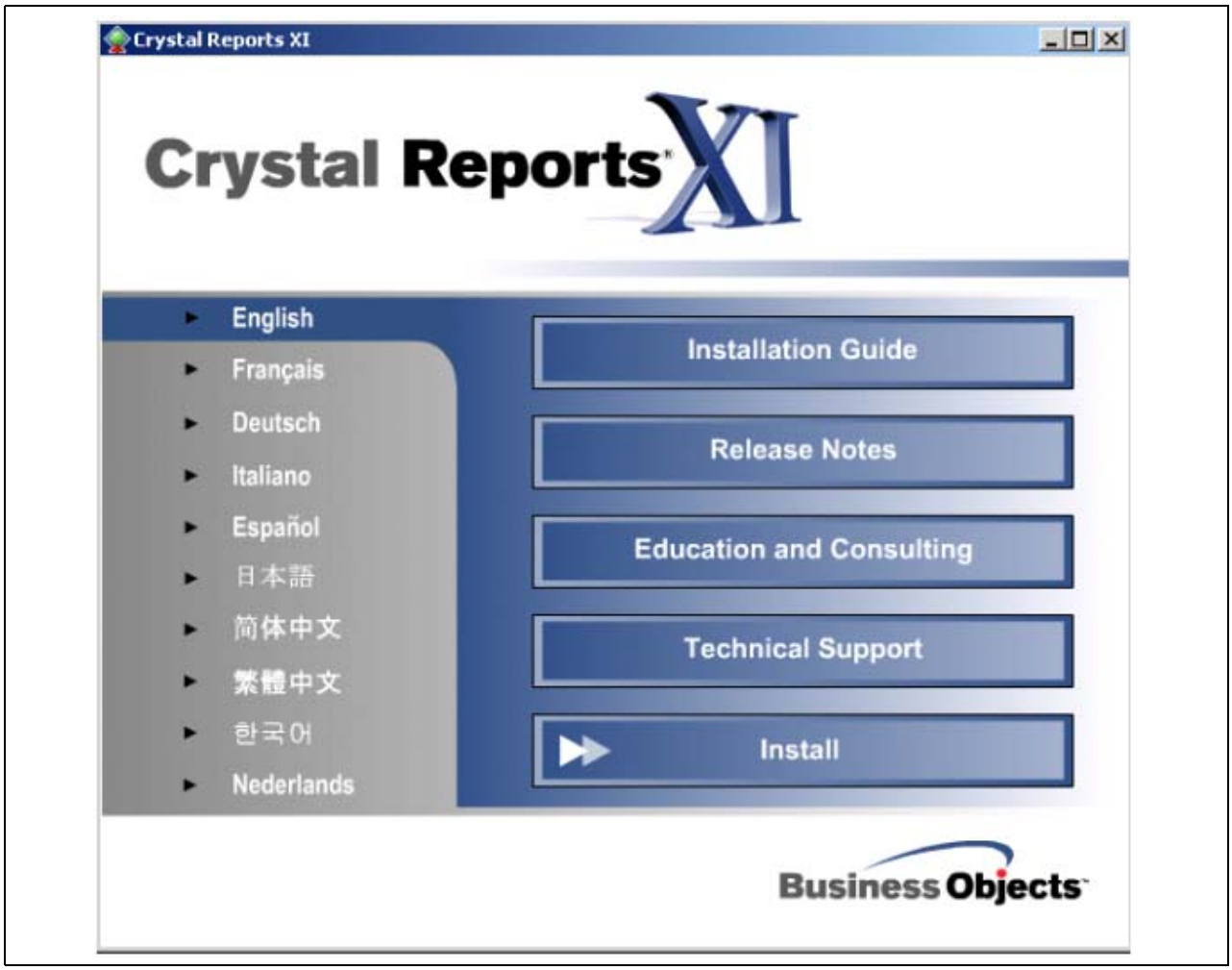
Simply running reports does not require installation of Crystal Reports XI.

Before beginning this task, verify that the target workstation meets the minimum system requirements as detailed in the Enterprise PeopleTools 8.48 Hardware and Software Requirements guide.

To install Crystal Reports XI:

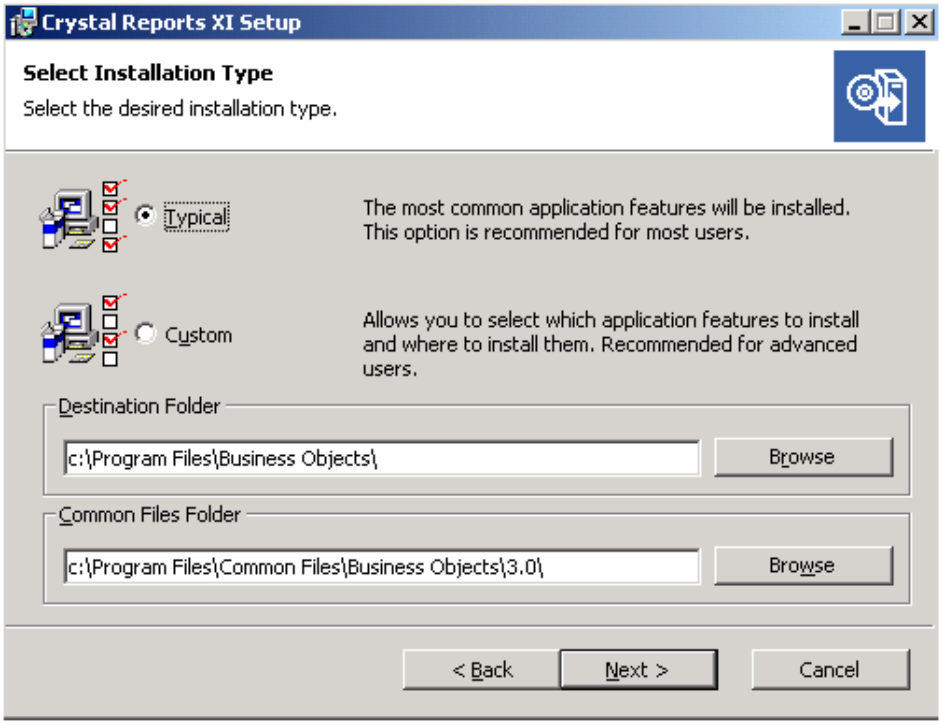
1. Insert Crystal Reports XI for PeopleSoft Disk 1.

   It should start automatically. If it does not, run `CRXI_Autorun.exe` from the CD directory.
2. Select your language and click Install.



Crystal Reports XI dialog box

3. Accept the defaults on the following windows.
4. Select Typical installation and, if necessary change the destination folder and common files folder (it is recommended that you accept the defaults).

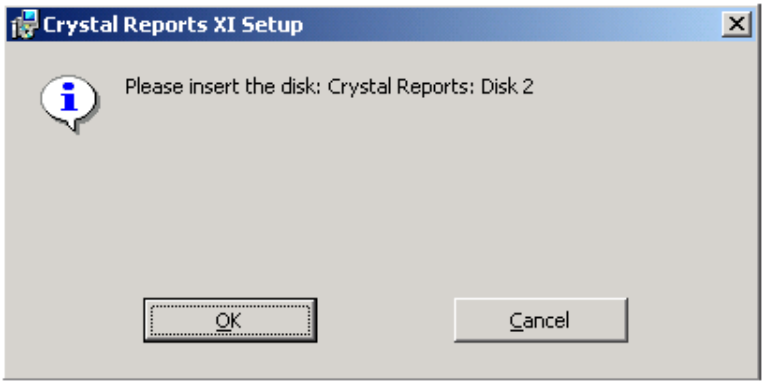


Select Installation Type dialog box

5. Click Next.

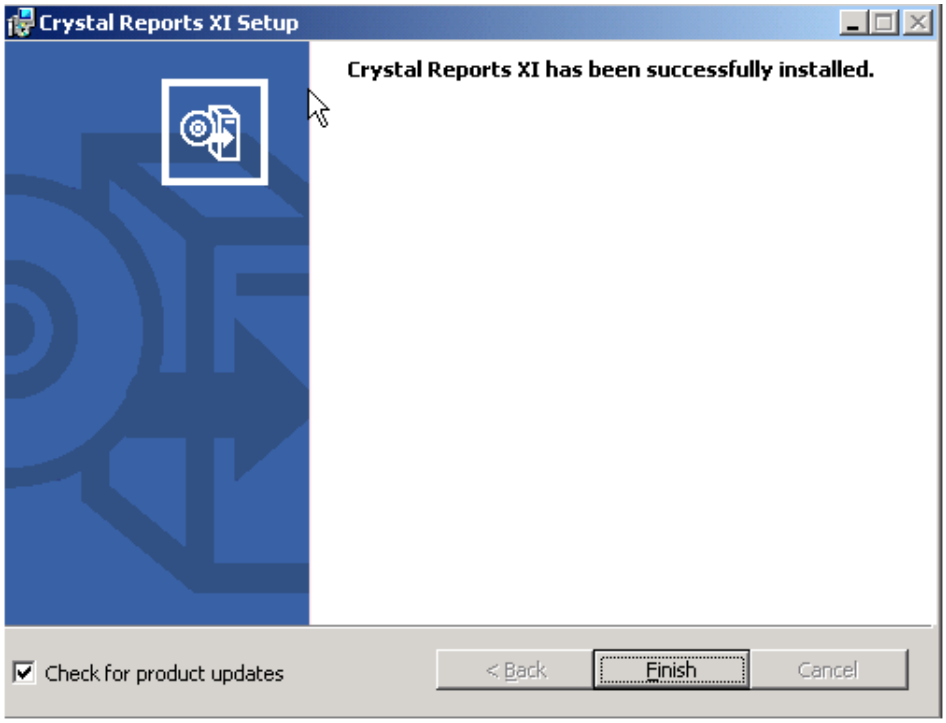
   The installation begins. This takes several minutes.

6. Insert Disk 2 and click Next when this message box appears:



Crystal Reports XI Setup dialog box - insert disk

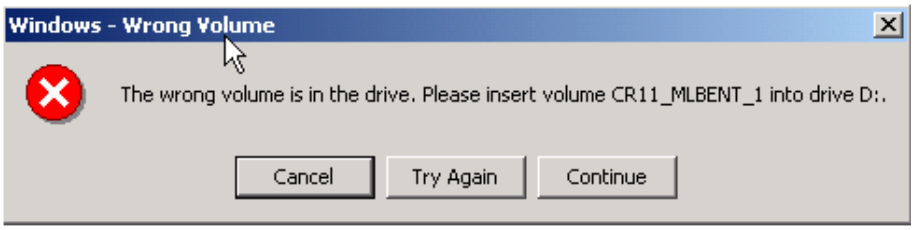
7. The installation proceeds. The installation is complete when this window appears:



Crystal Reports XI Setup dialog box - successful installation

Note. If there are any product updates, you should install them.

8. Click the Finish button. If the following dialog box appears, click Continue.



Wrong volume dialog box

9. Set the PATH environment system variable after the Crystal Reports installation is complete to include:

   <CR_DIR>\BusinessObjects Enterprise 11\win32_x86

Note. <CR_DIR> refers to the folder in which you installed Crystal Reports XI (for example, C:\Program Files\Business Objects\). Substitute your path.

Task 12-6: Removing Crystal Reports XI

To remove Crystal Reports XI:

1. On the workstation where you installed Crystal Reports XI, select Start, Settings, Add/Remove Programs.
2. Highlight Crystal Reports XI.
3. Select Remove.

It will take several minutes for the removal to finish.

Task 12-7: Administering and Using BusinessObjects Enterprise XI

This section discusses:

- Understanding PeopleSoft Permission Lists, Roles, and Users Involved in PeopleSoft Integration with BusinessObjects Enterprise XI
- Installing Patches
- Changing the Data Source of the BusinessObjects Enterprise XI Report Repository
- Uninstalling BusinessObjects Enterprise XI Integration
- Switching to Crystal 9 from BusinessObjects Enterprise XI
- Using Logging in BusinessObjects Enterprise XI
- Understanding BusinessObjects Enterprise XI License Codes

Understanding PeopleSoft Permission Lists, Roles, and Users Involved in PeopleSoft Integration with BusinessObjects Enterprise XI

Certain PeopleSoft permission lists, roles, and users are necessary in order to have your PeopleSoft application integrate with BusinessObjects Enterprise XI. To run BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI:

- PeopleSoft Permission Lists
- PeopleSoft Roles
- PeopleSoft Users IDs

The Permission Lists and Roles are added to the PeopleSoft database when you run the CRTOBOE project and 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 run the project CRTOBOE:

- 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 run the project CRTOBOE:

- “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.

- “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:

- QAS_Admin

  This user makes QAS web service calls to PeopleSoft from BusinessObjects Enterprise. It is known only within the PeopleSoft application. BusinessObjects Enterprise XI is not aware of this user.

  When user BOE_Admin calls the PeopleSoft application from BusinessObjects Enterprise XI with a request to run a query through QAS, the user is switched programmatically from BOE_Admin to QAS_Admin to run the query.

- BOE_Admin

  This user is used:

  - to run the Crystal 9 to Crystal XI report convert/publish utility
  - by Process Scheduler to run reports in BusinessObjects Enterprise XI

  This user is specified in the PeopleSoft BusinessObjects Enterprise PIA configuration page. The user will be created in BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI administrators group.

- BOE_Viewing

  PeopleSoft Report Manager logs in to BusinessObjects Enterprise XI Interactive Viewer as this user in order to permit viewing dynamic report output. This user is specified in the PeopleSoft BusinessObjects Enterprise XI PIA configuration page.

  The user will be created automatically in BusinessObjects Enterprise XI by specifying its corresponding role (that is, “BOE Viewing”) in that application.

  This user id is a concurrent user in BusinessObjects Enterprise XI, which means that each time it logs into BusinessObjects Enterprise XI 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 Interactive Viewer via the PeopleSoft Report Manager will appear from the perspective of the BusinessObjects XI Interactive Viewer to be concurrent logins from the same user – BOE_Viewing.

Task 12-7-1: Installing Patches

While you may have installed patches for both BusinessObject Enterprise XI and the PeopleSoft Integration for BusinessObject Enterprise XI that were required at installation time, there may be other patches that you need to install after installation.

Check PeopleSoft Customer Connection to see whether there are patches you must install.

Installation instruction for each patch will be included with the patch.

Task 12-7-2: Changing the Data Source of the BusinessObjects Enterprise XI Report Repository

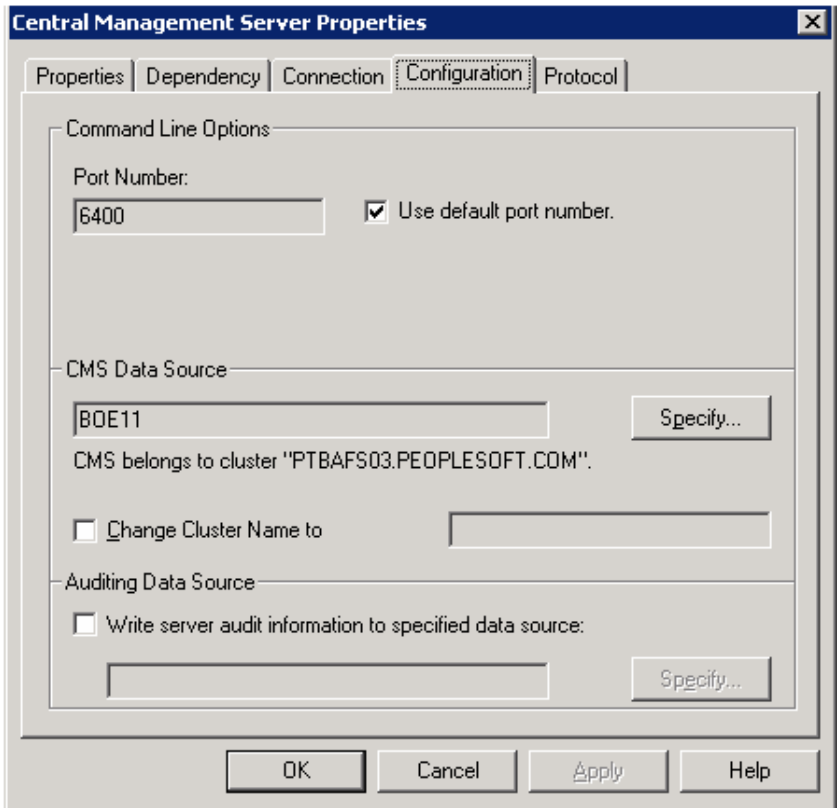
This section discusses:

- Changing the Data Source on Windows
- Changing the Data Source on UNIX or Linux

Changing the Data Source on Windows

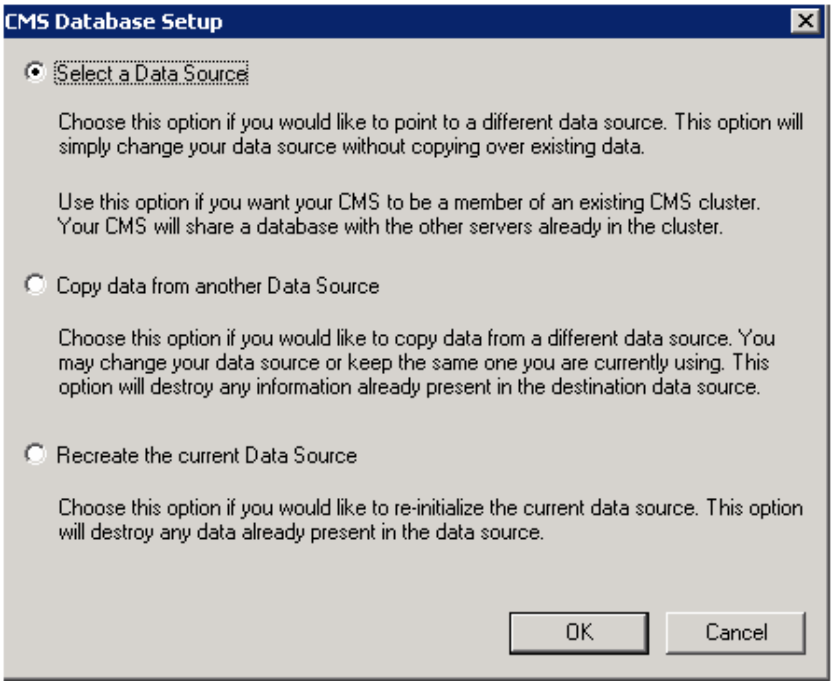
Use the steps in this section if you want to change the data source after you have completed the installation and integration.

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.



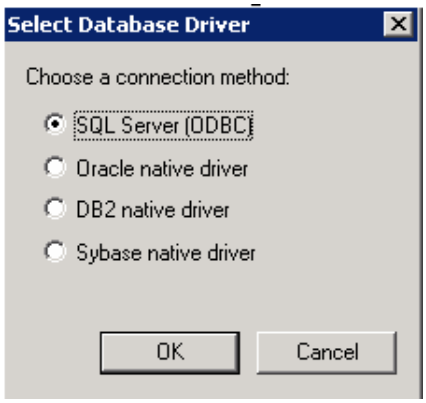
Central Management Server Properties dialog box: Configuration tab

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 12-7-3: Uninstalling BusinessObjects Enterprise XI Integration

This section discusses:

- Uninstalling PeopleSoft for BusinessObjects Enterprise XI on Windows
- Uninstalling BusinessObjects Enterprise XI on Windows
- Uninstalling PeopleSoft for BusinessObjects Enterprise XI on UNIX or Linux
- Uninstalling BusinessObjects Enterprise XI on UNIX or Linux

Uninstalling PeopleSoft for BusinessObjects Enterprise XI on Windows

To remove the BusinessObjects Enterprise XI integration to PeopleSoft Enterprise, you must first uninstall the PeopleSoft for BusinessObjects Enterprise XI integration, then uninstall BusinessObjects Enterprise XI.

1. Select Start, Settings, Control Panel.
2. Select Add/Remove Programs.
3. Select BusinessObjects Enterprise XI for PeopleSoft Integration.
4. Click Remove.

Uninstalling BusinessObjects Enterprise XI on Windows

After removing the BusinessObjects Enterprise XI integration to PeopleSoft, use these steps to uninstall BusinessObjects Enterprise XI:

Note. These instructions assume that Crystal Reports XI is not installed on the same machine as BusinessObjects Enterprise XI.

---

1. Select Start, Settings, Control Panel, Add or Remove Programs.
2. Remove Business Objects XI.
3. Remove the following directories:
   - <BOE_DIR>\Business Objects, where <BOE_DIR> is the directory where you installed BusinessObjects Enterprise XI. If you accepted the defaults during installation, this is C:\Program Files\Business Objects.
   - <BOE_DIR>\Common Files\Business Objects
4. Find and delete the following registry keys.

   Warning! Using the Registry Editor incorrectly can cause serious problems that may require you to reinstall the Windows operating system. Use Registry Editor at your own risk. It is strongly advised that you make a backup copy of the registry files (System.dat and User.dat on Win9x computers) before you edit the registry.

   - HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects
   - HKEY_LOCAL_MACHINE\Software\Business Objects
   - HKEY_USERS\S-#-#-##...-####\Software\Business Objects

     The number signs (#) represent a series of numbers that are different on each computer.
   - HKEY_USERS\.DEFAULT\Software\Business Objects
5. If you have both Business Objects and Crystal Reports installed on your system, you must also delete the Crystal Reports folders, and delete the Crystal Reports registry key, as described above.
6. Reboot your system.

Uninstalling PeopleSoft for BusinessObjects Enterprise XI on UNIX or Linux

To uninstall the BusinessObjects Enterprise XI integration to PeopleSoft on UNIX or Linux, you must first uninstall the PeopleSoft for BusinessObjects Enterprise XI integration, then uninstall BusinessObjects Enterprise XI.

1. Enter the following command, where <BOE_INTEG_HOME> is the directory where you installed BusinessObjects Enterprise XI Integration, and <OS> is your database platform:


```
<BOE_INTEG_HOME>/_uninst/uninstallaer.<OS> -console
```

2. At the following prompt, enter *1* for Next to continue:

```
InstallShield Wizard

Initializing InstallShield Wizard...

-------------------------------------------------------------------------------
Welcome to the InstallShield Wizard for Integration Kit for PeopleSoft
Enterprise 11.0

The InstallShield Wizard will uninstall Integration Kit for PeopleSoft
Enterprise 11.0 from your computer.
To continue, choose Next.

Integration Kit for PeopleSoft Enterprise 11.0
Oracle
http://www.oracle.com


Press 1 for Next, 3 to Cancel or 4 to Redisplay [1] 1
InstallShield Wizard

Initializing InstallShield Wizard...

-------------------------------------------------------------------------------
Welcome to the InstallShield Wizard for Integration Kit for PeopleSoft
Enterprise 11.0

The InstallShield Wizard will uninstall Integration Kit for PeopleSoft
Enterprise 11.0 from your computer.
To continue, choose Next.

Integration Kit for PeopleSoft Enterprise 11.0
Oracle
http://www.oracle.com


Press 1 for Next, 3 to Cancel or 4 to Redisplay [1] 1
```

3. At the following prompt, enter *1* for Next to continue:

```
Select the features for "Integration Kit for PeopleSoft Enterprise 11.0" you
would like to uninstall:

   [x] Integration Kit for PeopleSoft Enterprise 11.0

   To select/deselect a feature or to view its children, type its number:

     1.  [x] Native Drivers
```



```
     2.  [x] Security Plug-in (Server Side)
     3.  [x] Security Plug-in (Web Content)
     4.  [x] Security Plug-in (Client Side Java Version)

   Other options:

    -1. Deselect 'Integration Kit for PeopleSoft Enterprise 11.0'
     0. Continue uninstalling

   Enter command [0]


Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1] 1
```

4. At the following prompt, confirm the directory where BusinessObjects Enterprise is installed and then enter *1* for Next to continue:

```
Integration Kit for PeopleSoft Enterprise 11.0 will be uninstalled from the
following location:

/ds1/home/bobje/installation/peoplesoft

with the following features:

Native Drivers
Security Plug-in (Server Side)
Security Plug-in (Web Content)
Security Plug-in (Client Side Java Version)

Press 1 for Next, 2 for Previous, 3 to Cancel or 4 to Redisplay [1]
```

5. Confirm the uninstallation is correct and enter *3* to finish:

```
Uninstalling Integration Kit for PeopleSoft Enterprise 11.0...

-------------------------------------------------------------------------------
The InstallShield Wizard has successfully uninstalled Integration Kit for
PeopleSoft Enterprise 11.0. Choose Finish to exit the wizard.
Press 3 to Finish or 4 to Redisplay [3]
```

Uninstalling BusinessObjects Enterprise XI on UNIX or Linux

After removing the BusinessObjects Enterprise XI integration to PeopleSoft, use these steps to uninstall BusinessObjects Enterprise IX:

1. Disable and stop all of the BusinessObjects Enterprise XI servers.
2. Run the script `$bobje/uninstallBOBJE.sh`.

   This script deletes all of the files installed during your original installation of BusinessObjects Enterprise XI.

Note. You may also notice scripts in the %bobje/uninstall directory. Do not run the scripts in the %bobje/uninstall directory manually. Each of these scripts removes only the files associated with a single BusinessObjects Enterprise XI component, which may leave your BusinessObjects Enterprise XI system in an indeterminate state.

3. Remove all of the files in the $bobje directory by running the command `rm -rf`.

   This removes files that are created during the installation process, or files created by the system or by users after installation, that are not removed by the uninstallBOBJE.sh script.

4. If you performed the "system" installation type, you will also need to delete the run control scripts from the appropriate /etc/rc# directories.

Task 12-7-4: Switching to Crystal 9 from BusinessObjects Enterprise XI

Use the instructions in this section if you need to switch your environment back to run Crystal Reports using the Crystal Reports 9 runtime instead of the BusinessObjects Enterprise XI server.

To switch from using BusinessObjects Enterprise XI to Crystal Reports:

1. Run the DMS script boetocr.dms
2. Run the project BOEtoCR.

   Running this script and project will change your delivered Crystal process type back to use Crystal 9.

Note. This will not change any process types that you created.

You cannot run any reports converted to BusinessObjects Enterprise XI format using Crystal Reports. You have to run your original Crystal reports.

Task 12-7-5: Using Logging in BusinessObjects Enterprise XI

This section discusses:

- Enabling Web Component Adapter Logging
- Enabling BusinessObjects Enterprise XI Server Logging
- Enabling Security Plug-in Logging
- Enabling BusinessObjects Enterprise XI Services Tracing

Enabling Web Component Adapter Logging

The integration between PeopleSoft and BusinessObjects Enterprise XI requires a special version of the Web Component Adapter. It is delivered as a war file called pswebcompadapter.war.

To enable logging:

1. Stop the application server running BusinessObjects Enterprise XI.
2. Extract the web.xml file from the pswebcompadapter.war archive.
3. Edit the file using a text editor. The relevant entries to edit are:

Context Parameter	Description
Log.file	Filename of the log file including full real path to file, including extension. The default is WCA, with no path.
Log.ext	File extension of log file; the default is .log
Log.isRolling	Determines whether or not the logs will be rotated; the default value is true.
Log.size	If log rolling is turned on, this will govern the maximum size allowed before the log file is rotated. Accepted suffixes: MB, KB, and GB
Log.level	The default log level is "ERROR" Possible values are: ALL, DEBUG, INFO, WARN, FATAL, ERROR, OFF
Log.entryPattern	This is the log4j Pattern Layout. Log4j is a standard for logging in XML files for Java application servers. It formats logging events according to the pattern specified. If no value is specified, the entry in the log will display the date, thread, level or priority of the logging event, and the message. Conversion patterns are composed of literal text and conversion specifiers. Literal text is output as is. Conversion specifiers consist of the % character followed by an optional format modifier and a mandatory conversion character. For example: %-5p [%t]: %m%n Please refer to log4j documentation for accepted log patterns.

Log.Flags	Possible values are:
	
	`-trace`
	`-reqtrace`
	`-noassert`
	`-stackdump`
	`-nativeassert`
	`-nonativeassert`
	`-notraceoutput`
	`-filelogFilter`

4. Reinsert the file into the WEB-INF directory in pswebcompadapter.war.

Note. To reinsert web.xml into WEB-INF using WinZip, right-click on the WEB-INF directory that contains your edited web.xml file and select "Add to Zip File...". Adding the file in this way ensures that it is placed in the correct directory inside the archive.

---

5. Restart your application server.

When you install more than one WCA, each pswebcompadapter.war file contains its own web.xml file containing configuration parameters for that WCA.

For more information on configuring the Web Component Adapter please refer to the section in the BusinessObjects Administration Guide, “Configuring the Web Component Adapter.”

Enabling BusinessObjects Enterprise XI Server Logging

Each of the BusinessObjects Enterprise XI servers is designed to log messages to your operating system’s standard system log.

On Windows, BusinessObjects Enterprise XI logs to the Event Log service. You can view the results with the Event Viewer (in the Application Log).

On UNIX, BusinessObjects Enterprise XI 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 11\Logging.
- On UNIX, the default logging directory is the <INSTALL_ROOT>/bobje/logging directory of your installation.

It is important to note that these 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 BusinessObjects Enterprise XI server activity please refer to the BusinessObjects Enterprise Admin Guide Section “Logging Server Activity.”

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\Business Objects\Suite 11.0\Integration Kit for PeopleSoft⇒
   Enterprise
  Log Mode
  ```

  1. Change the Log Mode value from *0* to *1*.
  2. Restart the services CMS.

  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 and Linux:

  To turn on logging you need to update the Log Mode setting in the registry file.

  The registry file is located at: <BOE_DIR>/bobje/data/.bobj/registry

1. Open the file in a text editor and set the value of "Log Mode" to "1".
2. Restart the services (CMS, Job Server, Page Server, Report Application Server). This will turn on the driver/security plug-in tracing.

Enabling BusinessObjects Enterprise XI Services Tracing

It is also possible to turn on tracing for the BusinessObjects Enterprise XI services. This involves updating the command line for each of the services and adding *-trace* at the end. Depending on the Operating System on which you are running BusinessObjects Enterprise XI the procedure to do this varies.

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 Crystal Configuration Manager with an account with administrative privileges.
2. Highlight the server you would like to enable tracing on and click the Stop button.
3. Double-click the server, add *-trace* to the command line, and click the Start button.

   Completing the steps will enable advanced logging on a Crystal Enterprise, Crystal Reports Server, or BusinessObjects Enterprise XI server for Windows.

   To review the logs open Windows Explorer and navigate to the logging directory:

   X:\Program Files\Business Objects\BusinessObjects Enterprise 11\Logging

   where X is the drive letter where software was installed.

UNIX or Linux:

1. Go to the $bobje$\bobje folder.
2. Edit ccm.config file. Add "-trace" at the end of services that you want to logging.
3. Restart all servers.

The log files write to the $bobje$\bobje\logging folder.

Task 12-7-6: Understanding BusinessObjects Enterprise XI License Codes

Access to BusinessObjects Enterprise XI is based on license codes. There are two types of license codes relevant to BusinessObjects Enterprise XI:

- Named Users licences
- Concurrent Access licences

Named users licenses allow a specific user access to BusinessObjects Enterprise XI. If you are a named user, you have access to BusinessObjects Enterprise XI regardless of how many other users are connected to the system.

Concurrent access licenses allow a certain number of unspecified users access to BusinessObjects Enterprise XI from a pool of users. If you are a concurrent user, you have access to BusinessObjects Enterprise XI only if there are Concurrent Access Licenses that are not being used by other concurrent users.

The OEM license codes delivered by Oracle for the integration between PeopleSoft and BusinessObjects Enterprise allow for:

- 1 Named User license
- 5 Concurrent Access licences

In the context of PeopleSoft applications integrated with BusinessObjects Enterprise XI, the one Named User License is reserved for use by Process Scheduler to schedule reports to be run by BusinessObjects Enterprise XI.

In the context of PeopleSoft applications integrated with BusinessObjects Enterprise XI, Concurrent Access Licenses are used in these ways:

- when a user views a report using the BusinessObjects Enterprise XI Interactive Viewer
- when a user logs into the BusinessObjects Enterprise XI 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 Acrobat (pdf) format or in viewers other than the BusinessObjects Enterprise XI Interactive Viewer 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.

It is likely that you will want to purchase additional Concurrent Access licenses to provide greater access for more users. You can do so by contacting your Oracle sales representative.

When you purchase more Concurrent Access Licenses, you will be provided a License Code. You will need to add this License Code to your BusinessObjects Enterprise XI installation.

To enter license codes:

1. In a browser, enter the following URL, substituting the name of your BusinessObjects Enterprise XI server for <machine_name>, and the BusinessObjects Enterprise XI port number for <BOE_port>:

   http://<machine_name>:<BOE_port>/businessobjects/enterprise11/adminlaunch/

   Note. You can also click the Webserver Ping button on the QAS admin page to open the Central Manager Console.

   ---

2. Log on with *administrator* and no password.

Central Management Console log on

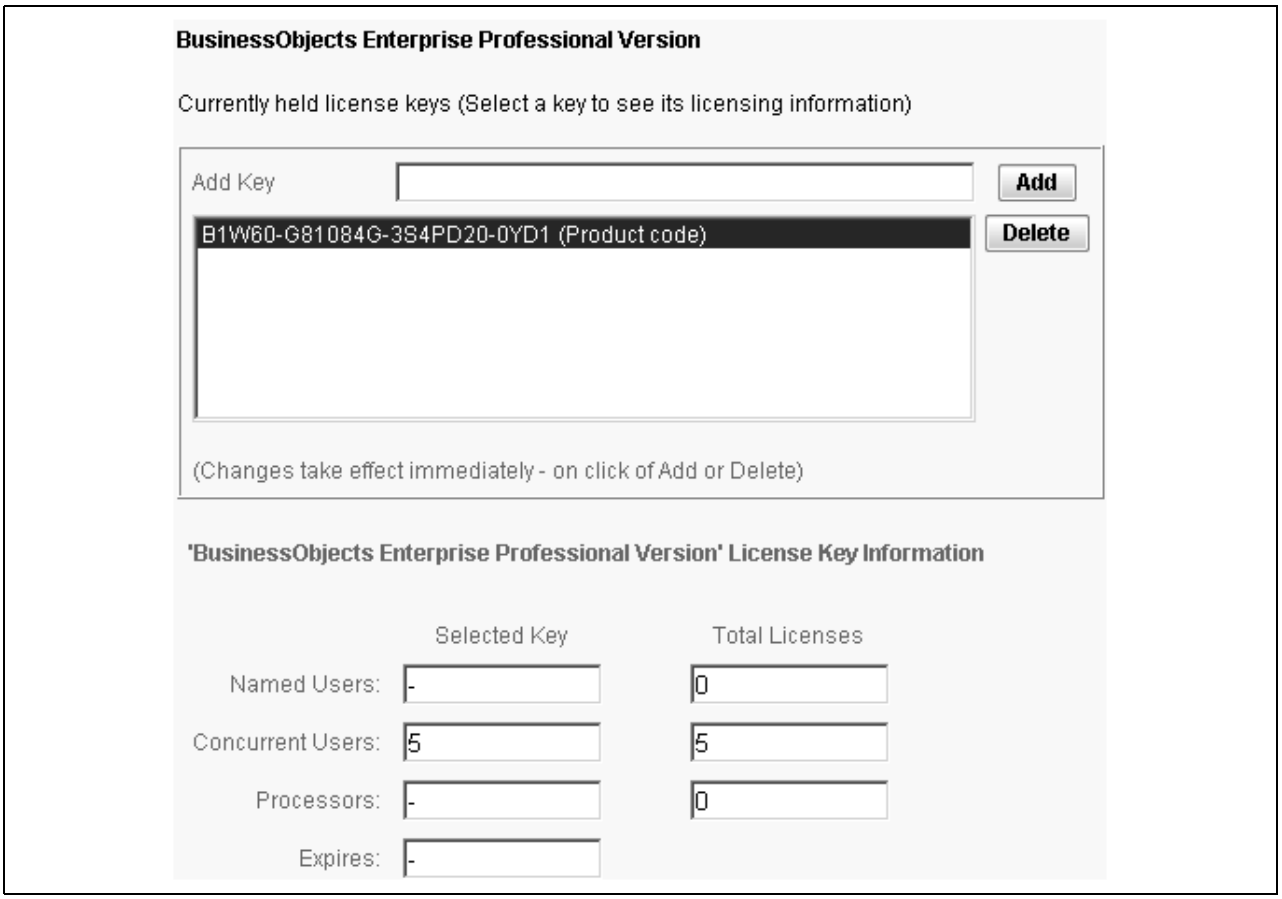
3. Click License Keys.

CMC Home page

4. Enter the following license keys:

```
B1W60 080084G 3SM5U40 0J51 (1 Named User)
B1W60 G81084G 3S4PD20 0YD1 (5 User Concurrent Access)
```

Note. As concurrent users access the system to view reports, you may find that the five user concurrent access license is insufficient. If you need more concurrent access licenses, please contact the Oracle Global Support Center for assistance in securing additional licenses.



Entering license keys

5. Click Go to return to the home page.

Task 12-8: Converting Crystal Reports

This section discusses:

- Selecting the Crystal Reports Conversion Method
- Converting pre-PeopleTools 8 Crystal Reports to PeopleTools 8 Crystal Reports
- Converting Reports from Crystal Reports 9 Format to Crystal Reports XI Format

Selecting the Crystal Reports Conversion Method

This section includes information on converting from Crystal Reports to various formats. You will fall into one of the following scenarios:

- *Scenario 1:*

  You are upgrading your PeopleSoft installation to run on PeopleTools 8 and you do not plan to use BusinessObjects Enterprise XI. You will use the Windows-based Crystal Report Print Engine packaged with PeopleTools instead.

You will have to run a conversion program to convert your Crystal reports so that they can run on PeopleTools 8.

See Converting pre-PeopleTools 8 Crystal Reports to PeopleTools 8 Crystal Reports.

- *Scenario 2:*

  Your PeopleSoft installation is already running on PeopleTools 8 and you want to run your Crystal reports using BusinessObjects Enterprise XI.

  You will have to convert your reports from Crystal 9 format to Crystal XI format.

  See Converting Reports from Crystal Reports 9 Format to Crystal Reports XI Format.

- *Scenario 3:*

  You are upgrading your PeopleSoft installation to run on PeopleTools 8.48 from a pre-PeopleTools 8 environment and plan to use BusinessObjects Enterprise XI.

  You will have to:

  - first run a conversion program to convert your Crystal reports so that they can run on PeopleTools 8;
  - then run the conversion program that will convert them from Crystal 9 format to Crystal 11 format.

See the section Converting pre-PeopleTools 8 Crystal Reports to PeopleTools 8 Crystal Reports.

Then see the section Converting Reports from Crystal Reports 9 format to Crystal Reports XI format.

- *Scenario 4:*

  You are upgrading your PeopleSoft installation and are already running your reports on BusinessObjects Enterprise XI.

  No report conversion is necessary.

Task 12-8-1: Converting pre-PeopleTools 8 Crystal Reports to PeopleTools 8 Crystal Reports

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 PeopleSoft used in previous releases to the PeopleTools 8 format. You only need to run this program if you are upgrading from previous versions of PeopleTools. This section discusses how to:

- Convert .rpt files
- Repair .rpt files

See the PeopleSoft upgrade guide for your platform.

Converting RPT Files

Before you run the PeopleSoft RPT Conversion utility, you should move your report files to a specific directory. You can then point the conversion utility to that directory.

Note. 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, 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, 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 12-8-2: Converting Reports from Crystal Reports 9 Format to Crystal Reports XI Format

This section discusses:

- Understanding the Conversion from Crystal Reports 9 to Crystal Reports XI
- Preparing for Conversion of Crystal 9 Reports
- Running the Conversion
- Verifying the Conversion and Publish
- Reviewing Common Conversion Errors and Warning Messages

Understanding the Conversion from Crystal Reports 9 to Crystal Reports XI

The PeopleTools RPT Conversion utility pscrconv.exe is a program that converts your Crystal Reports .rpt files from the format that PeopleSoft used in previous PeopleTools 8.x releases to the PeopleTools 8.48 format for use with Crystal Reports XI. 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:

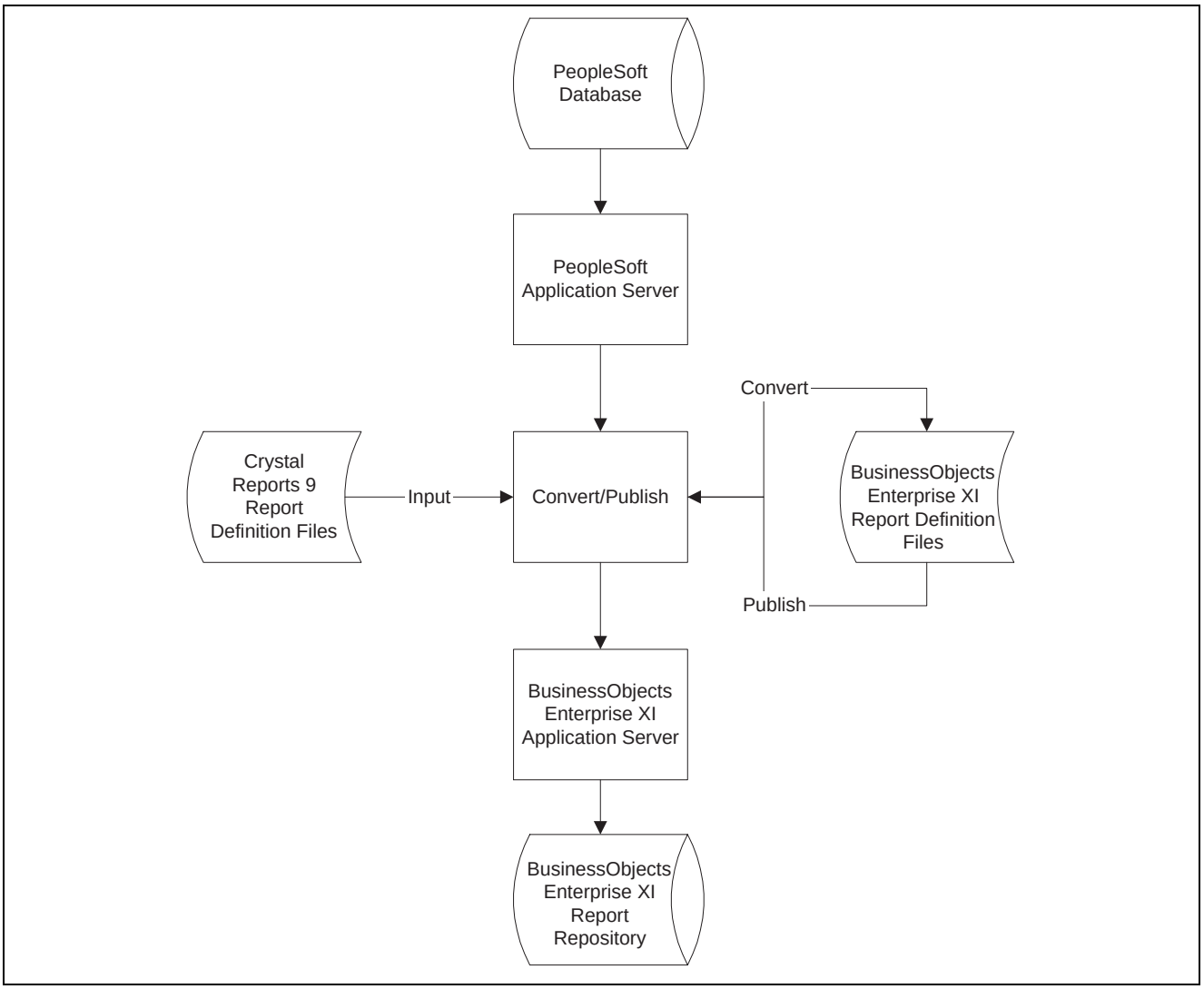
- Converting report definition files from Crystal 9 format to Crystal XI format
- Publishing Crystal XI report definition files into the BusinessObjects Enterprise XI Report Repository

In order to run reports using BusinessObjects Enterprise XI through PeopleSoft, the Crystal Reports XI report definitions must reside in the BusinessObjects Enterprise XI 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.

Here is a diagram that illustrates conversion and publishing:



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 XI 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 XI 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 XI report files for the first time to the BusinessObjects Enterprise XI Report Repository for a PeopleSoft database, folders are created in the BusinessObjects Enterprise XI 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. BusinessObjects Enterprise XI 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 XI reports
- Stores (publishes) the converted report in the BusinessObjects Enterprise XI 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 Report Repository

---

Note. If you publish a report that has been previously published to the BusinessObjects Enterprise XI 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 BusinessObjects Enterprise XI server
- A properly installed PeopleSoft application (database and application server)
- Integration between the PeopleSoft application and the BusinessObjects Enterprise XI 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 Crystal 9 Reports

Before running the conversion, there are several steps you must complete.

To prepare the conversion workstation:

1. Confirm the Operating System of the workstation.

The conversion program must be run on a machine that is running Windows 2000, Windows Server 2003, or Windows XP.

2. 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).

3. Confirm access to the BusinessObjects Enterprise XI application.

   The workstation must have connectivity to the BusinessObjects Enterprise XI application. Users can verify connectivity by bringing up the BusinessObjects Enterprise XI server CMC (management console) on the workstation.

4. Install PeopleTools on the workstation.

   The way to install the conversion program on the conversion workstation is to simply install PeopleTools on the workstation. PSCRCONV.EXE is one of the files installed on the machine.

5. 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.

6. Perform a PeopleTools Workstation Installation on the workstation.

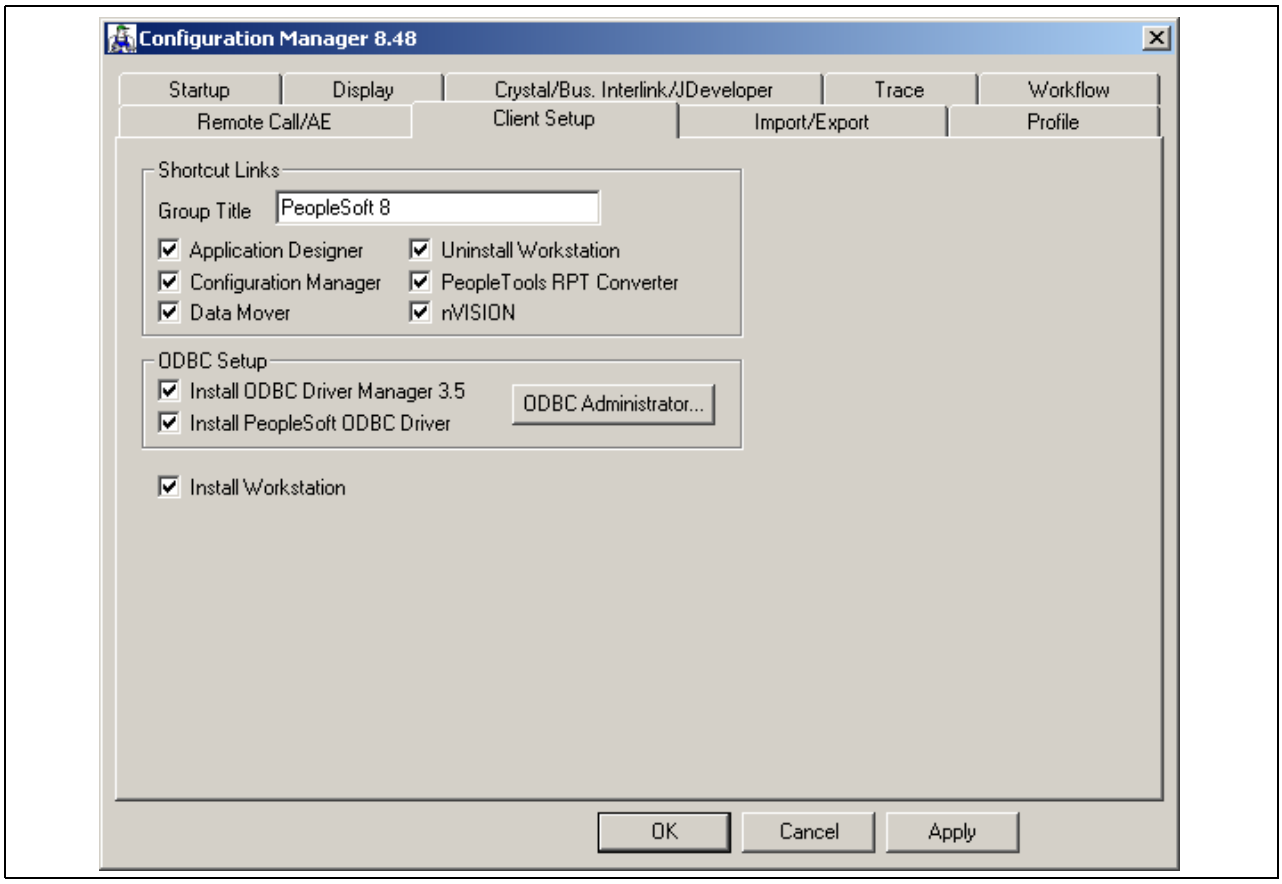
   The conversion program (specifically, the portion of the conversion program supplied by Business Objects), performs a “Verify Database” on each Crystal 9 report definition to be converted. “Verify Database” requires the PeopleSoft ODBC driver. PeopleSoft ODBC driver requires the PeopleTools workstation installation in order to remove the pipe character ‘|’ which would otherwise cause the Crystal Report XI report resulting from conversion to fail creation within BusinessObjects Enterprise XI environment.

   Do this by navigating to Start, Programs, PeopleSoft 8, Configuration Manager and selecting the Client Setup tab. Alternatively, run `pscfg.exe` from <PS_HOME>\bin\client\winx86.

7. Install PSODBC on the Workstation.

   PSODBC provides connectivity between Crystal 9 reports and the PeopleSoft application database.

   The PSODBC ODBC driver can be installed by navigating to Start, Programs, PeopleSoft 8, Configuration Manager and selecting the Client Setup tab. Alternatively, run `pscfg.exe` from <PS_HOME>\bin\client\winx86.



PeopleSoft Configuration Manager Client Setup tab

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 reports that you want to convert. That is, the database must have the queries that the Crystal 9 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 user BOE_Admin the “PeopleSoft Administrator” role. That role allows the user access to run all queries. To assign this role to BOE_Admin:

   a. Log onto PIA and navigate to PeopleTools, Security, User Profiles.

   b. Open the User Profile for BOE_Admin and go to the “Roles” tab.

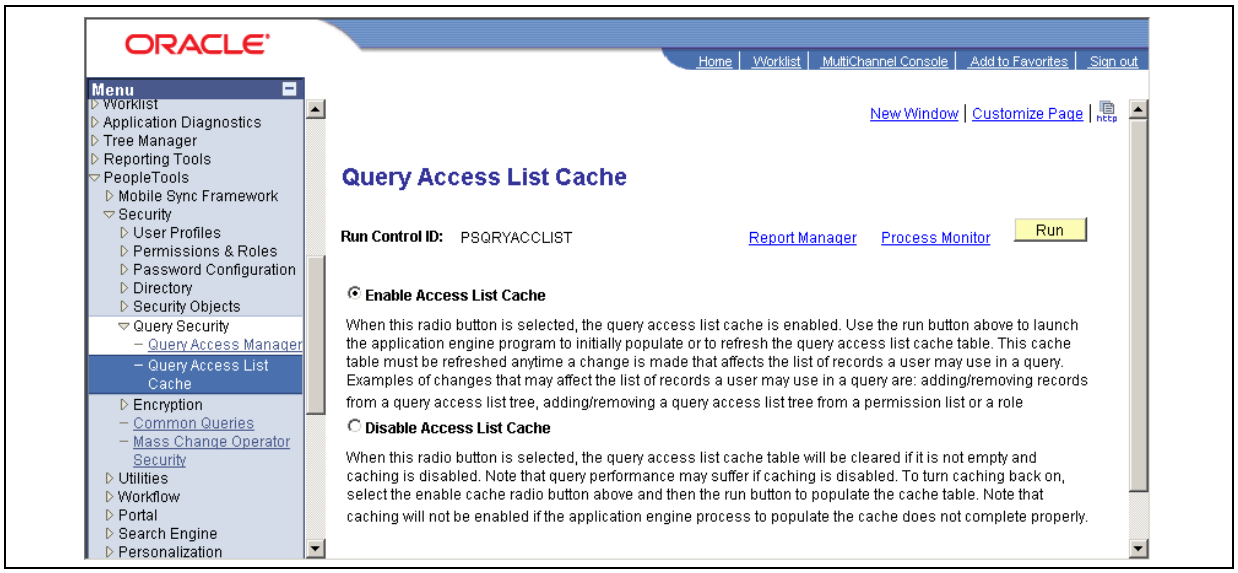
   c. If not already present in the list of Roles, add Role “PeopleSoft Administrator” to the roles assigned to BOE_Admin and save the page.

   Note. The PeopleSoft Administrator Role should be removed from BOE_Admin as soon as you are done converting reports to minimize security concerns.

   ---

   d. Run the process to update the Query Access List Cache.

      Select PeopleTools, Security, Query Security, Query Access List Cache. On the Query Access List Cache page, verify that the radio button Enable Access List Cache is selected, and click the Run button to run the process.



Query Access List Cache page

e. If you do not want to assign the PeopleSoft Administrator Role to user BOE_Admin, there are two options:

   Run the conversion by running the conversion program logged on as a PeopleSoft user who does have the “PeopleSoft Administrator” role assigned to it.

   or

   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. Confirm the integrity of the PeopleSoft application database.

   Verify the integrity of the PeopleSoft application database by running SYSAUDIT.SQR on the database. In particular, there should be no anomalies in the database as regards Query definitions (SysQuery-01 through SysQuery-26). For more information on SYSAUDIT.SQR refer to *Enterprise PeopleTools 8.48 PeopleBook: Data Management*.

4. Turn logging levels to low.

   Excessive logging will slow the conversion process. Make sure that you have logging for the application server, PeopleCode, SQL, and Integration Broker set to Low levels. If you experience problems while executing the conversion process, you can selectively increase logging to get better diagnostic information.

5. Confirm your BusinessObjects Enterprise XI environment and integration with PeopleSoft.

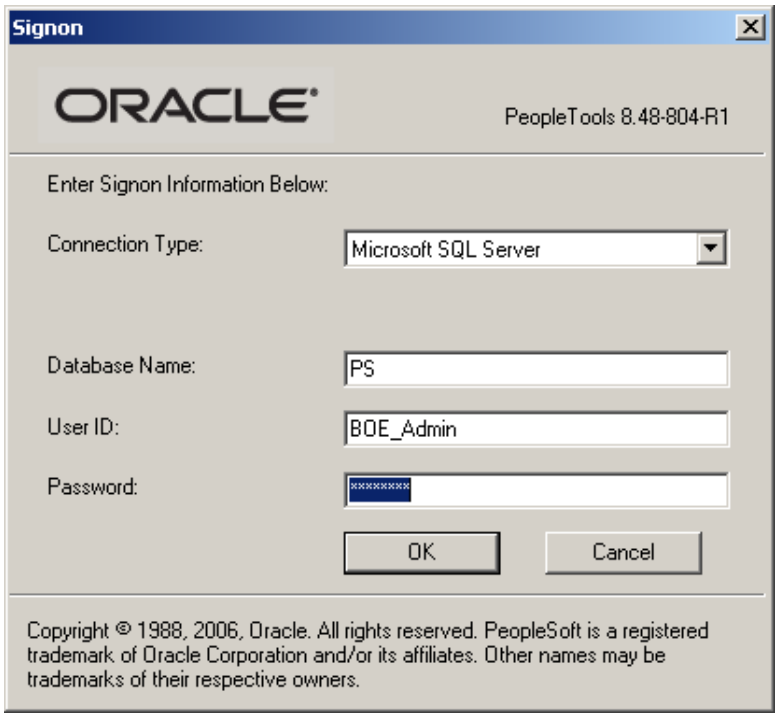
   The conversion program relies on having a properly installed and configured BusinessObjects Enterprise XI so that the converted report definitions can be inserted in the BusinessObjects Enterprise XI repository. There are no special steps in this section that are not part of the basic installation steps covered elsewhere in this installation guide.

Running the Conversion

To run the conversion:

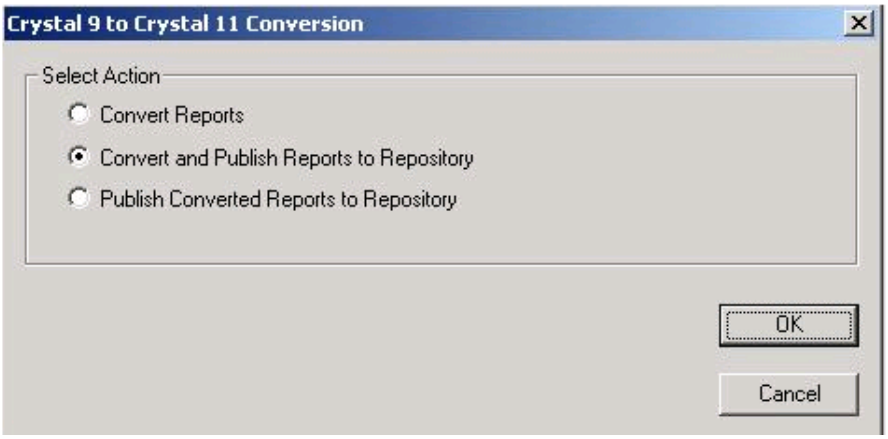
1. Run `pscrconv.exe` from <PS_HOME>bin\client\winx86 directory.
2. Sign into the PeopleSoft database, if you have not already done so. Log in as user BOE_Admin.

   Ensure that 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.



PeopleSoft database signon dialog box

3. Choose the action that you wish to perform.



Crystal 9 to Crystal 11 Conversion window

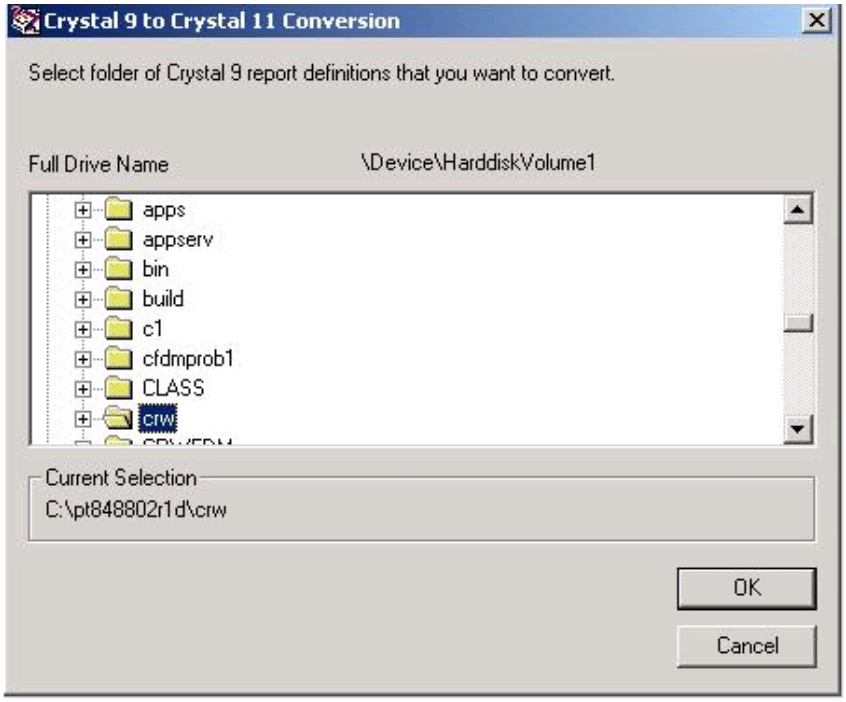
- Converting reports without publishing them to the BusinessObjects Enterprise XI report repository allows you to go from running Crystal Reports 9 report definitions to running Crystal Reports XI report definitions using Crystal Reports XI on a client machine. The converted reports will be stored in 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.
- Converting reports and publishing them to the BusinessObjects Enterprise XI report repository allows you to go from running Crystal Reports 9 report definitions to running Crystal Reports XI report definitions using BusinessObjects Enterprise XI via the PeopleSoft Process Scheduler.
- 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 XI format.

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 reports to be converted reside in this subdirectory.

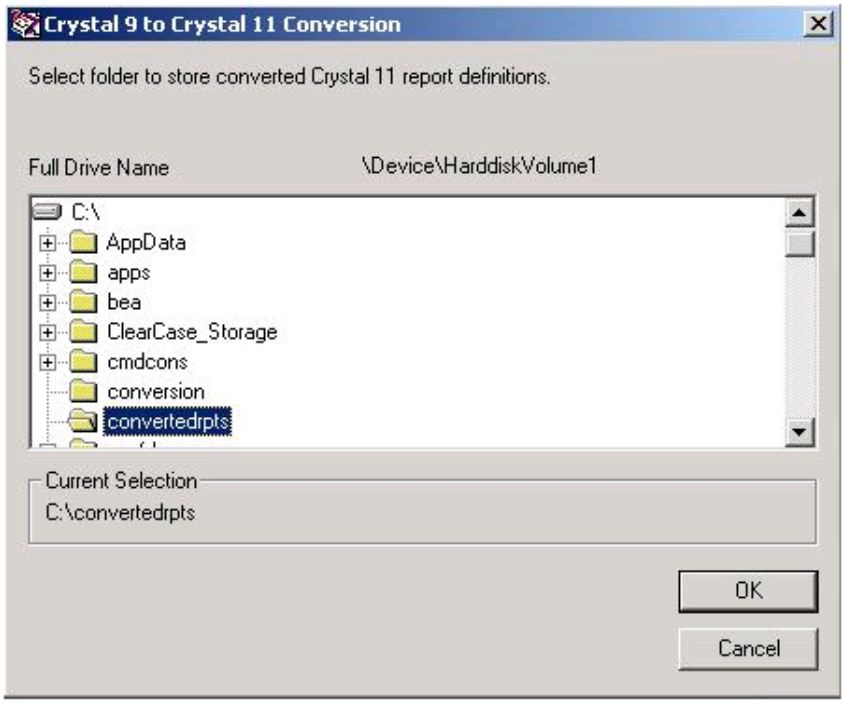
   Note. If you chose the Publish Converted Reports to Repository process option in the previous step, you do not see this dialog box.

   For example, select C:\PT848\CRW if the reports to be converted are located in C:\PT848\CRW\ENG.



Directory selection for the Crystal 9 to Crystal 11 Conversion

5. Select a report output directory for the converted reports and click OK.



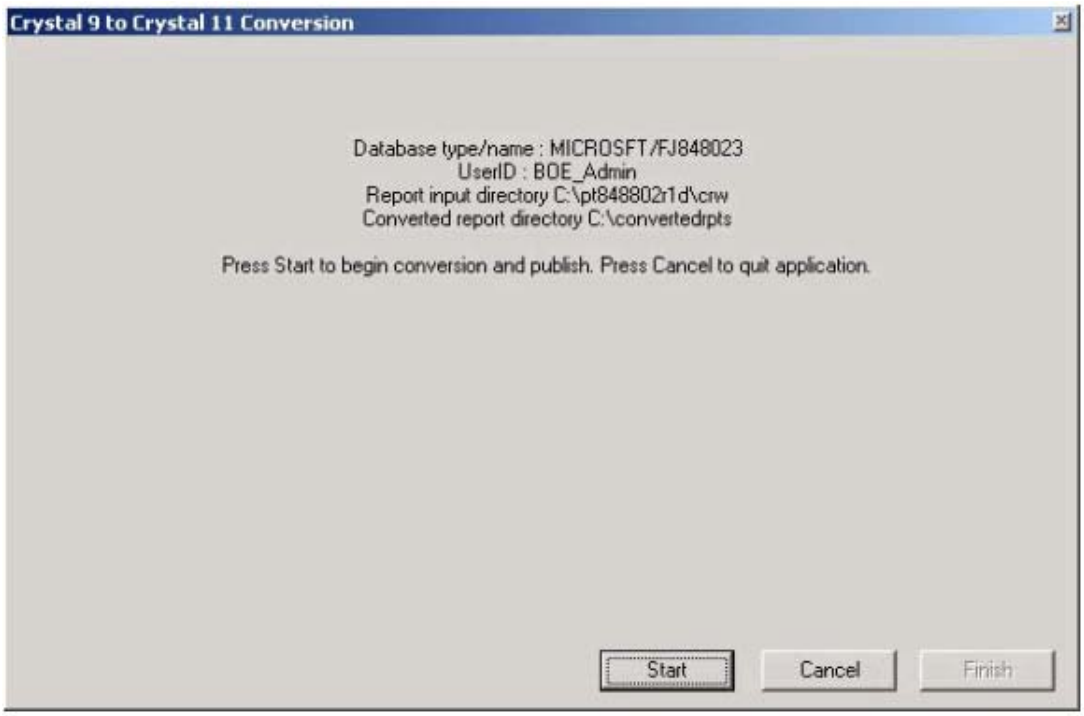
Output directory for Crystal 9 to Crystal 11 Conversion

This can be any writable folder, however it cannot be a subfolder of the report input directory. For example, if the reports to be converted are located in C:\PT848\CRW\ENG, the report output directory cannot be C:\PT848\CRW\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 C:\PT848\Converted\ENG, enter C:\PT848\Converted as the report output directory.

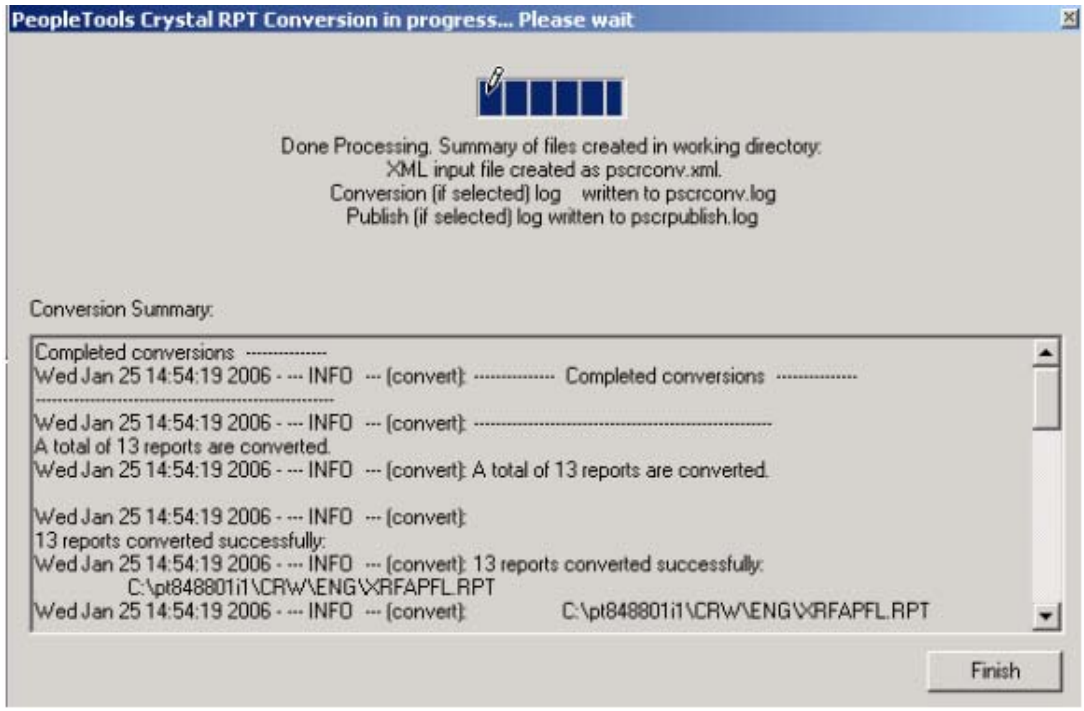
6. Review the information on the summary screen.

   If all looks good, click the Start button to begin the process. Clicking Cancel will cause you to exit from the program.



Summary information for Crystal 9 to Crystal 11 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 Crystal 9 to Crystal 11 Conversion

7. Click the Finish button.

Verifying the Conversion and Publish

Use these steps to verify that your reports converted properly are:

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 in the working folder (generally this will be your \client\bin folder).

   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:\pt848801i1\CRW\ENG\XRFAPFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFAPFL.RPT
  C:\pt848801i1\CRW\ENG\XRFFLPC.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFFLPC.RPT
  C:\pt848801i1\CRW\ENG\XRFFLPN.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFFLPN.RPT
  C:\pt848801i1\CRW\ENG\XRFFLRC.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFFLRC.RPT
```



```
  C:\pt848801i1\CRW\ENG\XRFIELDS.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFIELDS.RPT
  C:\pt848801i1\CRW\ENG\XRFMENU.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFMENU.RPT
  C:\pt848801i1\CRW\ENG\XRFPANEL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFPANEL.RPT
  C:\pt848801i1\CRW\ENG\XRFPCFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFPCFL.RPT
  C:\pt848801i1\CRW\ENG\XRFPNPC.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFPNPC.RPT
  C:\pt848801i1\CRW\ENG\XRFRCFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFRCFL.RPT
  C:\pt848801i1\CRW\ENG\XRFRCPN.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFRCPN.RPT
  C:\pt848801i1\CRW\ENG\XRFWIN.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\CRW\ENG⇒
\XRFWIN.RPT
  C:\pt848801i1\CRW\ENG\XRFWNFL.RPT
Fri Jan 20 13:24:31 2006 - --- INFO  --- (convert):   C:\pt848801i1\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:\pt848801i1\CRW\ENG\XRFAPFL.RPT".
Fri Jan 20 13:29:46 2006 - --- INFO  --- (convert): Converting the report "C:⇒
⇒
\pt848801i1\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:\pt848801i1\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 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 InfoView:

   a. Log onto BusinessObjects Enterprise XI 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.

CHAPTER 13A

Compiling COBOL on Windows

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Compiling COBOL Source Files
- Distributing COBOL Binaries

Understanding COBOL

This chapter describes how to compile and link PeopleSoft COBOL batch programs, if necessary.

COBOL is not needed for PeopleTools because the Process Scheduler has been re-written in C++. In addition, COBOL is not required for applications that contain no COBOL programs. See Supported Platforms on Customer Connection for the details on whether your application requires COBOL.

See "PeopleSoft Application COBOL Requirements," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Batch).

For more details about running COBOL in Unicode, consult the following.

See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Running COBOL in a Unicode Environment."

See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Running COBOL in a z/OS Unicode Environment."

Warning! If your database server is DB2 UDB for z/OS and your CCSID is not 37, you must read the CCSID discussion under "DB2 UDB for z/OS Subsystem Configuration" in Chapter 1 of this book. Also refer to *Enterprise PeopleTools 8.48 PeopleBook: Global Technology* (%BINARYSORT) and to *Enterprise PeopleTools 8.48 PeopleBook: Data Management* (PSOPTIONS) before proceeding.

Prerequisites

Before you attempt to run COBOL from the command line you should do the following:

- For UNIX and Windows systems, make sure the variable PS_SERVER_CFG points to a valid psprcs.cfg file.

- For Windows systems, 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 13A-1: Compiling COBOL Source Files

This section discusses:

- Understanding COBOL Compilation
- Compiling COBOL with CBLBLD.BAT
- Compiling COBOL with CBLMAKE.BAT
- Defining the GNT and INT Files

Understanding COBOL Compilation

With PeopleTools 8.4, your COBOL always needs to be compiled on Windows. (This is a change from previous versions of PeopleTools, which delivered compiled COBOL for Windows.) This chapter assumes that you are carrying out the compile 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.) PeopleSoft's recommended approach is to use CBLBLD.BAT to compile all your COBOL at once. Another alternative is CBLMAKE.BAT, which you can use to compile selected COBOL files.

Make certain to check whether you need to apply any late-breaking patches.

See PeopleSoft Customer Connection, Updates and Fixes.

Task 13A-1-1: Compiling COBOL with CBLBLD.BAT

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 DOS command prompt window.

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:\netexpress\base
```

2. Open a DOS 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
```


where <compile drive> is the drive where the compile takes place, <compile directory> is the temp directory where the compile takes place

and EBCDIC is a parameter for collating sequence comparisons on DB2 (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 UDB 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 DOS command line (they reside in <PS_HOME>\setup). For CBLRTCPY.BAT you need to specify a target directory.

Task 13A-1-2: Compiling COBOL with CBLMAKE.BAT

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. 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 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 UDB 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 DOS 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 13A-1-3: 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 MicroFocus 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 13A-2: Distributing COBOL Binaries

Once you've compiled your COBOL, you must transfer it to the needed locations. 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.

CHAPTER 13B

Compiling COBOL on UNIX

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Modifying the Liblist (IBM AIX 5.1, IBM AIX 5.2, and HP-UX Only)
- Compiling COBOL Programs
- Linking COBOL
- Recompiling COBOL on UNIX

Understanding COBOL

This chapter describes how to compile and link PeopleSoft COBOL batch programs, if necessary.

COBOL is not needed for PeopleTools because the Process Scheduler has been re-written in C++. In addition, COBOL is not required for applications that contain no COBOL programs. See Supported Platforms on Customer Connection for the details on whether your application requires COBOL.

See "PeopleSoft Application COBOL Requirements," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Batch).

For more details about running COBOL in Unicode, consult the following.

See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Running COBOL in a Unicode Environment."

See *Enterprise PeopleTools 8.48 PeopleBook: Global Technology,* "Running COBOL in a z/OS Unicode Environment."

Warning! If your database server is DB2 UDB for z/OS and your CCSID is not 37, you must read the CCSID discussion under "DB2 UDB for z/OS Subsystem Configuration" in Chapter 1 of this book. Also refer to *Enterprise PeopleTools 8.48 PeopleBook: Global Technology* (%BINARYSORT) and to *Enterprise PeopleTools 8.48 PeopleBook: Data Management* (PSOPTIONS) before proceeding.

Prerequisites

Before you attempt to run COBOL from the command line you should do the following:

- For UNIX and Windows systems, make sure the variable PS_SERVER_CFG points to a valid psprcs.cfg file.
- For Windows systems, 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 13B-1: Modifying the Liblist (IBM AIX 5.1, IBM AIX 5.2, and HP-UX Only)

This section discusses:

- Understanding Liblist Modifications
- Modifying the Liblist File

Understanding Liblist Modifications

If you are compiling COBOL on AIX 5.1 or 5.2, or HP-UX, modify the liblist or liblist64 file as described here. See the document "COBOL: Installation, versions, fixpacks, etc. PT8.44+" on Customer Connection for additional information about modifications that need to be made in the liblist or liblist64 file.

See "COBOL: Installation, versions, fixpacks, etc. PT8.44+," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools Release, Platform Communications by Topic, Batch).

Task 13B-1-1: Modifying the Liblist File

This section discusses:

- Modifying the Liblist File for AIX
- Modifying the Liblist64 File for HP-UX

Modifying the Liblist File for AIX

To modify the liblist file for AIX 5.1 and 5.2:

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/ps20_64/crt0.o
   ```

Task 13B-2: Compiling COBOL Programs

This section discusses:

- Understanding COBOL Compilation
- Compiling COBOL on UNIX

Understanding COBOL Compilation

Under UNIX, you always need to compile your COBOL at installation time. After you run the PeopleSoft Installer to set up your application or batch server, carry out the following steps.

Note. You have two options for compiling. You can treat one application or batch server as your compile server, compile all your COBOL 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. To copy a compiled COBOL program from one UNIX server to another, they must be on the same OS that the compile took place on. For example, if you compile on Solaris 8 and/or 9 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 box).

Task 13B-2-1: Compiling COBOL on UNIX

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. Run psconfig.sh from <PS_HOME> to set up environment variables correctly on your application or batch server.
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 13B-3: 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. It is compiled uniquely for each platform and consists of modules from PeopleSoft, the RDBMS vendor, and the operating system.

You need to create the PSRUN program in the following situations:

- You are installing PeopleSoft for the first time.
- Any COBOL programs have changed.
- The version of the RDBMS running PeopleSoft has changed.
- The COBOL compiler has changed.
- One of the C programs supplied by PeopleSoft has changed.

Note. PeopleSoft only supports dynamic linking of COBOL. Static linking is not an option.

Task 13B-3-1: 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 will now exist in the <PS_HOME>/bin directory. If you encounter errors, check <PS_HOME>/setup/psrun.err.

Task 13B-4: 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,

```
./pscbl.mak PTPDBTST
```

compiles the lone file PTPDBTST.

Note. If you want to recompile all your COBOL, you can follow the procedure described earlier.

See “Compiling COBOL Programs.”

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.

CHAPTER 14

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 PeopleTools release to another PeopleTools release.

Note. If you are upgrading to PeopleTools 8.44 or below, you must use PeopleSoft Upgrade Assistant.

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 PeopleSoft Customer Connection. With the environment data available, PeopleSoft Customer Connection can determine what updates apply to your environment.

When you access PeopleSoft Customer Connection, 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.

Task 14-1: Installing and Configuring PeopleSoft Change Assistant

This section discusses:

- Installing PeopleSoft Change Assistant
- Setting Up Security for Change Assistant
- Scanning the Workstation

Task 14-1-1: 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.

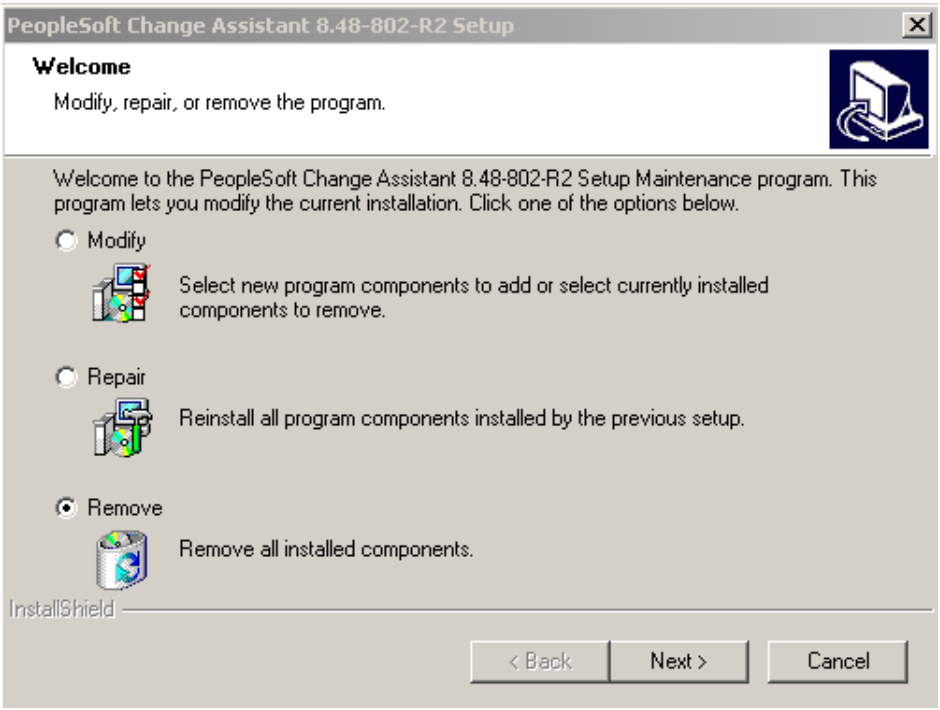
See “Installing PeopleSoft Change Impact Analyzer.”

To install PeopleSoft Change Assistant:

Note. A Windows-based operating system is required to use Change Assistant.

---

1. From the <PS_HOME>/setup/PsCA directory, run `Setup.exe`.
2. If there is an existing installation of PeopleSoft Change Assistant the following screen appears:



Change Assistant Setup Maintenance

   Select the Remove radio button, then click Next to remove the previous installation and close the screen. Run <PS_HOME>/setup/PsCA/`setup.exe` again.

3. On the Welcome screen, select Next.

   The Change Assistant screen appears.

4. Accept the default Destination Folder or specify another Destination Folder.
5. Select Next.

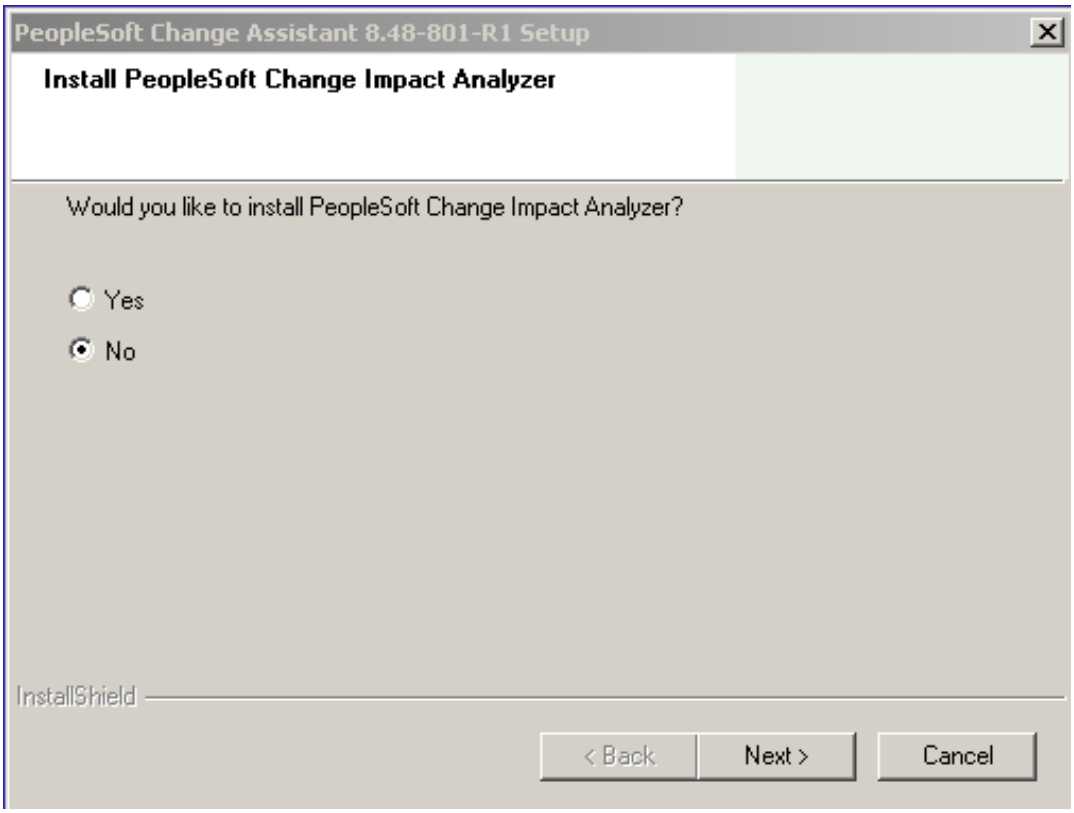
   The Start Copying Files screen appears.

6. Click Back to review or change any settings.

   If you are satisfied with your settings, click Next to begin copying files. Change Assistant copies files to the designated directory.

7. 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 Change Impact Analyzer

8. Click Finish to complete the installation process.
9. Reboot your machine after the installation process is complete.

Task 14-1-2: Setting Up Security for Change Assistant

To use PeopleSoft Enterprise 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 Enterprise Change Assistant:

- *Domains:* Allow access for the domains www.peoplesoft.com and update.peoplesoft.com.

  We recommend that you set domain rules to allow access to **.peoplesoft.com*.
- *IP addresses:* Allow access for the IP addresses 192.206.43.114 and 192.206.43.105.

  We recommend that you set IP rules at the subnet *192.206.43.0*.
- *FTP sites:* Configure your firewall to allow inbound ftp when the request is not initiated on the same port.

  Software update requests go to PeopleSoft Customer Connection on one port number, and the actual download comes back on a different ftp port number.

Change Assistant uses SSL to connect at all times, but when you log in to PeopleSoft Customer Connection or Update Gateway through a browser only the login page is SSL.

Task 14-1-3: Scanning the Workstation

The first time you use 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, Change Assistant must perform a scan of the system in order to discover the changes. To perform this scan, select Tools, Scan Configuration.

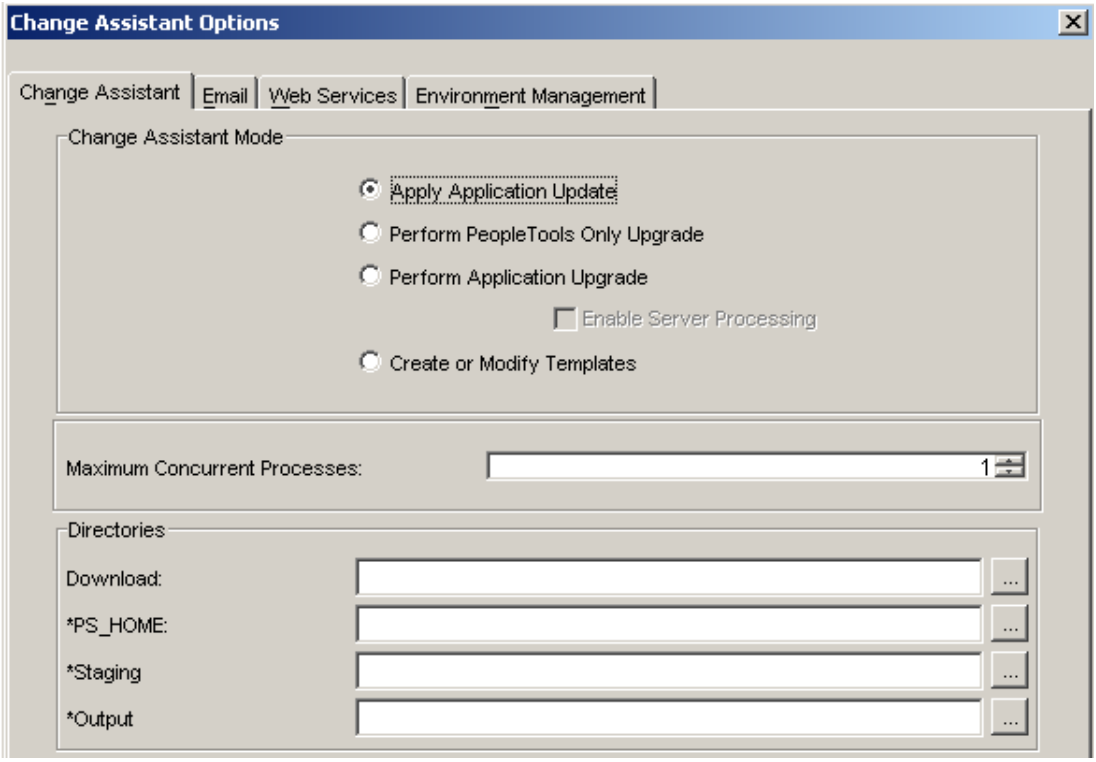
Task 14-2: Specifying Options

This section discusses:

- Specifying Change Assistant Options
- Setting Email Options
- Setting Up Web Services Options
- Setting Environment Management Options

Task 14-2-1: Specifying Change Assistant Options

This section describes options to set in Change Assistant. Select Tools, Options, Change Assistant.



Change Assistant Options window

Change Assistant Mode

Select one of the following radio buttons; 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

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 Directory

Enter the full path of the location to which you want to download your change packages.

***PS_HOME**

Enter the full path of the directory in which you installed PeopleTools.

***Staging Directory**

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 Directory**

Enter the directory in which you want the log files generated by the update process to reside.

Task 14-2-2: Setting Email Options

Select Tools, Options, Email.

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

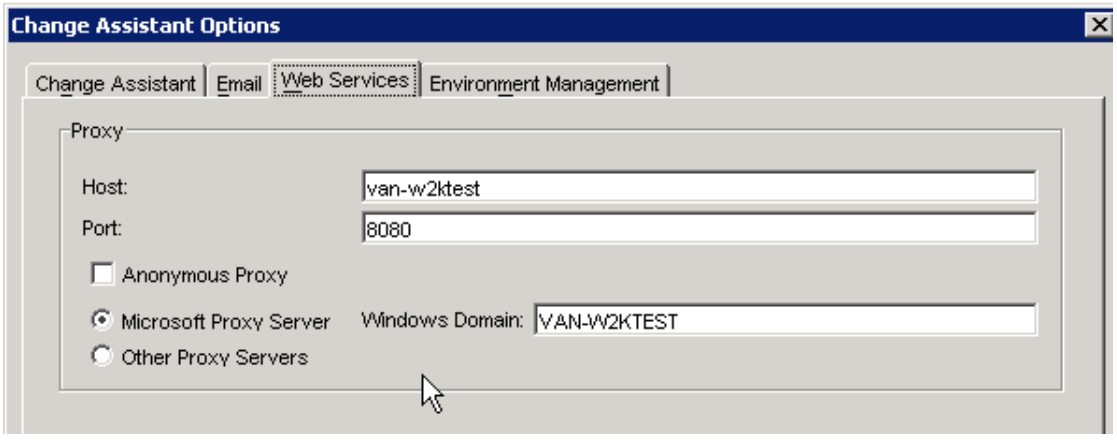
Enter the email address of the sender. Use this to identify who sent the notification.

Test

Use to validate that email is sent to the designated recipients and is working correctly

Task 14-2-3: Setting Up Web Services Options

Select Tools, Options, Web Services.



Change Assistant Options: Web Services tab

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 14-2-4: Setting Environment Management Options

Select Tools, Options, Environment Management.

Server Hostname	The hostname 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.”
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 14-3: 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 14-4: Validating Change Assistant Settings

After you have set up and configured Change Assistant and the Environment Management components, you should validate your Change Assistant and environment settings.

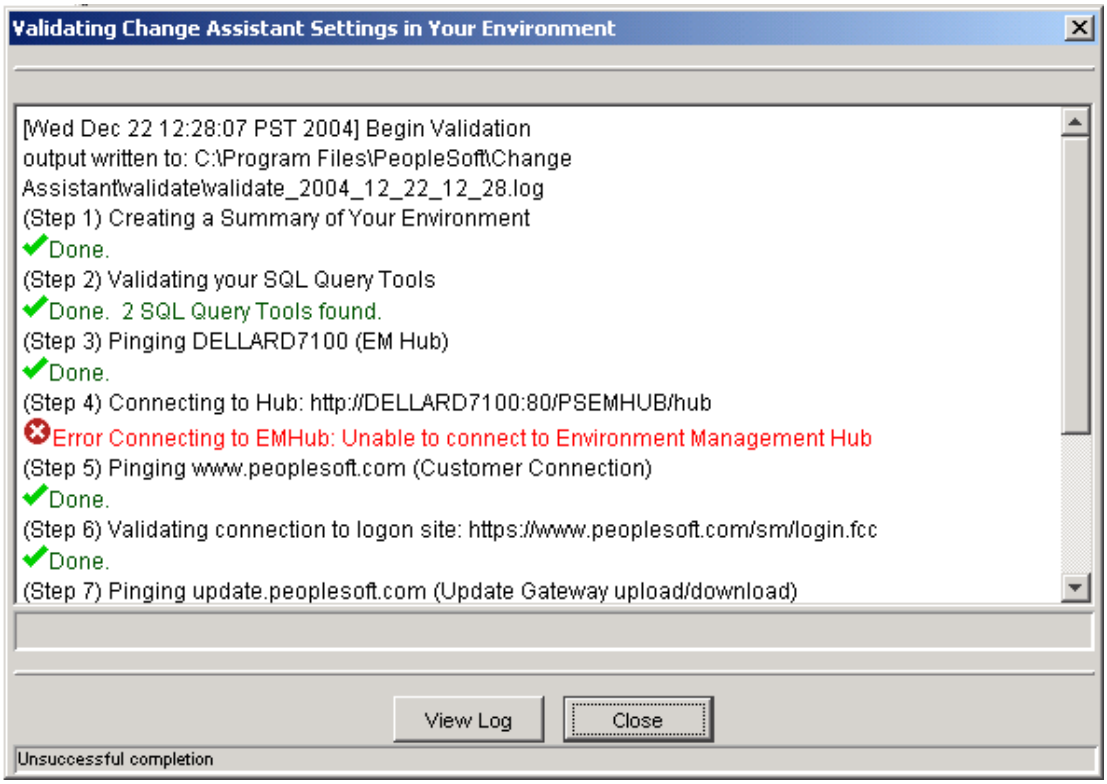
Change Assistant validates settings by:

- Locating valid SQL query tools required to run SQL scripts.
- Testing the Environment Management hub and ensuring that Change Assistant can communicate with it.
- Testing Customer Connection and ensuring that Change Assistant can communicate with it.

You can also print a summary of your environment, which can facilitate the diagnosis of problems by PeopleSoft Global 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.



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:

validate_2004_12_22_12_38 - Notepad

File Edit Format Help

```
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\xindice-1.1b.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\Oracle7\bin\sqlplus.exe
Done.  2 SQL Query Tools found.
(Step 3) Pinging DELLARD7100 (EM Hub)
Done.
(Step 4) Connecting to Hub: http://DELLARD7100:80/PSEMHUB/hub
Error Connecting to EMHub: Unable to connect to Environment Management Hub
(Step 5) Pinging www.peoplesoft.com (Customer Connection)
Done.
(Step 6) Validating connection to logon site: https://www.peoplesoft.com/sm/login.fcc
No proxy servers defined in configuration settings.  Connecting directly to
https://www.peoplesoft.com/sm/login.fcc
Done.
(Step 7) Pinging update.peoplesoft.com (Update Gateway upload/download)
Done.
(Step 8) Validating connection to Update Gateway:
https://update.peoplesoft.com/PSIGW/HttpListeningConnector
No proxy servers defined in configuration settings.  Connecting directly to
https://update.peoplesoft.com/PSIGW/HttpListeningConnector
Done.
[Wed Dec 22 12:38:38 PST 2004] End Validation
Unsuccessful completion (1 Step Failed).  Click on View Log to see additional messages.
```

Validation log

CHAPTER 15

Installing PeopleSoft Change Impact Analyzer

This chapter discusses:

- Prerequisites
- Installing Change Impact Analyzer

Prerequisites

Oracle's PeopleSoft Change Impact Analyzer (PsCIA) is a tool you can use to evaluate the effect of changes you make on your installation. CIA 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:

- The PsCIA runs on Windows. For database platforms that do not run on Windows, install PsCIA on the Windows client.
- You can install PsCIA from downloaded files as a standalone application, or as a part of your PeopleTools installation. You can also install PsCIA as a part of the PeopleSoft Change Assistant installation, as mentioned in the previous chapter. These instructions assume you have installed PeopleTools on the machine on which you want to run PsCIA, and have completed the PeopleSoft Change Assistant installation.
- You must install JDBC drivers for connectivity to your database platform. PsCIA 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

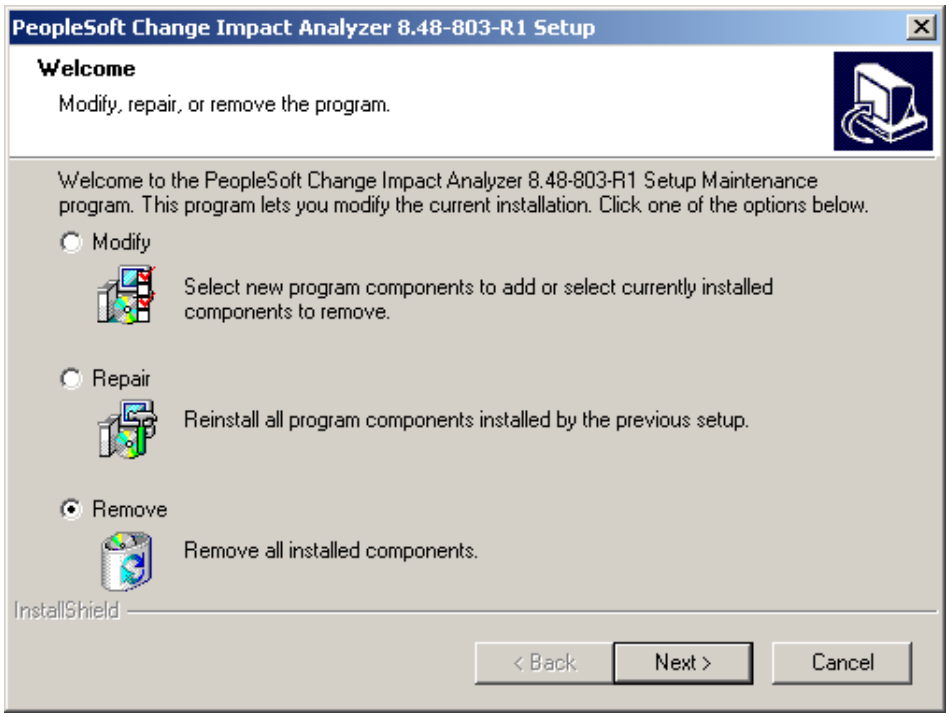
Enterprise PeopleTools 8.48 PeopleBook: Software Updates

Task 15-1: Installing Change Impact Analyzer

To install Change Impact Analyzer and Rules Editor:

1. From the <PS_HOME>\setup\PsCIA directory, run `setup.exe.`

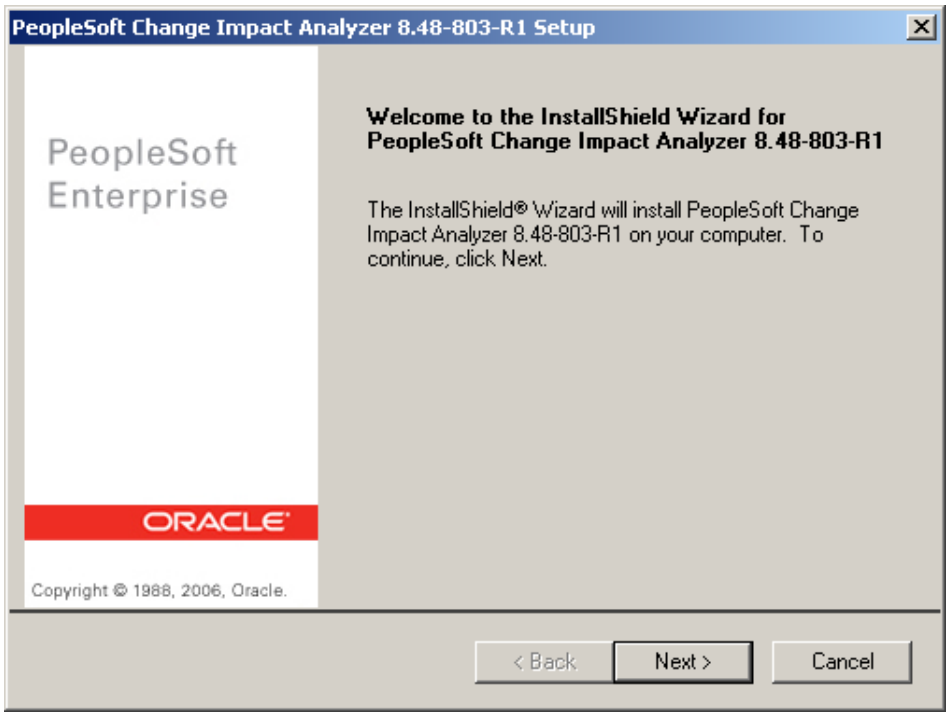
   A Welcome screen appears.
2. If there is an existing installation of PsCIA on your machine, a screen appears asking whether you want to Modify, Update, or Remove the existing installation.



PeopleSoft Change Impact Analyzer Setup Maintenance window

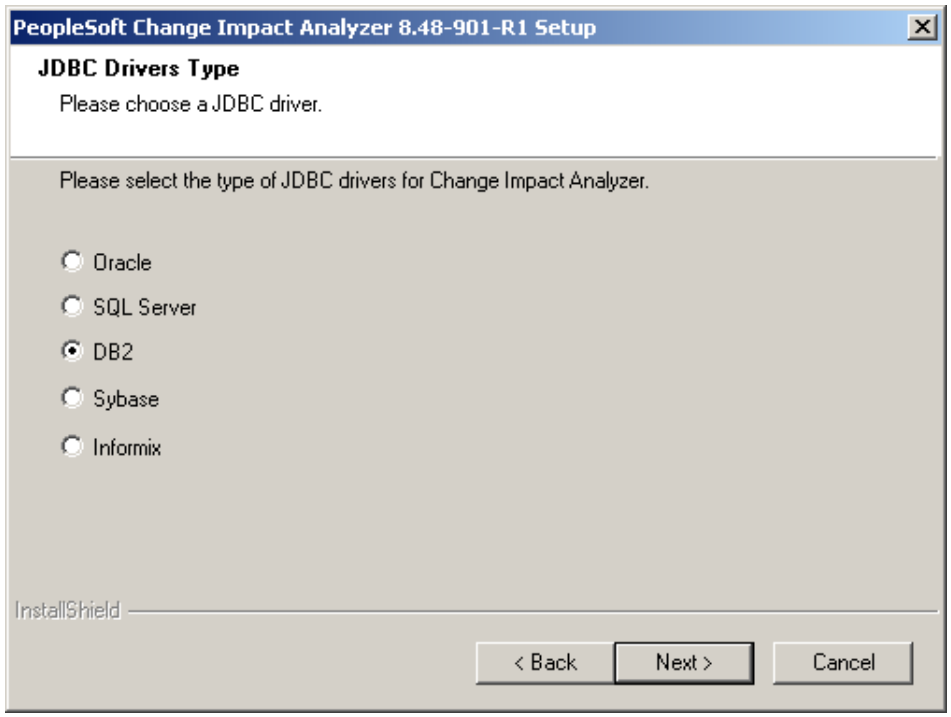
Select the Remove radio button, then click Next to remove the previous installation and close the screen. Run <PS_HOME>/setup/PsCIA/`setup.exe` again.

3. Click Next.



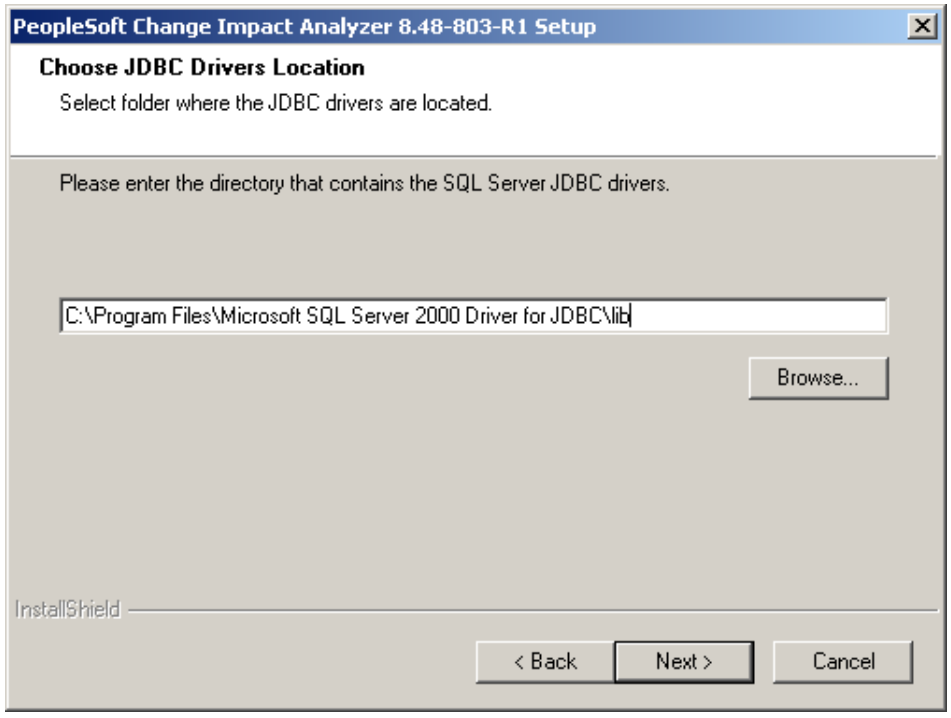
PeopleSoft Change Impact Analyzer welcome window

4. Select the JDBC drivers for your database platform.



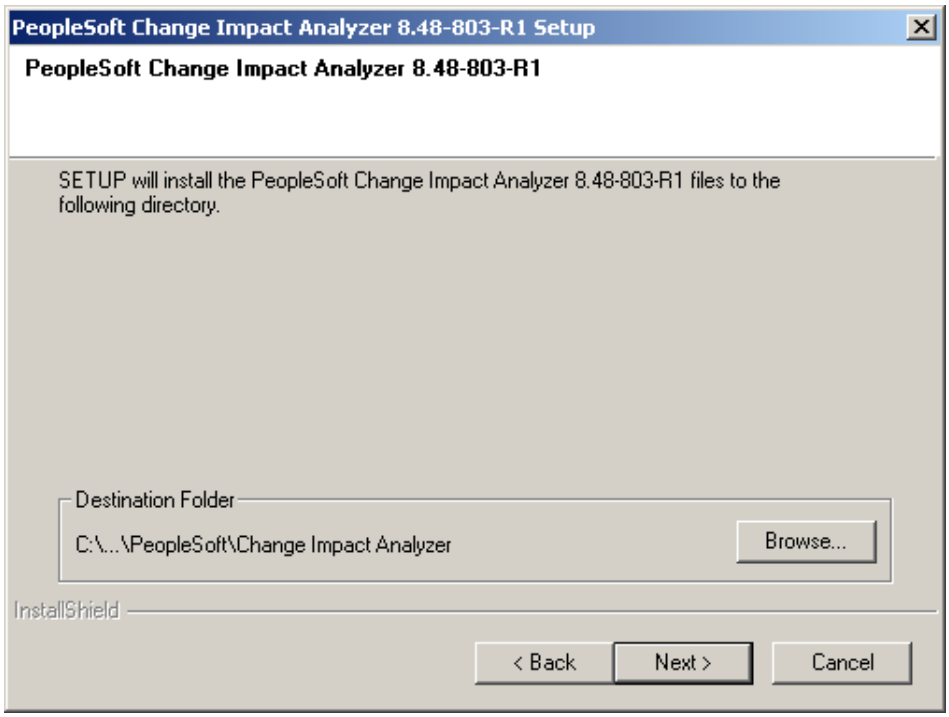
Selecting JDBC drivers type

5. Browse to select the directory where the JDBC drivers are installed, or accept the default location.



Choosing JDBC drivers location

6. Browse to select the directory where PsCIA will be installed, or accept the default directory.

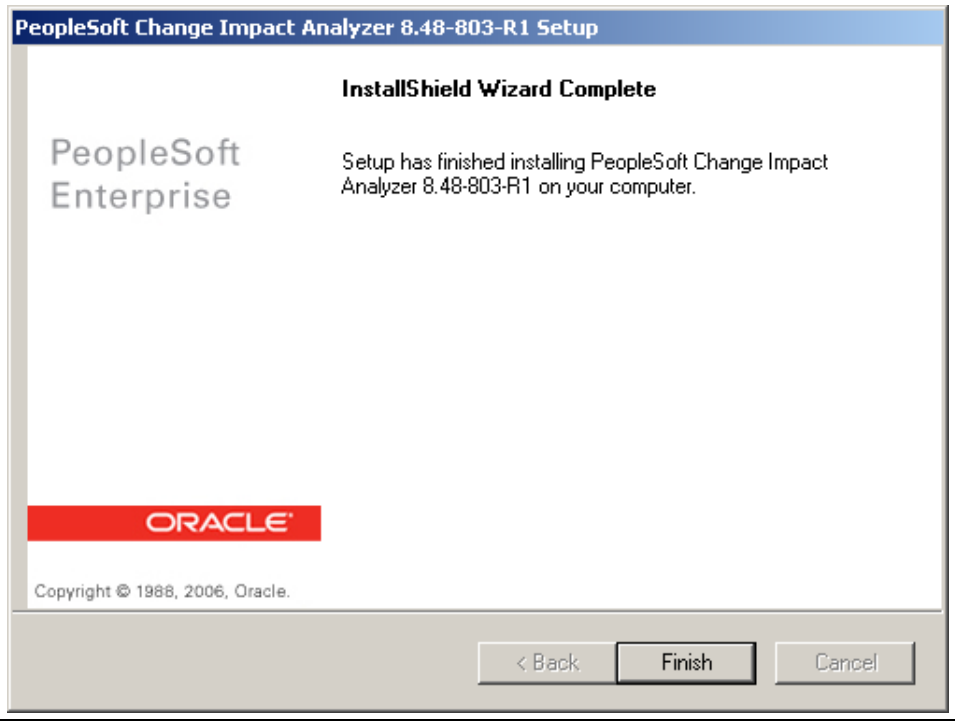


Selecting the destination folder

7. 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.

8. Click Finish to exit when the installation is complete:



Installation complete

9. To start PsCIA, select Start, Programs, PeopleTools 8, Change Impact Analyzer.

APPENDIX A

Adding New Product Modules

This appendix discusses:

- Adding New Module(s) to PeopleSoft 8.4 Installations

Task A-1: Adding New Module(s) 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 PeopleSoft then redelivers. If you install the update into your current working directory, your customized report will be overwritten with the newly installed, updated report.

PeopleSoft 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 PeopleSoft Customer Connection to identify any patches or fixes required for your installation.

See PeopleSoft Customer Connection, Updates and Fixes.

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).
3. Install the Application CD 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 back-up copies of your customizations.

12. Compile and link COBOL.

    See Compiling COBOL.
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 and SYSAUDIT SQRs.

    See “Creating a 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

Installing PeopleBooks

This appendix discusses:

- Understanding PeopleBooks
- Installing PeopleBooks
- Implementing the PSOL Server for PeopleBooks
- Setting up a Reverse Proxy Server
- Configuring Context-Sensitive Help
- Administering PeopleBooks

Understanding PeopleBooks

PeopleBooks are the documentation delivered with 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. Most sites will want to take advantage of all three.

- *Browse:* Browse the PeopleBooks from a file server or web server.
- *Full-text Search:* Requires installation of the PeopleSoft Pure Internet Architecture and hosting PeopleBooks on a web server.
- *Context-sensitive help:* Configure PeopleTools to call PeopleBooks as context-sensitive help from both internet applications and 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.

Task B-1: Installing PeopleBooks

This section discusses:

- Prerequisites
- Installing the PeopleBooks CD

Prerequisites

You can install PeopleBooks to your PeopleTools 8.48 dedicated web server machine or to a separate web server machine. Either way, the web server software must be installed before you install PeopleBooks. You can also install PeopleBooks on a file server, but you will not be able to search or to use PeopleBooks as context-sensitive help for your PeopleSoft applications.

Before you begin the installation, make sure you are installing to a supported web server and operating system platform. PeopleBooks 8.48 is supported on the same web server platforms as the PeopleSoft Pure Internet Architecture (PIA) for PeopleTools 8.48, and on the same operating systems as the PeopleTools 8.48 application server.

Note. PeopleBooks must be installed on a system other than HP-UX Itanium if full-text search is required. Asian language full-text search is not available on HP-UX systems.

See Also

Enterprise PeopleTools 8.48 Hardware and Software Requirements

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

Task B-1-1: Installing the PeopleBooks CD

Unlike in past releases, PeopleBooks can now be installed directly to a UNIX machine. In addition, PeopleBooks can be installed over an existing PeopleBooks site, effectively upgrading the site and merging in new content. (Duplicate book titles will be overwritten.)

Note. The PeopleSoft Pure Internet Architecture file structure has changed for PeopleTools 8.44 and above, so you cannot install PeopleBooks 8.48 into a pre-8.44 PIA site. However, after installing PIA 8.48, you can move your old PeopleBooks structure into the PSOL web module directory created during the PIA installation, and then install PeopleBooks 8.48 on top of it.

Note. The following instructions are based on using the GUI InstallShield program. If you run the installation in console mode, follow the instructions on your command line to make selections and progress through the installation prompts.

To install the PeopleBooks CD:

1. If your server does not have a built-in CD-ROM drive, share a CD-ROM drive elsewhere on the network and mount that drive on your server. You also have the option of copying the CDs to the network.
2. On UNIX, if you have not run psconfig.sh in the current shell, run it now at the command line:

   ```
   . ./psconfig.sh
   ```

3. Insert the PeopleBooks CD into the CD-ROM drive.
4. If your Windows CD-ROM drive is set to autorun, the PeopleBook Installer welcome screen appears. Otherwise, at the command line launch the setup program for your operating system platform:

Platform	Launch Program
AIX	setup.aix
HP-UX (PA RISC)	setup.hp
HP-UX Itanium	setup.hp-ia64
Linux	setup.linux
Solaris	setup.solaris
Tru64	setup.tru64
Windows	setup.exe

Note. If you are installing to a UNIX machine and do not have a GUI interface tool, use the command `setup.<OS> -is:javaconsole -console`.

5. Enter your application license code and click Next.
6. Accept the license terms and click Next.
7. Select one of the following options, and click Next:
   - Option 1: Generate search collection on this product only
   - Option 2: Generate search collection on entire site

     Note. The collection generation can take up to 20 minutes to complete per PeopleBooks CD. If you are installing multiple PeopleBooks CDs, you might want to install all but the last without building the collections, and then generate them for the entire site (option 2) when installing the last CD. You should also choose option 2 if you are installing over an older version of PeopleBooks.

     You can generate or regenerate the search collections at any time after installation using the PSOL Manager utility.

     See *About These PeopleBooks,* "Managing PeopleBooks and the PeopleSoft Online Library."
   - Option 3: Do not generate search collection

     Note. If you do not plan to use the Full-Text Search functionality, select this option.
8. Select which PeopleTools web server you are installing to and whether PIA is installed on the machine and click Next.

   Note. This information is used to build the default install path for PeopleBooks. If you are not using one of these web servers, it does not matter which you choose.
9. Enter the paths to the PeopleTools home directory (<PS_HOME>) and to the directory where you installed the Oracle Application Server (OAS), WebLogic, or WebSphere web server software (for example, specify your <OAS_HOME> for OAS, <WebLogic_Home> for WebLogic, and <WAS_HOME> for WebSphere). Then click Next.

Note. This information is used to build the default install path for PeopleBooks. If you are installing to a non-PeopleTools machine, enter any valid directory. If your are installing to a web server other than OAS, WebLogic, or WebSphere, enter any valid directory.

Warning! After clicking Next, you may be warned that you have a non-standard PSOL path. If so, this is either because you are not using the PIA default domain/node name, or because PIA is not installed and you selected the "PIA" option on the previous panel. If you have a custom domain/node name, continue to the next step and be sure to edit the default path to reflect your PIA installation. If PIA is not installed, you must either cancel the PeopleBooks installation and install it first, or go back the previous panel and deselect the "PIA" option.

10. Enter the install location and click Next.

    If you plan to use the Full-Text Search feature, you *must* specify a subdirectory *immediately* below the PSOL module directory in your PIA installation. *Edit the default path as necessary to reflect your PIA installation.*

    Note. You can opt to use an install directory other than the default, 'htmldoc'. It will be created automatically.

    Note. If you do not plan to use PeopleBooks Full-Text Search, you can enter any valid path you like—for instance, to the docroot of your alternate web server.

    For OAS the path should be:

    `<OAS_HOME>\j2ee\PSOL_<domain_name>\applications\<domain_name>\PSOL\htmldoc`

    For WebLogic, the path should be:
    `<PS_HOME>\webserv\<PIA_domain_name>\applications\peoplesoft\PSOL\htmldoc`

    For WebSphere, the path should be:
    `<PS_HOME>\webserv\<CellName_NodeName_ServerName>\peoplesoft.ear\PSOL\htmldoc`

11. The screen now lists the PeopleBooks that you are entitled to install. If you do not want to install a particular book, deselect the check box next to that book title. Click Next.

    Note. If you are running the installation to apply a maintenance patch, just click Next.

12. Specify whether you want to install the selected titles (default) or install just the PeopleBooks infrastructure (for applying maintenance patches only) and click Next.
13. Confirm your selections and click Next to install PeopleBooks.
14. After the CD content has been installed (and collections generated, if applicable), click Finish to end the setup program.

Task B-2: Implementing the PSOL Server for PeopleBooks

This section discusses:

- Understanding PeopleBooks in the PeopleSoft Pure Internet Architecture
- Starting Oracle Application Server Components
- Creating the PSOL Server on WebSphere with Existing 8.4x PeopleSoft Pure Internet Architecture
- Managing the PSOL Server on WebLogic or WebSphere

Understanding PeopleBooks in the PeopleSoft Pure Internet Architecture

If you are hosting PeopleBooks in a PIA installation that also hosts your PeopleSoft applications, you must run PeopleBooks, the PeopleSoft Online Library (PSOL) web module, as a separate server instance. The setup of the separate server differs slightly depending on the web server you are using:

- For Oracle Application Server (OAS), the PSOL server was created during the PIA installation. The commands to start all PeopleSoft services on OAS are given in the next section.

  See Starting Oracle Application Server Components.
- For WebLogic, you were instructed to install PIA as a "Multiple Server Domain" if installing PeopleBooks on the same machine as PeopleTools. This means that PSOL is now configured to be run as a separate server (on port 6001).
- For WebSphere, because there is no such option during the PeopleSoft Pure Internet Architecture install, you will now need to create a new server to run PSOL.

See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode," Installing the PeopleSoft Pure Internet Architecture in GUI Mode.

If you are hosting PeopleBooks in a PIA installation that is independent of the PeopleSoft applications, there is no need to create or configure a new server instance, and you can skip this task.

You also do not need to carry out the steps in this task if you installed PeopleBooks on another web server that is independent of a PeopleSoft Pure Internet Architecture installation (Full-Text Searching disabled).

Task B-2-1: Starting Oracle Application Server Components

On a Windows-based server, NT services are automatically created for the Oracle Application Server-based components. The services default to startup type Automatic. If the services have never been started or are set to type Manual, you may start up the web server by following the instructions below.

To manually start the Oracle Application Server, change to the opmn\bin directory under the OAS home directory and execute the appropriate opmnctl command as follows. The default port for the PeopleBooks (PSOL) server is 7777, unless the installer changed the port number at PIA creation time.

Action	Windows command	UNIX command
To start services	`C:\<OAS_HOME>\opmn\bin⇒ \opmctl.exe startall`	`$OAS_HOME/opmn/bin/opmctl⇒ startall`
To stop services	`C:\<OAS_HOME>\opmn\bin⇒ \opmctl.exe stopall`	`$OAS_HOME/opmn/bin/opmctl⇒ stopall`

The resulting default URL for access to the PeopleBooks website is:

http://<*machine_name*>:7777/PSOL/htmldoc/index.htm

Task B-2-2: Creating the PSOL Server on WebSphere with Existing 8.4x PeopleSoft Pure Internet Architecture

These instructions explain how to install a new server instance via the WebSphere administration console. This task is only required if running PeopleBooks on the same PeopleSoft Pure Internet Architecture installation that hosts your PeopleSoft applications.

Warning! These steps will cause the PIA application to be redeployed, which will remove directories created during the PIA installation. It is imperative that you back up your webserv folder as instructed below.

To create a new PSOL server:

1. Stop the WebSphere server, if it is running.

   At the command line, navigate to <*WAS_HOME*>\AppServer\bin and enter the following command:

   ```
   stopServer server1
   ```

2. Make a copy of your <*PS_HOME*>\webserv folder.
3. Start the WebSphere server.

   At the command line, navigate to <*WAS_HOME*>\AppServer\bin and enter the following command:

   ```
   startServer server1
   ```

4. In a web browser, launch the WebSphere Administrative Console.

   The URL address is `http://<machine_name>:<port>/admin/`, with <machine_name> and <port> replaced by your onsite values. By default, the port number is 9090.

5. Log in with your user name. (For change tracking purposes only.)
6. In the left-hand frame, click Servers, Application Servers.
7. In the right-hand frame, add a new application server by clicking the New button.
8. In the form in the right-hand frame, enter PSOL as the Server name, select Generate Unique Http Ports, and select Existing application server as the server template. Then click Next.
9. Confirm your selections and click Finish to install the server.
10. In the upper left-hand corner of the browser window, click Save to save your changes. Then click the Save button in the right-hand frame.
11. In the left-hand frame, click Applications, Enterprise Applications.
12. In the right-hand frame click the link peoplesoft.
13. In the new page in the right-hand frame, scroll to the bottom and click Map modules to application servers.
14. The new page in the right-hand frame lists the available Clusters and Servers, including the PSOL server you just created. Select the PSOL server entry in that list.
15. Select the PSOL module check box and click Apply.

    After the screen refreshes, re-select the PSOL module check box, and then click OK.

16. Save your changes a final time. In the upper left-hand corner of the browser window, click Save, and then click the Save button in the right-hand frame.
17. Navigate to the Application Servers page again and click PSOL.

In the new page in the right-hand frame, click Web Container. In the new page, click Http transports. The new page shows the port numbers assigned to the PSOL server. Make a note of these values.

18. Stop server1, as described in step 1.
19. Copy the contents of your backed up webserv folder into the real webserv folder, overwriting any duplicate files.

See the next task for instructions on starting the PSOL server.

See Managing the PSOL Server on WebLogic or WebSphere.

Note. In the future, you may see warnings that the peoplesoft application could not be launched on PSOL. You can ignore these warnings.

Task B-2-3: Managing the PSOL Server on WebLogic or WebSphere

This section discusses:

- Modifying the PSOL Admin Scripts
- Using the PSOL Admin Scripts

During the PeopleBooks installation, two script files were generated in the admin directory below your installation directory. You can use these scripts to manage your PSOL server.

Note. The PSOL script files will have a .bat extension on Windows machines and a .sh extension on UNIX machines. The following discussion omits the file extensions.

The two PSOL script files are:

- psolAdmin. The command script used to start the PSOL server, stop the PSOL server, etc.
- set_psol_env. A configuration script used to store information about your PSOL environment.

Modifying the PSOL Admin Scripts

For convenience, you may want to copy the scripts from the admin directory to the location where your other web server scripts and commands are located. This is not required, however. The scripts will run properly no matter where they are located or where they are run from.

If you want to copy the scripts to the same directory where your other web server scripts are located:

- On WebLogic, copy the scripts to <*PS_HOME*>\webserv\<*domain*>
- On WebSphere, copy the scripts to <*WAS_HOME*>\AppServer\bin

---

Note. The two script files *must* reside in the same directory.

Before you use the psolAdmin script, you should check the configuration in the set_psol_env script and compare it against the variable descriptions below. Make any necessary changes according to your system environment, depending upon whether your domain is WebLogic, WebSphere, Single Server or Multi Server. This script was created during the PeopleBooks installation and contains directory paths and other information required for launching the PSOL server properly. There are eight PSOL environment variables that you can verify and set accordingly:

Variable	Description
PSOL_SERVERNAME	This is the name of the server instance that runs PSOL. For WebLogic Multi Server Domain and WebSphere, this value is set to *PSOL*. For WebLogic Single Server Domain, it is set to *PIA*. You should only have to modify this value if you installed a PeopleTools-independent PIA for WebSphere (and so did not create a new PSOL server). In that case, you should change this value to *server1*.
PSOL_SERVERURL	This stores the URL of your WebLogic administration server domain and port. In some Multi Server Domain environments, it may be necessary to pass this value as an argument when starting the PSOL server. It is also necessary if the IP address of the PSOL server machine resolves to multiple values. In that case the URL should specify the proper IP address—for example: http://55.234.667.91:9999.
PSOL_SVC_NAME	This is the name that will be used when creating a Windows service for PSOL. **Note.** On WebLogic, this name will be prepended with "peoplesoft - ". On WebSphere, the name will be prepended with "IBM WebSphere Application Server V5 - ".
PSOL_PSHOME	The location of your PeopleTools home directory.
PSOL_WEBSERVER_HOME	The location of your WebLogic or WebSphere installation.
PSOL_WEBSERVER_CMD_PATH	The directory where your web server command scripts are stored. On WebLogic, this is <*PS_HOME*>\webserv\<*domain*>. On WebSphere this is *PSOL_WEBSERVER_HOME*\bin.
PSOL_ENV_SCRIPT	The path to the set_psol_env script (the file you are currently editing). If you moved your scripts in the previous step, be sure to update this path accordingly.
PSOL_WEBSERVER_TYPE	The web server you are running on.

Important! If you make any changes to set_env_psol, save your changes and then also save a backup copy of the set_psol_env script under another name, as the script will be recreated with any subsequent PeopleBooks installation.

Using the PSOL Admin Scripts

Once your scripts are edited and in the desired location, you can use psolAdmin to start and stop the PSOL server, as well as to install or uninstall a Windows service for PSOL.

Note. The following instructions assume that the script files are in the current working directory.

Enter each command at the command line. The command arguments must be in UPPERCASE. If you launch the script without an argument, explanatory text will be displayed.

Action	Command	Comment
Start the PSOL server	`psolAdmin START`	On WebLogic in a multi server domain, you must launch the administration server before starting PSOL. To do this, use the `startWebLogicAdmin` command.
Stop the PSOL server	`psolAdmin STOP`	none
Create a Windows service for PSOL	`psolAdmin INST_SVC`	none
Remove the PSOL Windows service	`psolAdmin RMV_SVC`	Stop the PSOL service before attempting to remove it.

Task B-3: Setting up a Reverse Proxy Server

A reverse proxy server (RPS) is a web server that acts as a front-end gateway to user requests, usually forwarding transaction requests to a back-end server and hosting the static HTML pages itself. WebLogic and WebSphere both support various popular web servers (Apache, Microsoft IIS, Sun ONE) as RPS platforms. If you would like to use WebLogic or WebSphere as a back-end server to an RPS, you can configure the RPS to host static PeopleBooks requests and forward PeopleBooks Full-Text Search (servlet) requests to the back-end server. More information on setting up an RPS can be found in the PeopleTools documentation. And instructions on configuring PeopleBooks on an RPS can be found in *About These PeopleBooks*.

See Also

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, “Working with BEA WebLogic”

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration, “Working with IBM WebSphere”

About These PeopleBooks, “Managing PeopleBooks and the PeopleSoft Online Library”

Task B-4: Configuring Context-Sensitive Help

This section discusses:

- Enabling the Help Link from the Application Pages
- Enabling F1 Help

Task B-4-1: 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. Change the value for the Help URL field by replacing the "helpweb server" string with the domain name and port number of your web server. Also, if you installed to a directory other than "htmldoc" (the default), replace "htmldoc" accordingly.

   Example:

   If your PSOL server is named “mywebserver” and listens to port 5080, you would modify the default Help URL from:

   ```
   http://helpweb server/htmldoc/f1search.htm?ContextID=%CONTEXT_ID%&LangCD=%LANG_⇒
   CD%
   ```

   to:

   ```
   http://mywebserver:5080/PSOL/htmldoc/f1search.htm?ContextID=%CONTEXT_ID%&LangCD=⇒
   ⇒
   %LANG_CD%
   ```

   Note. 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.

   Note. If you do not want the Help icon to display in your applications, clear the Help URL field value.

   Note. The default port for PSOL in a WebLogic multi-server domain installation is 6001.

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 B-4-2: Enabling F1 Help

This procedure describes how to enable F1 help for Application Designer, PeopleCode Editor, and other Windows-based PeopleSoft programs.

To enable F1 help:

1. Sign on to your PeopleSoft application using your browser.
2. Navigate to the PeopleTools, Utilities, Administration, PeopleTools Options page.
3. Enter the same URL as in the previous procedure (where <web_server>/<directory>/ reflects your installation) into the F1 Help URL field:

   ```
   http://<web_server>/<directory>/f1search.htm?ContextID=%CONTEXT_ID%&LangCD=⇒
   %LANG_CD%
   ```

4. Save the page.

Task B-5: Administering PeopleBooks

A special browser-based tool, psolmanager.htm, may assist you in administering your PeopleBooks web site.

For security purposes, this tool is disabled by default on installation. When enabled, you may use it to recreate collections upon demand, and view system parameters.

See *About These PeopleBooks,* "Managing PeopleBooks and the PeopleSoft Online Library"

APPENDIX C

Installing PeopleTools Mobile Agent

This appendix discusses:

- Understanding PeopleTools Mobile Agent
- Finding the Installation Program
- Installing PeopleTools Mobile Agent on a Laptop
- Installing PeopleTools Mobile Agent on a PDA
- Modifying, Repairing, or Removing PeopleTools Mobile Agent
- Expediting the Initialization of a PDA
- Troubleshooting Installation Issues

Understanding PeopleTools Mobile Agent

This chapter describes how to install the PeopleTools Mobile Agent software to a laptop computer or personal digital assistant (PDA).

The PeopleTools Mobile Agent is a product that is licensed separately from the PeopleTools product, and only those customers who have a license for PeopleTools Mobile Agent may install and use this product. Use of the Mobile Agent functionality described herein is subject to the licensing conditions for the PeopleTools Mobile Agent product. Please refer to the applicable contract to determine restrictions regarding this product.

Task C-1: Finding the Installation Program

The installation program for PeopleTools Mobile Agent can be delivered in several ways:

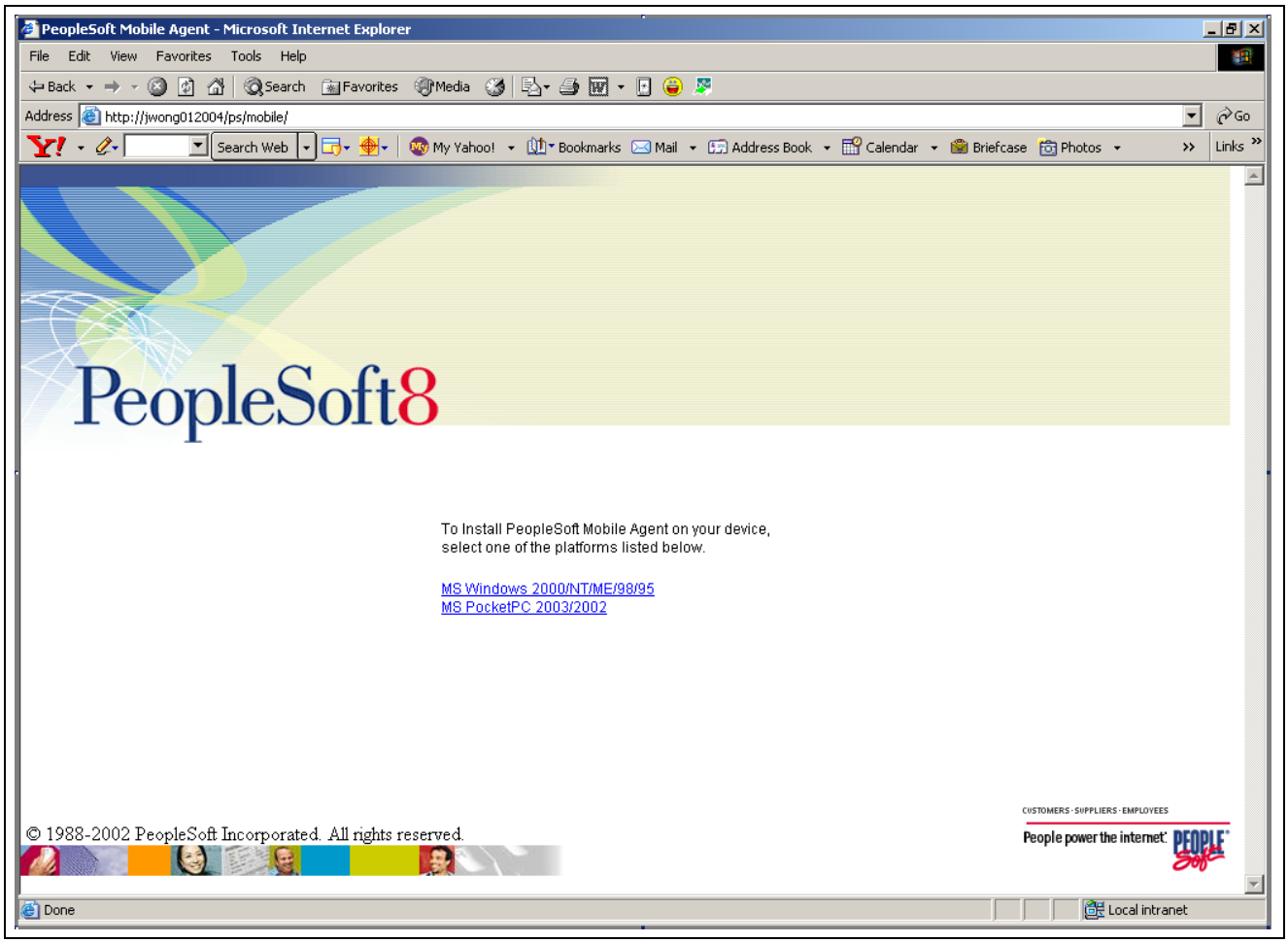
- From a web site established by your administrator.
- From an FTP site established by your administrator.
- As an attachment to an email.
- As a link to a web or FTP site in an email.
- In the mobile portal web site directory of your web server:

Note. PeopleSoft delivers a sample index.html file to be used to deploy the PeopleSoft Mobile Agent from a web site. This is only a sample and needs to be modified if it is to support web server configurations other than the delivered defaults and provide option of customer branding.

- On an Oracle Application Server web server the location of index.html is
  c:\<OAS_HOME>\j2ee\PeopleSoft\applications\PeopleSoft\PORTAL\ps\mobile
- On a BEA WebLogic web server the location of index.html is
  c:\<PS_HOME>\webserv\peoplesoft\applications\peoplesoft\PORTAL\ps\mobile\
- On an IBM WebSphere web server the location of index.html is
  c:\<PS_HOME>\webserv\<cellname_nodename_servername>\peoplesoft.ear\PORTAL\ps\mobile\

Task C-2: Installing PeopleTools Mobile Agent on a Laptop

Use a web page like the following to distribute PeopleTools Mobile Agent installation files.



PeopleSoft 8 window

To install PeopleTools Mobile Agent on a laptop:

1. Locate and run setup.exe:
   The PeopleTools Mobile Agent Setup window appears.
2. Click Next.

3. Specify the directory in which PeopleTools Mobile Agent will be installed, or accept the default.
4. Click Next.
5. Select whether to automatically start PeopleTools Mobile Agent on login.
6. Click Next.
7. Select the preferred language.

   After installation, you cannot change this selection except by reinstalling PeopleTools Mobile Agent.
8. Click Next.
9. Enter the address of your Sync Server in the URL text box.

   This address will usually be the same as that of your PIA web server. For example, if you access PeopleSoft applications at http://mywebserver/ps/signon.html, your Sync Server address is http://mywebserver:80/SyncServer. Contact your system administrator to confirm this information.
10. Click Next.

    A summary page appears, listing your installation selections.
11. Click Back to change a selection, or click Next to proceed with installation.
12. Click Finish when the installation completion window appears.

Task C-3: Installing PeopleTools Mobile Agent on a PDA

Installing PeopleTools Mobile Agent to a PDA requires:

- Installing the appropriate version of PeopleTools Mobile Agent to the computer that connects to your PDA.
- Installing PeopleTools Mobile Agent to your PDA.

Note. The following procedure assumes that you have already established connectivity between the computer and PDA, including applicable synchronization software.

To install PeopleTools Mobile Agent on a PDA:

1. Locate and run setup_<processor_type>.exe:

   The <processor_type> is the type of processor present in the PDA to which PeopleTools Mobile Agent is being installed.

   The PeopleTools Mobile Agent Welcome window appears.
2. Click Next.
3. Specify the directory in which PeopleTools Mobile Agent will be installed on the computer, or accept the default.
4. Click Next.
5. Select the preferred language.

   The only way you can change the preferred language on the PDA is by reinstalling PeopleTools Mobile Agent.
6. Click Next.

7. Enter the address of your Sync Server in the URL text box and click Next.

   This address will usually be the same as that of your PIA web server. For example, if you access PeopleSoft applications at http://mywebserver/ps/signon.html, your Sync Server address is http://mywebserver:80/SyncServer. Contact your system administrator to confirm this information.

8. Click Next.

   A summary page appears, listing your installation selections.

9. Click Back to change a selection, or click Next to proceed with installation.

   The ActiveSync Add/Remove Programs dialog box appears.

10. Confirm the installation.

    The installation proceeds. A completion message appears when installation to the PDA has finished.

11. Click Finish when the installation completion window appears.

Task C-4: Modifying, Repairing, or Removing PeopleTools Mobile Agent

To modify, repair, or remove PeopleTools Mobile Agent:

1. Locate and run the appropriate program:

Installation	Program
Laptop	Setup.exe
PDA	Setup_<processor_type>.exe

   The PeopleTools Mobile Agent Welcome window appears.

2. Select:
   - *Modify* to specify another preferred language
   - *Repair* to reinstall all program components
   - *Remove* to remove all installed components

You are asked to confirm any changes to the current installation.

Task C-5: Expediting the Initialization of a PDA

If PeopleTools Mobile Agent is installed to a PDA, you have the option of using the processing power of the connected computer to expedite initialization (bootstrap synchronization) or update applications synchronization.

To expedite the initialization of a PDA:

1. From the Start menu of the computer connected to your PDA, select *Programs*, *PeopleTools Mobile Agent*, *PS Sync PDA*.

The PeopleTools Mobile Device Bootstrap page appears.

2. Enter your User ID and Password.

   Your User ID and its associated roles determine the application metadata and business data that will be installed to your mobile device.

3. Click *Synchronize*.

   The PeopleTools Mobile Synchronization Results page appears, showing the progress of your bootstrap synchronization.

4. After Update PDA Applications completes successfully, open the PeopleSoft program folder on the PDA.
5. Start PS Mobile Agent.
6. Start PS Mobile Application.
7. Select *Synchronization*, *Last Results* to view the synchronization results.

Task C-6: Troubleshooting Installation Issues

This section discusses:

- Resolving Port Conflicts
- Configuring the Web Server

Task C-6-1: Resolving Port Conflicts

The default HTTP listening port for PeopleTools Mobile Agent is port 8080, which is specified in the psmobile.ini file. If possible, ensure that port 8080 is not used by another application. If PeopleTools Mobile Agent encounters a port conflict because another process is already using port 8080, it reports an error in the log file (\temp\psmobile.log), and stops processing.

You can resolve the conflict by editing the psmobile.ini file. For example, change Port=8080 to Port=80 or Port=8888.

- For a laptop installation, edit the Port setting in the psmobile.ini file.

  Find the file in C:\Windows or C:\WinNT.

- For a PDA installation, copy the psmobile.ini file to the laptop or desktop computer using ActiveSync, edit it there, and then copy it back.

After changing the port assignment in psmobile.ini, start PeopleTools Mobile Agent to determine whether the new setting is acceptable.

Note. If you change the port assignment in psmobile.ini, update any shortcuts, bookmarks, or favorites that reference the changed setting. For example, if you changed Port=8080 to Port=8888, change a browser favorite or bookmark from http://localhost:8080 to http://localhost:8888. If you use PS Sync PDA to expedite PDA synchronization, change the port number in any shortcuts to the port number specified in psmobile.ini + 1. For example, if you change psmobile.ini to Port=8888, change the PS Sync PDA shortcut to http://localhost:8889.

Task C-6-2: Configuring the Web Server

Configure the web server to identify the application server (Sync Server gateway) used for synchronization.

To configure the web server, edit the file SyncServerGatewayConfig.xml. The location of this file depends on the web server.

Web Server	Directory Path
Oracle Application Server	c:\<OAS_HOME>\j2ee\PeopleSoft\applications \PeopleSoft\PORTAL\WEB-INF\psftdocs\ps
BEA WebLogic	c:\<PS_HOME>webserv\peoplesoft\applications \peoplesoft\PORTAL\WEB-INF\psftdocs\ps
IBM WebSphere	c:\<PS_HOME>\webserv\<cellname_nodename_ servername>\peoplesoft.ear\PORTAL\WEB-INF\psftdocs \ps

Edit the file to reflect your environment, where:

- *Domain #1 Name Here* is an optional name for the gateway.
- *Domain #1 Description Here* is an optional description for the gateway.
- *Domain #1 Application Server Connect String Here* is the machine name and JSL port number for the gateway.
- *APP_SRVRS* is the number of application servers configured for this gateway.

```
<?xml version='1.0'?>
<sync-gateway-config>
    <primary-domain>1</primary-domain>
                <trace-level>0</trace-level>
                <max-timeslice>10</max-timeslice>
    <domain-list>
        <domain id='1' version='1'>
            <name>Domain #1 Name Here</name>
            <description>Domain #1 Description Here</description>
            <connect>Domain #1 Application Server Connect String Here</connect>
            <thread-pool-size>APP_SRVRS</thread-pool-size>
        </domain>
     </domain-list>
</sync-gateway-config>
```


APPENDIX D

Installing Web Application Deployment Tools

This appendix discusses:

- Prerequisites
- Installing the Web Application Deployment Tools on Oracle Application Server in GUI Mode
- 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 Oracle Application Server in Console Mode
- Installing the Web Application Deployment Tools on WebLogic in Console Mode
- Installing the Web Application Deployment Tools on 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 Application Server (OAS), WebLogic, and WebSphere. Complete the instructions for the web server you selected when you carried out the PeopleTools installation. Typically, you would choose GUI mode for Windows platforms and console mode for UNIX or Linux platforms.

Before you install the Web Application Deployment tools, confirm that you have completed the following requirements.

If you use OAS as your web server, you must fulfill these requirements:

- You must install the PeopleSoft web server during the PeopleTools installation.
- The OAS 10g software must be installed.

If you use WebLogic as your web server, you must fulfill these requirements:

- JDK 1.4.x must be installed and working properly. Your PATH environment variable must include an entry for JDK 1.4.x (for example, <jdk14x>/bin). If you do not install JDK 1.4.x the deployment will fail due to the absence of a java compiler.
- You must install the PeopleSoft web server during the PeopleTools installation.
- WebLogic 8.x must be installed.

If you use WebSphere as your web server, you must fulfill these requirements:

- JRE 1.4.1 or above must be installed and working properly. You can use the JRE software that is supplied with the PeopleTools installation CD.

- You must install the PeopleSoft web server during the PeopleTools installation.
- The WebSphere 5.x 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 WebSphere, and who owns <PS_HOME>. Here are two examples: If 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/wsadmin as the user and group.

See Also

"Installing Web Server Products"

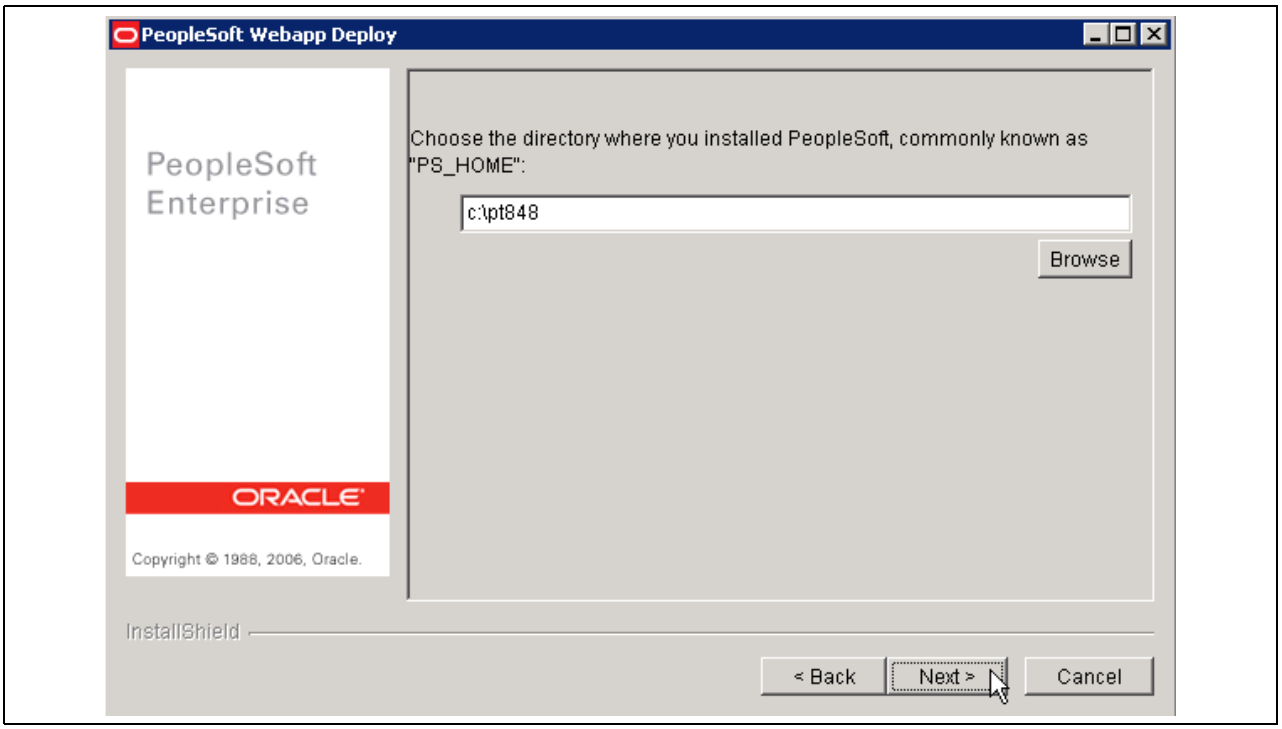
"Using the PeopleSoft Installer"

Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.

Task D-1: Installing the Web Application Deployment Tools on Oracle Application Server in GUI Mode

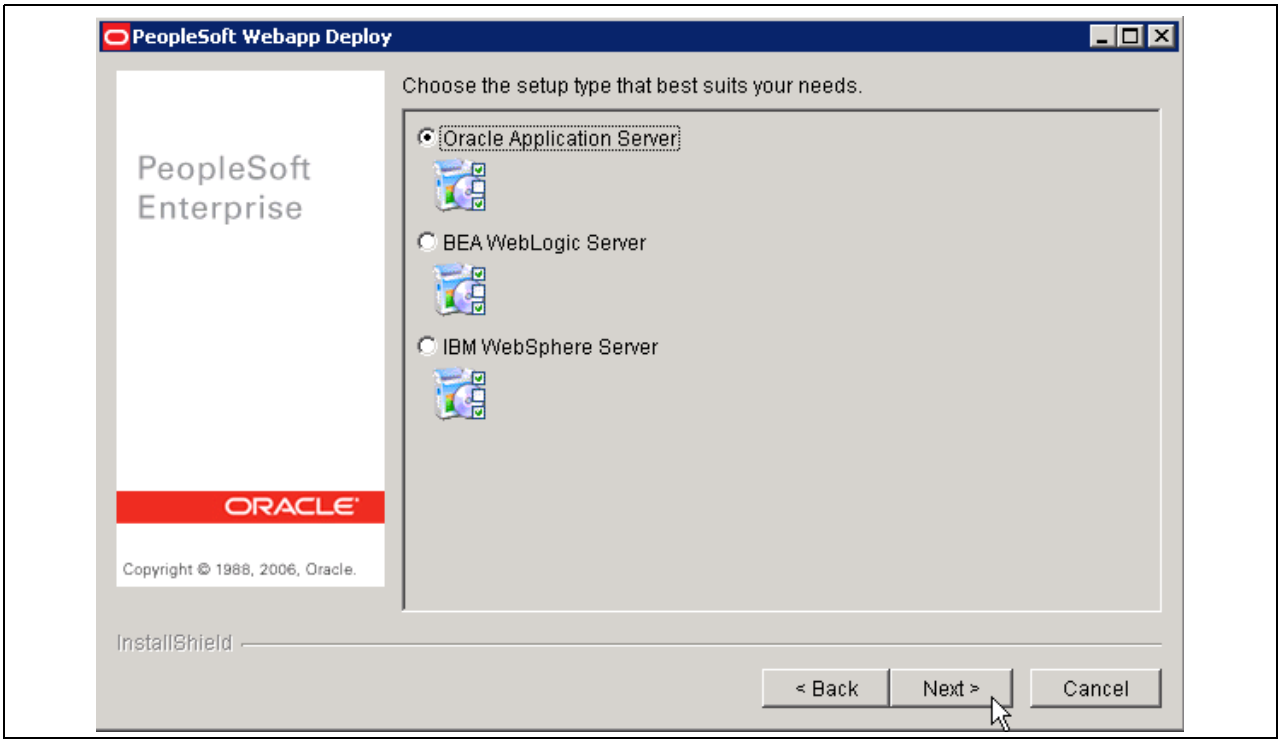
To install the Web Application Deployment tools on Oracle Application Server (OAS):

1. Copy the required Web application (EAR) files to <PS_HOME>/setup/mpwebappdeploy/archive.
2. Navigate to <PS_HOME>/setup/mpwebappdeploy.
3. Double-click on setup.<OS>.
4. Click Next on the Welcome page.
5. Enter the same <PS_HOME> that you specified when you ran the PeopleTools installer, and click Next.



Specifying directory on PeopleSoft Webapp Deploy window

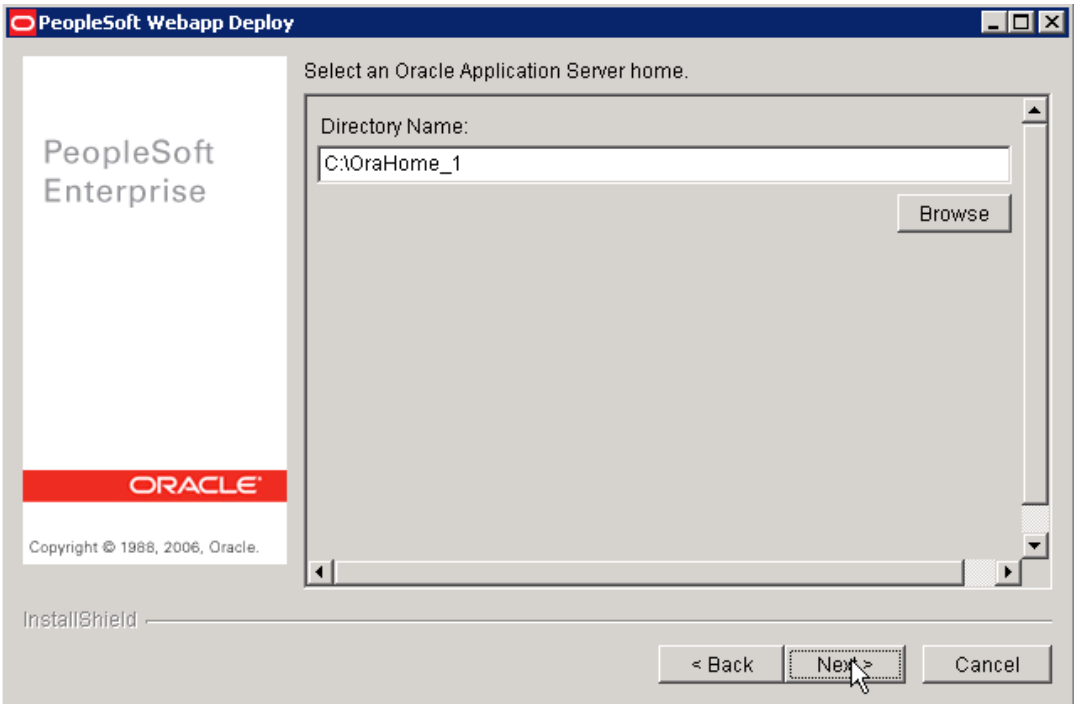
6. Accept Oracle Application Server as the setup type, and click Next.



Selecting Oracle Application Server

7. Specify the OAS home directory, or accept the default, and click Next.

   This is the directory where you installed the OAS software.

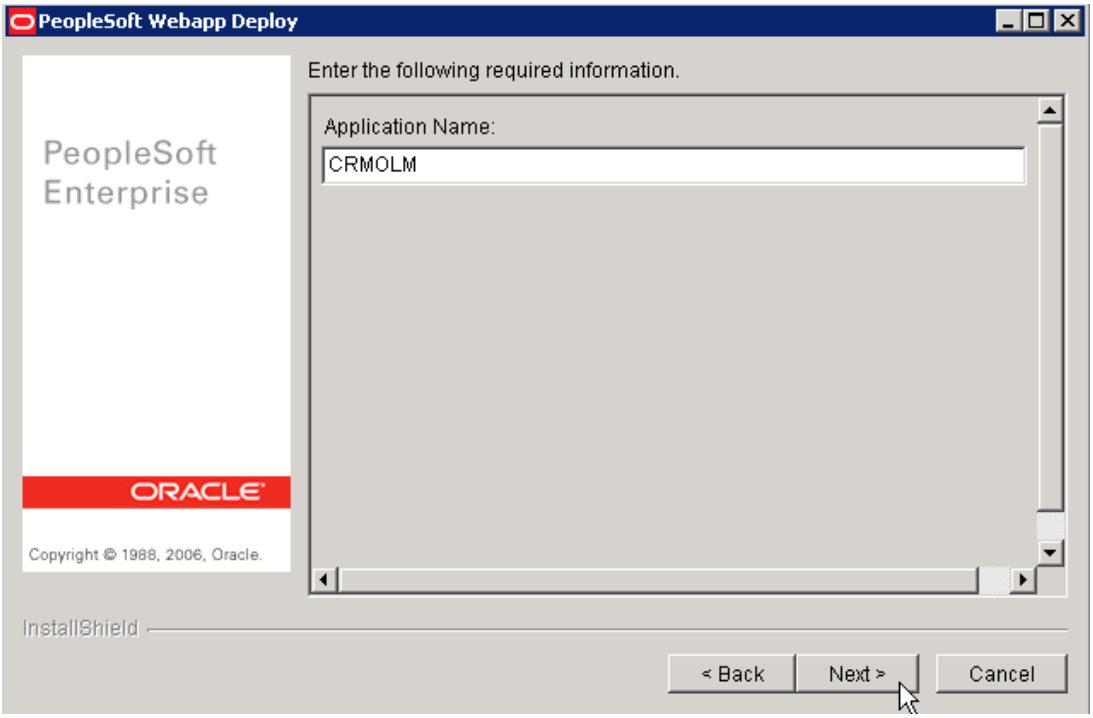


Specifying OAS home on the PeopleSoft Webapp Deploy window

8. Enter an application name, and click Next.

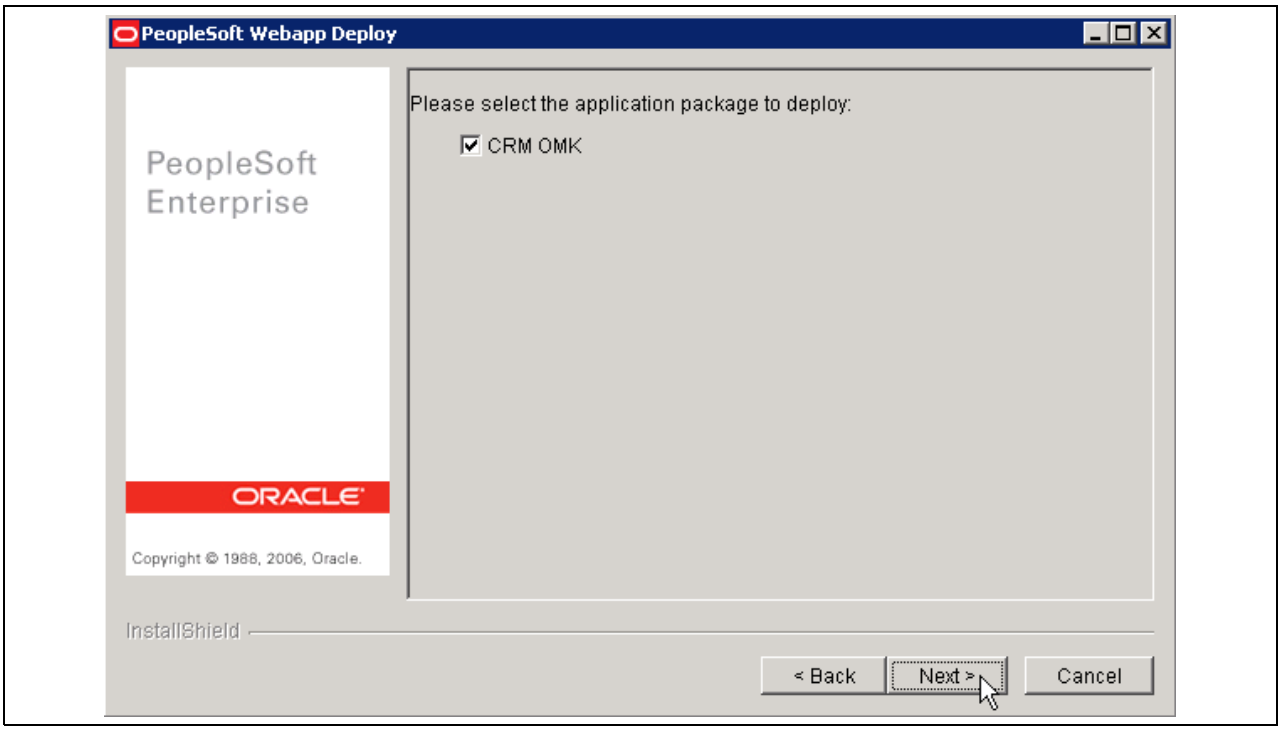
Note. This is not a PeopleSoft Application package name.

A new OC4J component will be created using the user-specified application name.



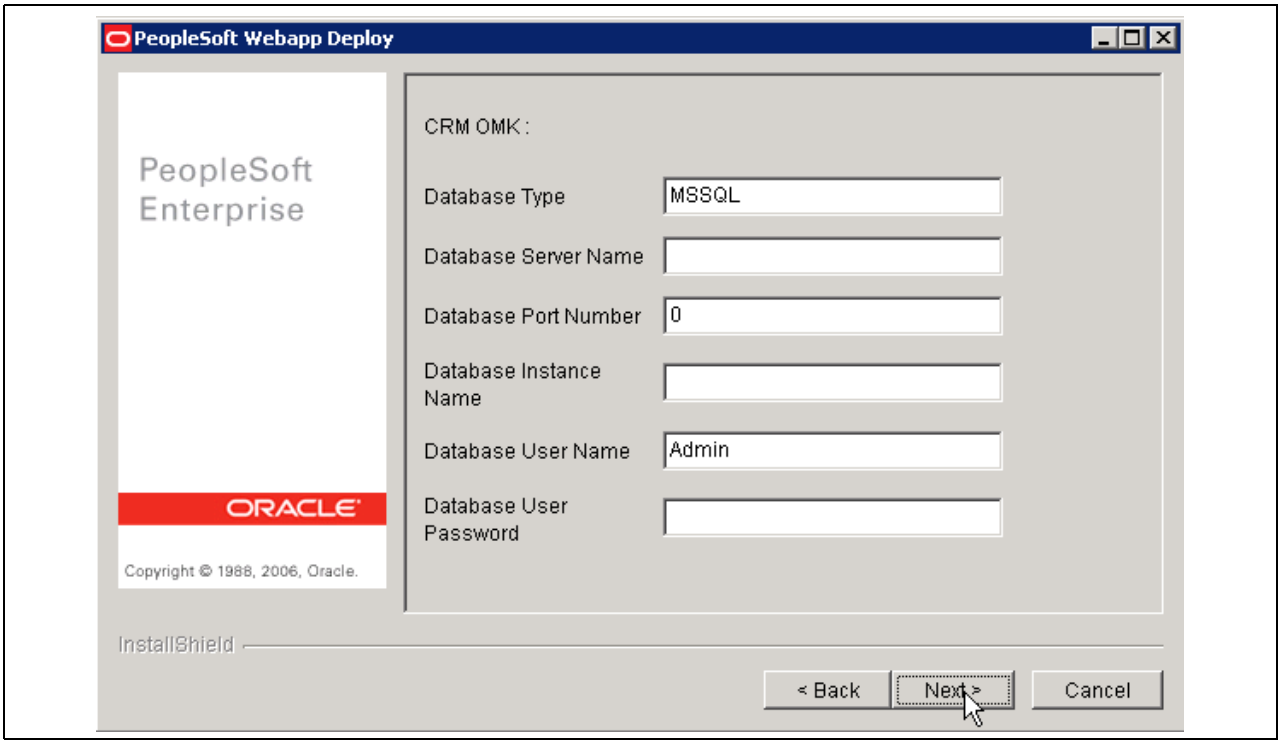
Entering the Application Name for the PeopleSoft Webapp Deploy window

9. Select the application package to deploy, and click Next.



Selecting the application package on the PeopleSoft Webapp Deploy window

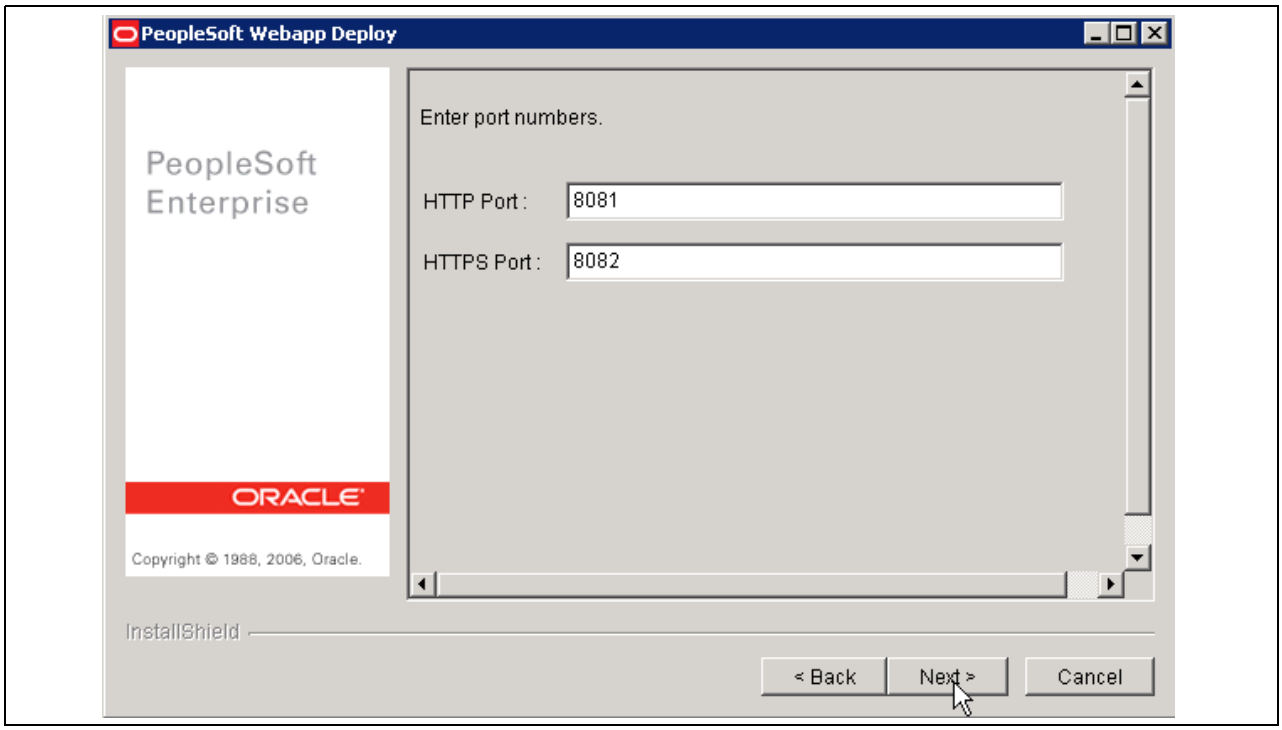
10. Specify Application Information:



Entering application information on PeopleSoft Webapp Deploy window

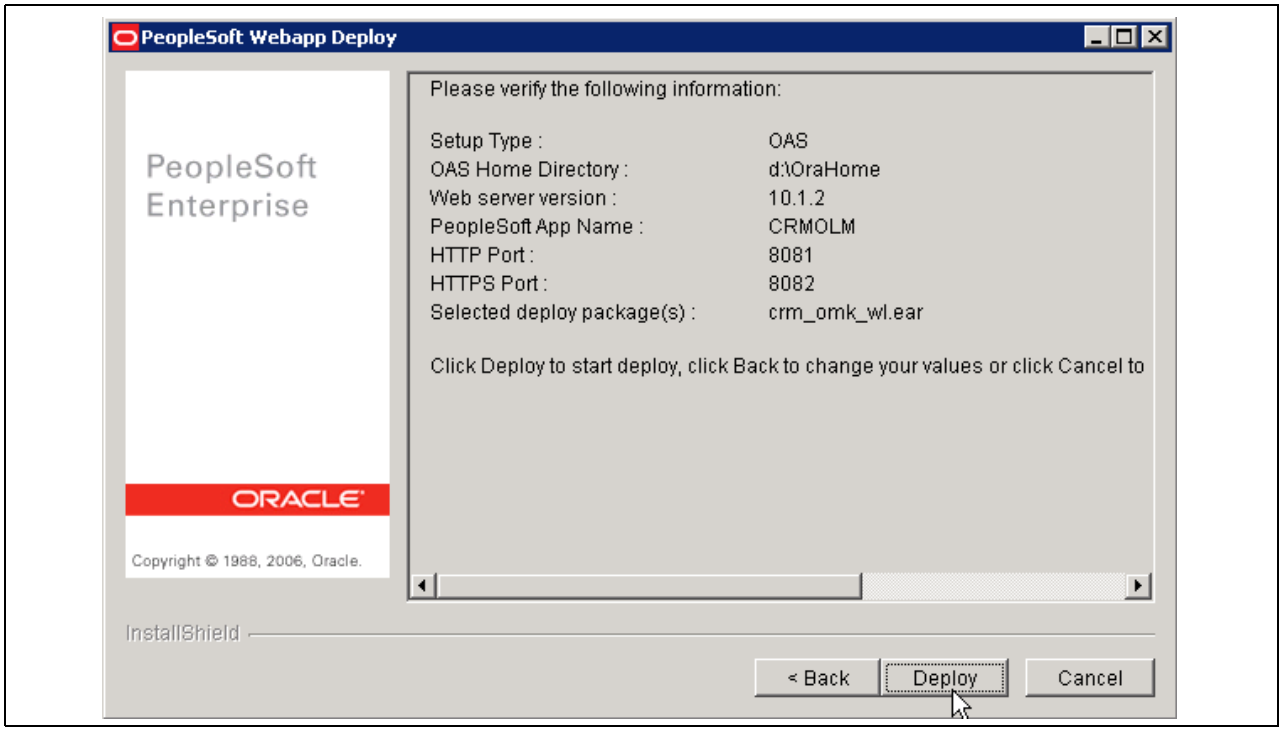
11. Enter port numbers, and click Next.

Note. Review the reserved port numbers for OAS in the file <OAS_HOME>/install/portlist.ini and enter a different port number here.



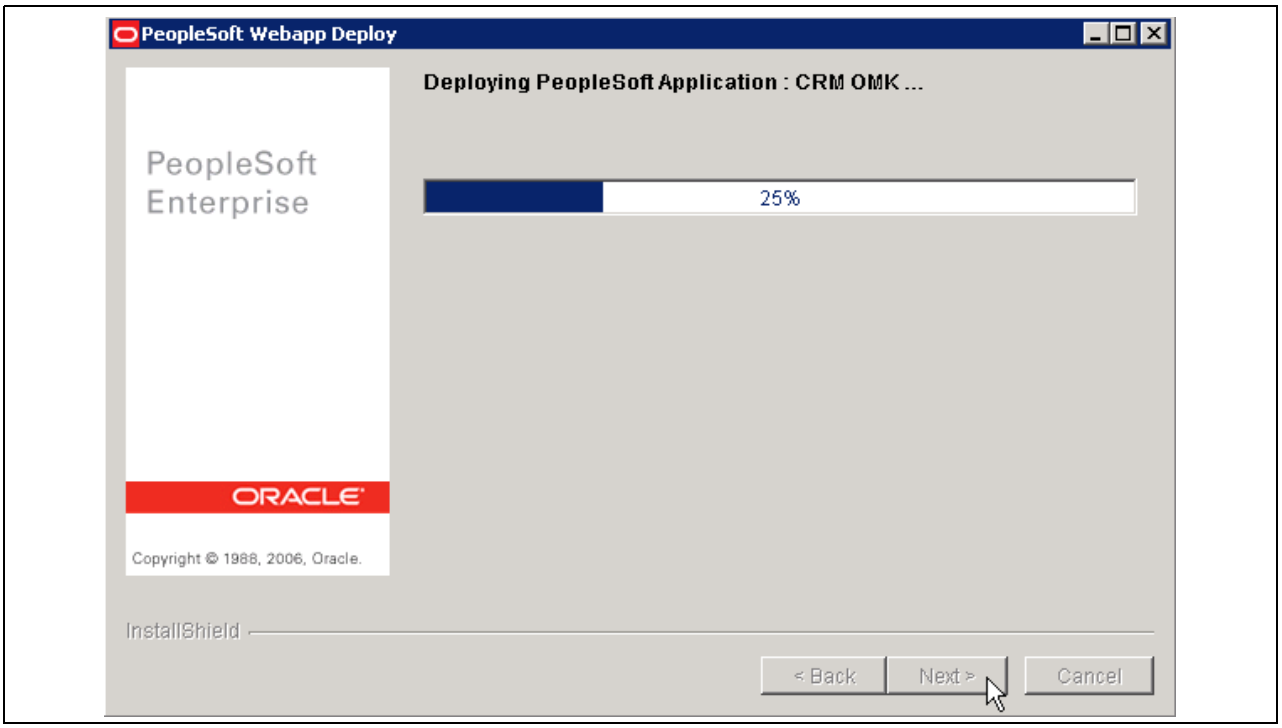
Entering port numbers on PeopleSoft Webapp Deploy window

12. Verify that the information on the confirmation window is correct, and click Next.



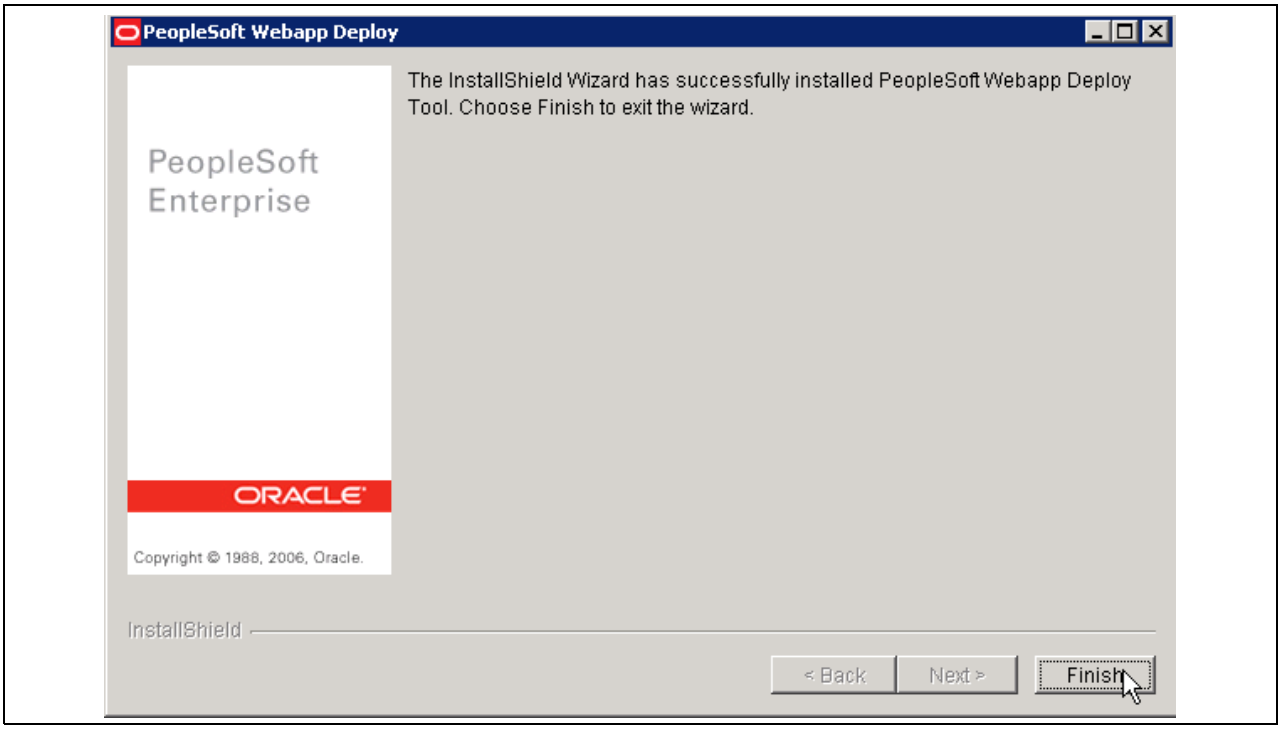
Verifying information on PeopleSoft Webapp Deploy window

A progress window appears.



Progress window for PeopleSoft Webapp Deploy

13. A confirmation window appears when the installation is complete. Click Finish to exit.



Successful installation on the PeopleSoft Webapp Deploy window

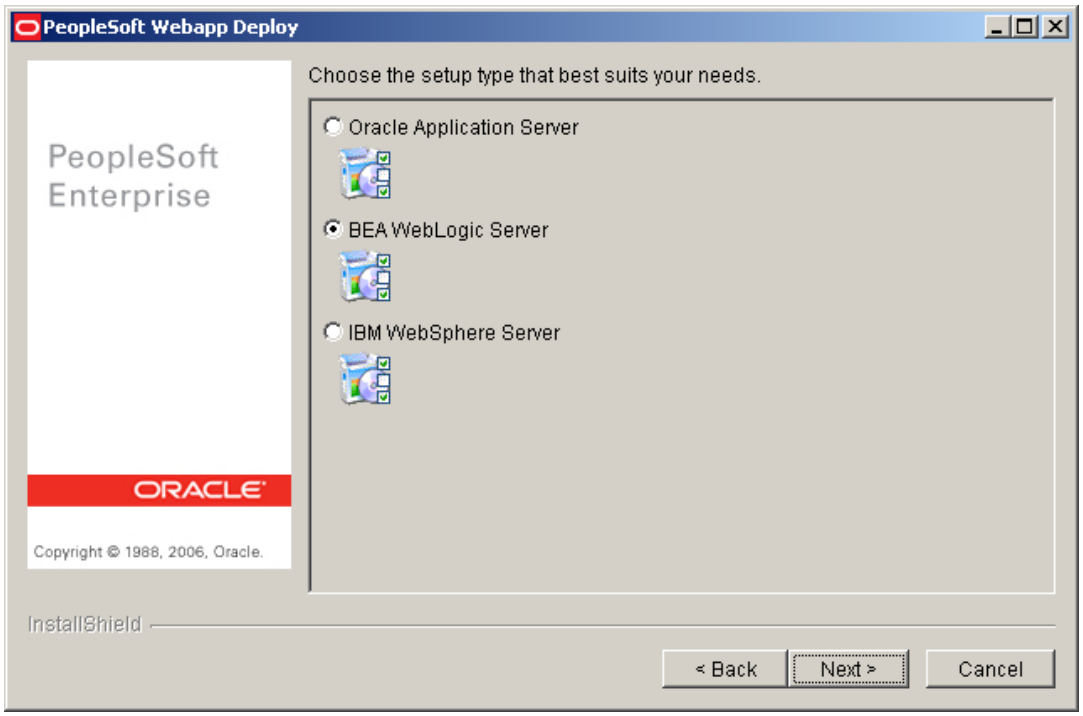
Task D-2: Installing the Web Application Deployment Tools on WebLogic in GUI Mode

Use these instructions to install the Web Application Deployment Tools on WebLogic in GUI mode.

1. Copy the required Web Applications (EAR) files to <PS_HOME>/setup/mpwebappdeploy/archive.
2. Navigate to <PS_HOME>/setup/mpwebappdeploy.
3. Double-click on setup.exe.

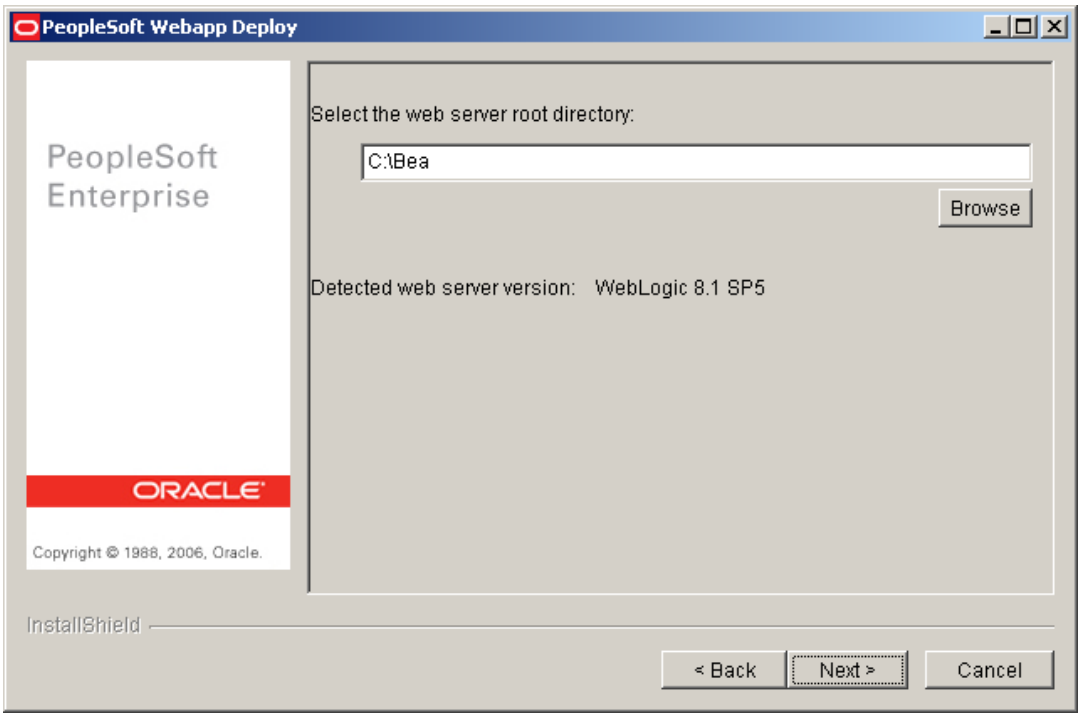
Note. If the setup executable fails, and an error message appears saying the JVM directory cannot be found, open a command prompt. Navigate to <PS_HOME>\setup\mpwebappdeploy, and use the command `setup.exe –is:javahome <jre_dir>`, where <jre_dir> is the location of the JRE files.

4. Click Next on the Welcome page.
5. Enter the same <PS_HOME> directory that you specified when you ran the PeopleTools Installer.
6. Select BEA WebLogic Server and click Next.



Selecting BEA WebLogic on the PeopleSoft Webapp Deploy window

7. Specify the root directory where you installed WebLogic, and click Next.



Specifying the WebLogic root directory on the PeopleSoft Webapp Deploy window

8. Enter the login ID and password for the new domain that you are creating. Click Next to continue.
9. 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. 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.

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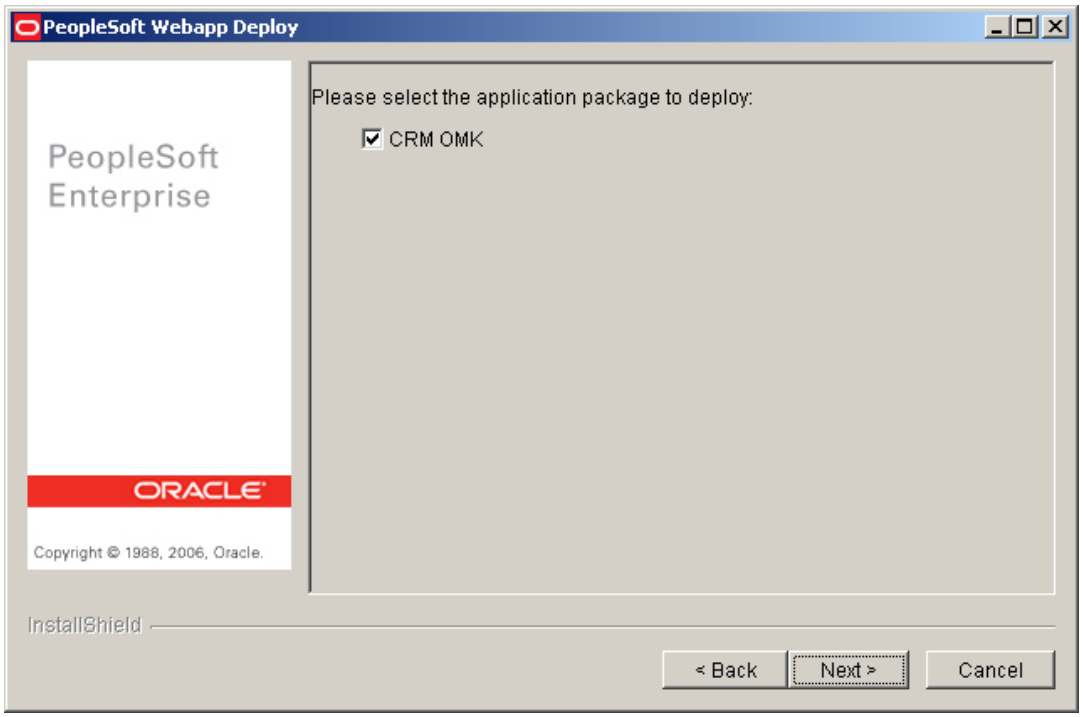
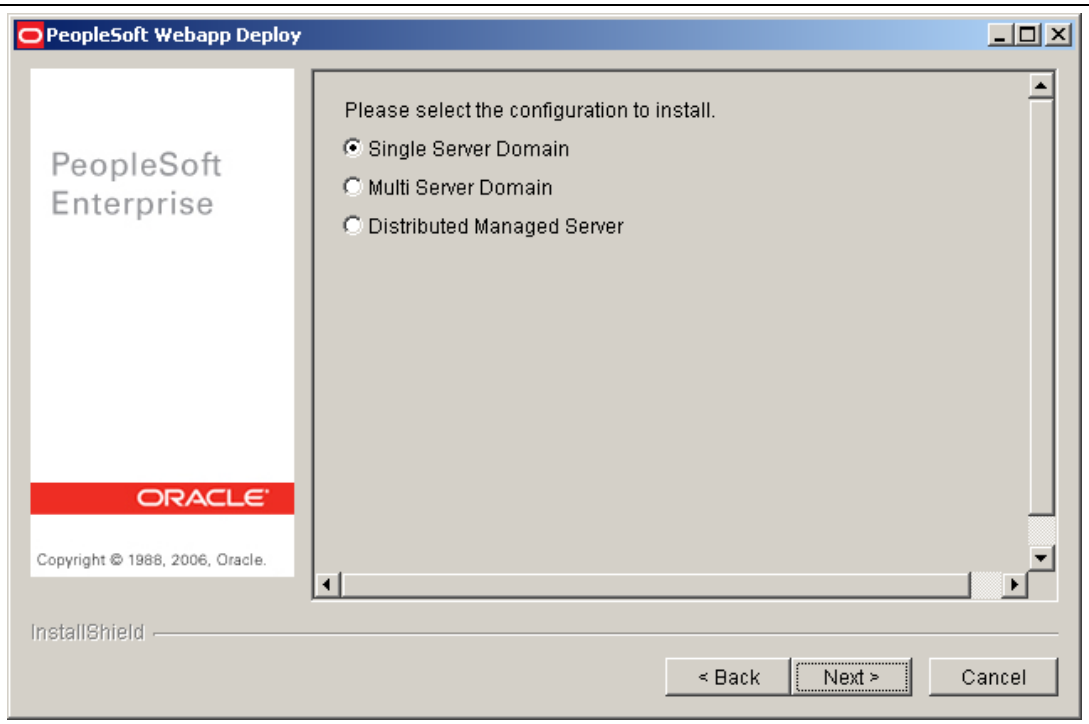
10. The next window lists all of the available application packages (EAR files). Select the packages you want to install. *You must select at least one application package from this list.*



Selecting application packages from the PeopleSoft Webapp Deploy window

11. Select the type of domain to create from these options:

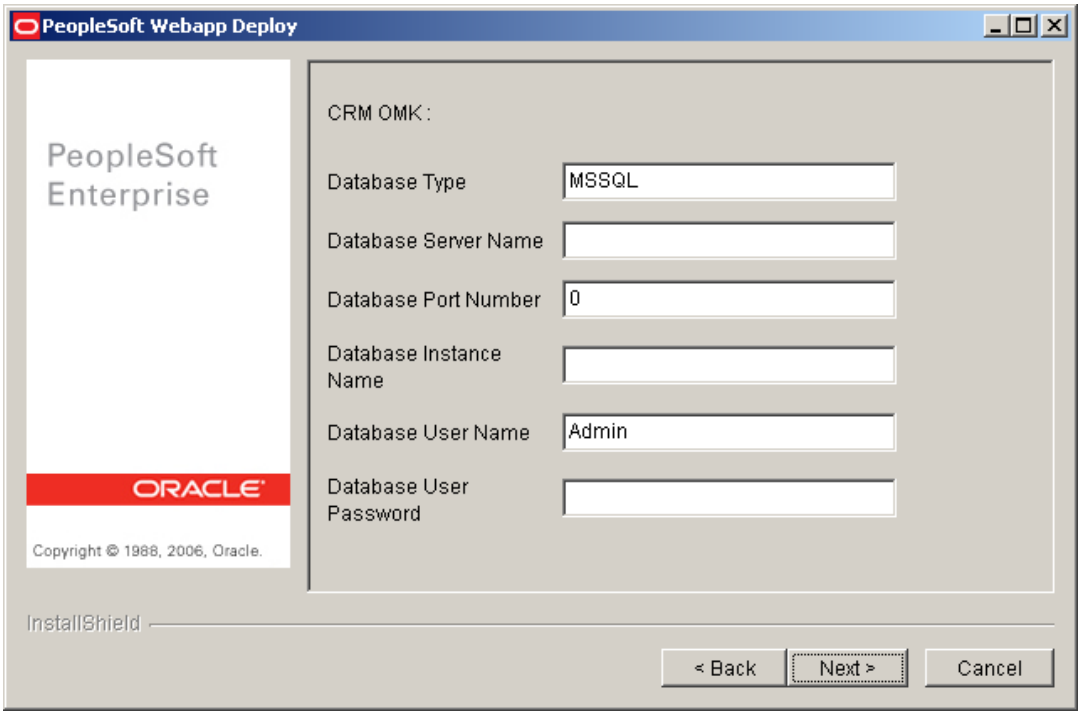
    See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode," Installing the PeopleSoft Pure Internet Architecture in GUI Mode.



Selecting the domain type from the PeopleSoft Webapp Deploy window

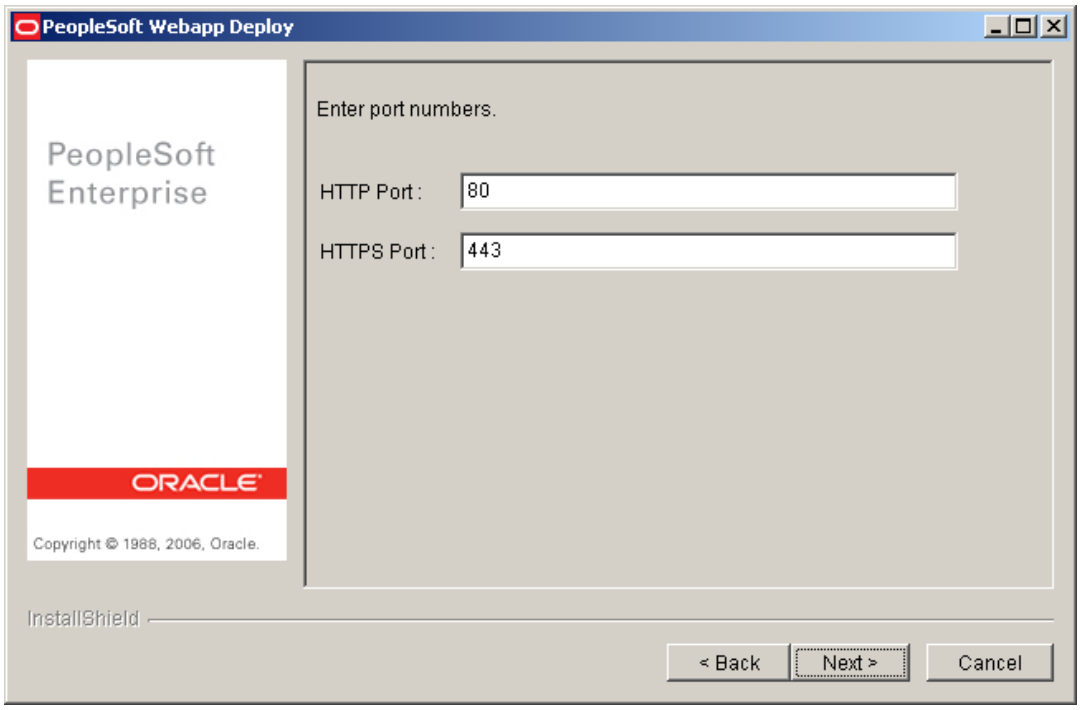
- Single Server Domain: This configuration is intended for single users or very small scale, non-production environments.
- Multi-Server Domain: This configuration is intended for a production environment.
- Distributed Managed Server: This option is an extension of the Multi-Server Domain selection 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, a window appears with entry fields for the required information. For example:



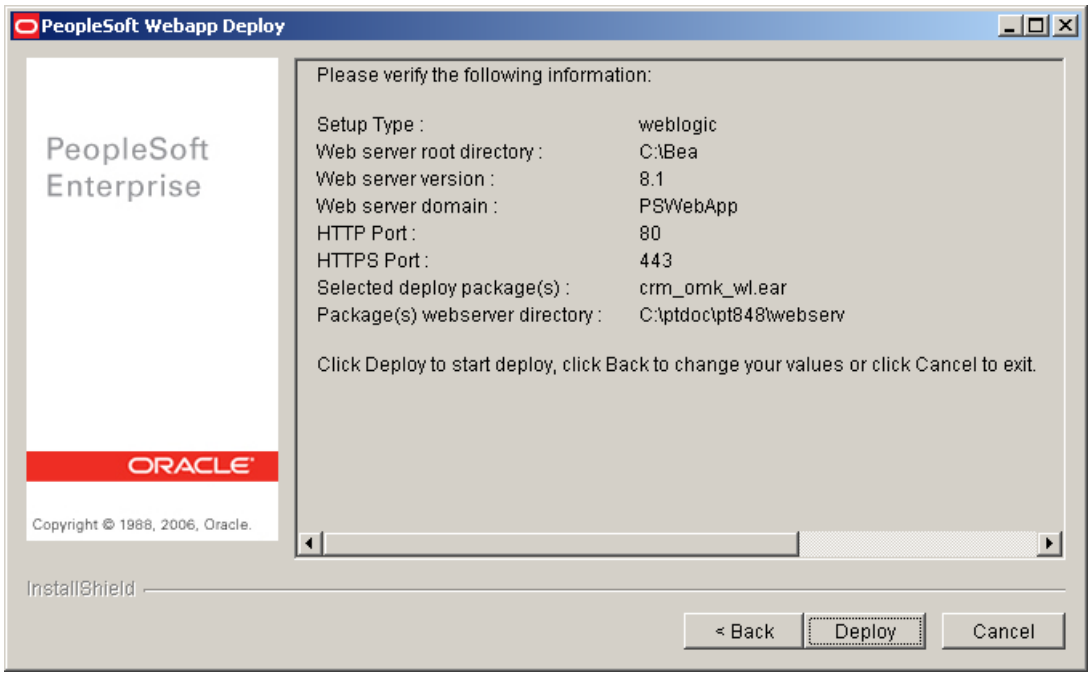
Specifying application information on the PeopleSoft Webapp Deploy window

13. Enter HTTP and HTTPS port numbers. Click Next to continue.



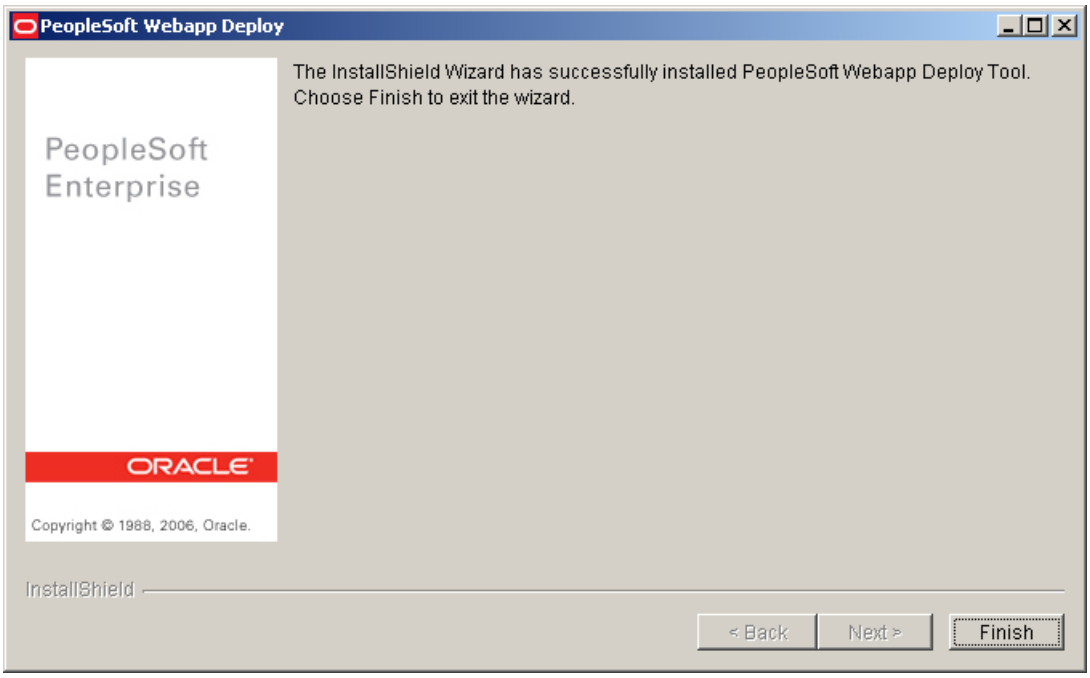
Entering port numbers on the PeopleSoft Webapp Deploy window

14. Verify your installation information on the summary screen that appears. Click Deploy to begin the installation, Back to go back to make changes on an earlier window, or Cancel to exit the installation.



Verifying installation information on the PeopleSoft Webapp Deploy window

15. A confirmation screen appears when the installation completes. Click Finish to exit the install shield wizard.



Final confirmation on PeopleSoft Webapp Deploy window

Task D-3: 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.

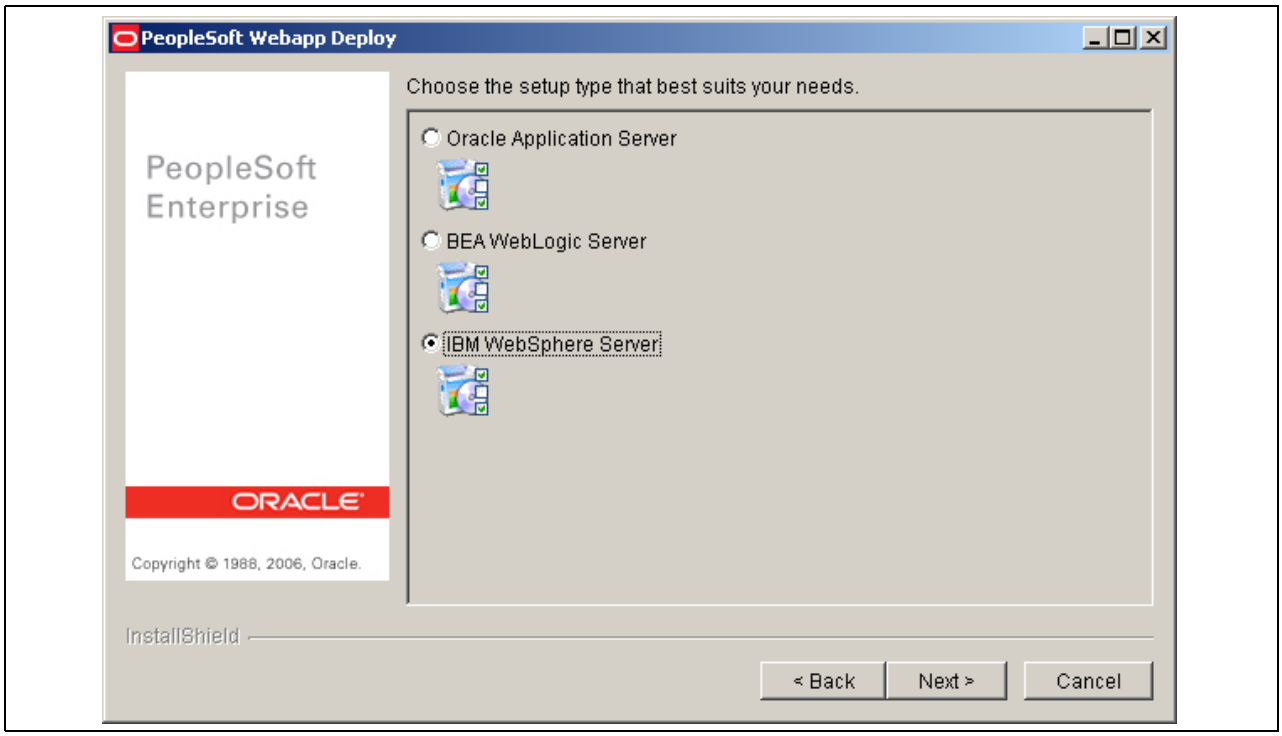
1. Copy the required Web Applications (EAR) files to <PS_HOME>\setup\mpwebappdeploy\archive.
2. Start WebSphere on the server on which you plan to deploy the Web Application Deployment tools. Open a command prompt, navigate to the \bin directory under the root directory where you installed WebSphere (<WAS_HOME>\bin), and enter:

   ```
   startServer.bat <server_name>
   ```

3. Navigate to <PS_HOME>\setup\mpwebappdeploy.
4. Double-click on setup.exe.

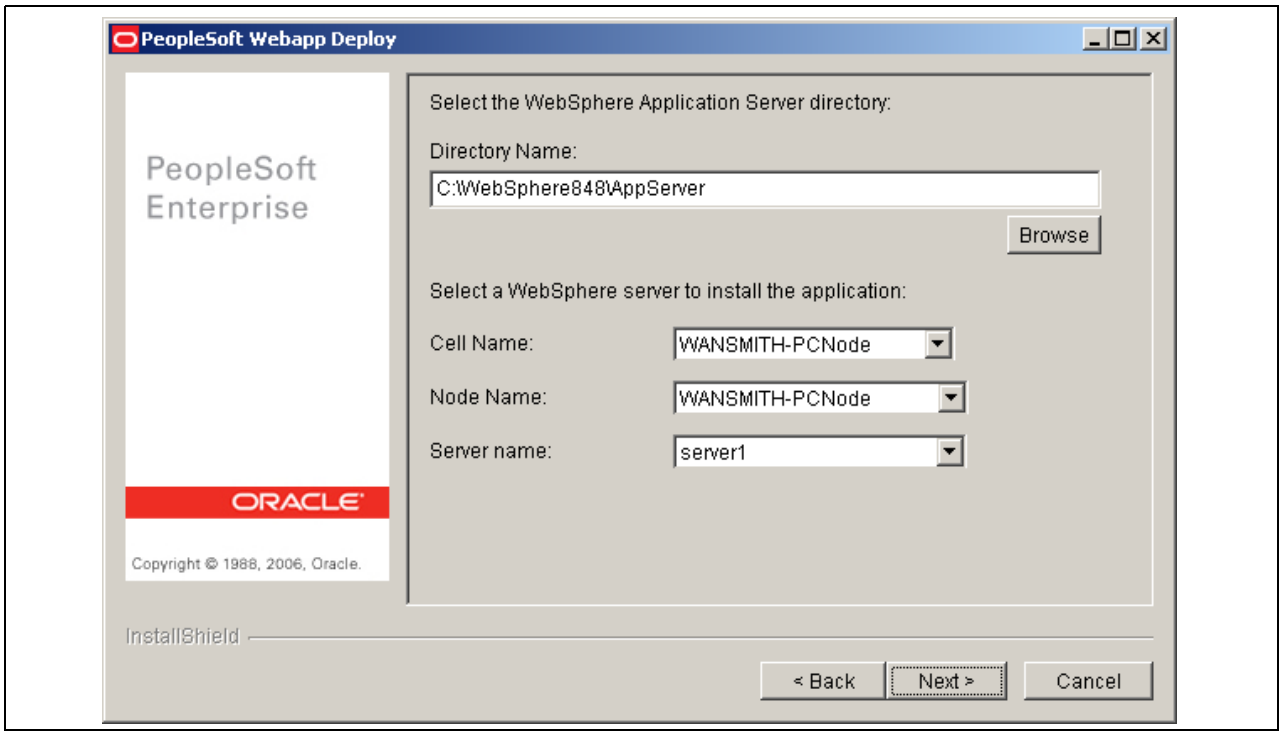
   Note. If the setup executable fails, and an error message appears saying the JVM directory cannot be found, open a command prompt. Navigate to <PS_HOME>\setup\mpwebappdeploy, and use the command `setup.exe -is:javahome <jre_dir>`, where <jre_dir> is the location of the JRE files.

5. Click Next on the Welcome page.
6. Enter the same <PS_HOME> directory that you specified when you ran the PeopleTools Installer.
7. Select IBM WebSphere and click Next.



Selecting IBM WebSphere on the PeopleSoft Webapp Deploy window

8. Specify the root directory where you installed WebSphere, and the cell name, node name and server name of the WebSphere server.



Specifying the WebSphere 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.

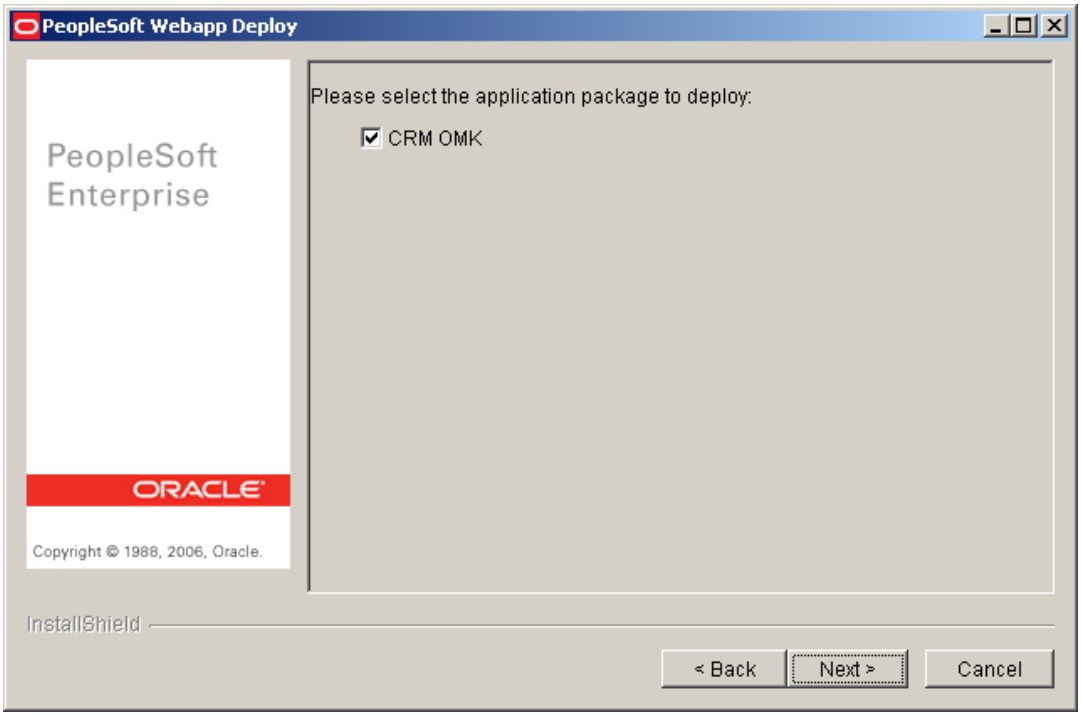
See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration*

9. 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. 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.

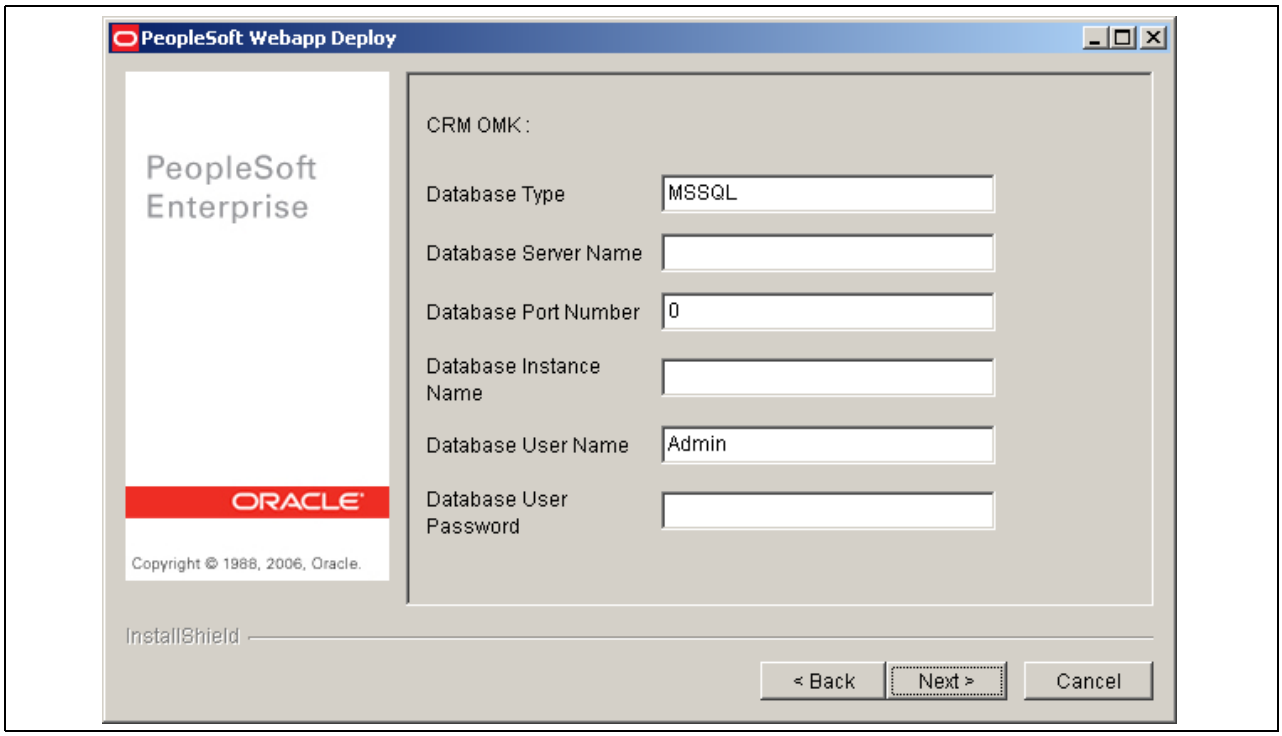
---

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.*



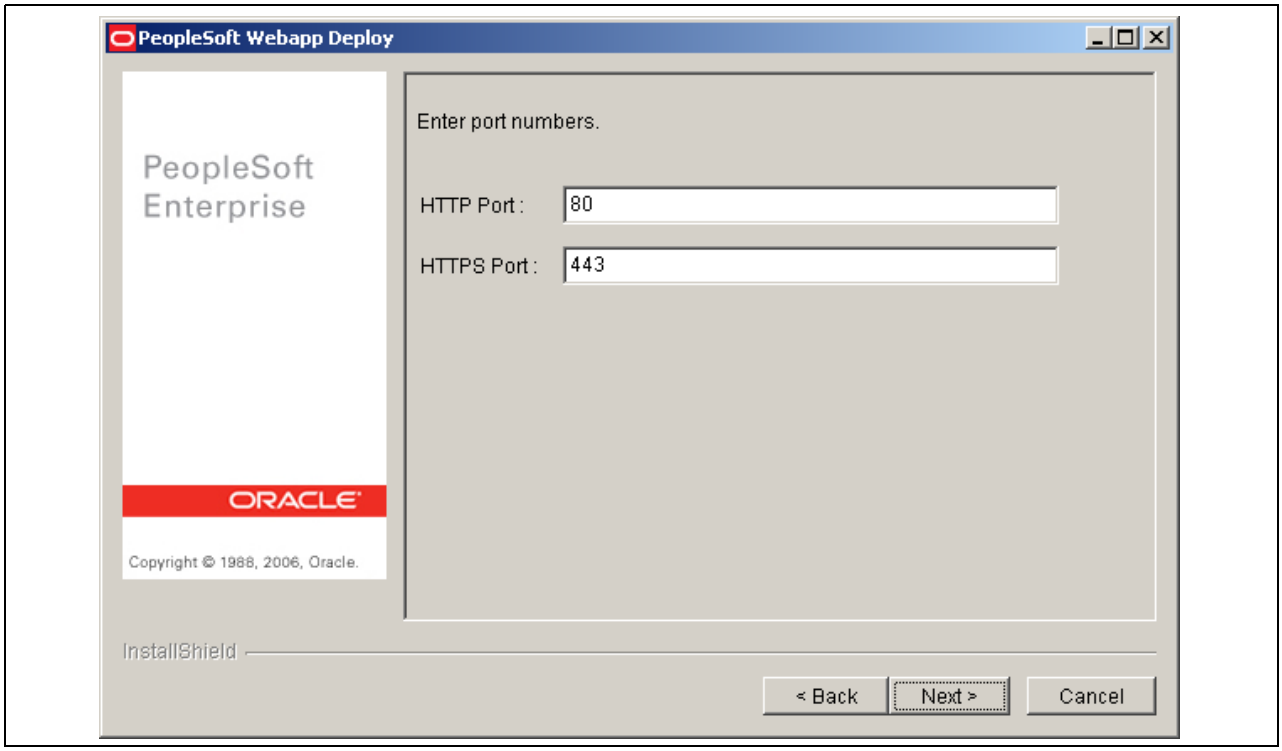
Selecting application packages on the PeopleSoft Webapp Deploy window

11. If the application(s) you selected in step 10 requires additional information, a window appears with entry fields for the required information. For example:



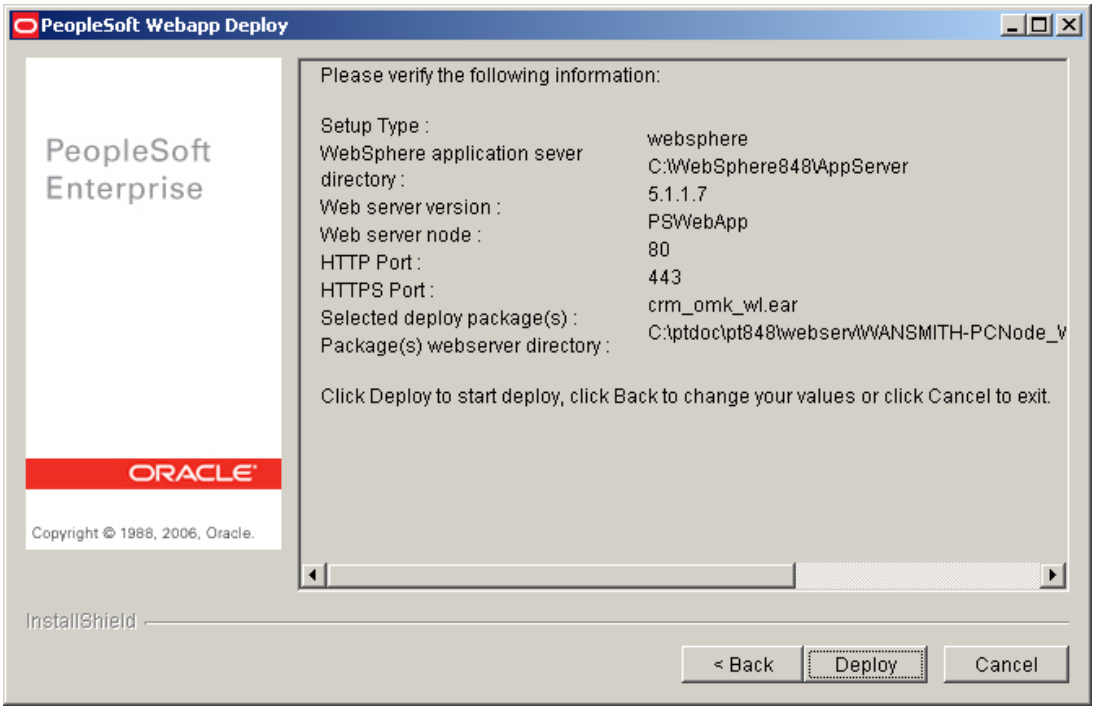
Specifying application information on the PeopleSoft Webapp Deploy window

12. Enter HTTP and HTTPS port numbers. Click Next to continue.



Entering port numbers on the PeopleSoft Webapp Deploy window for WebSphere

13. Verify your installation information on the summary screen that appears. Click Deploy to begin the installation, Back to go back to make changes on an earlier window, or Cancel to exit the installation.



Verifying installation information on the PeopleSoft Webapp Deploy

14. A window appears with a progress indicator. A confirmation screen appears when the installation completes. Click Finish to exit the install shield wizard.

Confirming installation on the PeopleSoft Webapp Deploy window

Task D-4: Installing the Web Application Deployment Tools on Oracle Application Server in Console Mode

To install the Web Application Deployment Tools on OAS 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/mpwebappdeploy/archive.
2. Set up the PeopleSoft environment as follows:

```
cd <PS_HOME>
../psconfig.sh
```

3. To run the installer:

```
cd <PS_HOME>/setup/mpwebappdeploy
setup.<OS> -console [-is:javahome<jre14x>]
```

   - Use the same platform-specific extension for the setup executable as you used for the PeopleSoft Installer.

     See "Using the PeopleSoft Installer," Running the PeopleSoft Installer.
   - Use the optional flag `-is:javahome<jre14x>` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path. For example, to run on a HP-UX platform and use the JRE that PeopleSoft supplies with PeopleTools, use the command `setup.hp -console -is:javahome <PS_HOME>/jre`.
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 BEA 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 4 to Redisplay [1]
```

5. Choose the <PS_HOME> directory that you specified when you installed 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 4 to Redisplay [1]
```

6. Press ENTER to select the default, Oracle Application Server, at the following prompt, and then enter *1* to continue.

```
Choose the setup type that best suits your needs.
[X] 1 - Oracle Application Server
```



```
[ ] 2 - BEA WebLogic Server
[ ] 3 - 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 4 to Redisplay [1]
```

7. Enter the directory where you installed the OAS software, and press ENTER to continue at the following prompt.

```
Select the web server root directory:
Please specify a directory name or press ENTER [/home/OraHome_1]
```

8. Enter a name for the web application, or accept the default name.

```
Enter application name or click Next to select default:

[CRMOLM]
```

A New OC4J component will be created using the user-specified application name.

9. 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:

[X]  1  -  CRM Package
[ ]  2  -  Financial Package

To select an item enter its number, or 0 when you are finished [0]:
```

10. If the application(s) you selected in step 9 requires additional information, supply the necessary information at the next prompt. For example:

```
CRM OMK :

Database Type
    [MSSSQL]

Database Server Name
    []

Database Port Number
    [0]

Database Instance Name
    []

Database User Name
    [Admin]

Database User Password
    []
```

11. Enter HTTP and HTTPS port numbers.

Note. Review the reserved port numbers for OAS in the file <OAS_HOME>/install/portlist.ini and enter a different port number here.

```
Enter port numbers.

HTTP Port :  [80] 8091

HTTPS Port :  [443] 4431
```

12. 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 : OAS

Web server root directory : /home/OraHome_1

Web server version : 10.1.2

PeopleSoft App Name : CRMOLM

HTTP Port : 8091

HTTPS Port : 4431

Selected deploy package(s) : crm_omk_wl.ear
```

13. A confirmation screen appears when the installation completes. Click Finish to exit the install shield wizard.

Task D-5: Installing the Web Application Deployment Tools on WebLogic in Console Mode

Use these instructions to install the Web Application Deployment Tools on 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/pswebappdeploy/archive.
2. Set up the PeopleSoft environment as follows:

```
cd <PS_HOME>
../psconfig.sh
```

3. To run the installer:

```
cd <PS_HOME>/setup/pswebappdeploy
```



```
setup.<platform> -console [-is:javahome<jre14x>]
```

- Use the same platform-specific extension for the setup executable as you used for the PeopleSoft Installer.

  See "Using the PeopleSoft Installer," Running the PeopleSoft Installer.
- Use the optional flag `-is:javahome<jre14x>` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path. For example, to run on a HP-UX platform and use the JRE that PeopleSoft supplies with PeopleTools, use the command `setup.hp –console –is:javahome <PS_HOME>/jre`.

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 BEA 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 4 to Redisplay [1]
```

5. Choose the <PS_HOME> directory that you specified when you installed 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 4 to Redisplay [1]
```

6. Enter *2* to select BEA WebLogic Server, at the following prompt, and then enter *1* to continue.

```
Choose the setup type that best suits your needs.
[X] 1 - Oracle Application Server
[ ] 2 - BEA WebLogic Server
[ ] 3 - 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 4 to Redisplay [1]
```

7. Enter the directory where you installed 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 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 WebLogic domain, and press ENTER to continue.

```
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:

[X]  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.

[X] 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
    [MSSSQL]

Database Server Name
    []

Database Port Number
    [0]

Database Instance Name
    []

Database User Name
    [Admin]

Database User Password
    []
```

13. Enter HTTP and HTTPS port numbers.

```
Enter port numbers.

HTTP Port :  [80] 8091

HTTPS Port :  [443] 4431
```

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 : 8.1

Web server domain : PSWebApp

HTTP Port : 8091

HTTPS Port : 4431

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.

Note. You can choose to deploy at a later time using the same commands.

Task D-6: Installing the Web Application Deployment Tools on WebSphere in Console Mode

Use these instructions to install the Web Application Deployment Tools on 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/pswebappdeploy/archive.
2. Set up the PeopleSoft environment using the following commands:

```
cd <PS_HOME>
../psconfig.sh
```

3. Start 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 WebSphere, <WAS_HOME>. Use the following commands:

```
cd <WAS_HOME>/bin
startServer.sh <server_name>
```

4. To run the installer:

```
cd <PS_HOME>/setup/pswebappdeploy
setup.<platform> -console [-is:javahome<jre14x>]
```

- Use the same platform-specific extension for the setup executable as you used for the PeopleSoft Installer.

  See “Using the PeopleSoft Installer,” Running the PeopleSoft Installer.
- Use the optional flag `-is:javahome<jre14x>` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path. For example, to run on a HP-UX platform and use the JRE that PeopleSoft supplies with PeopleTools, use the command `setup.hp –console –is:javahome <PS_HOME>/jre`.

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 BEA 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 4 to Redisplay [1]
```

6. Choose the same <PS_HOME> directory that you specified when you ran the 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 *3*, to select the IBM WebSphere Server, at the following prompt:

```
Choose the setup type that best suits your needs.

[X] 1 - Oracle Application Server
[ ] 2 - BEA WebLogic Server
[ ] 3 - 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 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 *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration.*

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. 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:
```



```
[X]  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
    [MSSQL]

Database Server Name
    []

Database Port Number
    [0]

Database Instance Name
    []

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] 8091

HTTPS Port: [443] 4431
```

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 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 WebSphere server you used in step 3.

Task D-7: 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 locations:

- If you installed on OAS, the log files are found in <OAS_HOME>/j2ee/home/webappdeploy_install.log.
- If you installed on WebLogic, the log file is found in <PS_HOME>/webserv/<domain_name>logs/*.log
- If you installed on WebSphere, look in <WAS_HOME>/appserver/log/<server_name>*.log

If you need to start or stop OAS, WebLogic, or 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 E

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. For the complete instructions on installing DB2 Connect, refer to their product documentation.

See the DB2 Connect Product documentation.

Verifying Supported Versions

To use PeopleSoft 8.4 with DB2 Connect, verify the following release information:

- Consult Supported Platforms on PeopleSoft Customer Connection to verify that PeopleSoft supports the version of DB2 Connect that you intend to use with your particular release of DB2 UDB for z/OS.
- Consult Supported Platforms on PeopleSoft Customer Connection also to verify that PeopleSoft 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 PeopleSoft Customer Connection for the minimum required z/OS version for PeopleTools 8.48.

See Also

PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise)

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 UDB for z/OS via DDF:

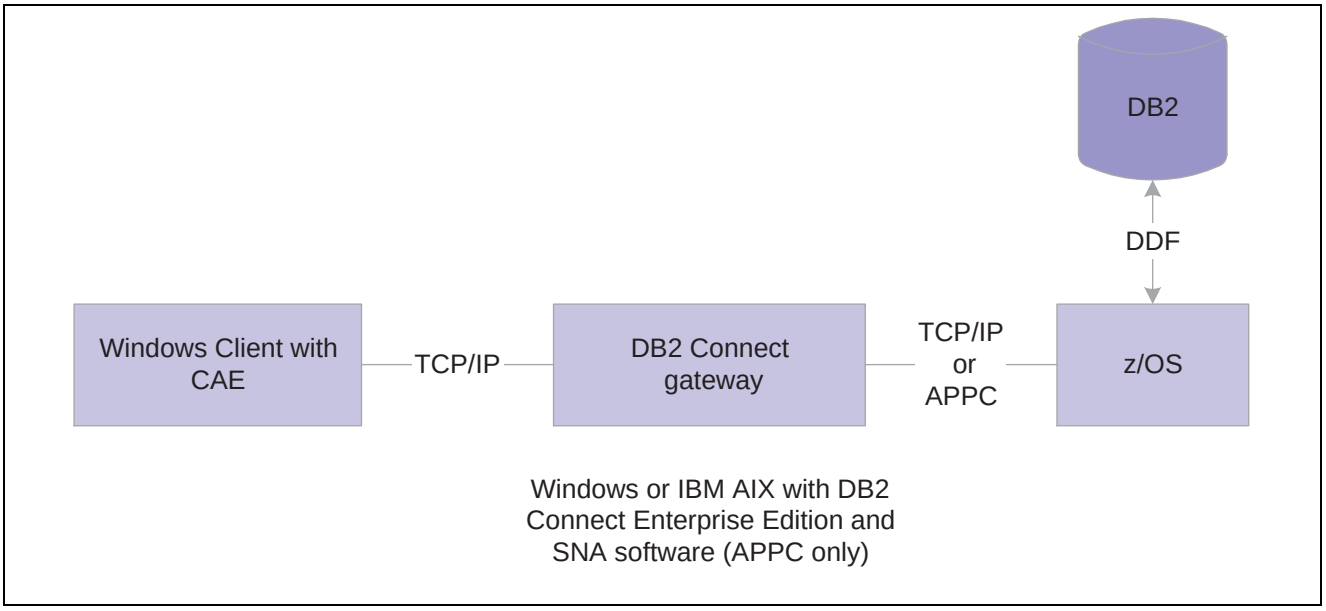
- Provides a control point for client connections.
- Performs the proper character conversions when receiving data from DB2.
- Responds to the connect requests from PeopleSoft client computers and creates corresponding TCP/IP conversations with DDF.
- Sends requests and replies between client computers 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 PeopleSoft's 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 communication between the Windows client machine and the DB2 Connect gateway is accomplished using the TCP/IP protocol.

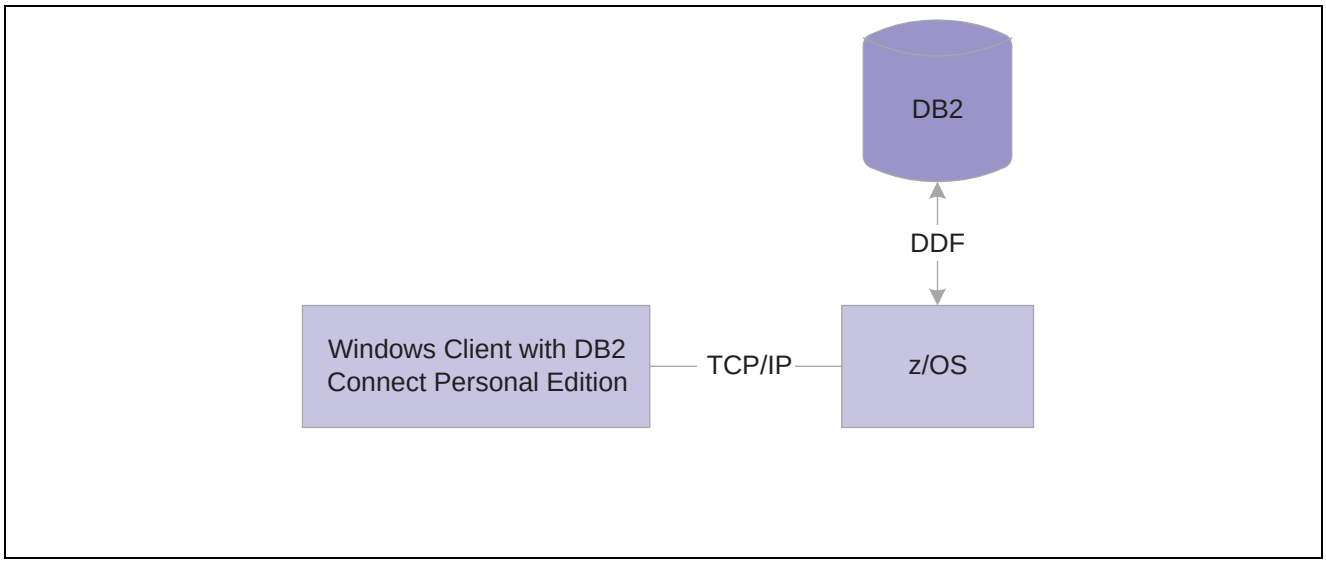


DB2 Connect Enterprise Edition architecture

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.



DB2 Connect Personal Edition architecture

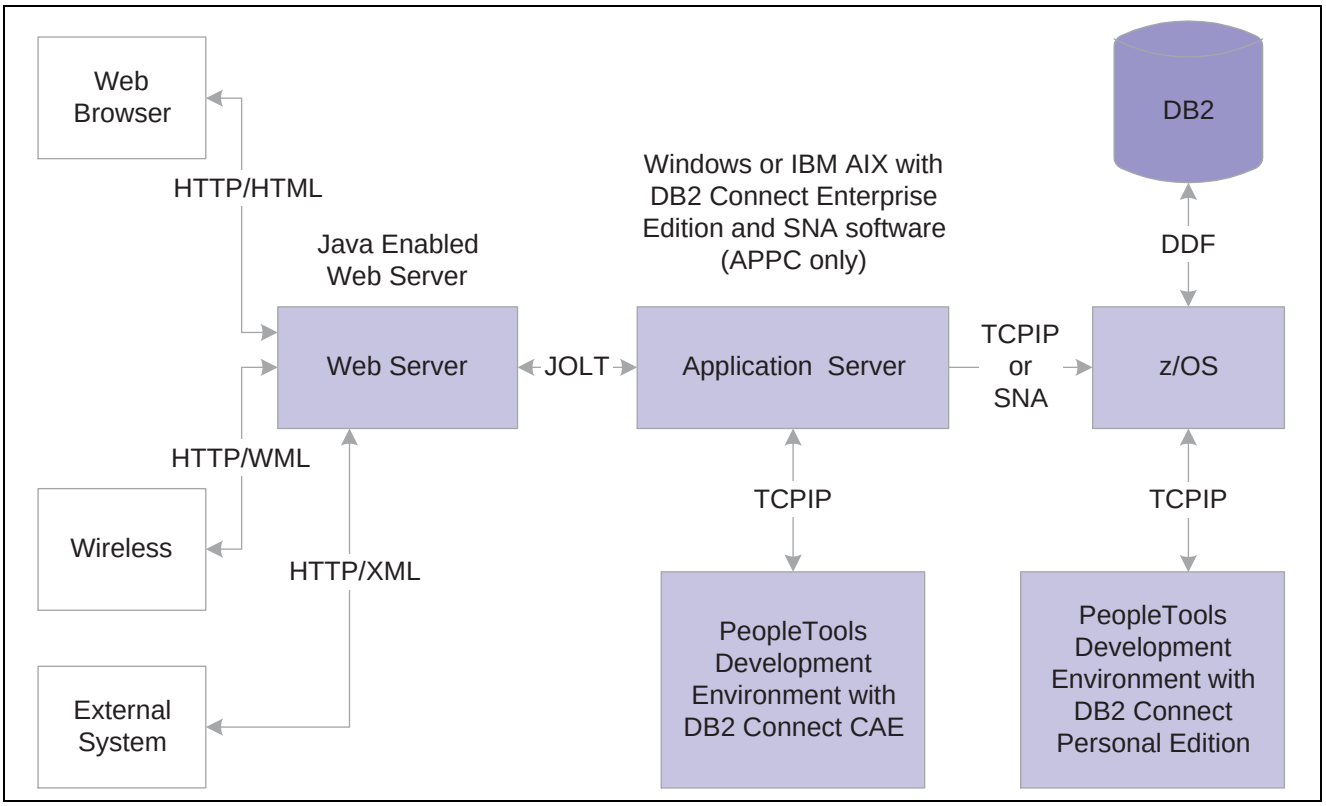
DB2 Connect Personal Edition allows direct TCP/IP connection to the host with no gateway requirement.

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. BEA's Tuxedo middleware product manages all these transactions in the application server. In addition to BEA's 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 UDB for z/OS, the application server can be configured either on Windows NT 4.0, Windows 2000, 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 via the PeopleSoft three-tier, the individual client workstations do not require DB2 Connect CAE. No connectivity is required on the client machines for PeoplesSoft 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



Three Tier Configuration with DB2 Connect

Task E-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 E-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
```

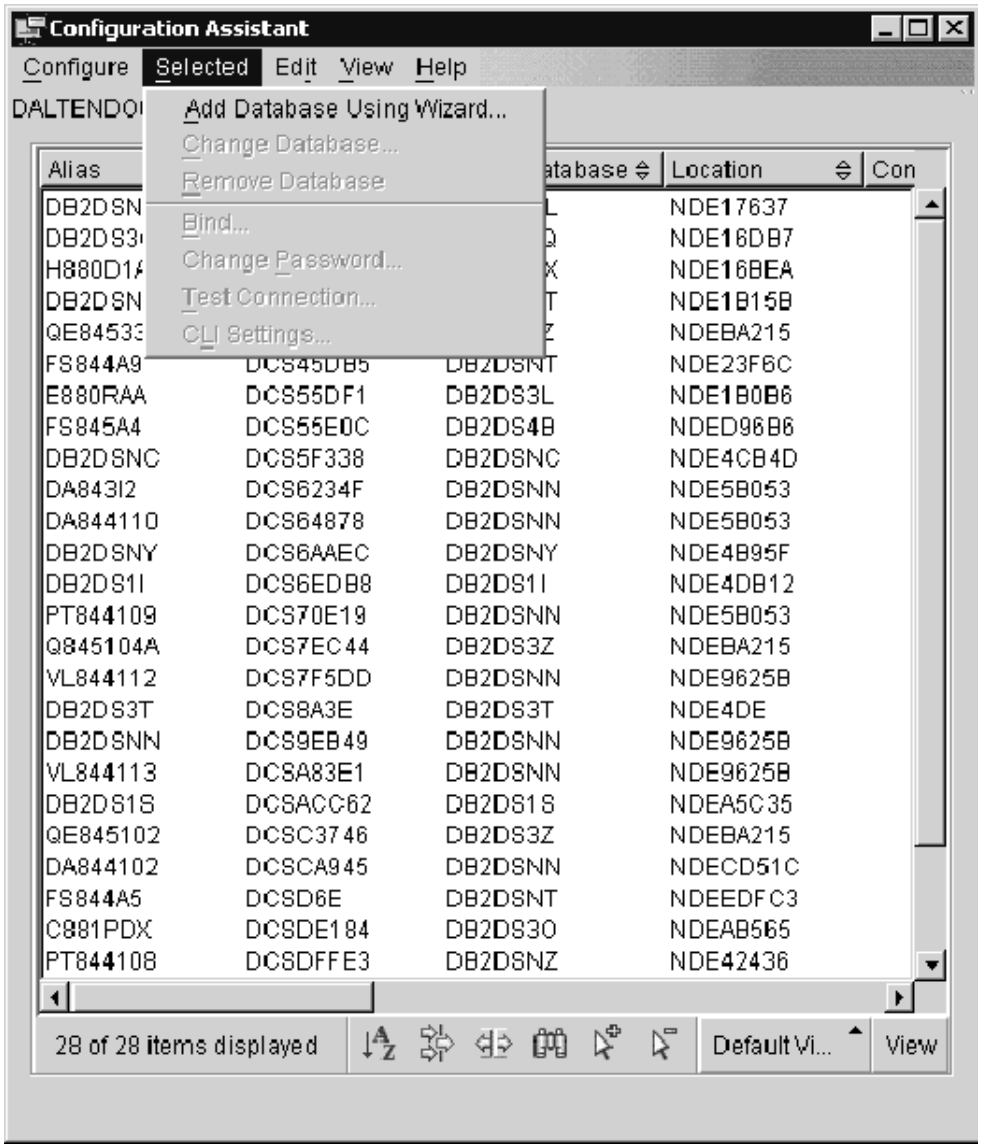
Authentication takes place on the DB2 server, so userid and password must be valid mainframe ids. If the connection is successful, you will get a message showing the name of the database to which you have connected. This step is synonymous to the TEST button in Client Configuration Assistant. You can now execute SQL statements against the database.

Task E-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.

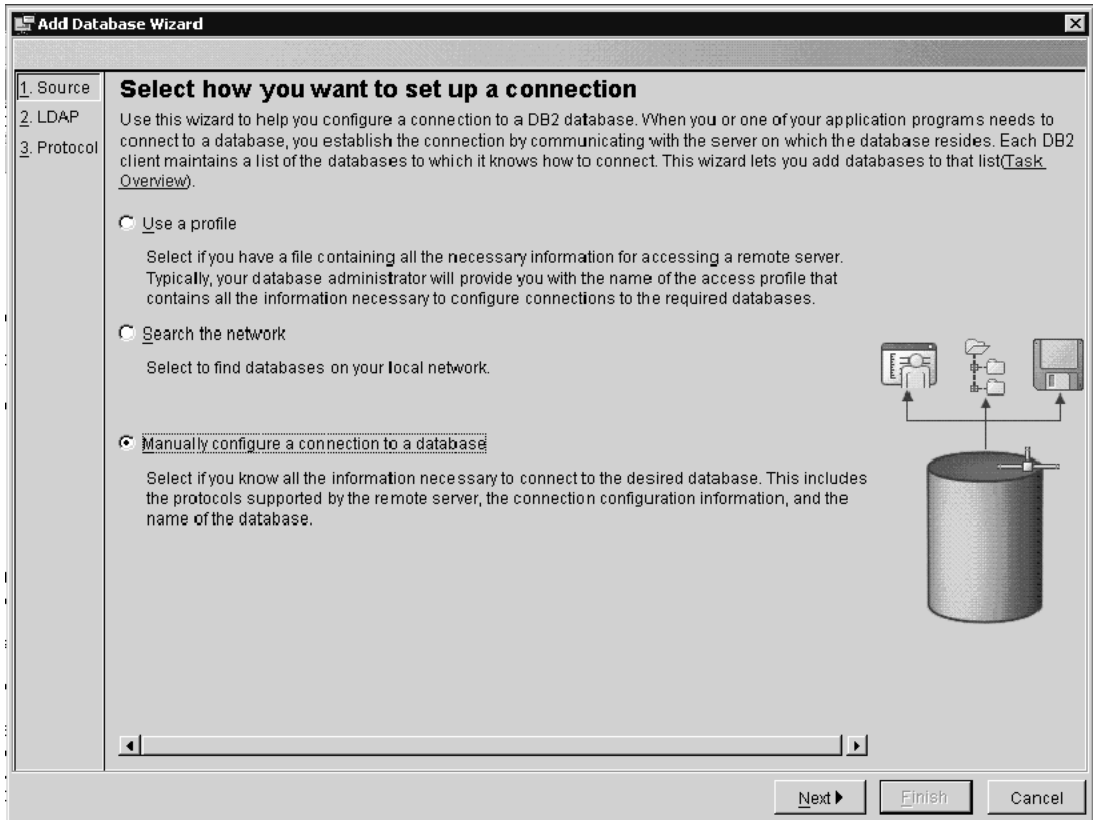
See *DB2 Connect Enterprise Edition Quick Beginnings manual.*

1. Open Configuration Assistant. On the Selected menu, select Add Database Using Wizard. The Add Database Wizard window opens.



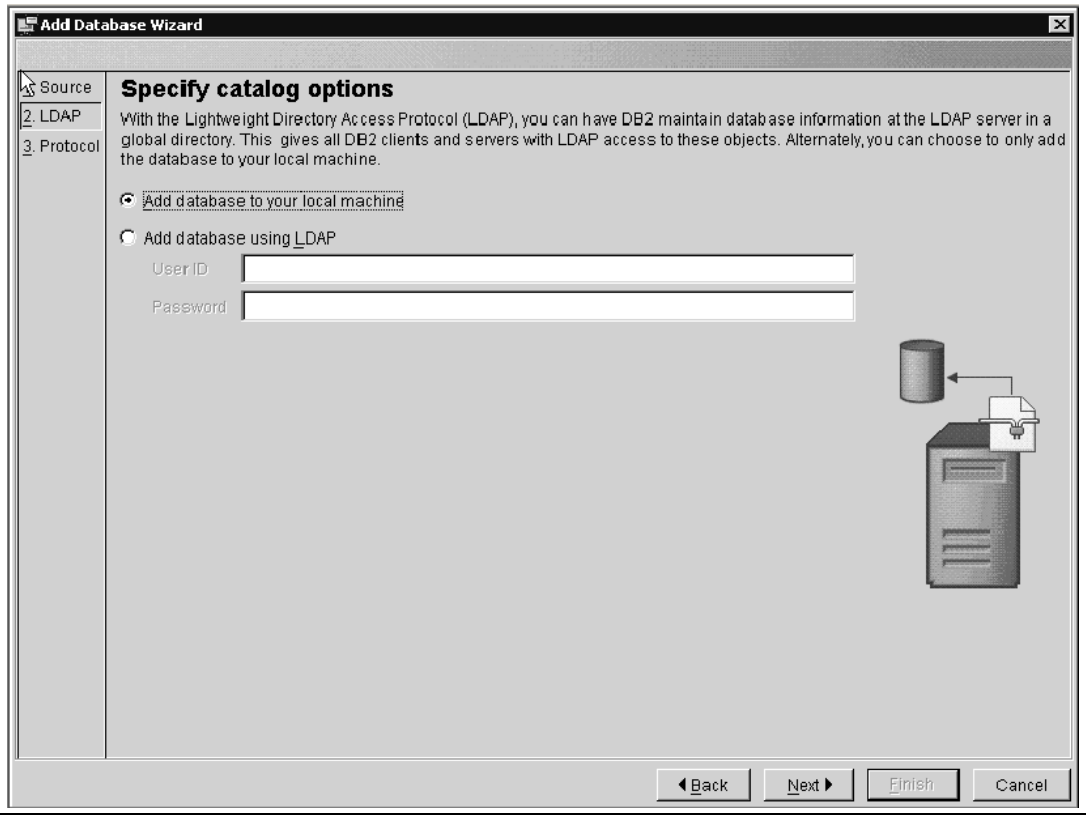
Using the Selected menu on the Configuration Assistant window

2. Select the radio button Manually configure a connection to a database, and then click Next to continue.



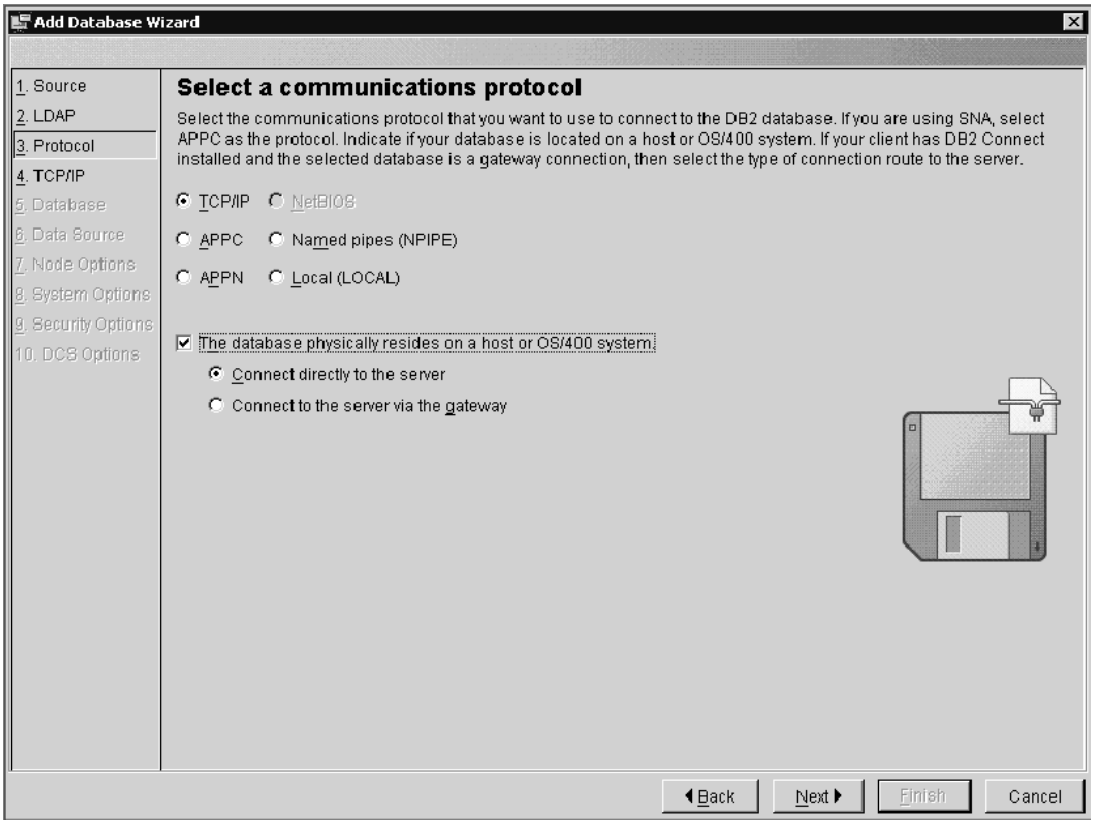
Selecting a connection method on the Add Database Wizard window

3. Select the radio button Add database to your local machine and click Next.



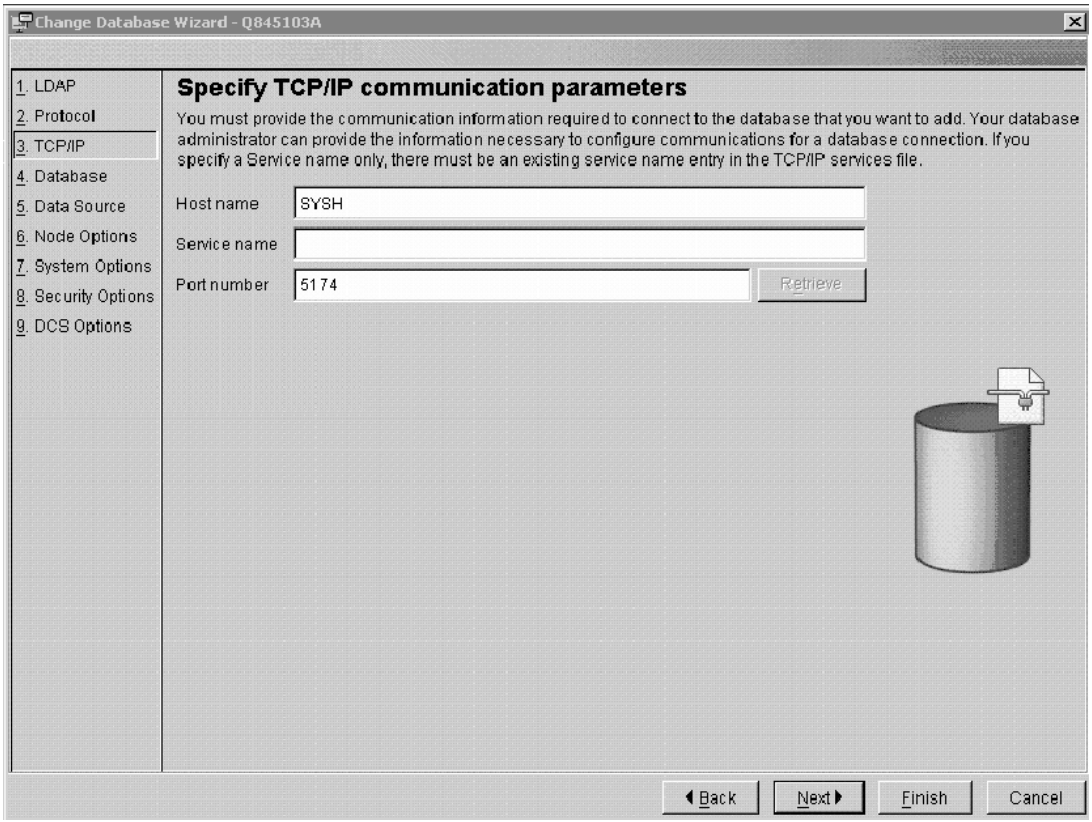
Specifying catalog options on the Add Database Wizard window

4. 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.



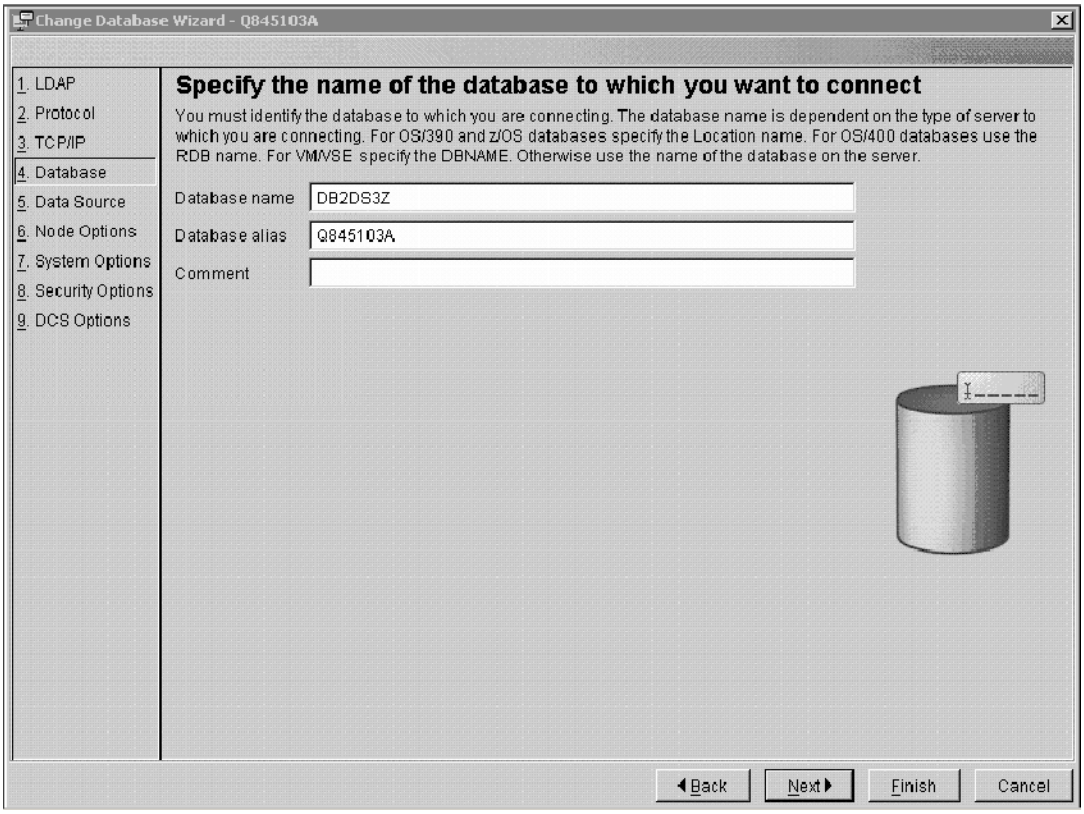
Selecting a communications protocol on the Add Database Wizard window

5. 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.



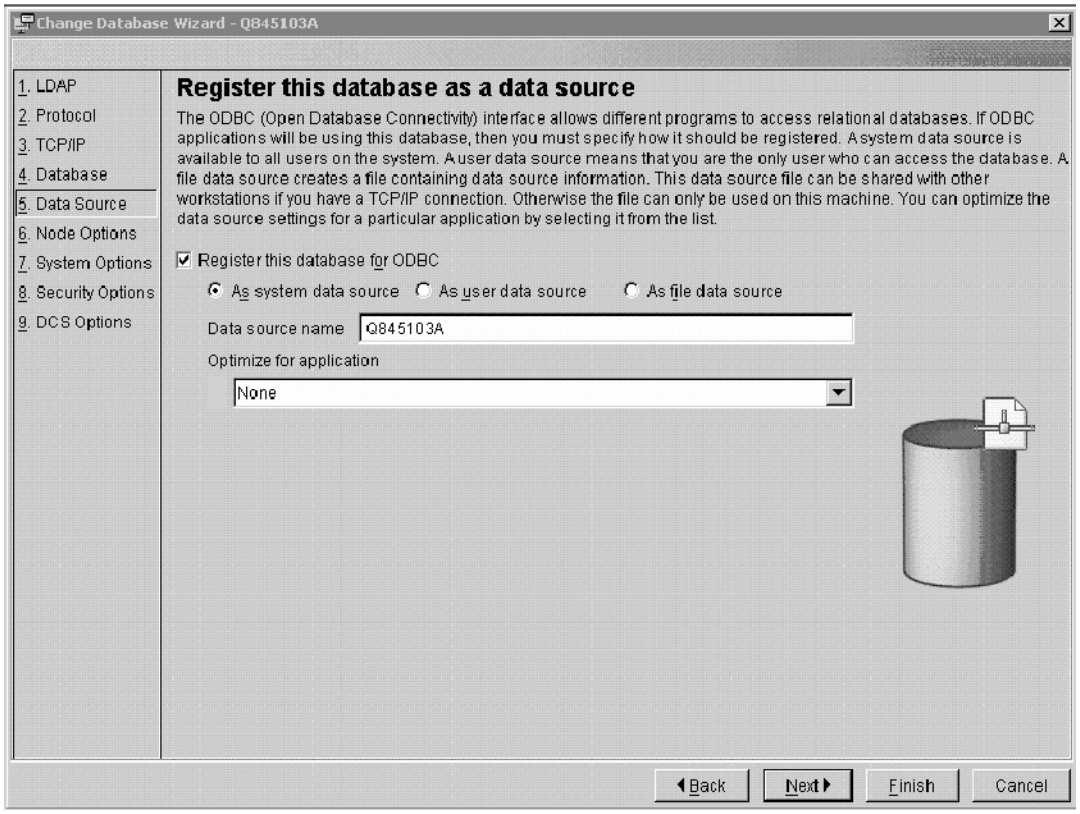
Specifying communication parameters on the Change Database Wizard window

6. Enter the database name defined in your LU in the Target database field in the entry boxDatabase name. For Database alias, enter the name of the database. Click Next.



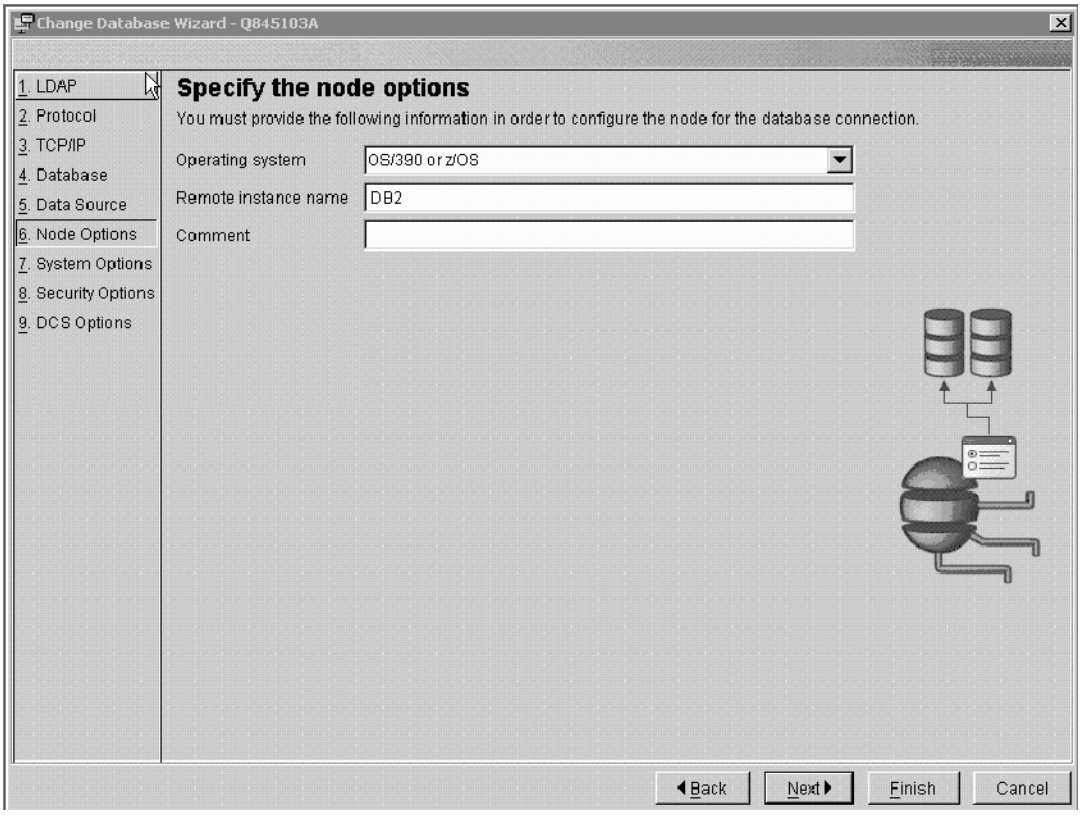
Specifying database parameters on the Change Database Wizard window

7. Verify that the check box Register this database for ODBC and the radio button As system data source are selected. Click Next.



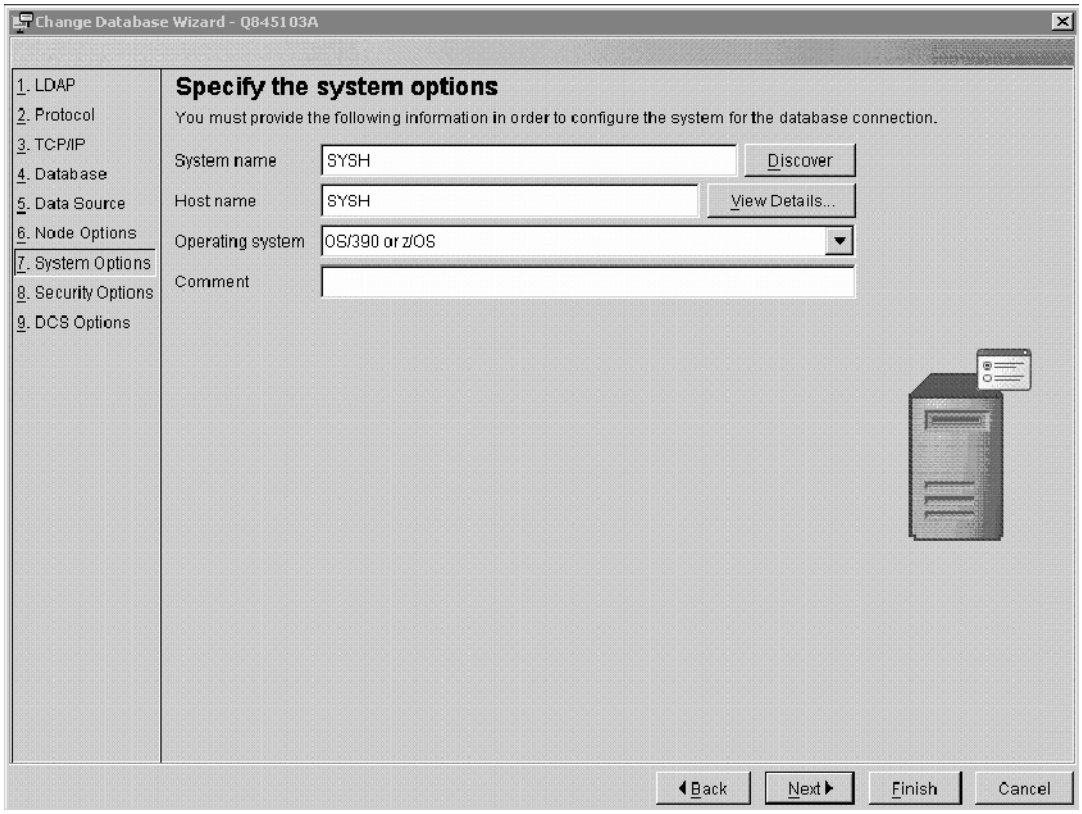
Registering the database on the Change Database Wizard window

8. Select *OS/390 or z/OS* in the Operating system drop-down list box. Click the Next button.



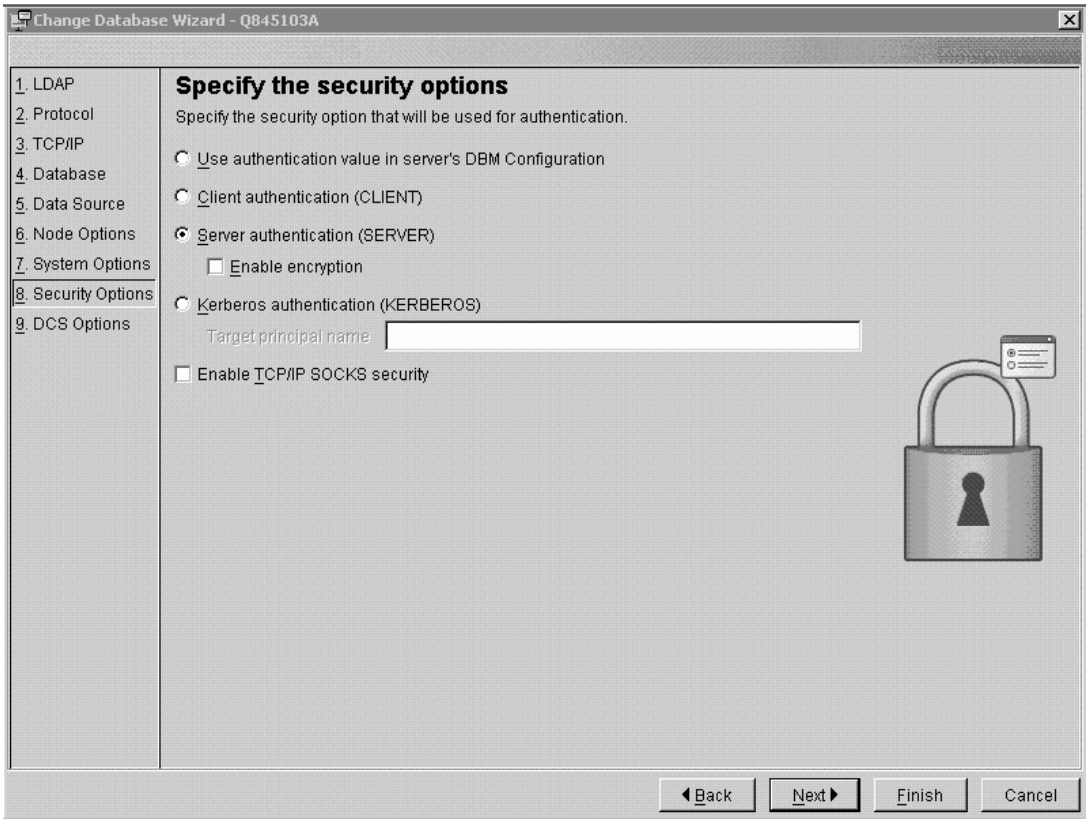
Specifying the node options on the Change Database Wizard window

9. Verify that the information in the System name and Host name text boxes is correct. Click Next.



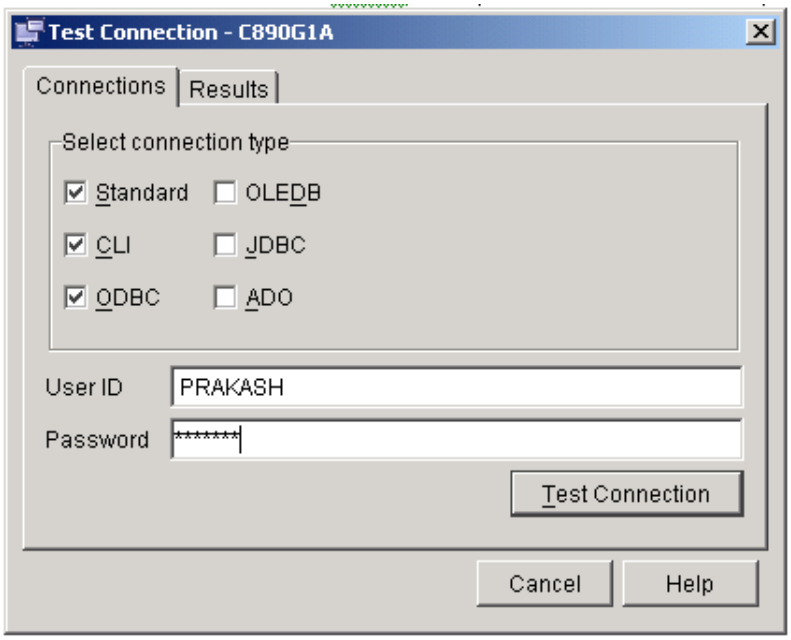
Verifying System name and Host name in the Change Database Wizard window

10. Make sure that the radio button Server authentication is selected and click Finish.



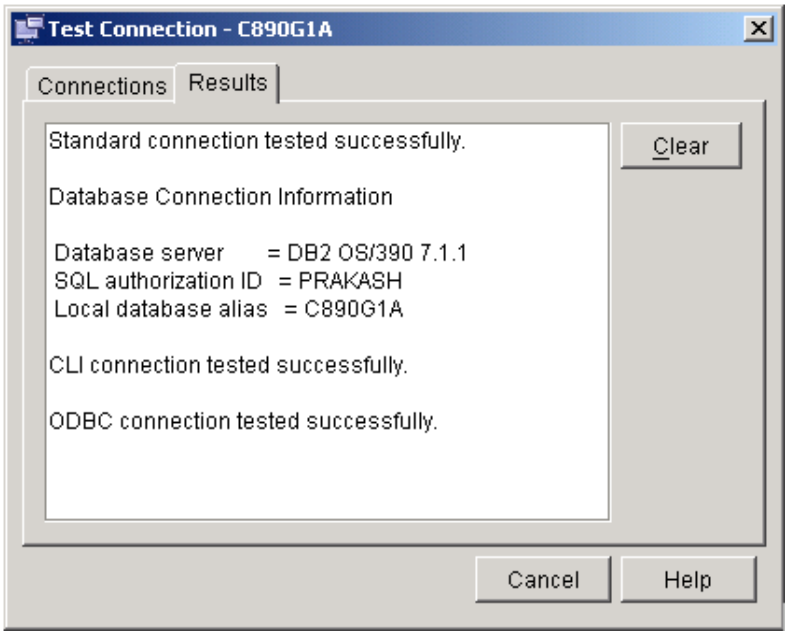
Specifying security options on the Change Database Wizard window

11. 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

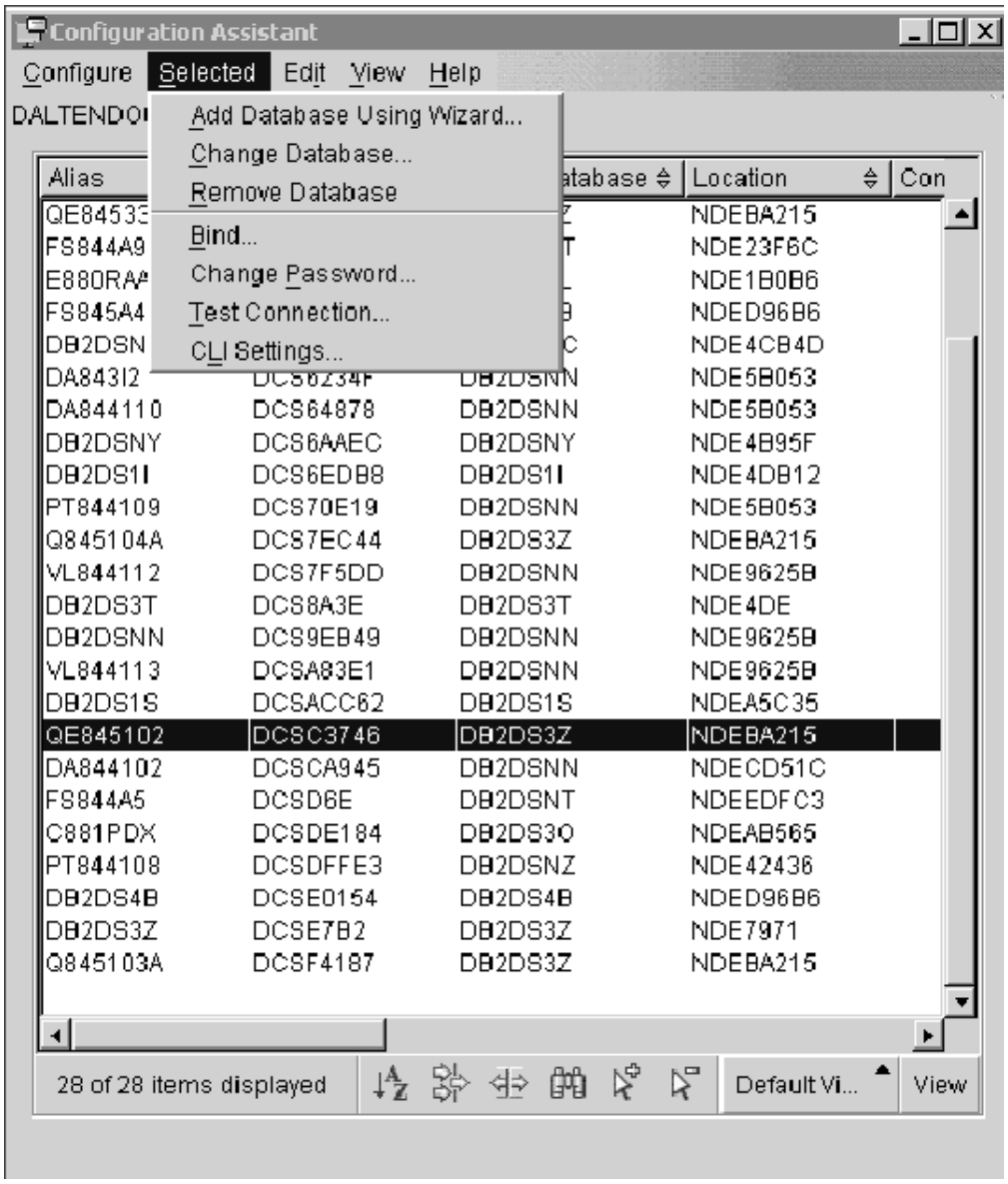
It may be necessary to bind the packages for DB2 Connect to the DRDA server for the first connection.

See “Binding DB2 Connect Packages for an EBCDIC Installation or Binding DB2 Connect Packages for an Unicode Installation.”

Task E-4: Binding DB2 Connect Packages for an EBCDIC Installation

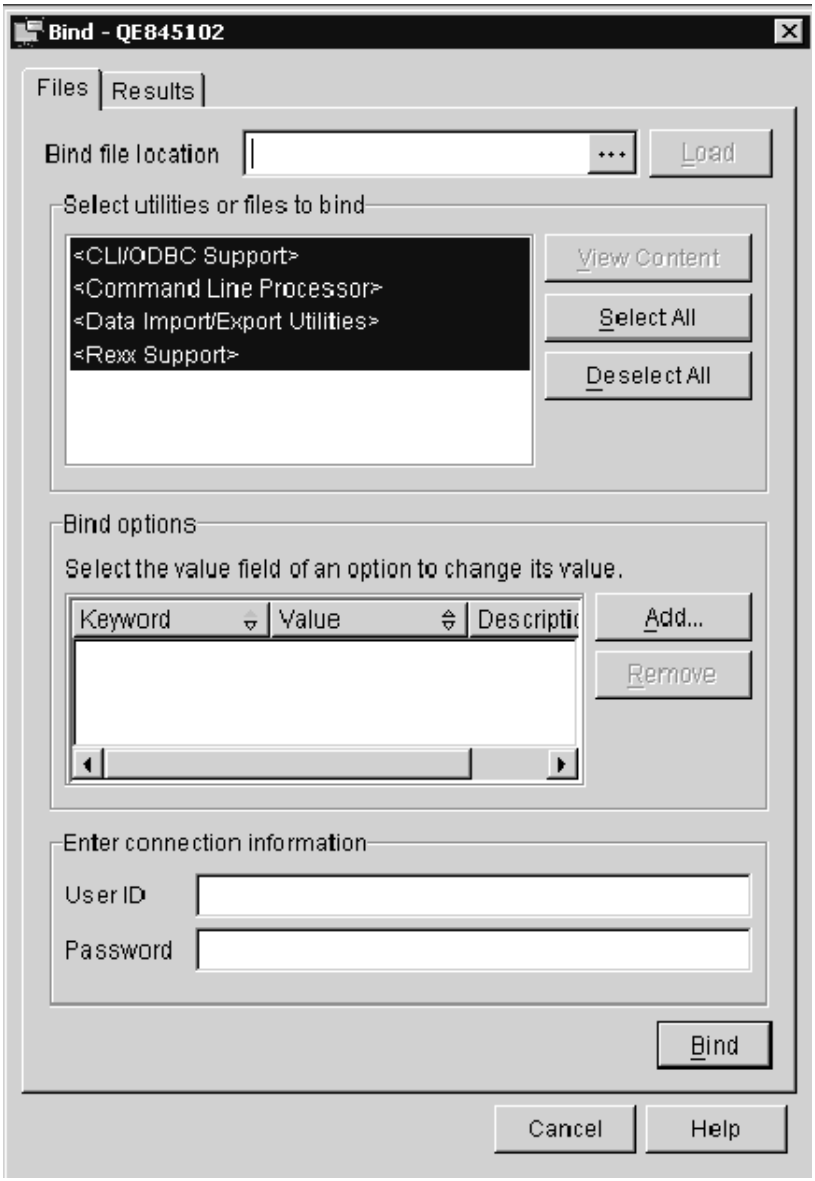
Use the instructions in this task if you have to bind the packages for DB2 Connect for a EBCDIC installation.

1. Open the Configuration Assistant. Highlight your database name and select Bind from the Selected. The Bind window appears.



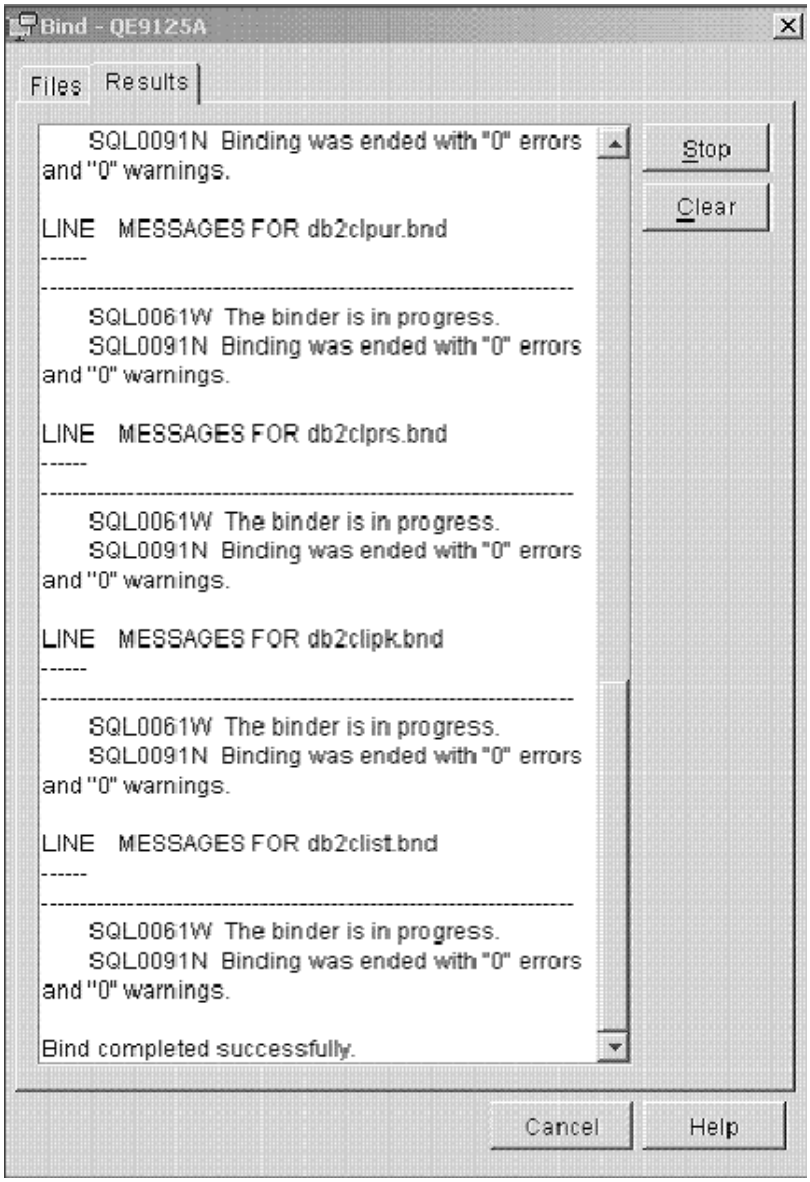
Selecting Bind on the Configuration Assistant window

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.



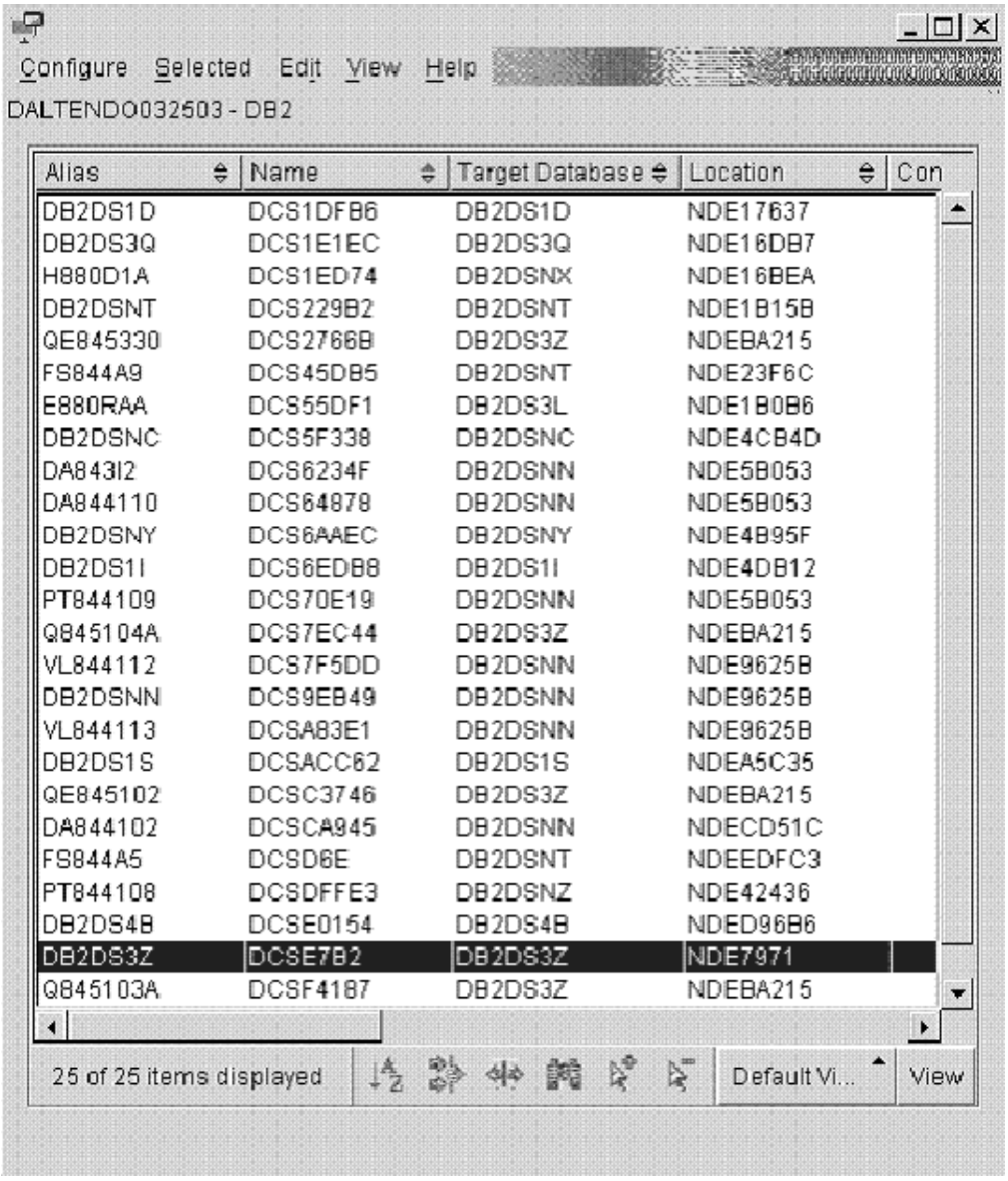
Results tab on the Bind window

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 UDB for Linux, UNIX, or Windows and not DB2 UDB for z/OS. *You can ignore these warning messages*.

Task E-5: Binding DB2 Connect Packages for a Unicode Installation

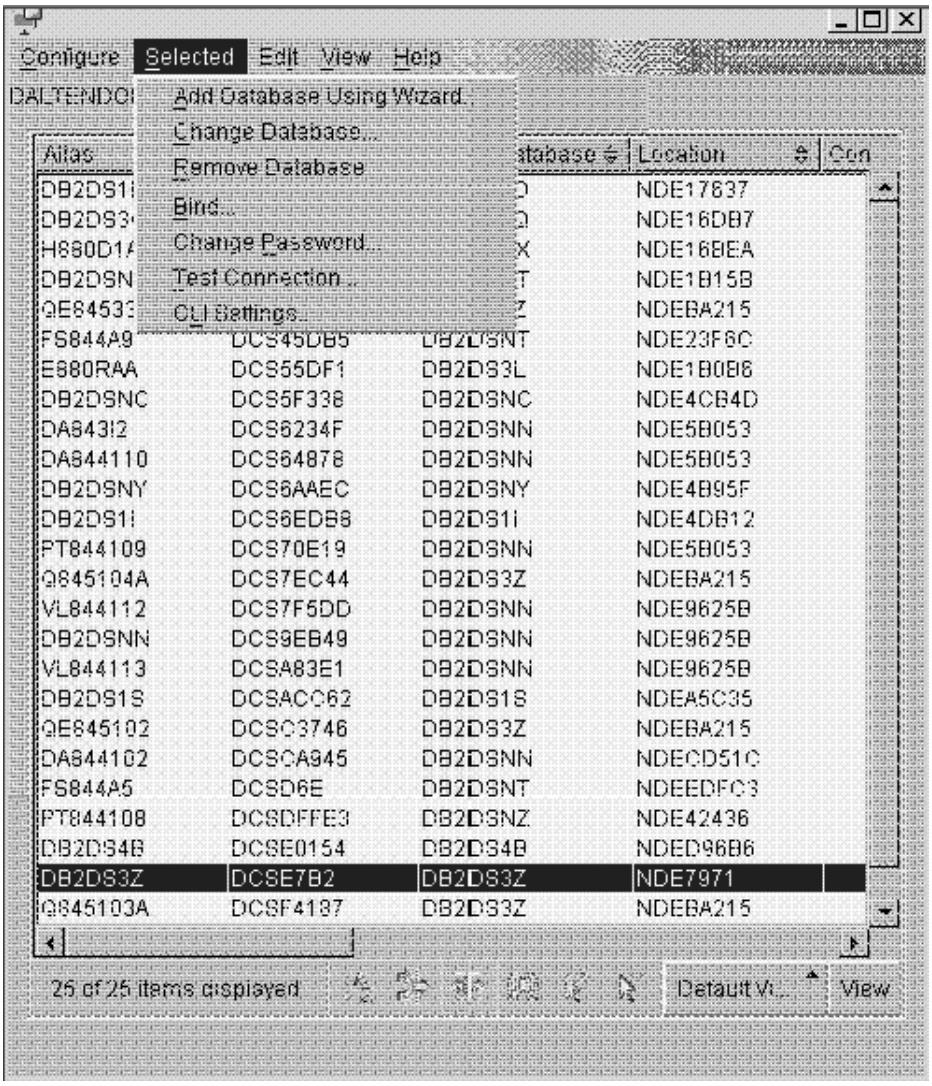
Use the instructions in this task if you have to bind the packages for DB2 Connect for a Unicode installation.

1. Open the Configuration Assistant.



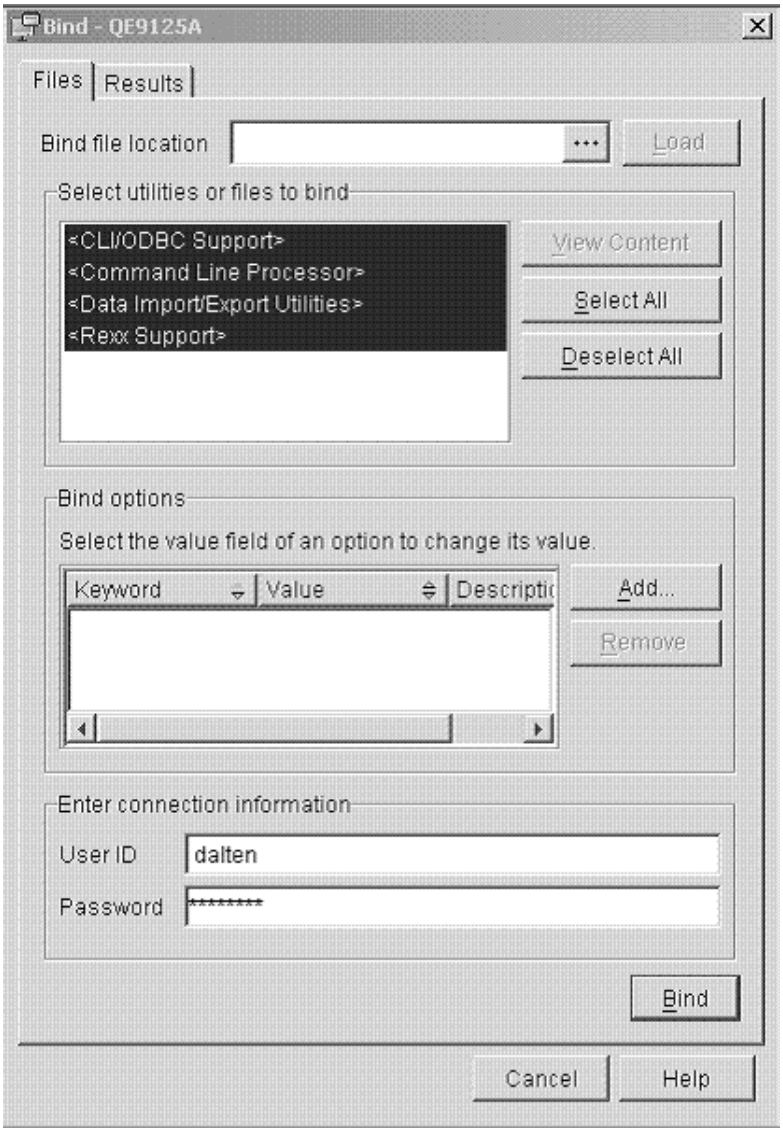
Configuration Assistant window

2. Highlight the database and on the Selected menu, select Bind.



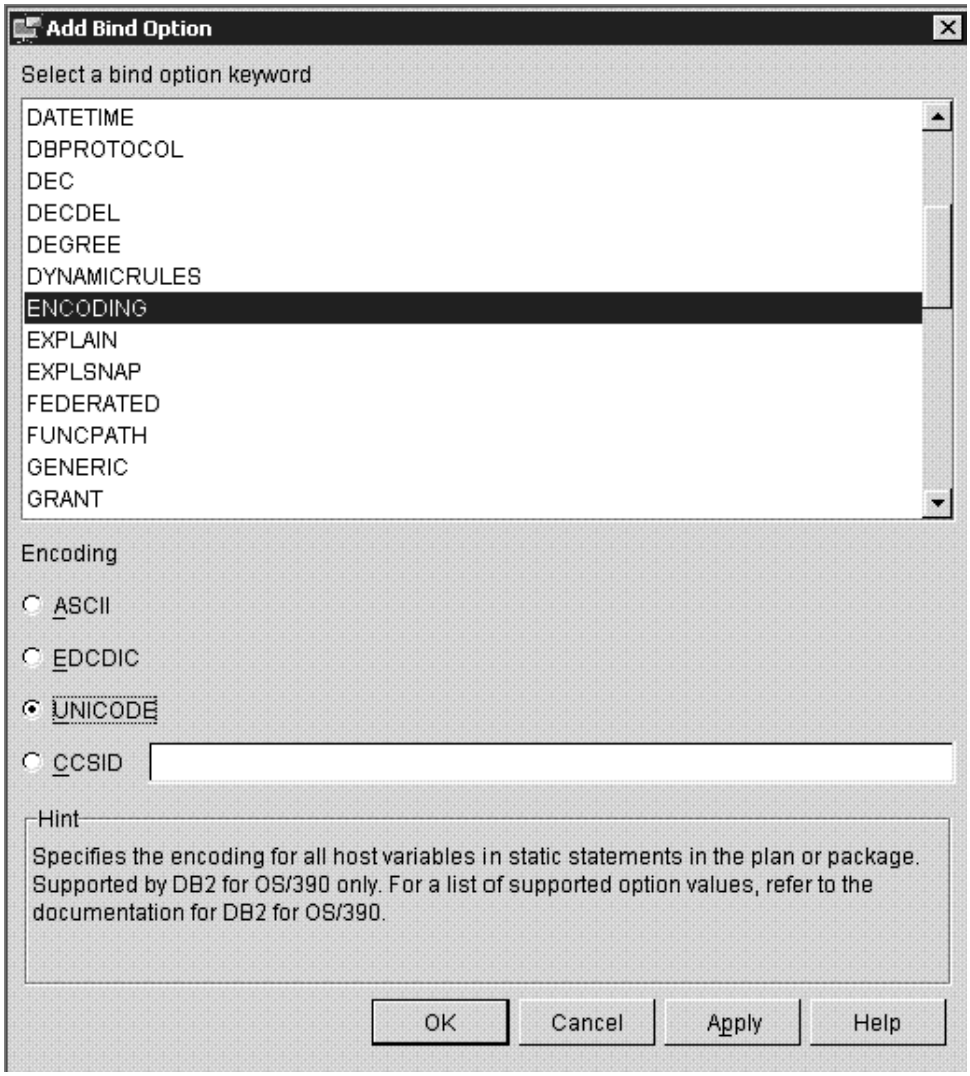
Selecting Bind on the Configuration Assistant

3. Enter a valid user ID and password. Click Select All and then click Add. The Add Bind Option window appears.



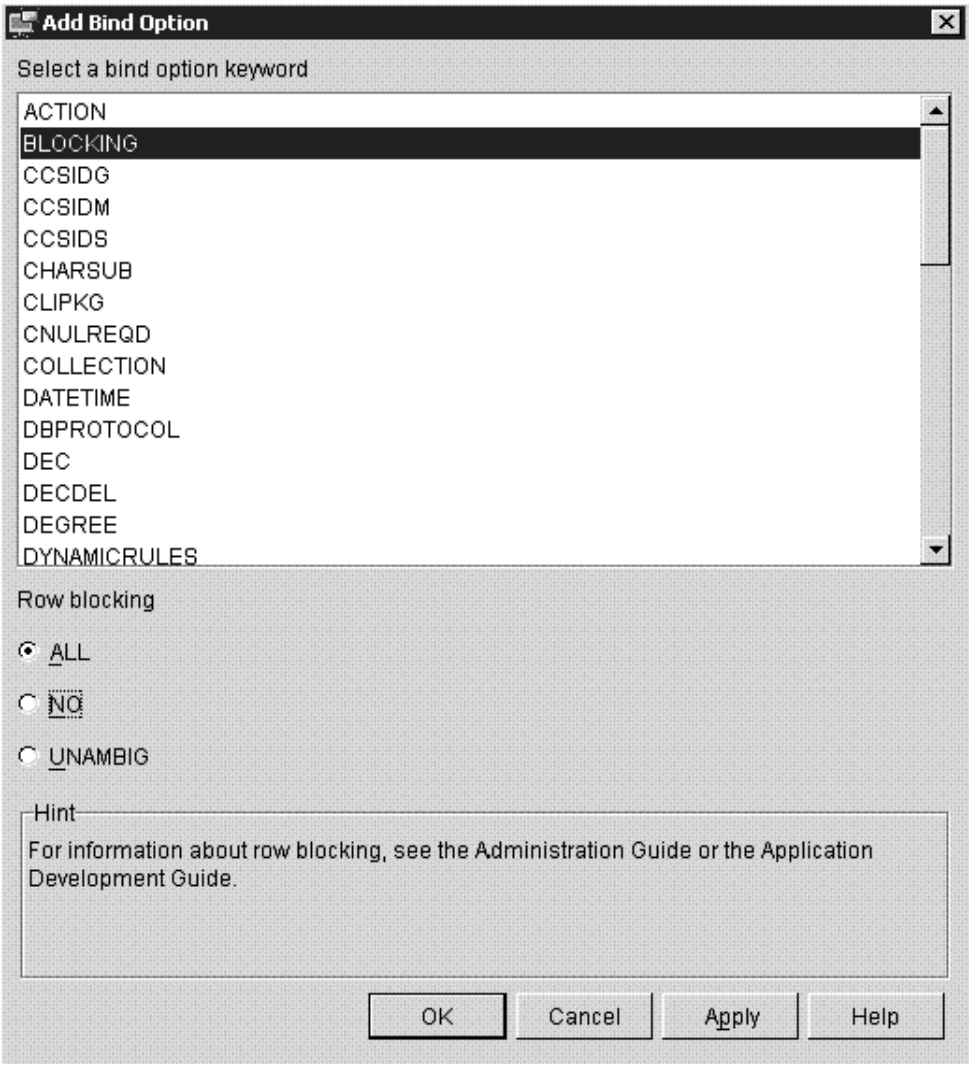
Files tab on the Bind window

4. Highlight *ENCODING* in the list, and select the UNICODE radio button in the Encoding area. Click Apply.



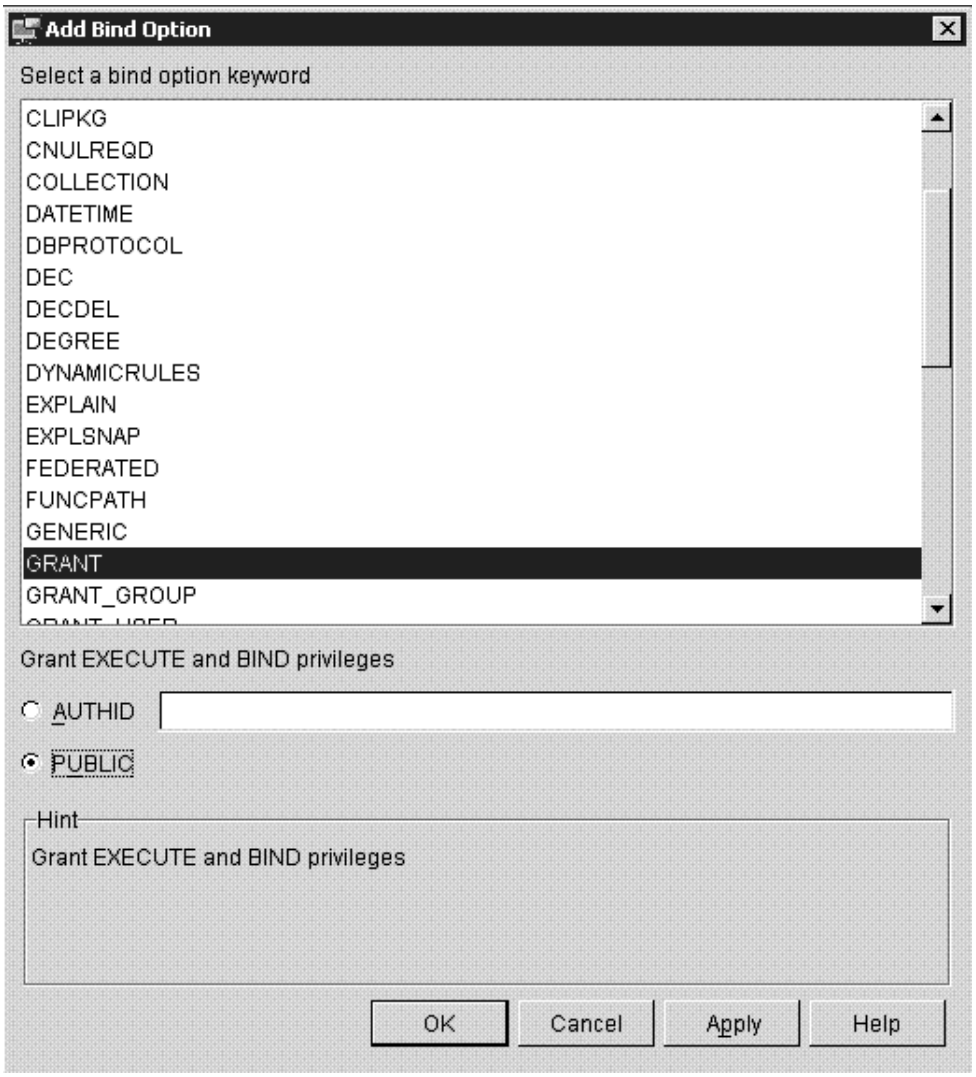
Specifying encoding on the Add Bind Option window

5. Highlight *BLOCKING* in the list, and select the ALL radio button in the Row blocking area. Click Apply.



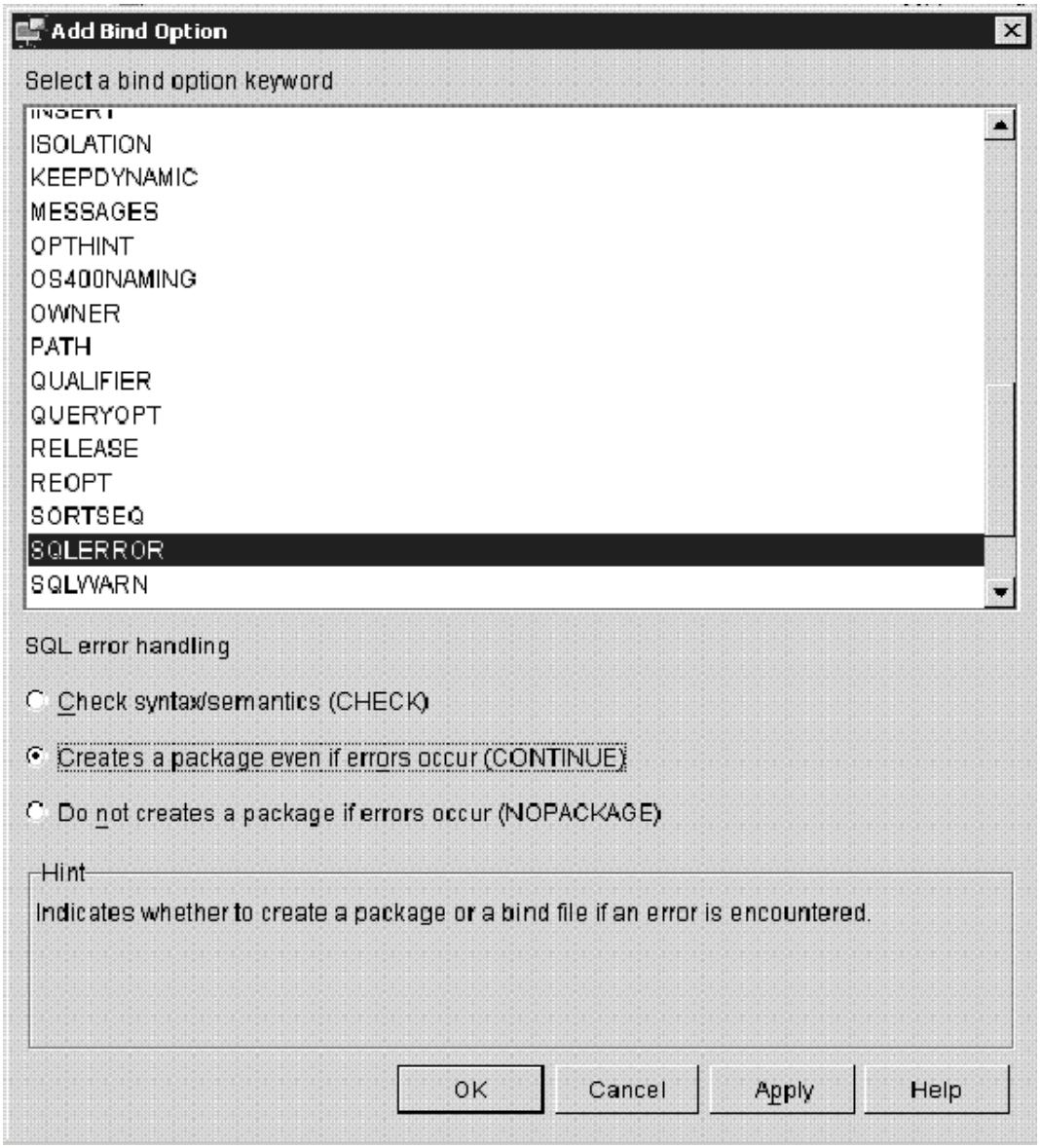
Specifying row blocking on the Add Bind Option window

6. Highlight *GRANT* from the list, and select the PUBLIC radio button from the Grant EXECUTE and BIND privileges area. Click Apply.



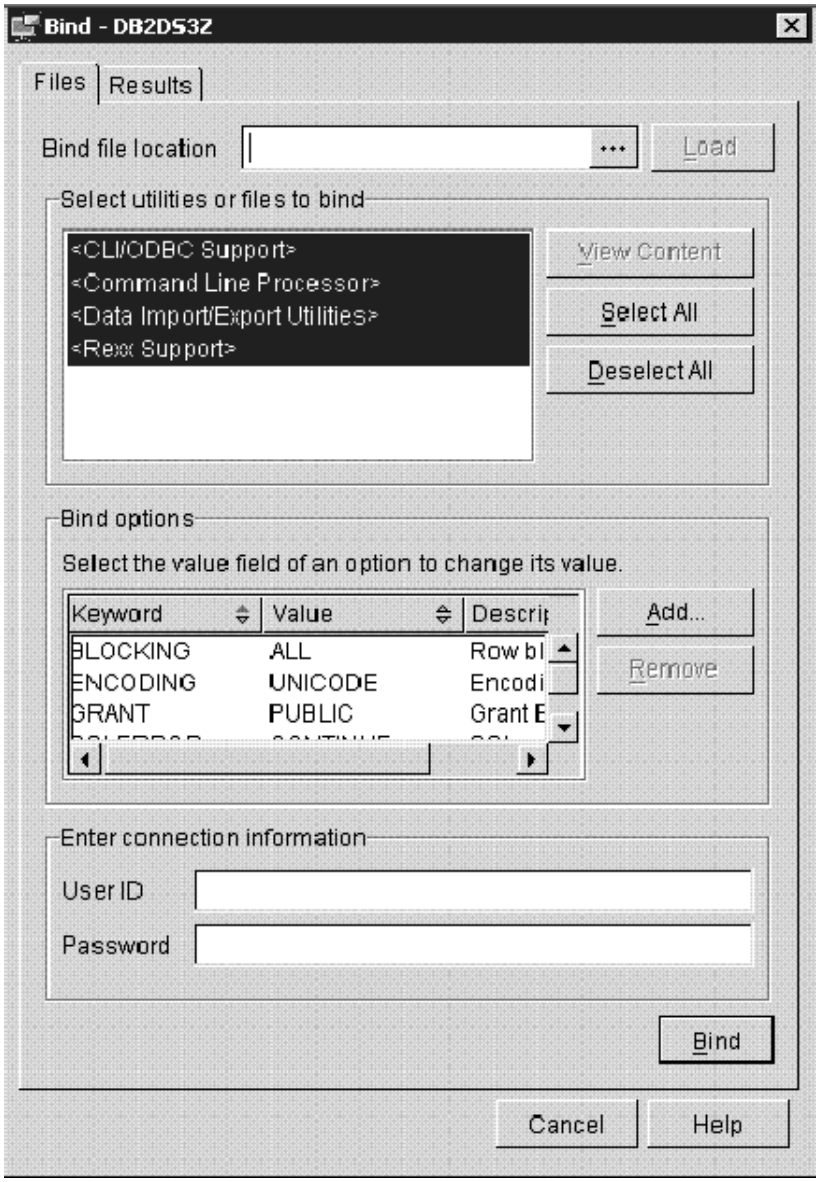
Specifying granting privileges on the Add Bind Option window

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.

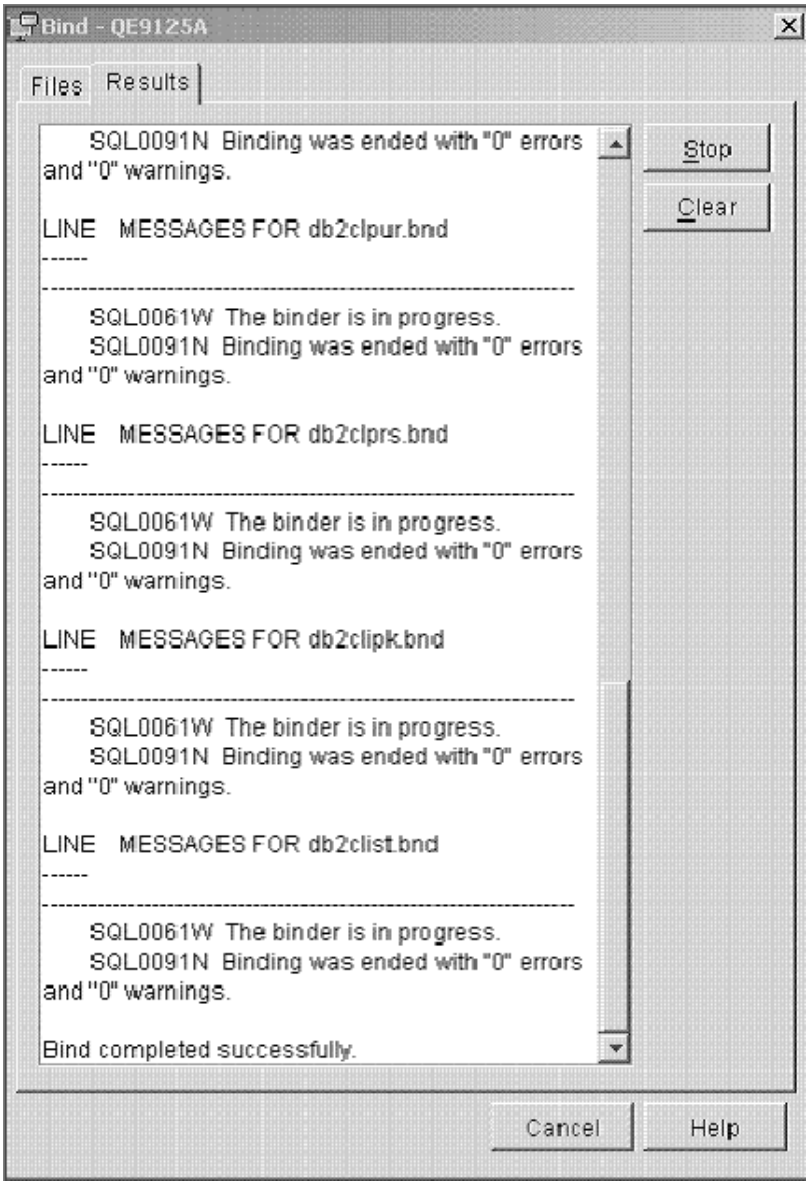


Verifying bind options on the Bind window

You should see these parameters in the Bind options area:

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 UDB for Linux, UNIX, and Windows and not DB2 UDB for z/OS. *You can ignore these warning messages.*

Task E-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 E-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 E-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 PeopleTools 8.4x, 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 PeopleSoft 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: 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 Peoplesoft control at what point a cursor needs to be released. The DB2 Connect default is Cursor Hold enabled.

  For PeopleSoft: 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. PeopleTools uses forward cursors rather than Keyset cursors, so this extra overhead is not justified for PeopleSoft.

  For PeopleSoft: 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, PeopleSoft requires that the DISABLEUNICODE=1 parameter be used to suppress DB2 Connect from communicating in Unicode, and use ANSI instead. The default is enabled. PeopleSoft 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]

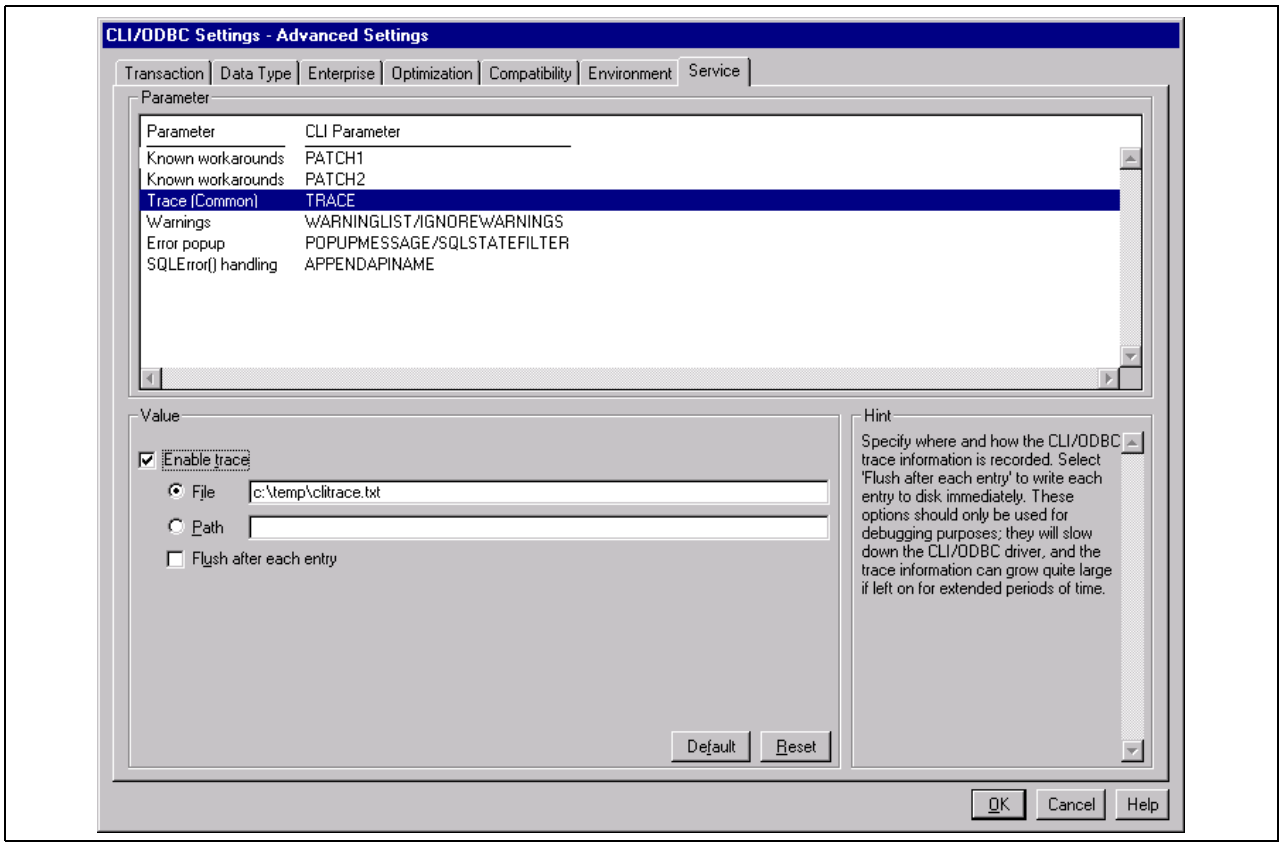
DISABLEKEYSETCURSOR=1

Task E-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 UDB 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 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 panel.



CLI/ODBC Settings - Advanced Settings page: Service tab

5. From the Advanced Settings panel, verify that you are on the Transaction tab. Select the Service tab and enable the trace. The example above shows how to set the DB2 CLI/ODBC trace.
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 F

Securing the Report Repository for HTTP

This appendix discusses:

- Setting Up Security in the Web Server
- Updating the Report Node Definition

Note. The SchedulerTransfer Java servlet is used to migrate reports to and from the report repository when using HTTP or HTTPS transfer protocol.

Task F-1: Setting Up Security in the Web Server

This section discusses:

- Understanding Web Server Security
- Setting Up Basic Authentication in Oracle Application Server
- Setting Up Basic Authentication in WebLogic
- Setting Up Basic Authentication in WebSphere

Understanding Web Server Security

To prevent unauthorized users from accessing the report repository, when using HTTP or HTTPS transfer protocol, access to the SchedulerTransfer Java servlet needs to be secured. To do this you first need to set up an authorized user ID through the web server. Procedures for setting up the user ID are different in Oracle Application Server, WebLogic, and WebSphere.

Task F-1-1: Setting Up Basic Authentication in Oracle Application Server

You should carry out the procedure in this section to edit the application EAR file before deploying the application to Oracle Application Server (OAS).

To set up basic authentication in OAS:

1. Extract the application EAR file into a temp directory (for example, C:\temp).

   Note. For single server installation, the EAR file is peoplesoft-OAS.ear. For multi-server installation, the EAR file is PIA.ear.

2. Modify the application.xml file and add the text as shown below in the <security_role> area.

   a. Open C:\temp\META-INF\application.xml.

b. Add the security section shown below (bold font):

```
<application>
...
...
</module>
<module id="WebModule_1084297392069">
<web>
<web-uri>PSEMHUB</web-uri>
<context-root>/PSEMHUB</context-root>
</web>
</module>
<security-role id="SecurityRole_1083944662253">
<description>Role for SchedulerTransfer Servlet</description>
<role-name>SchedulerTransferRole</role-name>
</security-role>
</application>
```

c. Save and close the file.

3. Modify the PORTAL web.xml file.

a. Extract C:\temp\PORTAL.war to C:\temp\PORTAL directory.

b. Open C:\temp\PORTAL\WEB-INF\web.xml.

c. Add the following section (bold font) after the <welcome-file-list> element, and before the </web-app> element:

```
<welcome-file-list>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
<security-constraint>
<web-resource-collection>
<web-resource-name>SchedulerTransferWebResource</web-resource-name>
<description>SchedulerTransferWebResourceDescription</description>
<url-pattern>/SchedulerTransfer/*</url-pattern>
<http-method>GET</http-method>
<http-method>POST</http-method>
</web-resource-collection>
<auth-constraint>
<description></description>
<role-name>SchedulerTransferRole</role-name>
</auth-constraint>
</security-constraint>
<security-role>
<description></description>
<role-name>SchedulerTransferRole</role-name>
</security-role>
</web-app>
```

d. Save and close the file.

4. Recreate the EAR file by running the following commands:

a. `cd C:\temp`

b. For single server installation:

```
jar -cvf ..\peoplesoft-OAS.ear .
```

For multi-server installation:

```
jar -cvf ..\PIA.ear .
```

5. Run the PIA installation with the modified EAR file.

6. Set up Users and associate the Roles to the Users using Application Server Control as follows:

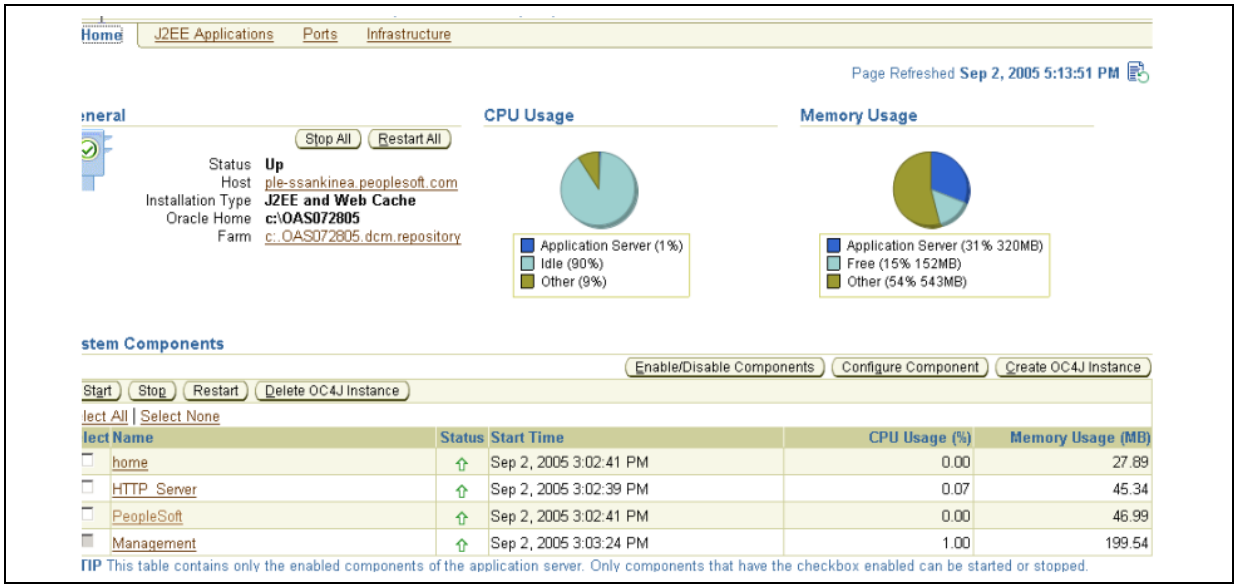
a. Open the OAS Application Server Control.

See "Working with Oracle Application Server," PeopleSoft Customer Connection (Support, Documentation, Documentation Updates, Enterprise).

b. Click the OC4J component where the application was installed.

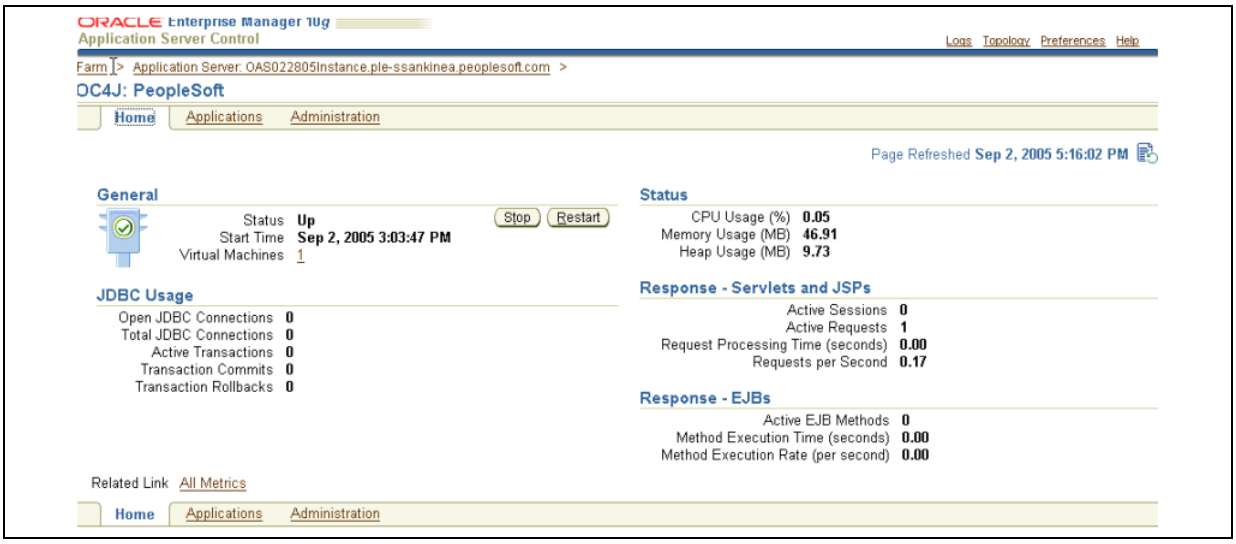
Note. Refer to installation instructions about the name of the components created during PIA installation. This example uses the application "PeopleSoft."

See "Setting Up the PeopleSoft Pure Internet Architecture (in GUI Mode or Console Mode)," Installing the PeopleSoft Pure Internet Architecture on Oracle Application Server (in GUI Mode or Console Mode).



Oracle Application Server Control window

c. Select the link Applications.

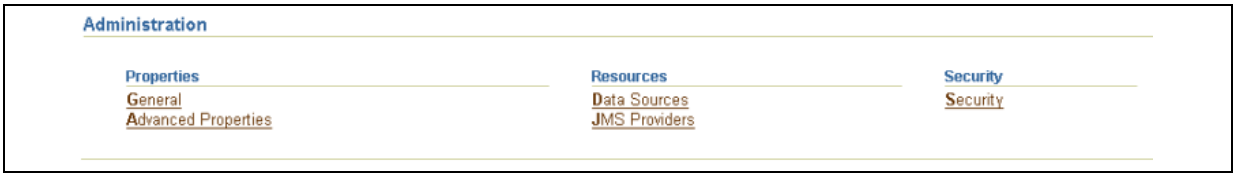


Reviewing component information on the OAS control window

d. Click the application name.

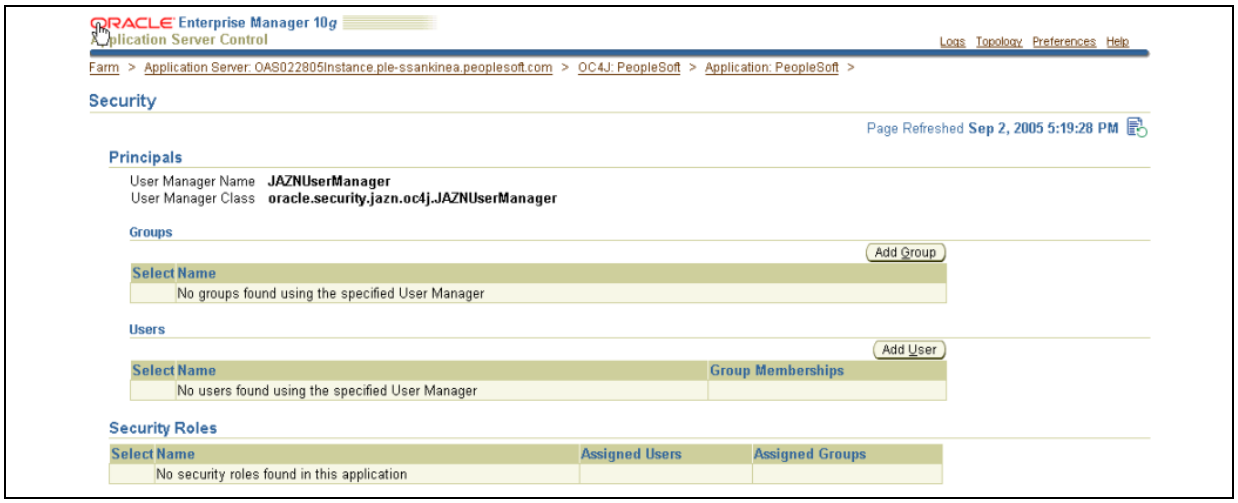
OAS Control window: Applications tab

e. In the Administration area, select Security.



Administration area on the OAS Control window

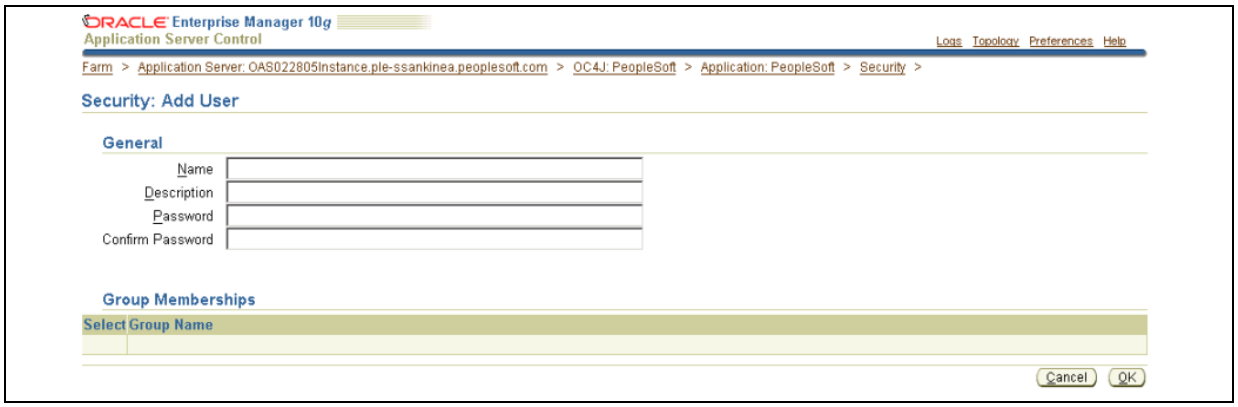
f. Click the Add User button.



Viewing application security information on the OAS Control window

g. Enter the user name and password, and click OK.

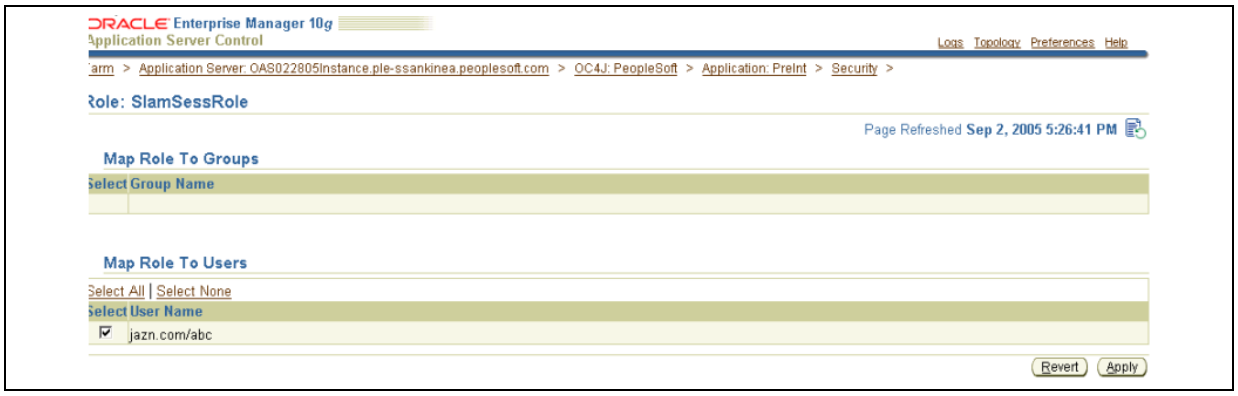
Note. Specify a user that is part of the Administration group on Windows. On UNIX, use the root user name and password, or a user who has permission to run OAS.



Adding a user on the OAS Control window

h. Click on the button "Map Roles to Principals" that is part of Security Roles.

i. Select the check box for the user just created and click the Apply button.



Mapping role to users on the OAS Control window

7. Restart the OC4J component.

Task F-1-2: Setting Up Basic Authentication in WebLogic

The procedure for restricting and securing access for servlets on WebLogic is covered in PeopleBooks documentation. To restrict access to the SchedulerTransfer Java servlet, substitute */SchedulerTransfer/** for "/" when the procedure asks you to specify the URL which will require authentication.

See *Enterprise PeopleTools 8.48 PeopleBook: System and Server Administration,* "Working with BEA WebLogic."

Note. When prompted for a User Name and Password, specify the WebLogic system ID and password. If you followed the default WebLogic Server install, the User Name and Password are system and password. Otherwise, specify the password supplied during your WebLogic server installation.

Task F-1-3: Setting Up Basic Authentication in WebSphere

To set up basic authentication in WebSphere:

1. Open Admin Console and enable security.
   a. Select Security, Global Security, and select the Enabled check box.
   b. Click OK and then enter the user name and password.
   c. Enter the user ID and password.

   Note. When prompted for a user ID and password, specify a user that is part of the Administration group on Windows. On UNIX, use the root user name and password, or a user who has permission to run WebSphere.

   ---

   d. Save the configuration in the Admin Console and log out.
2. Modify the application.xml file and add the text below in the <security_role> area.
   a. Open <PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\META-INF\application.xml
   b. Add the security section shown below:

```
</module>
<module id="WebModule_1084297392069">
<web>
<web-uri>PSEMHUB</web-uri>
<context-root>/PSEMHUB</context-root>
</web>
</module>
<security-role id="SecurityRole_1083944662253">
<description>Role for SchedulerTransfer Servlet</description>
<role-name>SchedulerTransferRole</role-name>
</security-role>
</application>
```

   c. Save and close the file.
3. Modify the ibm-application-bnd.xmi file.
   a. Open <PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\META-INF\ibm-application-bnd.xmi.
   b. Make the change indicated below:

Note. In the UserName line to be replaced, make sure you have added the user name to access the servlet.

Before Update:

```
<?xml version="1.0" encoding="UTF-8"?>

<com.ibm.ejs.models.base.bindings.applicationbnd:ApplicationBinding xmi:⇒
version="2.0" xmlns:xmi="http://www.omg.org/XMI" xmlns:⇒
com.ibm.ejs.models.base.bindings.applicationbnd="applicationbnd.xmi" xmi:id=⇒
"ApplicationBinding_1064609410468">

<authorizationTable xmi:id="AuthorizationTable_1064609410468"/>
<application href="META-INF/application.xml#Application_ID"/>
<runAsMap xmi:id="RunAsMap_1064609410468"/>
</com.ibm.ejs.models.base.bindings.applicationbnd:ApplicationBinding>
```

After Update:

```
<?xml version="1.0" encoding="UTF-8"?>

<applicationbnd:ApplicationBinding xmi:version="2.0" xmlns:xmi="http:⇒
//www.omg.org/XMI" xmlns:applicationbnd="applicationbnd.xmi" xmi:id=⇒
"ApplicationBinding_1083944662253">
<authorizationTable xmi:id="AuthorizationTable_1083944662253">
<authorizations xmi:id="RoleAssignment_1083944662253">
<users xmi:id="User_1083944662253" name="<Change to UserName part of
Admin group on NT and on UNIX either root or any user set up to
run as non-root>"/>
<role href="META-INF/application.xml#SecurityRole_1083944662253"/>
<groups xmi:id="Group_1083946750626" name="Administrators"/>
</authorizations>
</authorizationTable>
<application href="META-INF/application.xml#Application_ID"/>
</applicationbnd:ApplicationBinding>
```

c. Save and close the file.

4. Modify the web.xml file.

   a. Open <PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\PORTAL\WEB-INF\web.xml.

   b. Add the following section after the <welcome-file-list> element, and before the </web-app> element:

```
<welcome-file-list>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
<security-constraint>
<web-resource-collection>
<web-resource-name>SchedulerTransferWebResource</web-resource-name>
<description>SchedulerTransferWebResourceDescription</description>
<url-pattern>/SchedulerTransfer/*</url-pattern>
<http-method>
```

```
GET</http-method>
<http-method>
POST</http-method>
</web-resource-collection>
<auth-constraint>
<description></description>
<role-name>SchedulerTransferRole</role-name>
</auth-constraint>
</security-constraint>
<security-role>
<description></description>
<role-name>SchedulerTransferRole</role-name>
</security-role>
</web-app>
```

c. Save and close the file.

5. Test authentication.

a. Re-start the Websphere server, as follows:

```
stopServer server1 -user <username> -password <password>

startServer server1 -user <username> -password <password>
```

b. You will be prompted for the user name and password. Enter the user name and password that were defined in the <PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\META-INF\ibm-application-bnd.xmi file.

c. You will be allowed access to the servlet after you enter the user name and password.

To secure the SchedulerTransfer servlet in clustered environment using ND (Network Deployment), refer to the clustering and high availability Red Paper. It has instructions for creating a single EAR file. Update the following files within the exploded EAR file using the instructions in this section to secure the servlet.

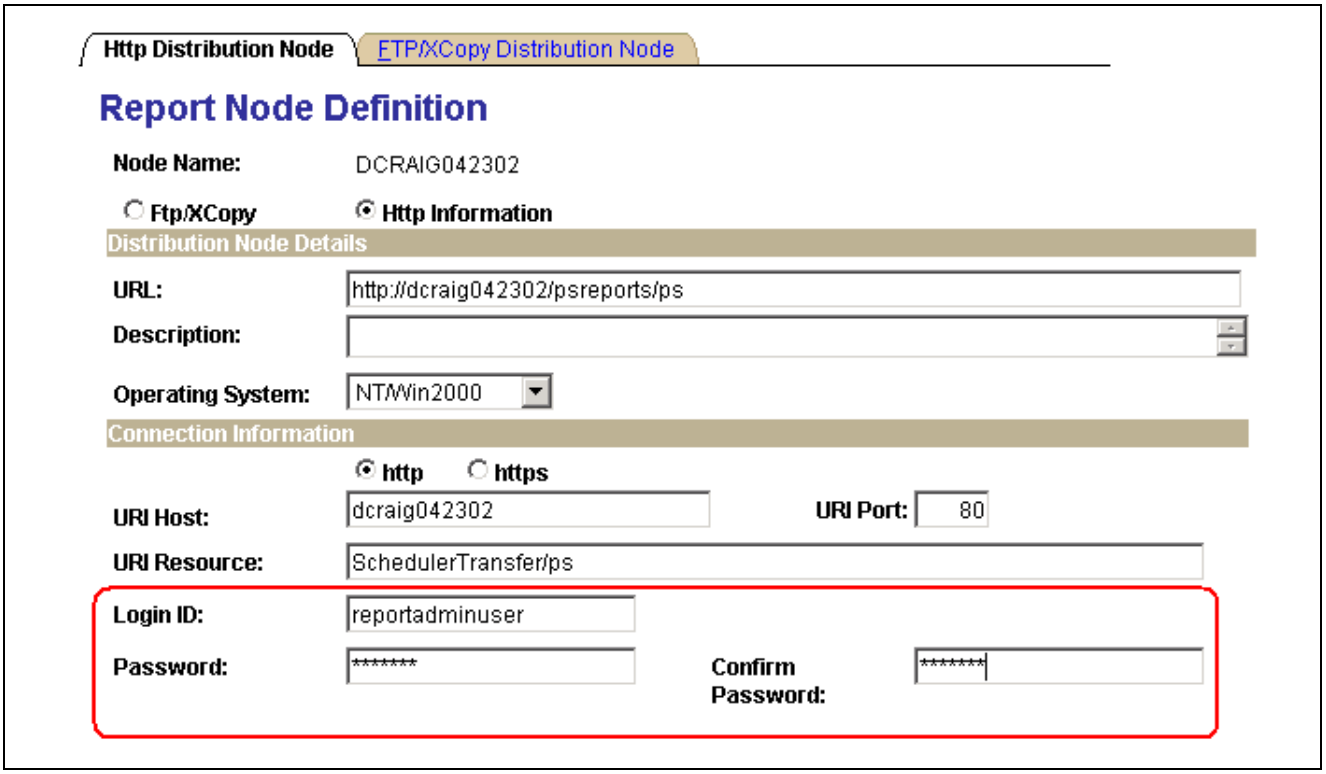
```
<PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\META-INF⇒
\application.xml
<PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\META-INF\ibm-⇒
application-bnd.xmi
<PS_HOME>\webserv\<cell>_<node>_<server>\peoplesoft.ear\PORTAL\WEB-INF⇒
\web.xml
```

After updating the files, compress the exploded PIA into a single EAR. Continue the rest of the instructions to deploy EAR to ND.

See Clustering and High Availability for PeopleSoft 8.4, PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Implementation Documentation and Software, Red Paper Library).

Task F-2: Updating the Report Node Definition

To secure the report repository, the new web server user account is added to the report node definition. The Distribution Agent will use this login information when it accesses the report repository to post files.



Process Scheduler - Report Node Definition page

To update the report node definition:

1. Sign into the PeopleSoft system.
2. Navigate to PeopleTools, Process Scheduler, Report Nodes.
3. Select Find an Existing Value, and enter the report node name associated with the report repository where the basic authentication was set up.
4. Select Search.

   The Report Node Definition page appears.
5. Go to the Connection Information section and enter the new web server user account information:
   - *Login ID* — Webserver user ID that was created in the previous procedure.
   - *Password* — Password for the webserver user ID.
   - *Confirm Password* — Enter the password again as confirmation.

APPENDIX G

Using the XSLT Mapper with Oracle BPEL Process Manager

This appendix discusses:

- Understanding the XSLT Mapper
- Installing BPEL Process Manager
- Setting Up the XSLT Mapper

Understanding the XSLT Mapper

The Extensible Stylesheet Language Transformation (XSLT) mapper is intended for application developers and consultants who write PeopleSoft Application Engine programs of type "transform." The XSLT mapper allows you to write transformation programs without hard-coding each XSLT step. The XSLT mapper is integrated with JDeveloper BPEL Designer, a component of Oracle BPEL Process Manager. To use the XSLT mapper, you must first install Oracle BPEL Process Manager, and then specify the location of the JDeveloper files in your PeopleSoft installation.

This section assumes that you have installed the PeopleSoft workstation.

See Also

"Setting Up the Install Workstation"

Enterprise PeopleTools 8.48 PeopleBook: Integration Broker, "Applying Filtering, Transformation and Translation"

Task G-1: Installing BPEL Process Manager

Download the Oracle BPEL Process Manager software and installation instructions from the Oracle Technology Network (OTN). Install the BPEL Process Manager on a Windows-based machine.

See Oracle Technology Network, http://www.oracle.com/technology/index.html

Search the OTN documentation web site for information on installing BPEL Process Manager.

See Oracle Documentation, http://www.oracle.com/technology/documentation/index.html

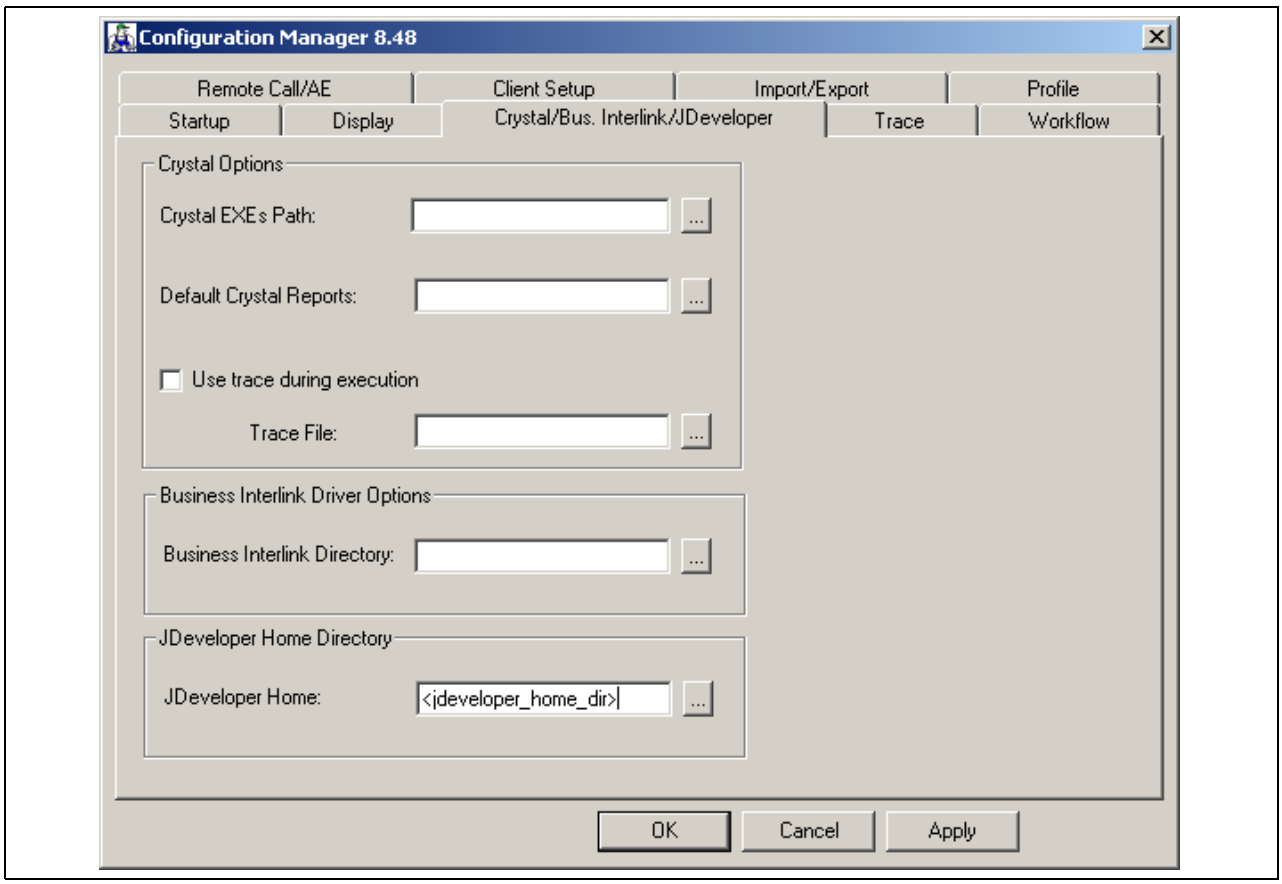
Be sure to obtain any patches that are required for the installation from the following location:

ftp://ftp.peoplesoft.com/outgoing/ptools/Oracle/BPEL

Task G-2: Setting Up the XSLT Mapper

To use the XSLT mapper, use Configuration Manager to specify the directory for JDeveloper:

1. Launch Configuration Manager by doing one of the following:
   - Select Start, Program, PeopleTools 8.48, Configuration Manager.
   - Double-click <PS_HOME>/bin/client/winx86/pscfg.exe.
2. Select the Crystal/Bus. Interlink/JDeveloper tab.



Configuration Manager: Crystal/Bus. Interlink/JDeveloper tab

3. Click the JDeveloper Path browse button (...) and select the JDeveloper directory.

   In a default installation of the BPEL Process Manager, the JDeveloper path is <OraBPELPM_HOME> /integration/jdev.

   Configuration Manager will verify that the version of JDeveloper is valid. If not, when you click OK to save the changes and exit Configuration Manager, an error message appears.
4. Click OK.

APPENDIX H

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 8.48 PeopleBook: PeopleSoft Performance Monitor

Using the PTGENDDL.DMS Script

"Creating a Database, " Creating Data Mover Import Scripts

Task H-1: Using the PTGENDDL.DMS Script

Since most DB2 UDB 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 I

Setting Up a Unicode Database

This appendix discusses:

- Prerequisites
- Defining Conversion Pages for Unicode Conversion Services
- Fulfilling Connectivity Requirements

Prerequisites

PeopleTools 8.48 Unicode support for the z/OS operating system requires the following:

- DB2 UDB for z/OS V8.1 (minimum) in New Function Mode
- IBM z/OS 1.4 (minimum)
- Refer to Customer Connection for a list of mandatory APARs and PTFs.

  See "Important PTFs for PeopleSoft 8 on DB2 UDB for OS390 and zOS," PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Implementation Guide, Supported Platforms, PeopleSoft Enterprise, By PeopleTools release, Platform Communications by Topic, Platforms - DB2 UDB for DB2 OS/390 and z/OS).

Task I-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 I-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 J

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 PeopleTools and Application DDL. The utility provides greater flexibility in allowing you to override the supported PeopleTools DDL parameters for DB2 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. Please 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 on your Installation CD. 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 xxDDL, TBDDL, and IXDDL scripts to more optimally distribute the 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.

- Beginning with PeopleSoft Enterprise 9.0 Applications, PSTAAT will replace the previously delivered “enhanced” installation scripts.

  PSTAAT will be used to isolate Application Engine temporary tables and other tables intended to be used with the %UpdateStats metaSQL function to individual tablespaces. As a result, the X1DDL.SQL, X2DDL.SQL, and X3DML.DMS scripts will no longer be delivered on the Enterprise 9.0 Application installation CDs.

- 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,” PeopleSoft Customer Connection (Support, User Groups, Product User Groups, DB2 z/OS, General Information).

Understanding PSTAAT Workstation Requirements

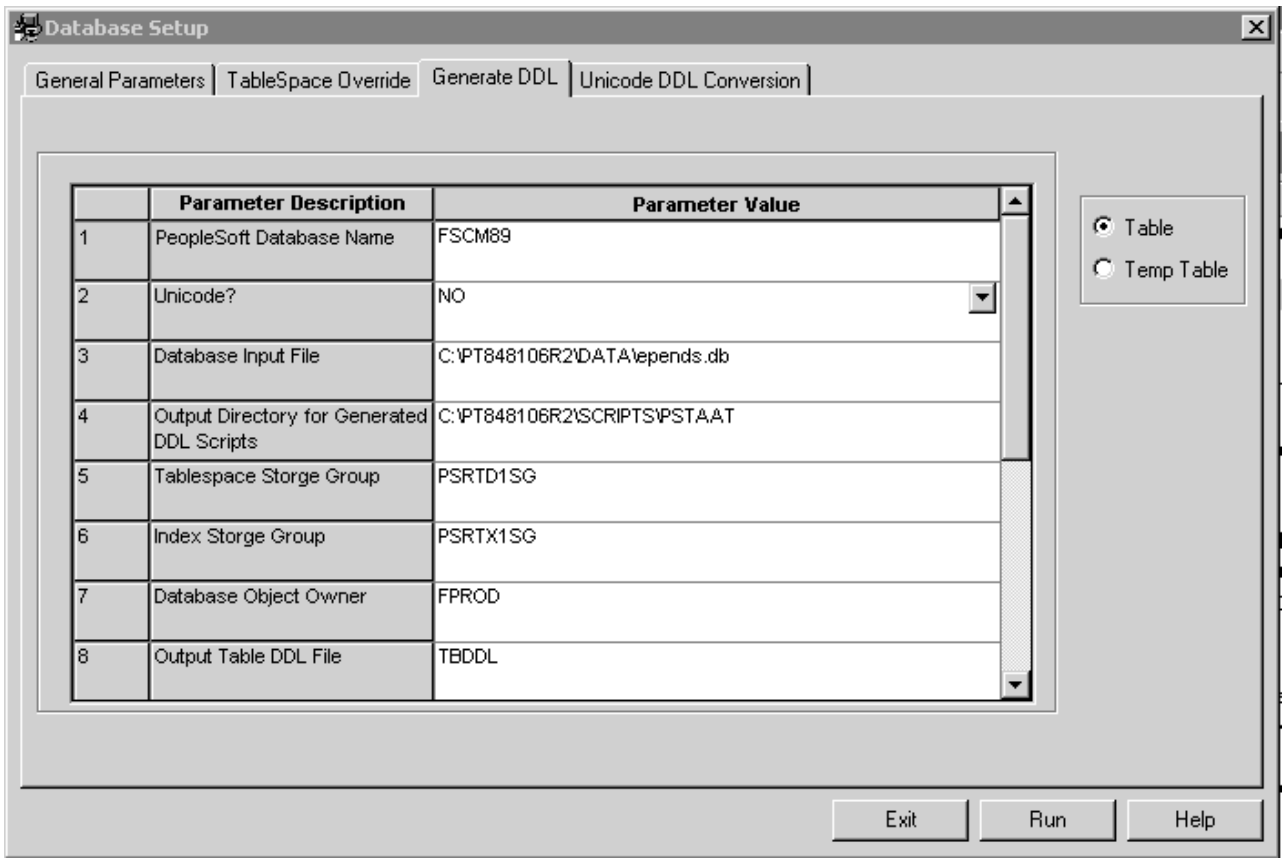
PSTAAT is a C++ Microsoft Windows application. It automatically invokes both Data Mover and Application Designer in command line mode depending on the particular functionality that is being used.

- PSTAAT must run from a 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 PeopleTools Installer will place the PSTAAT executable file in the <PS_HOME>\bin\client\winx86 directory of the PeopleTools “Install Workstation”, file server, or Windows-based two-tier development client.

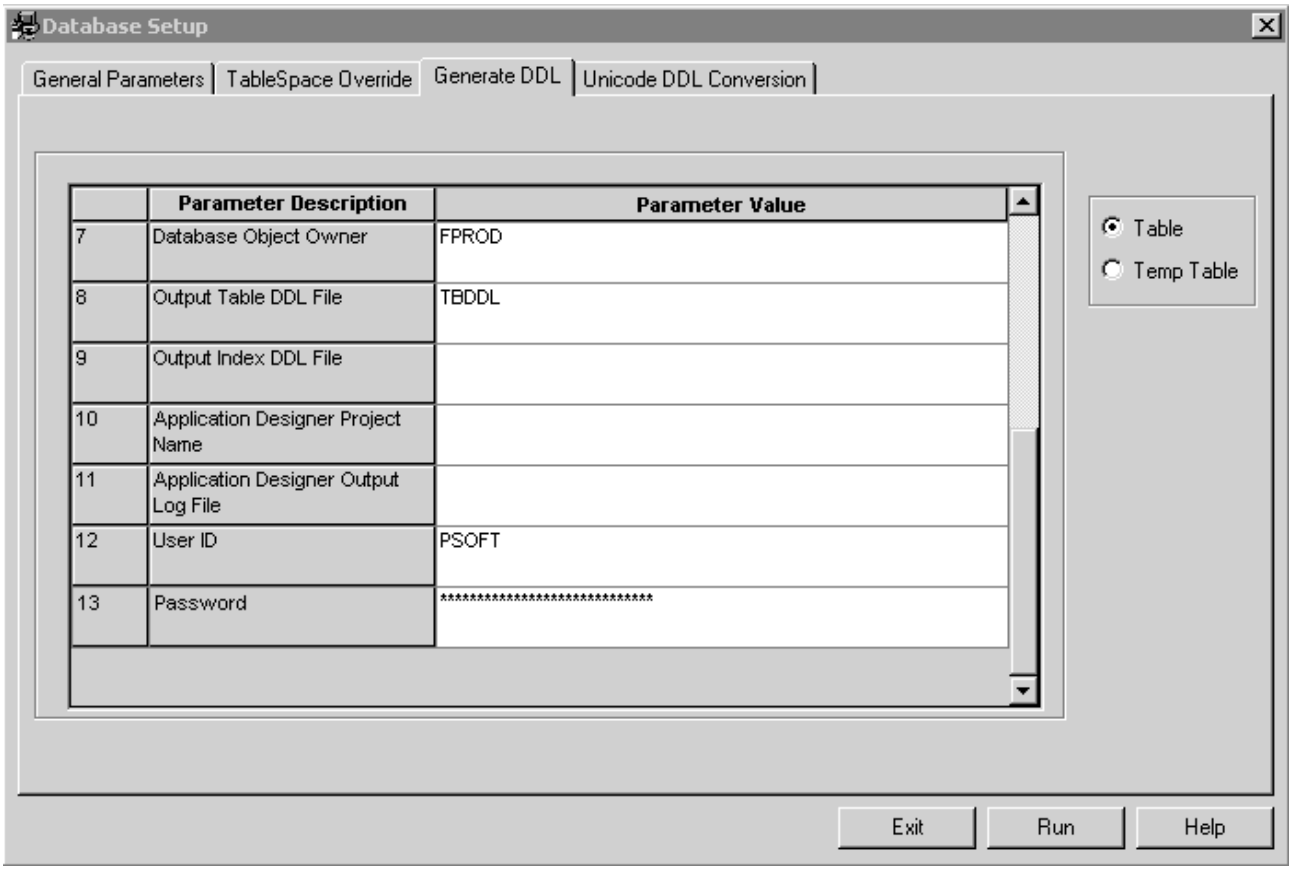
Understanding the PSTAAT Graphical User Interface

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)



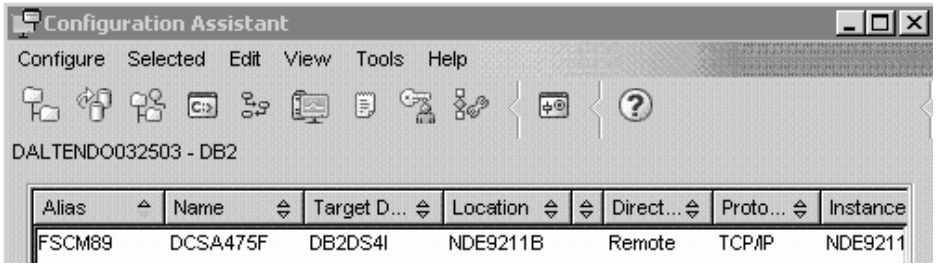
Database Setup page: Generate DDL tab (2 of 2)

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.

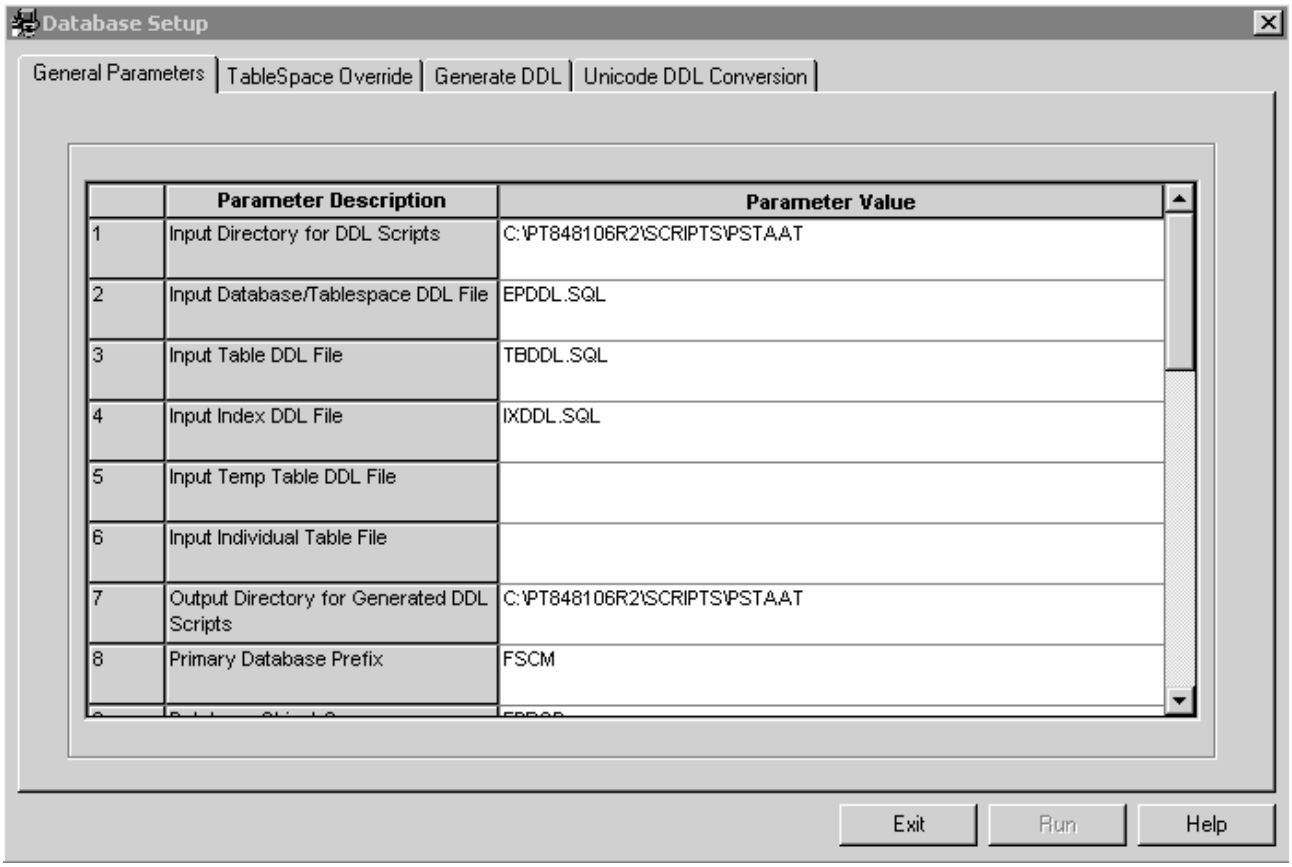
(3) Database Input File

Name of the database input file located in <PS_HOME>\data.

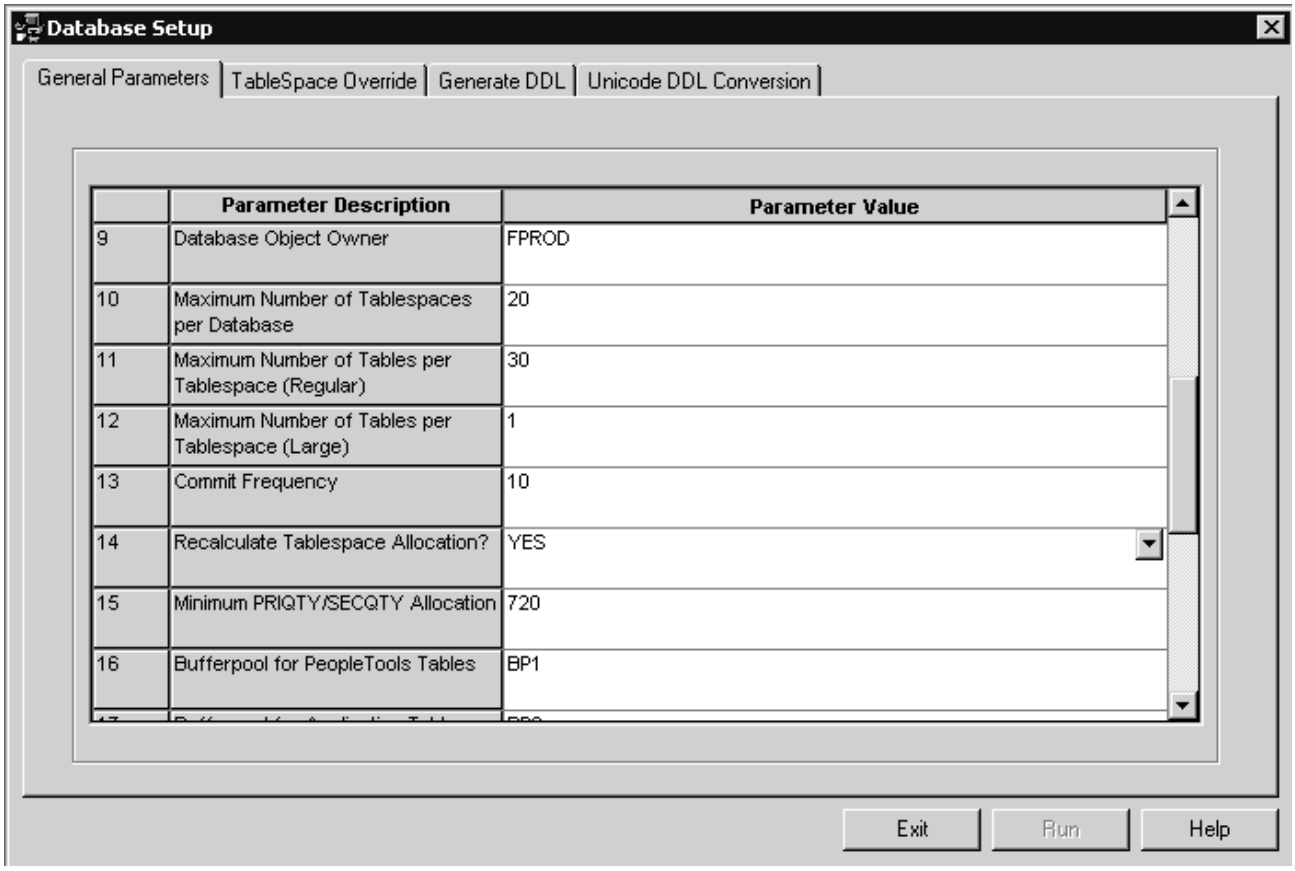
(4) Output Directory for Generated DDL Scripts	Specify a folder on the workstation where PSTAAT will store the generated DDL scripts. **Note.** The path must already exist—PSTAAT will not create it for you.
(5) Tablespace Storage Group	Storage group to be used for tablespace data sets
(6) Index Storage 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 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:

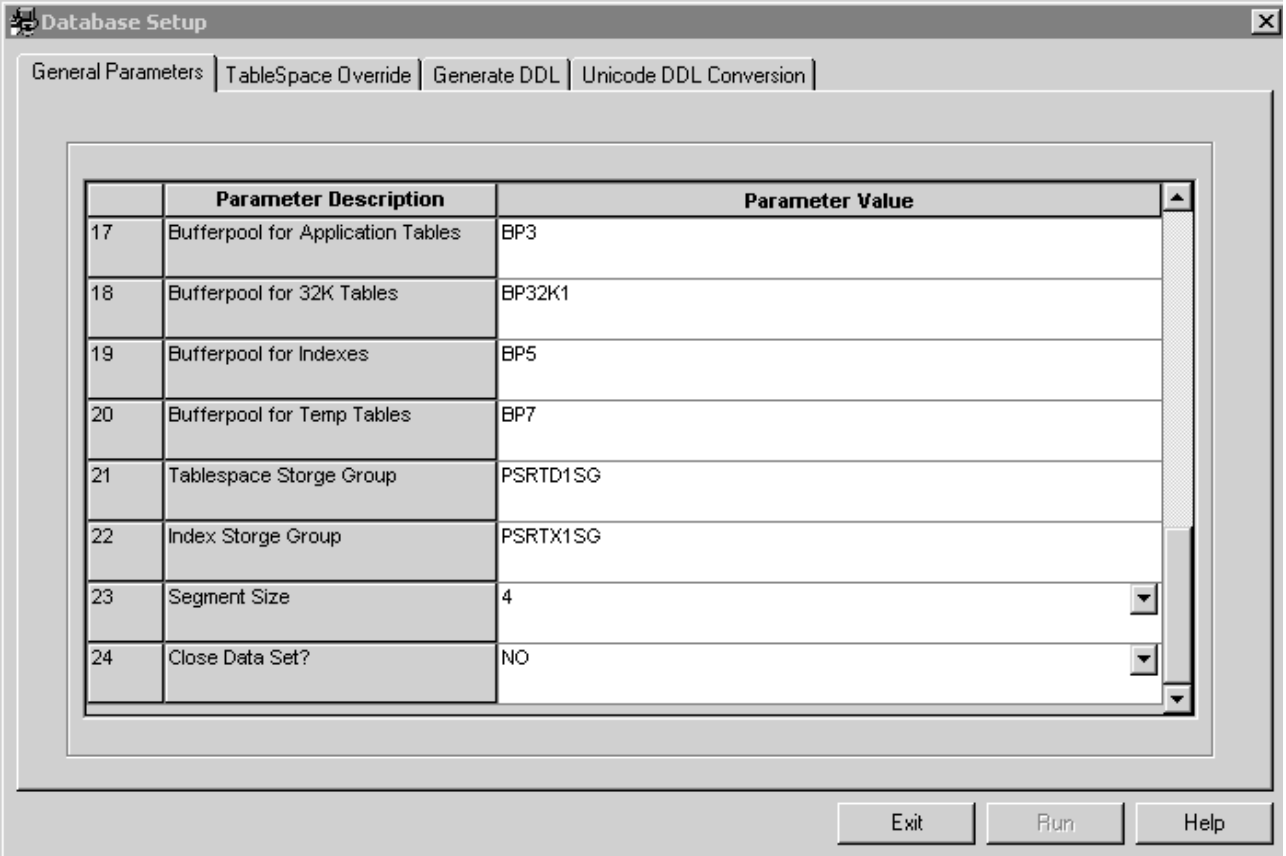
PSTAAT is a text parsing and DDL generation utility. It requires input files such as the default TBDDL.SQL and IXDDL.SQL scripts to operate. PSTAAT parses the text of the original files to create new versions of each script using the input supplied for the parameters below to override default values.



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 xxDDL.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 on the Installation CD.

(4) Input Index DDL File An IXDDL.SQL DDL script such as one that was created by the Generate DDL tab or delivered on the Installation CD.

(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 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 xxLARGE 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 xxDDL 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 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.

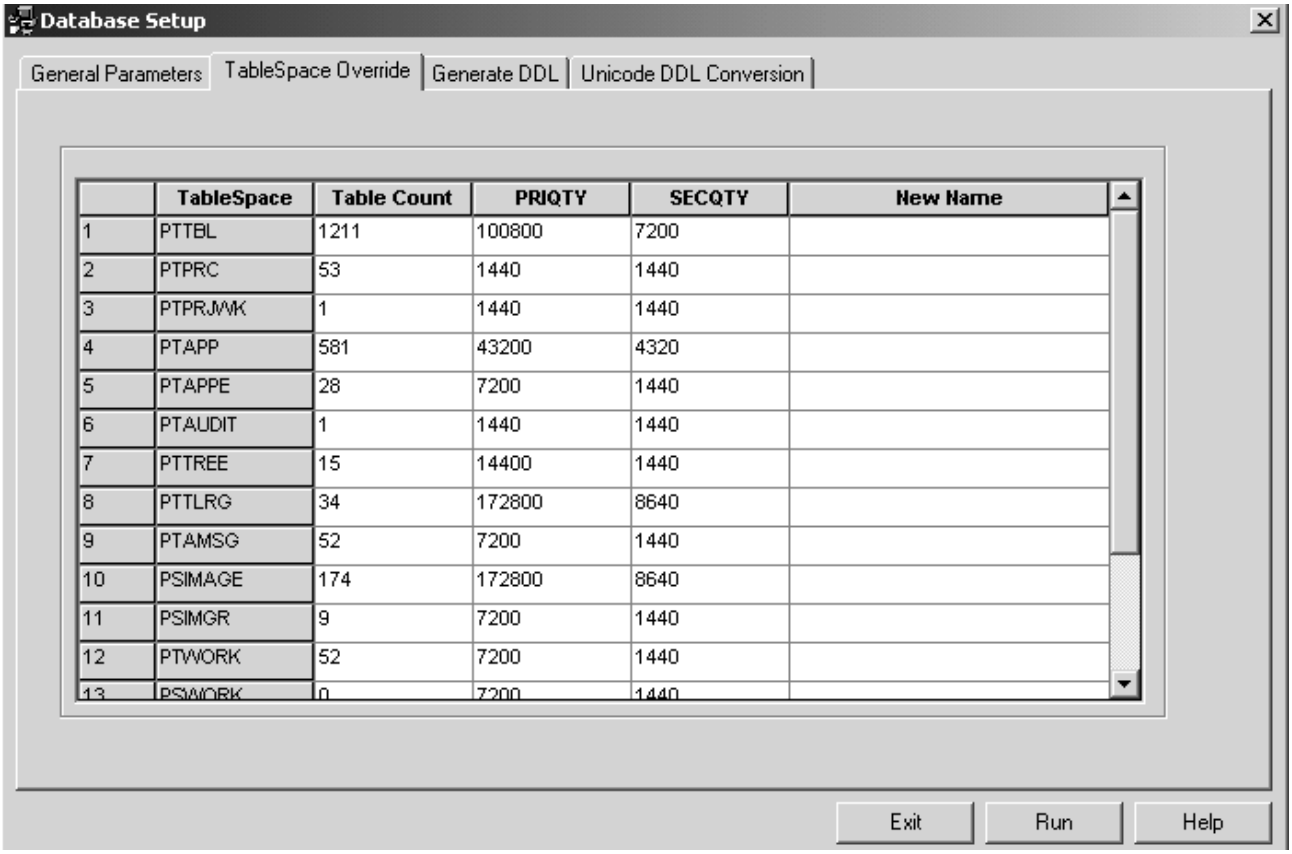
Note. LOCKSIZE does not appear as an override parameter on the GUI. LOCKSIZE is controlled automatically by PSTAAT. Those tables originally delivered in tablespaces set to a LOCKSIZE of ROW will be remapped to tablespaces also set to a LOCKSIZE of ROW automatically. All other tablespace DDL will be generated 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 xxDDL 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	PSWORK	0	7200	1440	

Database Setup page: TableSpace Override tab

Tablespace There is one row in the grid for each tablespace found in the xxDDL 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.

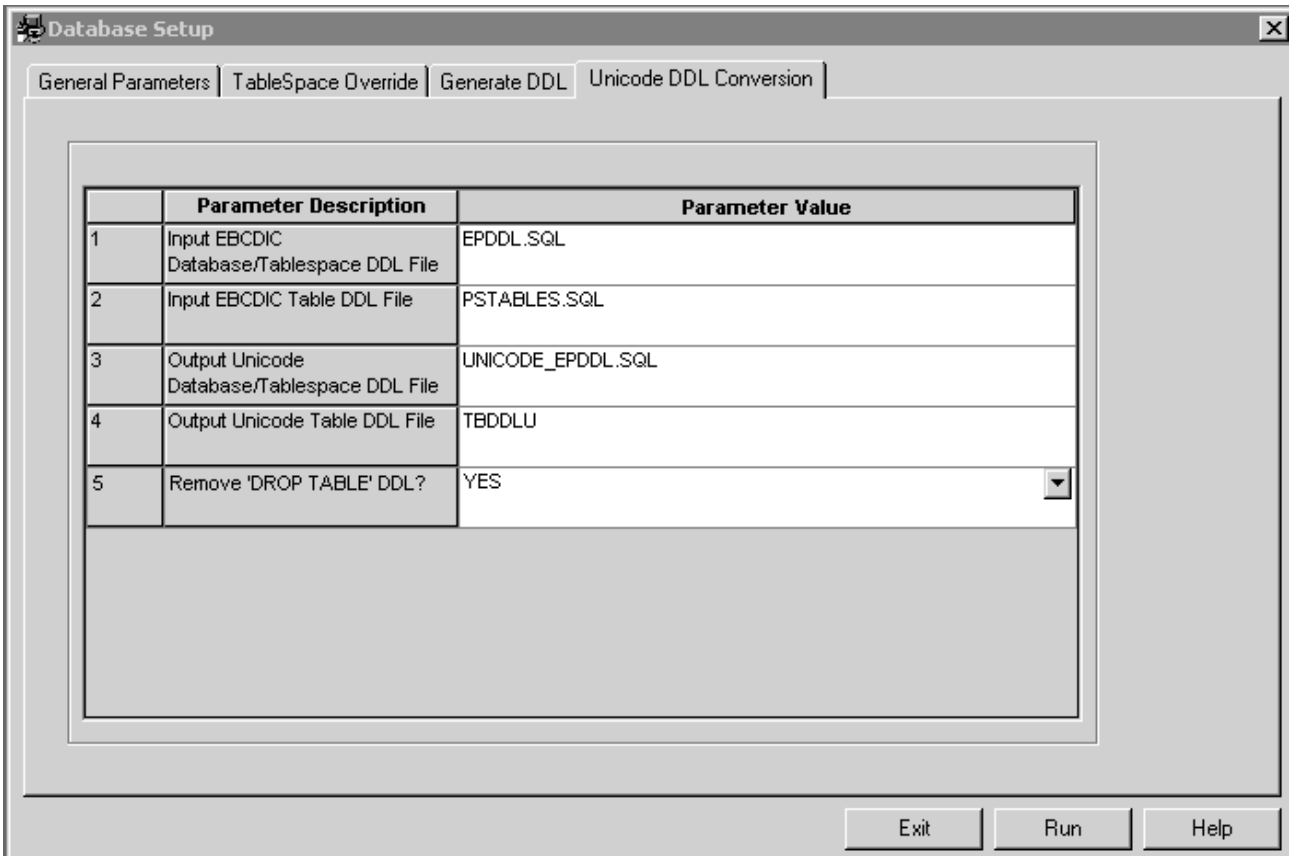
New Name Allows you to override the default tablespace name with a custom tablespace name. Although it is possible to completely override the name of any tablespace, for documentation purposes, we recommend that you use the default PSTAAT behavior of using part of the default tablespace name as a prefix 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. For more details, consult Customer Connection.

See "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS" PeopleSoft Customer Connection (Support, User Groups, Product User Groups, DB2 z/OS, General Information).



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, xxDDL.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 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" PeopleSoft Customer Connection (Support, User Groups, Product User Groups, DB2 z/OS, General Information).

(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 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:

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.

GUI Tab	File	Description
General Parameters Tab	Input Database/Tablespace DDL File	The name of the default database, tablespace, and stogroup DDL script (i.e. xxDDL.SQL)
	Input Table DDL File	The TBDDL.SQL DDL script that was generated from the Generate DDL tab or delivered through the Installation CD.
	Input Index DDL File	The IXDDL.SQL DDL script that was generated from the Generate DDL tab or delivered through the Installation CD.
	Input Temp Table DDL File	A temporary table DDL script as generated by Application Designer.
	Input Individual Table File	Input file of non-temporary PeopleTools and Application tables for which the %UpdateStats metaSQL function is called. This file is delivered through the installation CD.
Unicode Conversion Tab	EBCDIC/Tablespace DDL File	An EBCDIC default database, tablespace, and stogroup DDL script (i.e. xxDDL.SQL).
	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 PeopleTools record definitions; or, a default TBDDL.SQL script. See the Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS white paper for more details.

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 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.
	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 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.
	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).

GUI Tab	File	Description
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.	nXXDDL.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).
	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 nXXDDL.SQL script. The object mapping is based on the input parameters supplied to the General Parameters tab.
	nIXDDL.SQL	This is the new index DDL script for all tables except temporary tables.
	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 tXXDDL.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.
	tXXDDL.SQL	This script contains database and tablespace DDL for temporary tables

GUI Tab	File	Description
	PTlog.txt	This log file summarizes the re-mapped object counts by tablespace and database in the new nXXDL.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'.
	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 J-1: Using PSTAAT to Create TBDDL and IXDDL

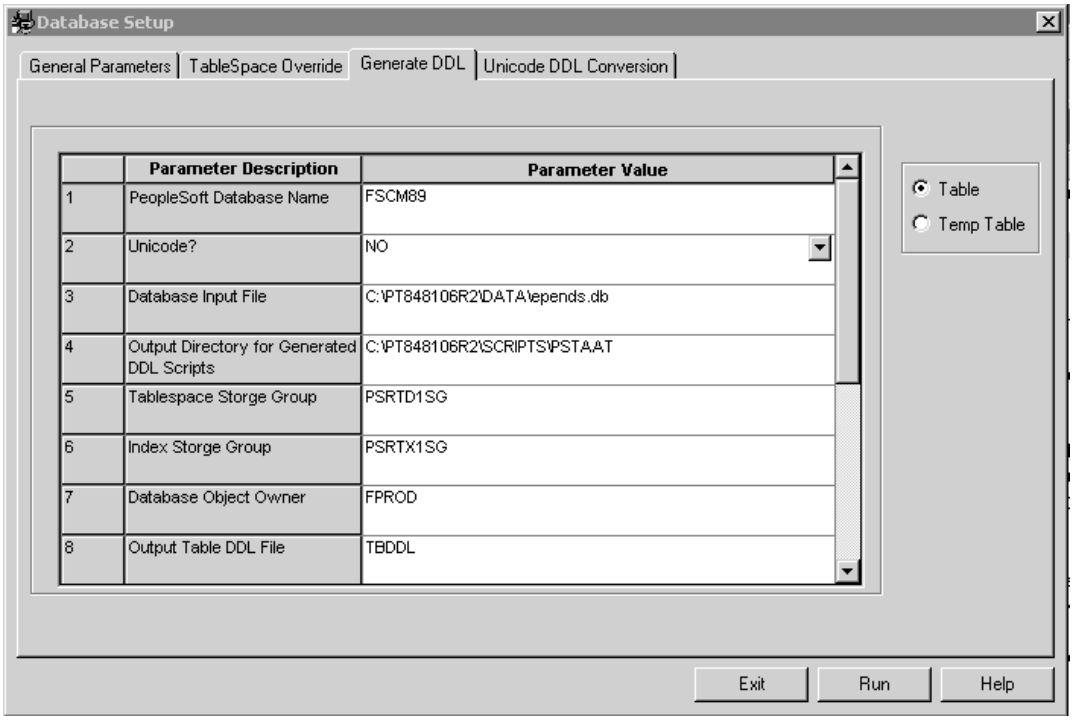
The Generate DDL tab of the PSTAAT interface is capable of extracting TBDDL.SQL and IXDDL.SQL scripts from the database import file located in <PS_HOME>\data. Note that the TBDDL and IXDDL scripts extracted from PSTAAT will be identical to those delivered on the Installation CD. You are free to use either 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.

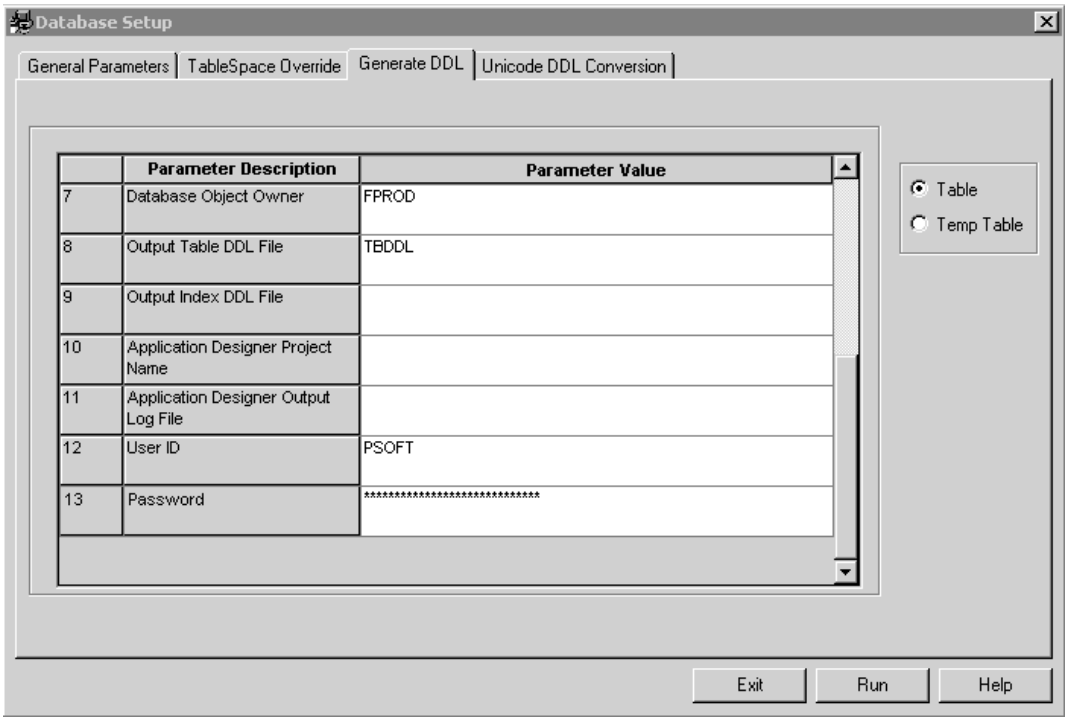
To create the TBDDL.SQL and IXDDL.SQL scripts:

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 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.



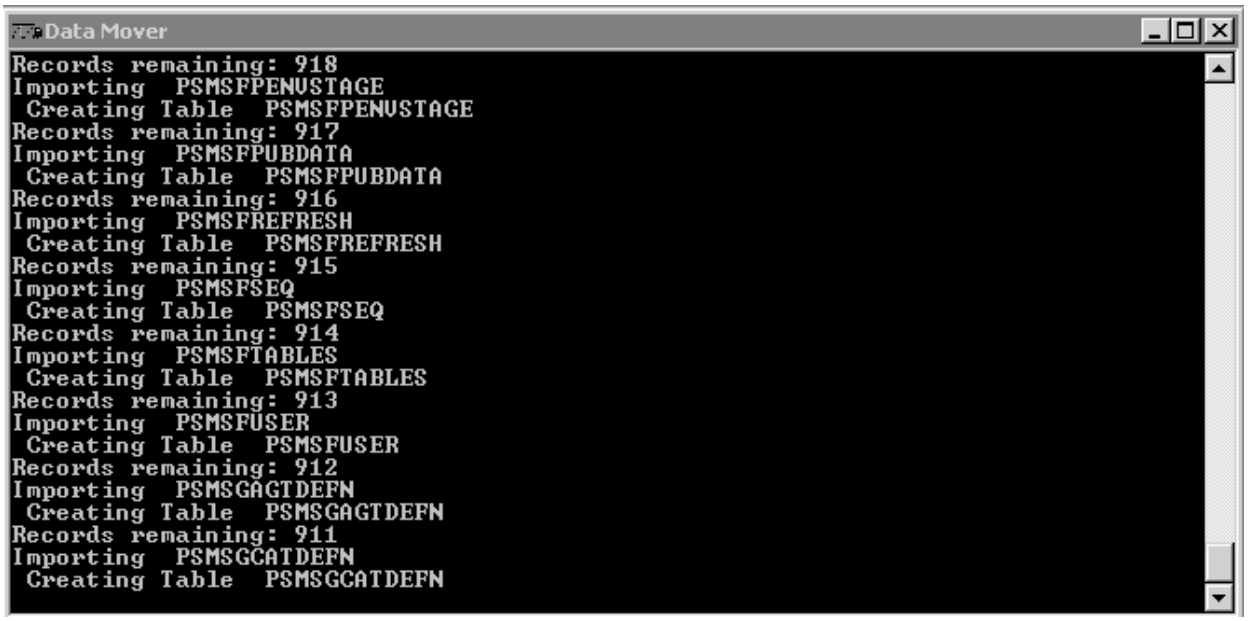
Generate DDL page (1 of 2)



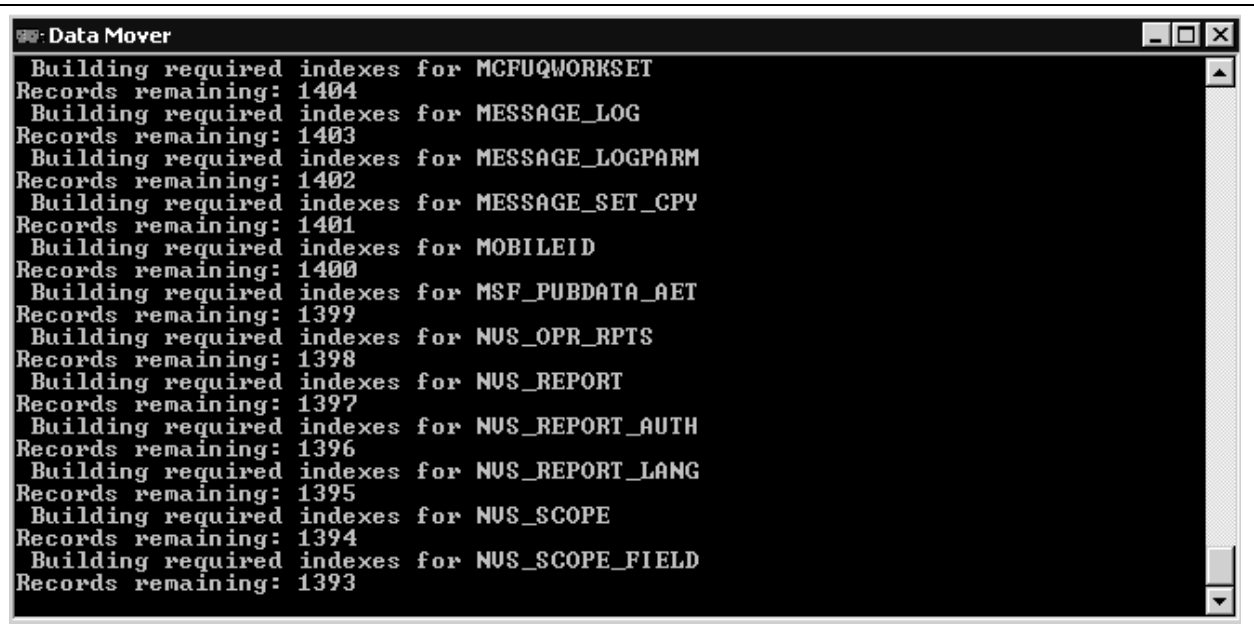
Generate DDL page (2 of 2)

Clicking the run button invokes Data Mover. Data Mover will open a window similar to the following 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.

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 extracting Table DDL



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 J-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 UDB 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.

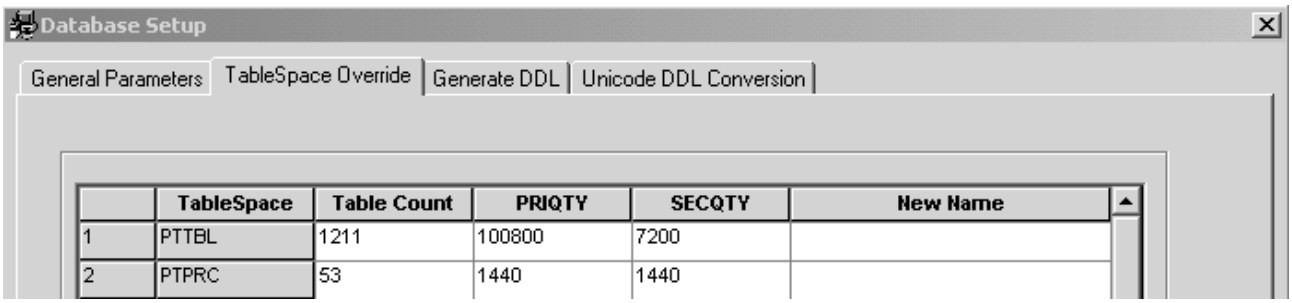
Note that these are only general guidelines and may not be adequate for every installation.

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
```



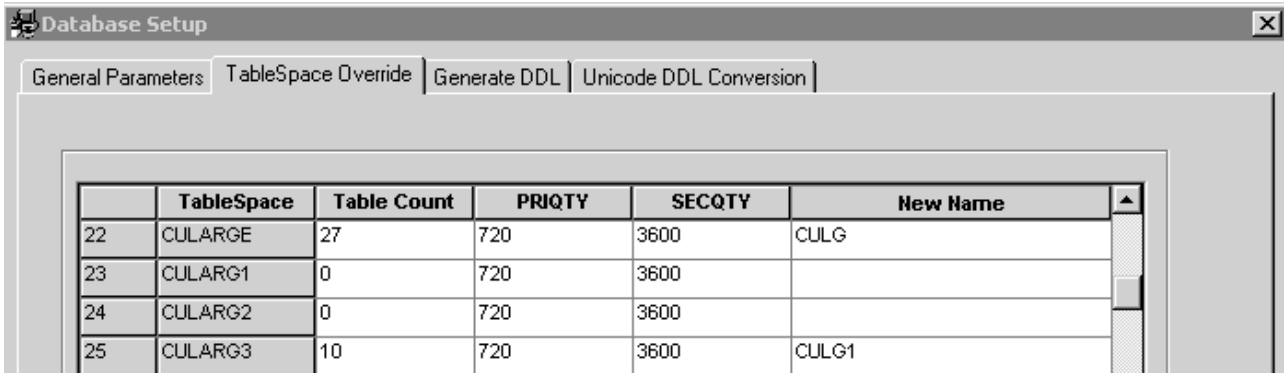
Reviewing Table Count on the TableSpace Override tab

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 xxDDL script contains similarly named Tablespaces:

Some of the delivered xxDDL.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:



	TableSpace	Table Count	PRIQTY	SECQTY	New Name
22	CULARGE	27	720	3600	CULG
23	CULARG1	0	720	3600	
24	CULARG2	0	720	3600	
25	CULARG3	10	720	3600	CULG1

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 xxDDL.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 J-2-1: Customizing DDL Scripts

PSTAAT can assist you in the following:

- Customizing the DDL by allowing you to override the supported 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 PeopleTools tables to individual tablespaces for use with the %UpdateStats metaSQL function and to enhance concurrency.

To optimize the default xxDDL.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 xxDDL.SQL and TBDDL.SQL scripts; and the default Primary and Secondary space allocations.
5. Click the Run button.

PSTAAT will parse the default xxDDL, 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 nXXDDL.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.

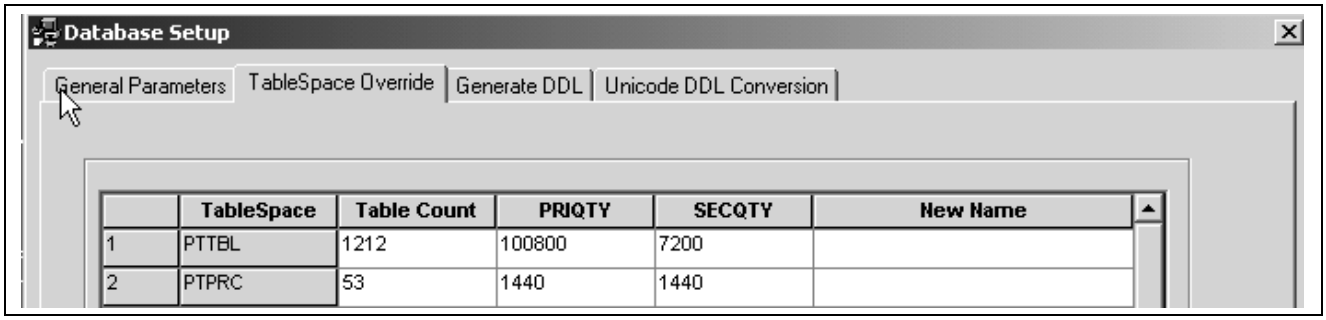
See Understanding How PSTAAT Assigns an Object Naming Convention.

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 J-2-2: Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation With PSTAAT

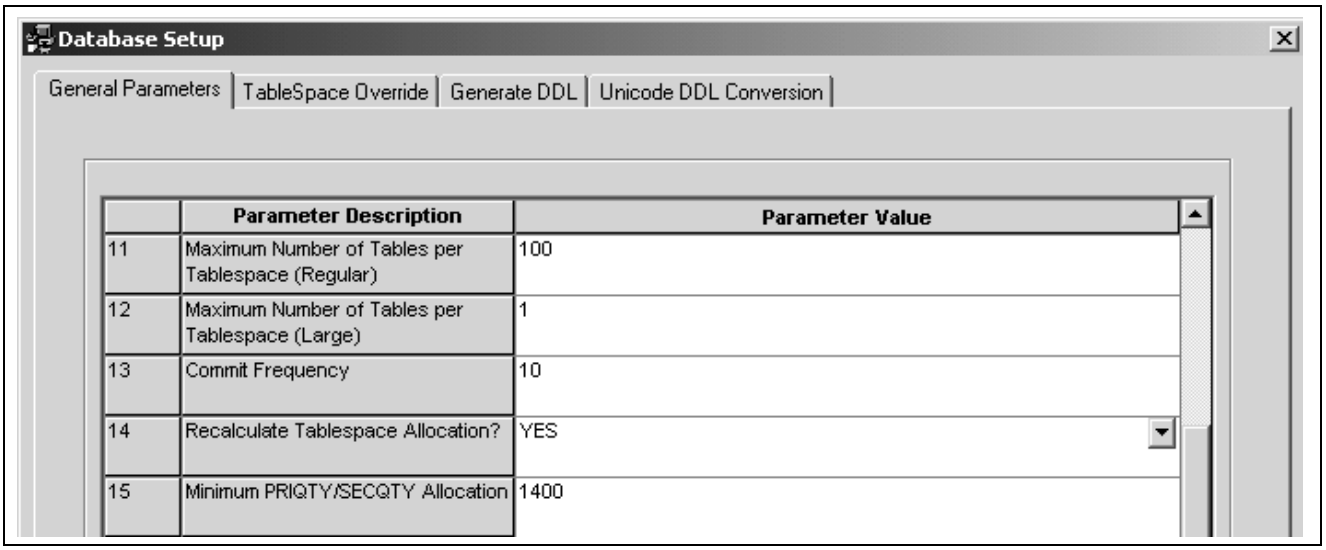
As PSTAAT parses the Database and Tablespace DDL script (xxDDL.SQL) and writes new tablespace DDL based on the table count provided, it always applies the original primary and secondary space allocation to each new tablespace that is generated unless the Recalculate Tablespace Allocation text box (General Parameters) is set to *YES*. The original primary and secondary allocations as read from the xxDDL.SQL input file are always displayed in the Tablespace Override tab.



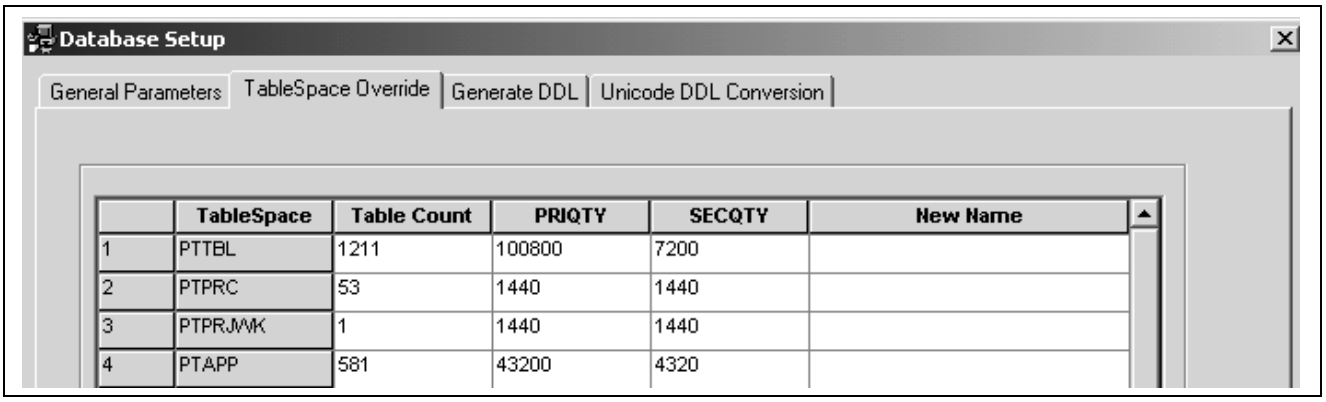
Reviewing primary and secondary space allocations on the TableSpace Override tab

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
```



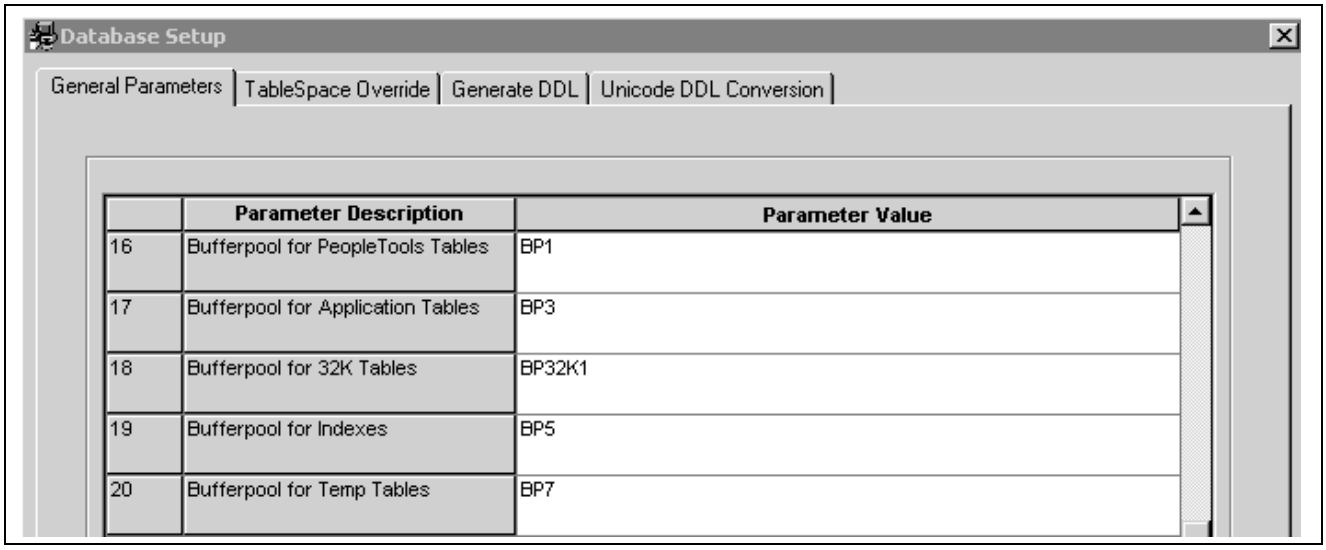
```
SEGSIZE  4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE NO ;
```

- 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 J-2-3: Using PSTAAT to Override the Default Bufferpool Assignment

It is possible to override the default bufferpool assignments found in the xxDDL.SQL script with PSTAAT as follows:



Reviewing bufferpool assignments on General Parameters tab

- PeopleTools tables and Application tables will be assigned to two separate bufferpools. Note that all 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 PeopleTools and Applications tables are assigned to BP32K via the default xxDDL.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).

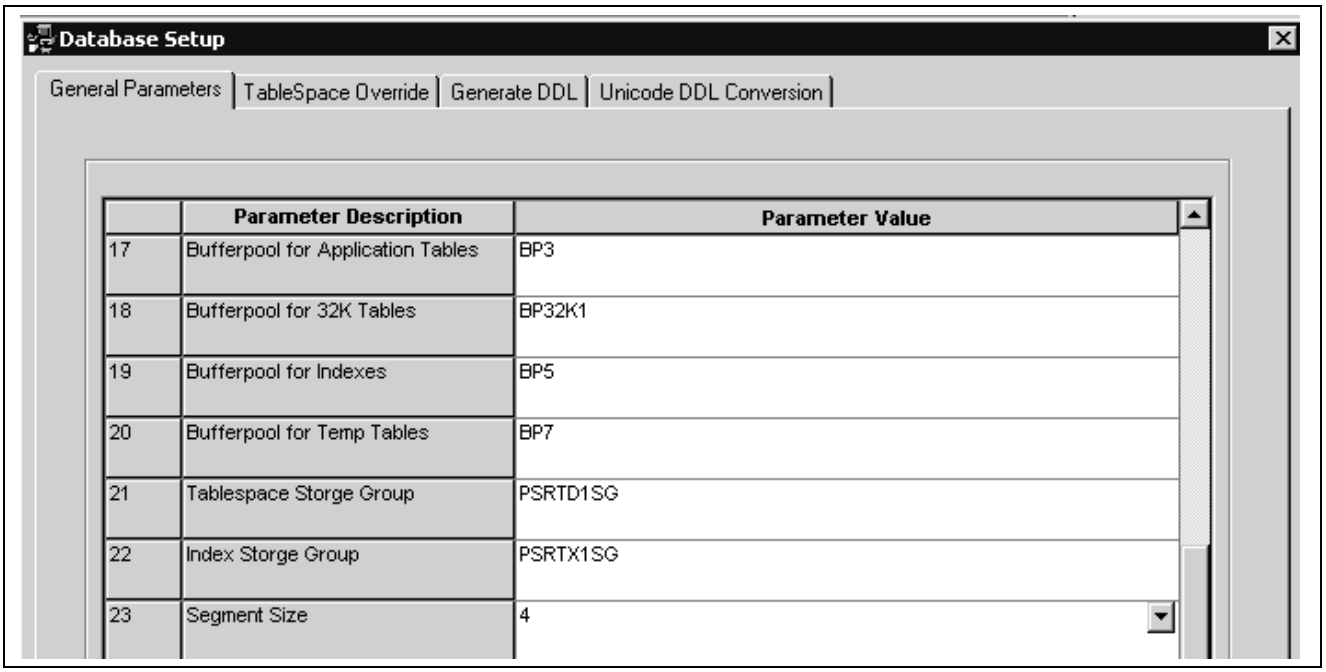
  The default Unicode xxDDLU.SQL script alternates bufferpool assignments between BP8K0, BP8K1, BP8K2, and BP8K3. When given an xxDDLU.SQL script as input, PSTAAT simply substitutes the values of input parameters 16-20 for the default assignments in the original Unicode script. Be careful to specify legitimate 8 KB bufferpools when optimizing a *Unicode* xxDDLU.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 xxDDL.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 J-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 xxDDL.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 xxDDL.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 UDB for z/OS Administration Guide.

Task J-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 nxxDDL.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: 8.48
  -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 nxxDDL.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 J-3: Using PSTAAT to Reassign Temporary Tables to Additional Tablespaces

Prior to PeopleTools 8.48, the following scripts were delivered on the installation CD to group temporary tables and non-temporary Application tables intended to be used with the %UpdateStats metaSQL function into separate tablespaces: X1DDL.SQL, X2DDL.SQL, and X3DML.DMS. Each base temporary table and its iterations were grouped together into a single tablespace. Executing these scripts, known as the "enhanced" installation, was optional although many customers chose to do so to improve the performance and concurrency of Application Engine and %UpdateStats processing. Starting with PeopleTools 8.48, the X1DDL.SQL, X2DDL.SQL, and X3DML.DMS scripts are no longer delivered on the installation CD, and PSTAAT will be used to reassign temporary table instances to additional tablespaces.

Here is an overview of the process:

1. Generate the temporary table and index DDL from an Application Designer project.
2. Create the project must 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:

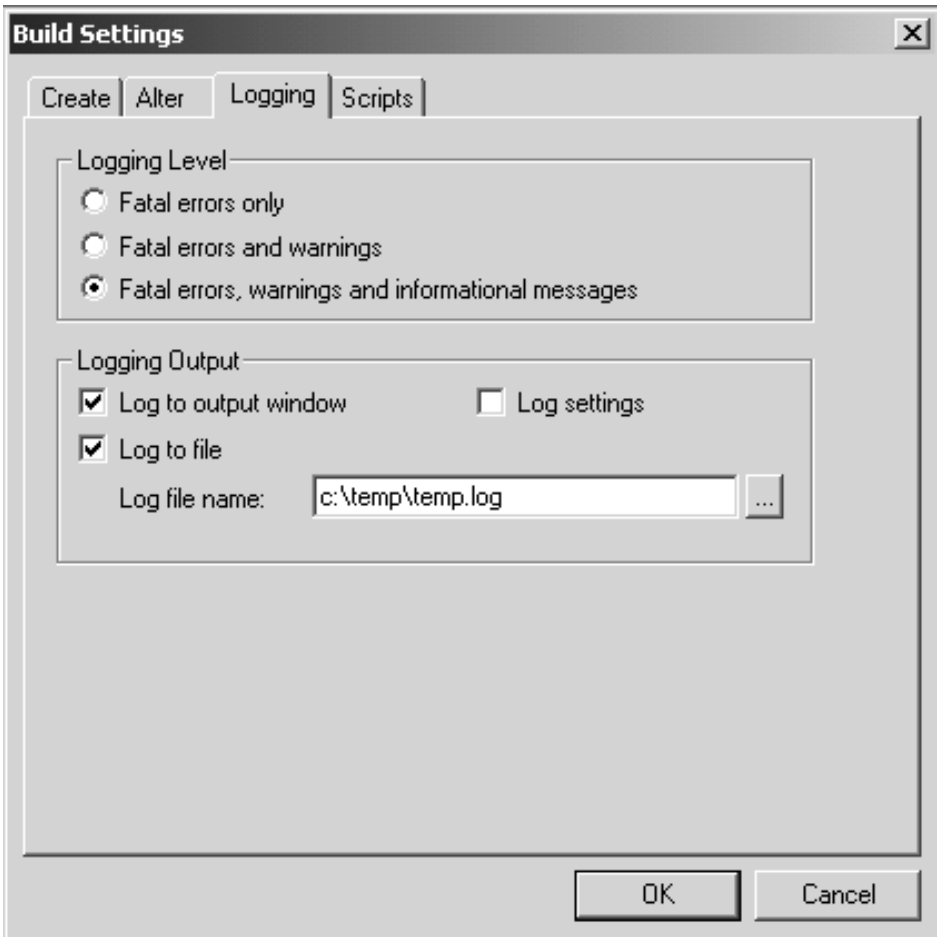
1. Start PSTAAT by double-clicking on the PSTAAT.exe found in <PS_HOME>\bin\client\winx86.

   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.

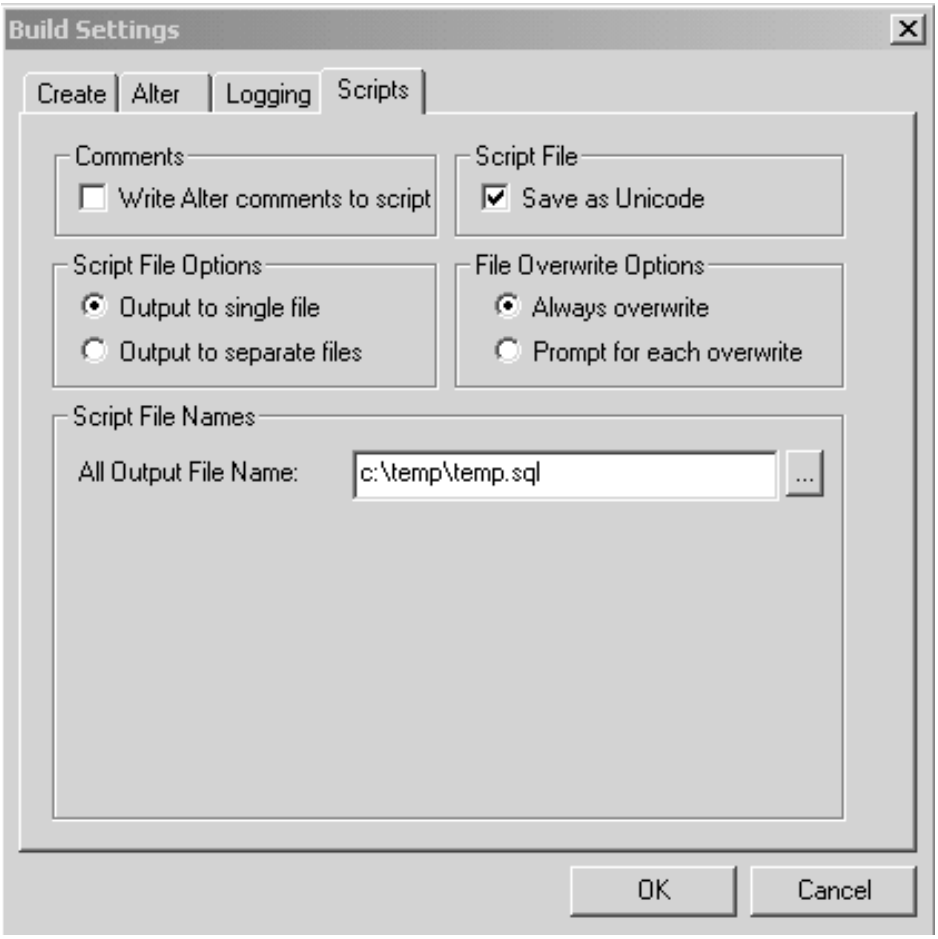
Enter the name of this log file into Parameter 11, Application Designer Output Log File, of the Generate DDL tab of PSTAAT.



Build Settings dialog box: Logging tab

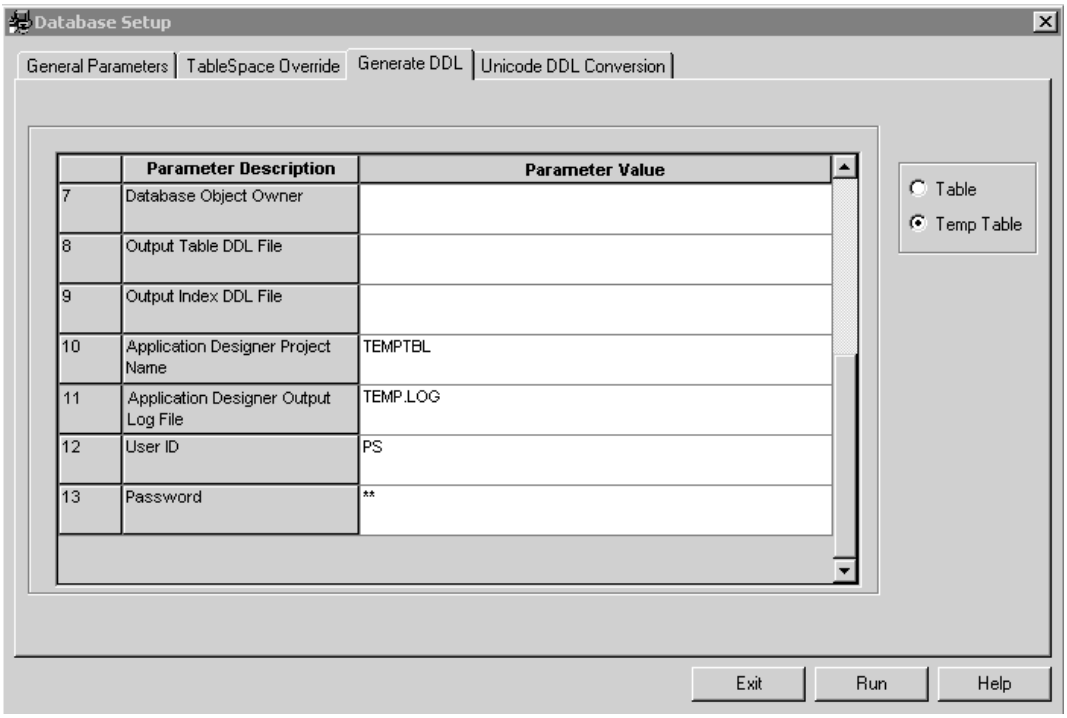
6. Select the Scripts tab of the Build Settings dialog box.
7. Select the Output to a single file radio button under Script File Options, and enter a script name for the DDL file to be created under Script File Names. The temporary table DDL script will be written to this location.

   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 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 tXXDDL.SQL script are hard-coded with the following naming convention: `TMP`*`nnnn`*, 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 J-4: Using PSTAAT to Isolate Other Tables to Individual Tablespaces

PSTAAT is also capable of isolating certain non-temporary 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 Enterprise two character Application prefix (HC for HRCS, EP for FSCM, PF for EPM, CR for CRM, and PA for Portal). The xxENHANCED.txt file is located in the <PS_HOME>\scripts directory of the installation CD.

Note. There may not be an xxENHANCED.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 xxENHANCED.txt file as the input for parameter 6, Input Individual Table File, on the General Parameters tab
2. Copy the xxENHANCED.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, nXXDDL.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 nXXDDL.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 J-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 UDB 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 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" PeopleSoft Customer Connection (Support, User Groups, Product User Groups, DB2 z/OS, General Information).

Task J-5-1: Creating Database, Tablespace, and Table Shell DDL for an EBCDIC to Unicode Database Conversion

When supplied with EBCDIC Database/Tablespace (xxDDL.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.

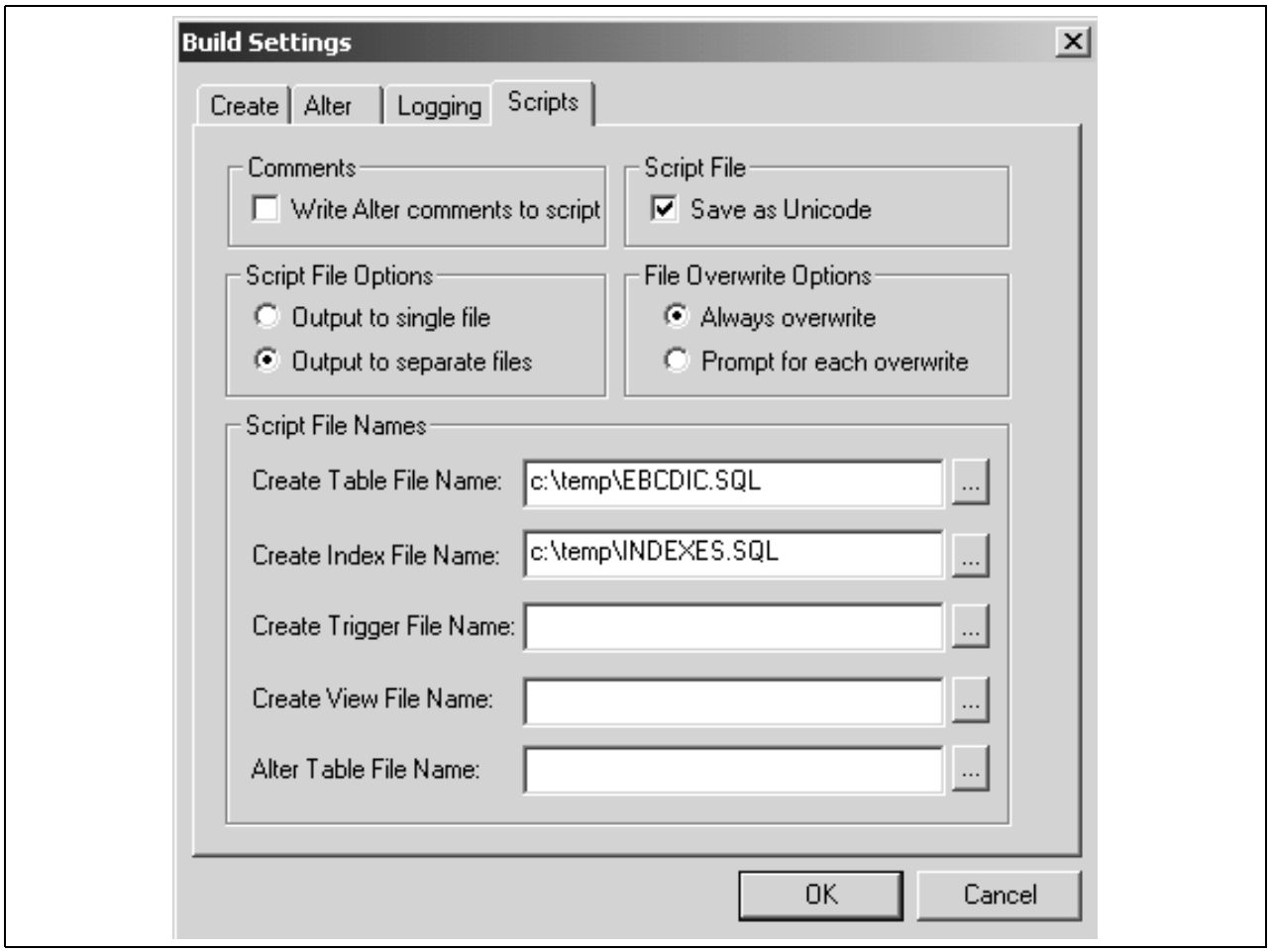
    The Build Settings dialog box appears.

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

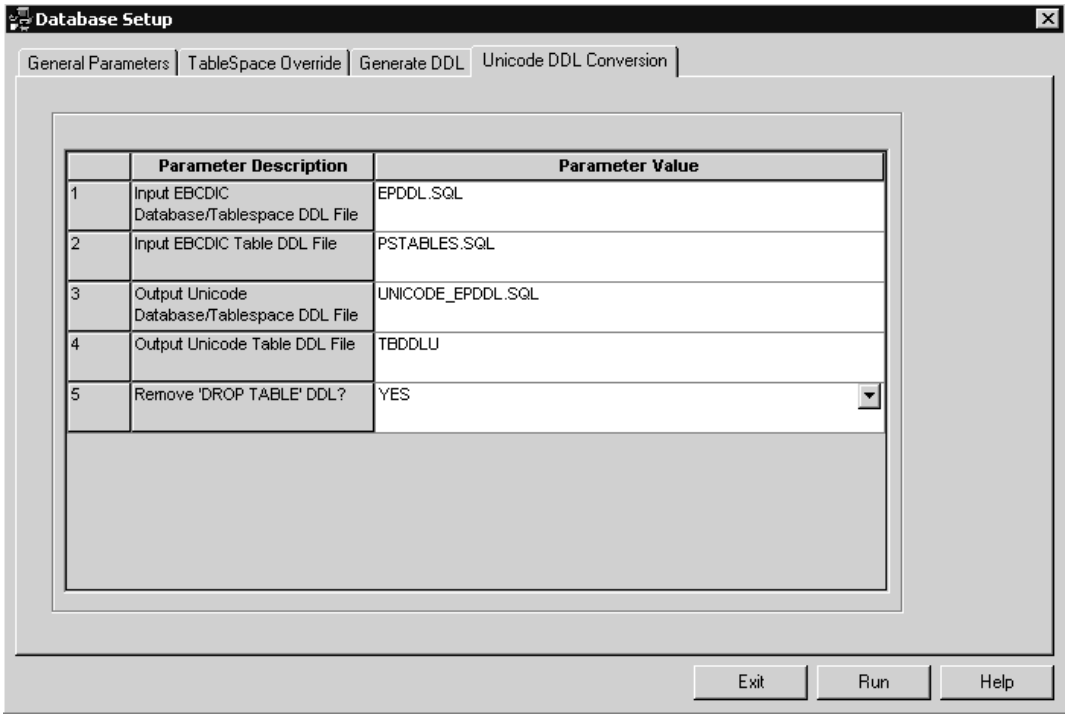
16. Click OK to accept the build settings.
17. Click Build to create the table and index DDL script.

    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 (xxDDL.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.



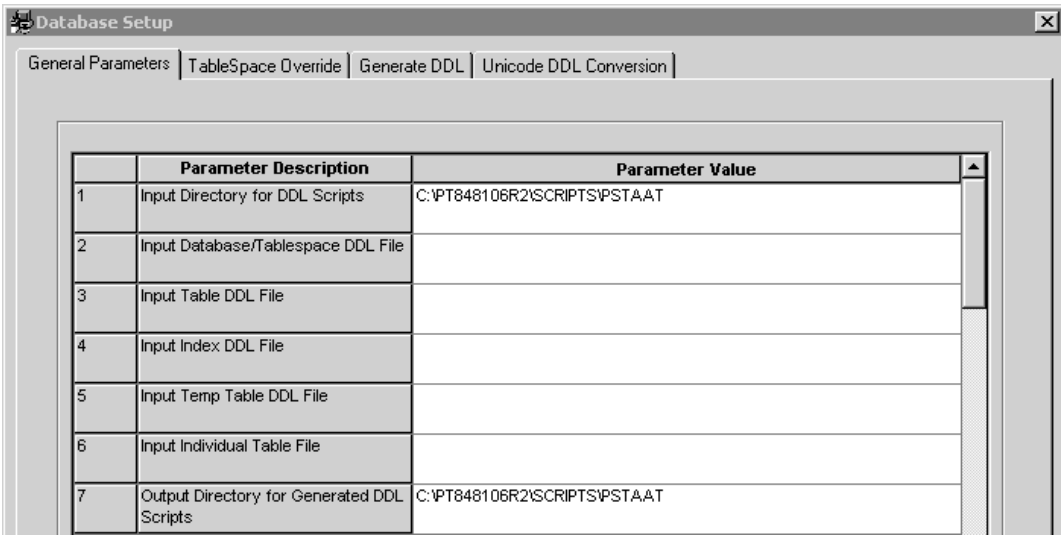
Specifying output files on Unicode DDL conversion tab

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 (nXXDDL.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" PeopleSoft Customer Connection (Support, User Groups, Product User Groups, DB2 z/OS, General Information).

Task J-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 PeopleTools metadata, has no direct knowledge of the data model of the individual Applications, and no mechanism itself to communicate directly with a DB2 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 CD, 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 the Enterprise PeopleTools 8.48 Installation Guide for DB2 UDB for z/OS.

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 xxDDL.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 PeopleTools file server.

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