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# Getting Started On Your PeopleSoft Upgrade

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**July 2006**

Getting Started On Your PeopleSoft  
Upgrade  
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# About This Documentation

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## Understanding This Documentation

This documentation is designed to get you ready for your PeopleSoft Upgrade. You must complete the tasks set forth in this documentation before beginning the actual upgrade. The tasks in this documentation guide you through planning your upgrade as well as the installation of the necessary software.

This section describes information you should know before you begin working with PeopleSoft products and documentation, including PeopleSoft-specific documentation conventions.

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## Audience

This documentation assumes you have a basic understanding of the PeopleSoft system. One of the most important components to a successful upgrade of your PeopleSoft installation is your onsite experience. PeopleSoft recommends that, prior to performing this upgrade, you have completed at least one PeopleSoft introductory training course.

You should be familiar with your operating hardware environment and have the necessary skills to support that environment. You should also have a working knowledge of SQL and SQL command syntax. Familiarity with navigating around the system and adding, updating, and deleting information using PeopleSoft windows, menus, and pages is necessary. You should also be comfortable using the World Wide Web and the Microsoft® Windows graphical user interface.

See PeopleSoft Customer Connection.

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## Organization

This documentation is divided into chapters to assist you in planning your upgrade and installing the necessary software.

- Plan your upgrade
- Install the software

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## Typographical Conventions and Visual Cues

To help you locate and understand information easily, PeopleSoft uses a few simple conventions in describing your interaction with the upgrade process.

Convention	Description
Monospace	Indicates messages you may receive during the upgrade process. Also, indicates examples of SQL scripts or queries you run during the upgrade, for example:  <pre>select distinct DDLSPACENAME from⇒ PSRECDEFN</pre>
<i>Italics</i>	Indicates a PeopleSoft or other book-length publication. We also use italics for <i>emphasis</i> and to indicate specific field values.  We also use italics when we refer to words as words or letters as letters, as in the following: Enter the number <i>0</i> , not the letter <i>O</i> .
Initial Caps	Field names, commands, and processes are represented as they appear on the window, menu, or panel.
ALL CAPS	File or directory names are represented with all caps; for example, BAT, BIN, CBLBIN.
Menu, Panel	Commas (,) between menu and panel references indicate that the panel exists on the menu. For example, select Use, Process Definitions indicates that you can select the Process Definitions panel from the Use menu.
Key+Key	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For ALT+W, hold down the ALT key while you press W.
Cross-references	Sections beginning with “See” found at the end of a task or step refer you to additional documentation that will help you implement with the task at hand. We highly recommend you reference this documentation.  “See Also” sections refer you to additional documentation where there is more information regarding the subject. The title and section of the PeopleBook are separated by commas.
Topic list	Contains a list of all topics in the section.

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**Note.** Text in this format indicates information that you should pay particular attention to as you work with your PeopleSoft system. If the note is preceded by Important!, the note is crucial and includes information that concerns what you need to do for the system to function properly.

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## Related Information

You can review related information that may help with your PeopleSoft upgrade. You can find the following information on Customer Connection. We post updates and other items on Customer Connection as well.



- **Release Notes.** Read the Release Notes, prior to starting your upgrade, to determine what has changed in the system, and to familiarize yourself with the new features. The Release Notes also indicate whether you need to upgrade any other portions of your system, such as your RDBMS software or batch files.

See PeopleSoft Customer Connection (Site Index, R, Release Notes).

- **Upgrades Database.** The Upgrade Documentation database on Customer Connection will have other information posted after shipment of this release that may not be included in these instructions. This information may include Updates & Fixes required at upgrade. Always check the Upgrade Documentation database for the most current documentation and information.

See PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Upgrade Guide, Upgrade Documentation and Software, Upgrade Documentation and Scripts).

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**Important!** Before upgrading, it is imperative that you check the Upgrade Documentation database on PeopleSoft Customer Connection for updates to the upgrade instructions. We continually post updates as we refine the upgrade process.

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- **Related Documentation.** Read the document titled *PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades*, for details on the tool which you use for upgrades. You can find this document on your Upgrade home page.

See PeopleSoft Customer Connection (Implement, Optimize + Upgrade, Upgrade Guide, Upgrade Documentation and Software, Upgrade Documentation and Scripts).

## See Also

[www.peoplesoft.com](http://www.peoplesoft.com)

“Using Change Assistant for Application Upgrades,” PeopleSoft Customer Connection, (Support, Documentation, Documentation Updates, Enterprise, PeopleTools, Change Assistant )

*Enterprise PeopleTools PeopleBook: System and Server Administration*, “Replicating an Installed Environment”

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## Comments and Suggestions

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

PeopleTools Product Documentation Manager, PeopleSoft, Inc.

4460 Hacienda Drive

Pleasanton, CA 94588

Or send comments by email to the authors of the PeopleSoft documentation at:

[DOC@PEOPLESOFT.COM](mailto:DOC@PEOPLESOFT.COM)

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



# CHAPTER 1

## Plan Your Upgrade

This chapter discusses:

- Understanding How to Plan Your Upgrade
- Understanding the Upgrade Process

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### Understanding How to Plan Your Upgrade

A PeopleSoft upgrade requires planning, time, resources, testing, and development. This chapter walks you through the planning process of your upgrade to ensure a smooth transition to the updated software.

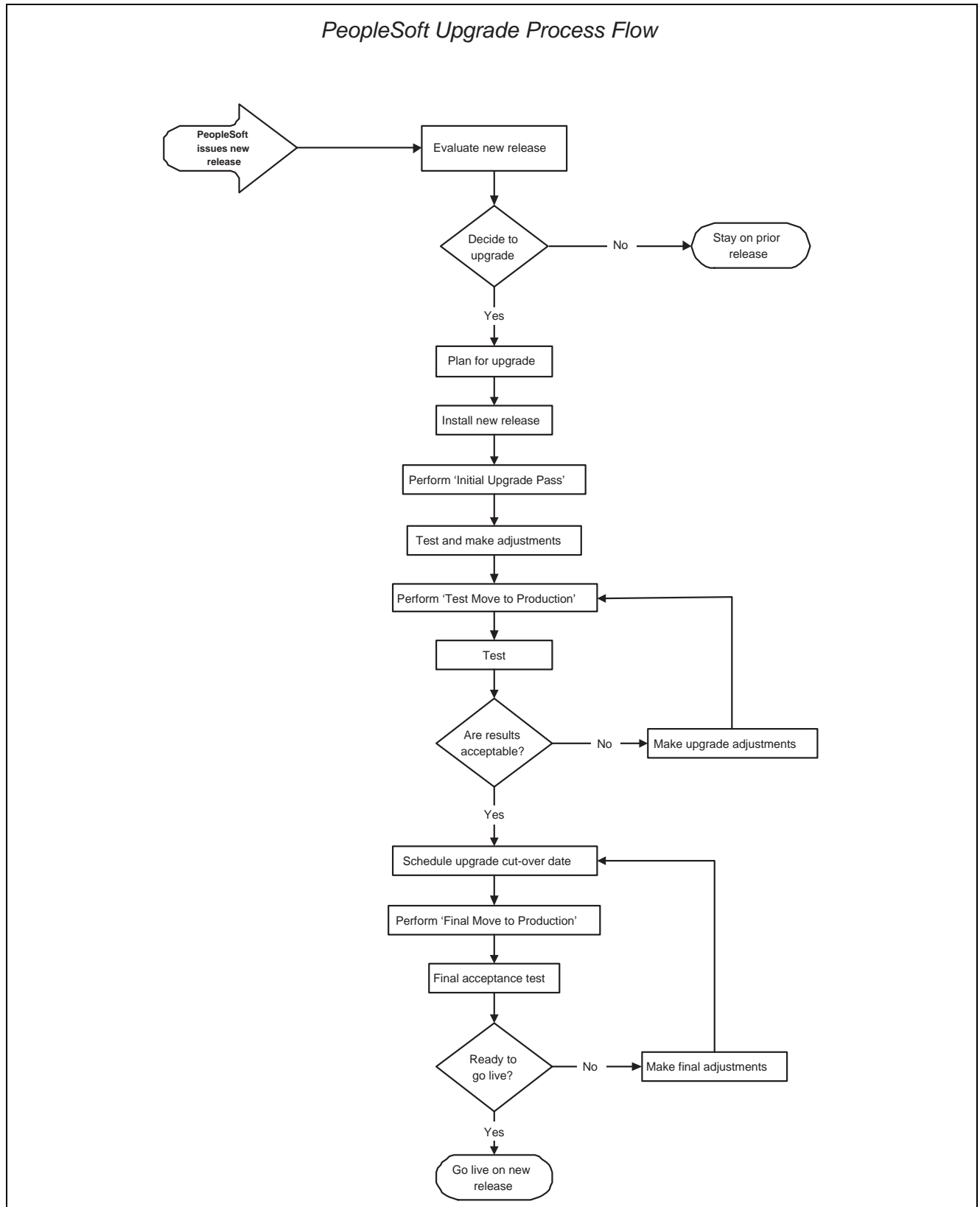
This chapter acts as a planning guide for you and your team to make all arrangements and decisions needed before you begin the actual upgrade process. These tasks help your team plan technical requirements, define the upgrade project plan, and understand the upgrade process as a whole. Planning is very important to execute this upgrade properly, therefore, take the time to carefully follow the tasks described in this chapter.

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**Important!** You need to use a supported Windows client workstation to upgrade to your new PeopleSoft release.

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The PeopleSoft upgrade process begins when PeopleSoft issues a new release and ends when you have successfully upgraded to the new release. The following illustrates the major activities and decision points in the upgrade process:



Upgrade Process Flow diagram

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## Understanding the Upgrade Process

This section discusses:

- Understanding Upgrading
- Defining the Upgrade Process
- Planning for Maintenance Packs
- Reviewing Upgrade Components
- Reviewing Environment Hardware and Software
- Reviewing PeopleTools Components
- Reviewing Application Components
- Comparing Upgrade Types
- Understanding Application Designer
- Understanding the Comparison Process
- Understanding Upgrade Reports
- Analyzing the Parts of the Upgrade

### Understanding Upgrading

This task explains the concepts behind upgrading your PeopleSoft system, and gives you hints and suggestions on accomplishing some of the more complex procedures involved.

### Defining the Upgrade Process

Many people think of upgrading as moving a software application from one release level to a higher release level by installing new program files. However, your PeopleSoft system does not just consist of software programs; there is also the database to consider.

In a PeopleSoft system, the process of upgrading can be defined as: migrating objects from one database to another and/or updating other system components, such as software.

At the heart of the upgrade methodology is the idea that the database objects as well as the software determine release level. Consequently, an upgrade may or may not include installing new executable files.

This definition of an upgrade holds true whether you are moving one of your own customized objects or one thousand new PeopleSoft objects into production. It is also true if you are only upgrading the software. You always perform one or both of these two steps (in the order presented):

- Update your PeopleSoft software.
- Copy any new object(s) into your database and adjust all your system components—such as application data, SQL tables, indexes, views, batch programs, and so forth—accordingly.

Whenever you perform one or both of these steps, you are upgrading your database to a new release level. It may not always be to a higher PeopleTools release—as with new software—but it is, at minimum, to a higher customer release.

When you upgrade to a new PeopleSoft release, several upgrade passes are required to ensure that your upgraded production database performs as you expect. You must complete all of these passes to complete your upgrade.

There are three passes in the upgrade process as follows:

- Initial pass

The first pass is called the initial pass. In this pass, you create a copy of your production database referred to as the Copy of Production. You then take the delivered database (the one with the new PeopleSoft release delivered with your product), called the Demo database, and incorporate the modified objects into the Copy of Production to create your first upgraded Copy of Production. In this pass your Demo database is your Source and the Copy of Production is the Target.

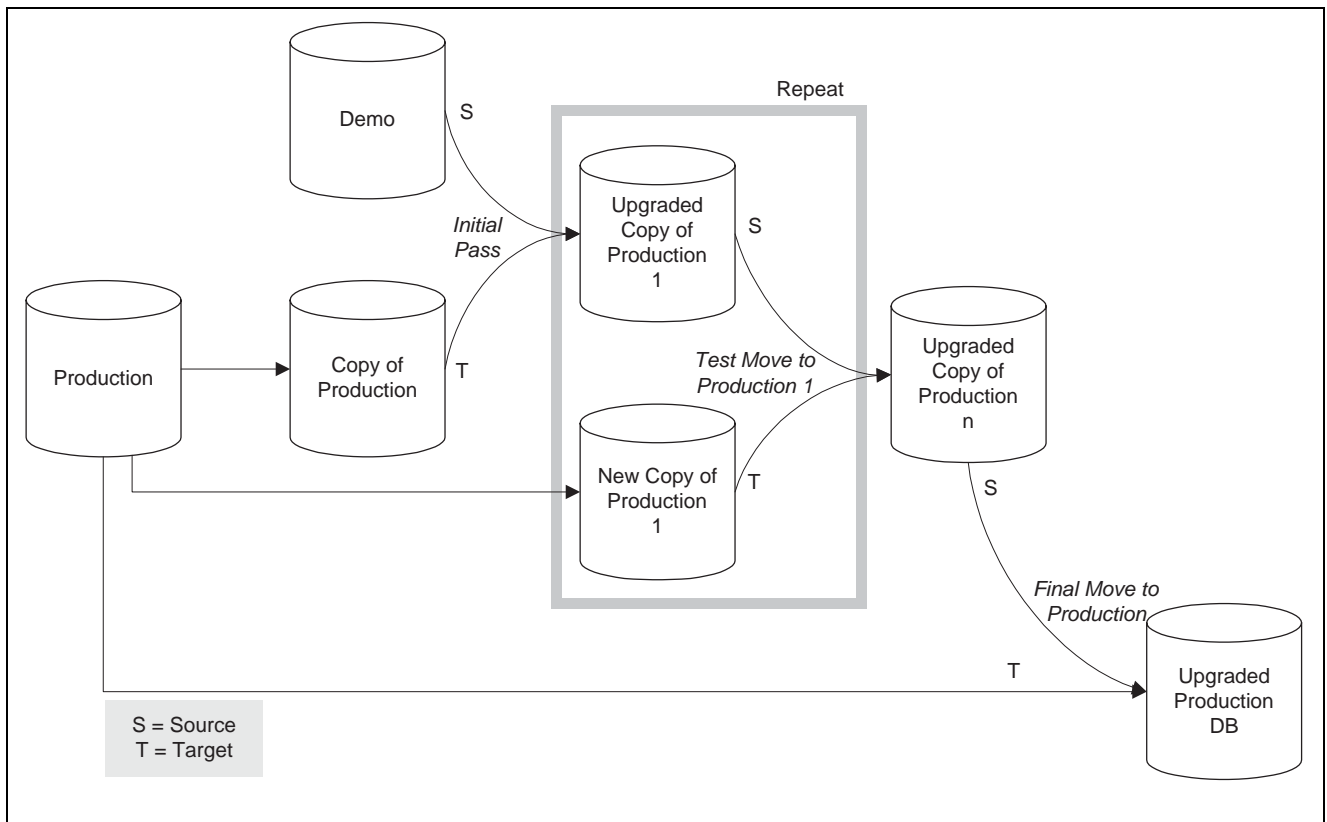
- Test Move to Production pass

After you complete the initial pass, you begin the first test Move to Production pass. In this pass you create another copy of your production database called the New Copy of Production. You take the upgraded Copy of Production (the one created in the initial pass) and incorporate the modified objects into the New Copy of Production to create your second upgraded Copy of Production. In this pass, the upgraded Copy of Production (from the initial pass) becomes your Source and the New Copy of Production becomes your Target.

The test Move to Production is repeated until it runs smoothly. A New Copy of Production is created for every test Move to Production pass and is the new Target for each pass.

- Final Move to Production pass

When you are ready for the final Move to Production pass, you freeze your production database and incorporate the modified objects from your most recent upgraded Copy of Production into the production database itself. Once again the upgraded Copy of Production (from the test move to productions) is your Source and your production database is the Target.



The PeopleSoft Upgrade Process

## Planning for Maintenance Packs

It is important that you identify the maintenance schedule for upcoming PeopleTools and Application releases. These releases are typically on a regular schedule and should be included in your project planning and budgeting processes. Release dates for maintenance packs are posted on Customer Connection. It is important to plan regular maintenance into your overall project plans. For example, for a year-long upgrade, development, and conversion project, time must be set aside 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.

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**Note.** Always ensure you apply maintenance packs to your Demo database.

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See Enterprise PeopleTools PeopleBook, PeopleSoft Software Updates, for your current PeopleTools release, “Migrating Change Packages or Maintenance Updates.”

## Reviewing Upgrade Components

Regardless of whether you are only updating your software, adding a single object to your database, or performing a full upgrade to a new PeopleSoft release, the basic components involved in upgrading are the same.

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**Note.** The exception to this rule is an upgrade of the PeopleTools programs only; this may not involve any new database objects.

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There are three main system components that can be affected by, or involved in, an upgrade:

System Component	Definition
Environment	Hardware and software, including client and server machines, client and server operating systems, RDBMS software and database, and network software.
PeopleTools	Software programs, utility scripts and reports, messages, COBOL SQL statements, and database tables and data that provide the framework for creating, using, and modifying PeopleSoft applications.
Applications	Object definitions that determine what is displayed on the screen, how and what kind of data can be entered, and where the data is stored, database tables and data, and batch programs.

## Reviewing Environment Hardware and Software

When upgrading to a new release, you may be required to update your environment hardware or software, such as RDBMS software, client operating system, or server machines. Please review information on platforms certified for this release.

### See Also

*PeopleSoft Release Notes*

*Enterprise PeopleTools Hardware and Software Requirements*

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

## Reviewing PeopleTools Components

This section discusses:

- Understanding PeopleTools Components
- Reviewing Software Programs
- Reviewing Utility Scripts and Reports
- Reviewing Compare Reports
- Reviewing Message Catalog Entries
- Reviewing COBOL SQL Statements
- Reviewing Database Tables
- Reviewing Table Structure
- Reviewing Table Contents

### Understanding PeopleTools Components

You are probably most familiar with PeopleTools as the series of items found on the PeopleTools menu. These items include: Application Engine, Security, Process Scheduler, and so on. These tools are composed of, and supported by, a multitude of components. Before copying new objects into your database, you should understand how the PeopleTools components interact with them.



## Reviewing Software Programs

The PeopleTools software programs are the executable files you run to create, implement, and administer the records, pages, components, and other objects that make up an application. These programs also enable you to manipulate the underlying SQL database from within the Windows environment on your client workstation.

When you upgrade to a new PeopleTools release, you always install new PeopleTools program files.

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**Important!** When you start to upgrade PeopleTools, the software release is compared against a release value stored in the database table PSSTATUS. These two numbers must match or the executable programs will not run.

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## Reviewing Utility Scripts and Reports

PeopleTools contain many SQL, SQR, and Data Mover utility scripts and reports that you can use to monitor and maintain your system, such as DDDAUDIT and SYSAUDIT, described in this table:

Report	Definition
DDDAUDIT	An SQR program that compares data structures defined in the PeopleTools tables against the underlying database to uncover inconsistencies. It is critical that all these underlying components of PeopleTools be synchronized before you perform an upgrade, and DDDAUDIT is an invaluable tool for helping you accomplish this.
SYSAUDIT	An SQR program that compares the various PeopleTools tables that define each object type and identifies inconsistencies and orphaned objects, such as PeopleCode programs that are unattached to any record.

PeopleSoft updates these scripts and reports each time the PeopleTools table structure changes. Therefore, when a new version of PeopleTools is delivered, there may be new or modified utility scripts delivered as well.

## Reviewing Compare Reports

Compare Reports are run in Application Designer.

See Enterprise PeopleTools PeopleBooks for information on PeopleSoft Application Designer for your new release.

## Reviewing Message Catalog Entries

When a new PeopleTools release is delivered, PeopleSoft will also deliver new system messages that support added or modified functionality. You must run a provided Data Mover script to update your system messages. PeopleSoft reserves all message set numbers up to 20,000. If you have any custom messages, be sure they are assigned to message sets with numbers 20,000 or greater before running the script.

With your new release of PeopleTools, you now have the ability to upgrade copy messages as a regular upgrade object type.

See Enterprise PeopleTools PeopleBooks for information on Upgrading with PeopleSoft Application Designer for your new release.

## Reviewing COBOL SQL Statements

It may be necessary to load new or modified stored COBOL SQL statements when upgrading your PeopleTools. When this is required, you are instructed to run a provided Data Mover script to update your stored statements.

## Reviewing Database Tables

The PeopleTools tables house—in the form of data—the definitions of all application objects, such as application records, views, indexes, and so on. Whenever you modify an application object, the system redefines that object's definition in the appropriate PeopleTools tables.

There are two facets to these tables that you should understand before upgrading; table structure and table contents. The easiest way to understand the relationship between structure and contents is to think of your system as a spreadsheet: PeopleSoft provides the spreadsheet columns (structure) and the initial rows of data (contents). Each row of data defines all or part of a particular application object, such as a record, menu, or page. You modify the table contents as you add, delete, or modify your application object definitions.

## Reviewing Table Structure

The structure of each PeopleTools table controls the type of information required for creating the object definitions it stores. For example, the columns in the record definition table, PSRECDEFN, display the information required for defining a PeopleSoft record.

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**Warning!** The structure of the PeopleTools tables is proprietary to PeopleSoft and subject to change without notice. If you attempt to change any information stored in these tables directly using SQL, you run the risk of causing your system to malfunction and losing your data. You should only use the PeopleTools provided with the PeopleSoft system to customize your application.

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When you perform an upgrade, your source and target PeopleTools table structure must be identical; that is they must be at the same release level. When you are performing a customization upgrade (moving definitions from development into production) this won't be an issue. However, if your upgrade involves a new PeopleTools release, you may have to update the structure of your existing PeopleTools tables so that it matches the structure of the tables in the new release.

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**Note.** If you are not sure what PeopleTools release you are running, select Help, About PeopleTools from any PeopleSoft menu bar. This opens a window displaying your PeopleTools release number, and the release number of the active application.

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Release scripts are SQL scripts that modify the underlying table structure of a database so it is compatible with a more recent PeopleTools release. They are located in the PS\_HOME\SCRIPTS folder. Release scripts can be identified by their common naming standard, REL<n>.SQL—where <n> designates a PeopleTools release number.

Depending on the release of PeopleTools you want to move to, you will run one or more of these scripts in order, one at a time, to upgrade your PeopleTools table structure.

## Reviewing Table Contents

PeopleSoft application objects—records, pages, components, and so on—are defined in the contents, or rows, of the PeopleTools tables.

When you upgrade to a new PeopleTools version only, the contents of the PeopleTools tables (application objects) will not change. However, when you upgrade to a new application version, some or all of the PeopleTools table contents that are delivered may have changed. You may want more information on this topic.

See Understanding the Comparison Process.

Some of the contents of the PeopleTools tables do not define application objects, but rather PeopleTools objects. For example, Workflow and Application Engine are PeopleTools that were built using PeopleTools. Like our applications, they are composed of menus, panels, and records. However, these PeopleTools table contents are owned by PeopleSoft and should not be modified.

## Reviewing Application Components

This section discusses:

- Understanding Application Components
- Reviewing Object Definitions
- Reviewing Application Table and Data
- Reviewing Batch Programs

### Understanding Application Components

Each application provided by PeopleSoft, such as Payroll, General Ledger, and so on, is composed of the following:

- Object definitions
- Application table and data
- Batch programs

### Reviewing Object Definitions

Application object definitions are stored as the contents of the PeopleTools SQL tables. You can execute SQL against your database to view these contents.

With each new application release, the object definitions stored in the PeopleTools tables are updated. This may be to improve functionality, conform to new tax codes, or to take advantage of new operating system features. However, you are not expected to readily accept these new objects since you may have made your own modifications to some of these same objects.

To protect your customizations when you upgrade to a new application release, you compare the definitions that are delivered with your current definitions to find any conflicts. Then you decide what version you want to keep. The comparison process is probably the most difficult part of an application upgrade because it requires careful review of these conflicting definitions.

### Reviewing Application Table and Data

Application table and data ownership fall into one of three categories according to who maintains the tables and data—PeopleSoft, our customers, or both.

Ownership	Explanation
PeopleSoft	PeopleSoft delivers application tables that contain processing logic and rules, or data required by statute—for example, tax tables and garnishment rules tables. These tables and their data are created, maintained, and updated as needed by PeopleSoft.

Ownership	Explanation
Shared	When tables are delivered that contain processing rules or other data that you can customize to address your unique business requirements, PeopleSoft owns the tables but shares ownership of the data with you.
Customer	When you create Custom application tables, you own those tables and their data.

When you upgrade to a new PeopleSoft release, the Release Notes identify any tables in the first two ownership categories that have been modified. The Release Notes also dictate whether you must accept the data changes to retain functionality in the new software.

## Reviewing Batch Programs

In every PeopleSoft application, certain processes are performed on a server in batch mode rather than online—for efficiency and scheduling purposes. For example, batch programs that calculate payroll, post General Ledger journal entries, or accrue sick leave are delivered.

When you upgrade to a new application release, your Release Notes point out any dependencies between table changes and changes that must be made to the batch programs that reference those tables. When you move your own customizations from development into production, you should also consider how they might affect these programs.

## Comparing Upgrade Types

This section discusses:

- Understanding Upgrade Types Comparison
- Understanding PeopleTools Upgrades
- Understanding Application Service Packs
- Understanding Full Application Upgrades
- Understanding Customization Upgrades
- Summarizing Upgrade Type

### Understanding Upgrade Types Comparison

As stated earlier, an upgrade does not necessarily involve merging all the objects of a new PeopleSoft release into your database. An upgrade can be as elementary as adding a new record or panel to your application. Or, an upgrade can involve only the PeopleTools software.

There are three types of upgrades:

Ownership	Explanation
PeopleTools	Move to a new PeopleTools release. This type of upgrade involves installing new software and copying in new PeopleTools database objects.

Ownership	Explanation
Application	Move to a new PeopleSoft application release. This type of upgrade usually involves a PeopleTools upgrade.
Customization	Move your customized application components into production. This type of upgrade never involves a PeopleTools upgrade.

You perform upgrades in a number of different ways, depending on your type of upgrade (PeopleTools, application, or customization), and your release level (your current release and your new release).

## Understanding PeopleTools Upgrades

A PeopleTools upgrade is required when moving to a new major or maintenance PeopleTools release.

This kind of upgrade involves:

- Installing new PeopleTools software, messages, stored statements, and utility scripts.
- Updating the PeopleTools table structure (running rel scripts).
- Copying new or modified PeopleTools objects into your database.

---

**Note.** This type of upgrade may also require you to update your environment hardware and/or software to remain on a supported platform.

---

## Understanding Application Service Packs

Periodically, PeopleSoft provides service packs that contain fixes to our applications. All application object definition changes for these packs are delivered in a single upgrade project. This project is compared and copied in order to apply the Service Pack to your system.

---

**Note.** You may need to complete a PeopleTools Upgrade as part of your Service Pack if you are not on the most current release of PeopleTools. PeopleTools upgrade instructions are included in the Service Pack.

---

## Understanding Full Application Upgrades

You perform a full application upgrade when you do not want to overwrite any of your modifications but you want to take advantage of most or all of the new features in a new major, or enterprise-level, PeopleSoft application release.

This kind of upgrade involves:

- A PeopleTools upgrade.
- Comparing application object definitions between our database and yours.
- Reviewing any conflicting definitions and deciding whose version (PeopleSoft's version or your version) to use.
- Copying the desired application object definitions into your database.
- Adjusting the Application table data and Batch programs.

---

**Note.** When you are moving to a new maintenance PeopleTools release level (by performing a PeopleTools upgrade) a database comparison upgrade is usually optional; you do not have to upgrade your applications. However, when you are moving to a new enterprise release level, a full application upgrade is always required.

---

In this type of upgrade, you compare your application object definitions with those supplied in the new release to find any conflicts. You then review upgrade reports that identify conflicting object definitions between the source and target databases. These reports tell you if and how the definition has changed in each database. After you see how a definition differs in each database, you can decide which version you want to keep.

Performing a full application upgrade can be very complex if significant object modifications have been made. The more changes that have been made at the time of the upgrade, the more items must be compared and considered before proceeding with the upgrade. This crucial process may take you several days or even weeks to complete.

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**Note.** When you start to upgrade a PeopleSoft application, the software release is compared against a release value stored in the database table PSSTATUS. These two numbers must match or the executable programs will not run.

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## Understanding Customization Upgrades

You perform customization upgrades when you want to move new or modified object definitions from development into production.

This kind of upgrade involves:

- Copying the desired application object definitions into your database.
- Adjusting the Application table data and Batch programs.

---

**Note.** It is assumed that you know how the new objects differ from existing objects in the target database and that you do not need to compare them. However, you can choose to compare the new objects against the target database before copying.

---

## Summarizing Upgrade Type

The following tables explain the various types and sub-types of upgrades, when you perform each kind of upgrade, and what system components they affect.

PeopleTools Upgrade Type/ Sub-Type	New Release Type	System Components Possibly Affected	Comments
Software	PeopleTools maintenance release	Software programs, scripts and reports	No database changes
Software	PeopleTools Enterprise release or PeopleTools maintenance release	<ul style="list-style-type: none"> <li>• Software programs, scripts and reports</li> <li>• PeopleTools table structure</li> <li>• PeopleTools object definitions (such as Workflow panels, Application Engine records, and so on)</li> <li>• Messages and stored statements</li> </ul>	Involves database changes and a PeopleTools program upgrade.

Application Upgrade Type/ Sub-Type	New Release Type	System Components Possibly Affected	Comments
Service Pack	Application maintenance release	<ul style="list-style-type: none"> <li>• Application object definitions</li> <li>• Application data</li> <li>• Batch programs</li> </ul>	Minor database changes
Full Application	Enterprise release or major application release	<ul style="list-style-type: none"> <li>• Executable programs, system files, scripts</li> <li>• Messages and stored statements</li> <li>• PeopleTools table structure</li> <li>• Application object definitions</li> <li>• Application data</li> <li>• Batch programs</li> </ul>	Major database changes  Always requires a PeopleTools project upgrade to the same release level.

Custom Upgrade Type/ Sub-Type	New Release Type	System Components Possibly Affected	Comments
Custom	Customer release	<ul style="list-style-type: none"> <li>• Object definitions (PeopleTools table contents)</li> <li>• Application data</li> <li>• Batch programs</li> </ul>	This is the kind of upgrade you use to move your customizations into production.  Example: Copying in a customized application page.

## See Also

*PeopleSoft Release Notes*

*Enterprise PeopleTools Hardware and Software Requirements*

## Understanding Application Designer

Application Designer is the tool you use for any upgrade that involves database changes. All of the listed upgrades involve an Application Designer project. A project is a collection of database objects to be copied from the source database into the target database. The contents of a project will vary depending on the type of upgrade you perform.

You can populate an Application Designer project in one of two ways, by adding them manually, or by comparing two databases. When you populate by comparison, the project is filled with any objects that are defined differently in the source than in the target. If a project has been created manually, it can still be compared against a target database, but only the objects currently in the project will be compared against the target.

## Understanding the Comparison Process

This section discusses:

- Understanding Comparison Release Level
- Understanding Object Status
- Understanding Actions
- Understanding the Upgrade Values
- Understanding How the System Tracks Object Changes
- Putting it All Together

### Understanding Comparison Release Level

All PeopleSoft databases have a system table, PSRELEASE that contains rows of data for every release level at which the database has ever existed.

The first column in this table, RELEASEDTTM, contains a date/time stamp identifying when each release level was “stamped.” The second column, RELEASELABEL, identifies the release level.

The format of a release label is *M XX.XX.XX.YYY* where *M* is the market code, *XX* is an integer from 0 to 99, inclusive, and *YYY* is an integer from 0 to 999, inclusive. A release label has two parts: the PeopleSoft release number (*M XX.XX.XX*) and the customer release number (*YYY*). Each time you customize your production database you can stamp it with a new customer release level to help you track your changes over time. You should not change any portion of the PeopleSoft release number unless specifically instructed to do so.

### Understanding Object Status

After determining the Report Action, Application Designer defines the status—in both the source and the target—of each object to be Compared or Reported. The following table explains the various status types:

Status Type	Definition
Unknown	The object has not been compared. This is the default status for all objects inserted manually into a project and the permanent status of all non-comparison objects.
Absent	The object was found in the other database, but not in this one. When upgrading to a new PeopleSoft release, all new objects should have Absent status in the target database and all of your new objects should have Absent status in the source database.
Changed	The object has been compared, its LASTUPDOPRID value is ‘PPLSOFT’, and its LASTUPDTIME value is greater than the date/time stamp of the comparison release database. In other words, PeopleSoft modified the object since the comparison release.
Unchanged	The object has been compared, its LASTUPDOPRID value is ‘PPLSOFT’, and its LASTUPDTIME value is less than or equal to the date/time stamp of the comparison release database. In other words, PeopleSoft last modified the object prior to the comparison release.



Status Type	Definition
Changed*	The object has been compared, its LASTUPDOPRID value is not 'PPLSOFT', and its LASTUPDTIME value is greater than the date/time stamp of the comparison release database. In this case, the customer has modified the object since the comparison release.
Unchanged*	The object has been compared, its LASTUPDOPRID value is not 'PPLSOFT', and its LASTUPDTIME value is less than or equal to the date/time stamp of the comparison release database. In this case, the customer last modified the object prior to the comparison release.
Same	The object has been compared and is defined as the same in both databases. When an object in one database has this status, so will its counterpart in the other database. This status would never be seen when performing a database comparison because in that case, the project is only populated with objects defined differently. However, it can occur when performing a project comparison because in a project comparison, the project contents are static; the project is not repopulated based on the comparison results.

## Understanding Actions

Application Designer assigns default actions for each object, depending on what needs to be done to make the target database consistent with the source—the major goal of a comparison upgrade. These actions cannot be changed, although you can decide whether or not to accept each action. Action types are described in the table below:

Action Type	Definition
Copy	The object will be added to the target database. Records will copy all record field information as well as the record object properties. Fields will copy all field table information as well as the field object properties.
Copy Prop (Records and Fields only)	Only Object Properties will be added to the target database.
Delete	The object will be deleted from the target database.
None	No action will be taken on this object.

One of these action types is assigned to every object in a comparison project and in the Upgrade Reports. However, these actions are not necessarily carried out during the copy process. The Upgrade setting makes that determination.

## Understanding the Upgrade Values

The upgrade values for each object—Yes or No—determine whether the object action will be carried out during the copy process. These settings are all determined together by the upgrade orientation you assign during the Compare process. You can orient the upgrade to take PeopleSoft changes or to retain your changes in the target. You will still have the option to set each Upgrade value individually before you copy your project to your target database, regardless of which orientation you choose.

## Understanding How the System Tracks Object Changes

PeopleSoft tracks object changes using the contents of the PSRELEASE table, and the value of two fields, LASTUPDDTTM and LASTUPDOPRID, used in the PeopleTools tables.

PSRELEASE was discussed earlier and one of its two fields, RELEASELABEL, was explained. The second field in this table, RELEASEDTTM, stores a date/time stamp for the current release level and all prior release levels.

The LASTUPDDTTM field in the PeopleSoft PS<object>DEFN tables—such as PSRECDEFN, PSPNLDEFN, and so on—stores a date/time stamp identifying when each object was last modified. The LASTUPDOPRID field stores the operator ID of the user who made the modification. If PeopleSoft made the modification, the proprietary ID “PPLSOFT” is used. Maintain Security prevents you from creating an operator named PPLSOFT.

If an object definition is found to be defined differently in the source database than in the target, it is checked to see whether either object definition has changed since the comparison release. If the object’s LASTUPDDTTM value is greater than the RELEASEDTTM value for the comparison release level (stored in PSRELEASE), the object has changed. If the object’s LASTUPDDTTM value is equal to or less than RELEASEDTTM the object has not changed (since the comparison release).

PeopleSoft identifies a customized object as any object that has been customized by anyone other than PeopleSoft (LASTUPDOPRID <> ‘PPLSOFT’) in the compared release or a prior release. A customized object is identified by a ‘\*’ in the comparison process.

## Putting it All Together

The following chart summarizes every possible Status, Action, and Upgrade value that could be applied to a single object during the comparison process:

Source Status	Target Status	Action	PeopleSoft Vanilla	Keep Customizations
(Any)	Absent	COPY	YES	YES
Absent	Changed or Unchanged	DELETE	YES	YES
Not applicable	Changed* or Unchanged*	DELETE	NO	NO
Changed	Changed or Unchanged	COPY	YES	YES
Not applicable	Changed* or Unchanged*	COPY	YES	NO
Unchanged	Changed	COPY	NO	NO
Not applicable	Unchanged	COPY	YES	YES
Not applicable	Changed* or Unchanged*	COPY	YES	NO
Changed*	Changed or Unchanged	COPY	NO	YES

Source Status	Target Status	Action	PeopleSoft Vanilla	Keep Customizations
Not applicable	Changed* or Unchanged*	COPY	YES	YES
Unchanged*	Changed or Unchanged	COPY	NO	YES
Not applicable	Changed*	COPY	NO	NO
Not applicable	Unchanged*	COPY	YES	YES

## Understanding Upgrade Reports

This section discusses:

- Reviewing Upgrade Reports
- Reviewing Report Columns
- Reviewing Cross-reference Reports

### Reviewing Upgrade Reports

During a comparison upgrade, you review the upgrade reports generated by Application Designer. These reports help you understand what objects differ between the source and target databases, and how they differ.

If you have documentation of your database modifications, you should retrieve it before reviewing these reports. This will help you understand how the target objects have changed and enable you to better compare the target version of the object with the source version. If you are upgrading to a new PeopleSoft release, you should also review the Release Notes for your product. These notes identify and explain object changes in the source database.

Upgrade reports can be a little intimidating at first glance, until you understand what data you are looking for and how best to use it.

### Reviewing Report Columns

For the most part, the columns in upgrade reports correspond with the columns you see in Application Designer's upgrade definition window. Moving from left to right, you see the Name of the object, then other key columns that vary by object type, then the Source and Target status, then the Action value and Upgrade flag (Yes or No).

After these columns, there are three more that you do not find in Application Designer. The first is Attribute. This tells you the kind of difference that was found between the two objects. For example, record field Attribute values include Use/Edit, which identifies key or audit differences, and Default Field Name (Def. Fldnm), which identifies differences in a default value. In addition to this, there is a Source column and a Target column. These wide columns display the actual differences between the object definitions. For example, on a Use/Edit attribute recfield difference, the Source column might contain "Xlat Table Edit" while the Target column is empty. This means the Source record field has a translate table edit while the Target record field does not.

If you are unsure of the meaning of anything in the last three report columns, open the PeopleTool that edits the particular object. The values in these columns correspond directly to dialog options in the tool.

## Reviewing Cross-reference Reports

PeopleSoft delivers several cross-reference reports that you can run to provide information about the inter-relationships between various objects. These reports are delivered in the form of SQRs (found in PS\_HOME\SQR), Crystal Reports (found in PS\_HOME\CRW\ENG), and Queries.

See Enterprise PeopleTools PeopleBooks for information on PeopleSoft Crystal Reports for your new release.

The cross-reference reports are described below:

Object Type(s)	Report Name	Report Description
Applications and Fields	XRFAPFL	Lists all application windows, such as General Tables, in alphabetical order, as well as the fields within each window. For each field, the report details the Field Name, Field Type, Length, and Format, as well as all the record and panel definitions that contain the field (within the window).
Fields Referenced by PeopleCode Programs	XRFFLPC	Lists all PeopleCode programs in alphabetical order by associated record definition/field. The report includes type of field and lists all fields referenced in the PeopleCode program.
Fields and Pages	XRFFLPN	Lists all fields in alphabetical order. The report includes the names of all record and page definitions in which each field is used, as well as the Long Name of each field.
Records and Fields	XRFFLRC	Lists all fields in alphabetical order. The report details the Long Name, Field Type, Field Length, and Formatting specified for the field, and includes the names of all record definitions that contain the field.
Field Listing	XRFIELDS	Lists all fields in alphabetical order. The report includes Field Type, Length, Format, Long Name and Short Name.
Menu Listing	XRFMENU	Lists application windows in alphabetical order. The report details all menus within each window, and all panel definitions within each menu. It also includes the associated search record definition name and detail panel definition name.
Page Listing	XRFPANEL	Lists all page definitions in alphabetical order.

Object Type(s)	Report Name	Report Description
PeopleCode Programs and Field References	XRFPCL	Lists record definitions that contain fields with PeopleCode program attributes. The report includes the Field Name, as well as the associated record definitions and fields referenced in the PeopleCode program.
Pages with PeopleCode	XRFPNPC	Lists all pages that contain fields with PeopleCode attributes. For each page, the report includes the name of the record definition(s) that contain the field as well as the Field Name and Type.
Fields and Records	XRFRCL	Lists all fields in alphabetical order by associated record definition name. The report details the Long Name, Field Type, Field Length, and Formatting specified for the field.
Records and Pages	XRFRCPN	Lists all record definitions in alphabetical order. The report includes the menu and page definitions associated with each record definition.
Window Listing	XRFWIN	Lists all application windows in alphabetical order.

In addition to using our standard cross-reference reports, you can also generate ad hoc reports to extract the exact combination of information you need. Or, you can create permanent custom reports for information you extract on a regular basis.

It is recommended that you mark your upgrade reports using a color-coding system to help you quickly identify what you need to do to certain objects.

If you have several people reviewing sections of the reports, a good documentation policy is to have everyone on your review cycle initial and date the action defaults and overrides they select.

You may also find it easier to change some objects manually after the upgrade, rather than copying the new versions from the source.

## Analyzing the Parts of the Upgrade

Up to this point, some of the more complex concepts of upgrading have been explained. These processes, however, comprise only a part of the entire upgrade process. Depending on what type of upgrade you perform—PeopleTools (PT), service pack (SP), full application (FA), or customization (CUST)—upgrading can consist of a multi-part process:

Upgrade Part	May include these steps	Type of Upgrade
Planning	Plan your upgrade activities.	All

Upgrade Part	May include these steps	Type of Upgrade
Software Installation	Follow the instructions in your installation book to install the software.	PT, FA, or SP
Preparation	Copy your production database, make functional decisions, clean up the copy, and identify customizations.	All
PeopleTools Copy	Update PeopleTools tables, load new messages and COBOL SQL statements; import, compare, and copy PPLTOOLS project; update user security, SQL back up database.	PT or FA
Comparison	Set upgrade controls, compare databases, review upgrade reports, adjust Upgrade values as needed, copy project.	SP, FA, or CUST
Apply Application Changes	Use SQL Create new tables, SQL Alter all records, load application data, run stored statements, and run data conversion.	All
Complete Copy of Production	Reapply customizations, setup menu security, and audit your database.	All
Testing	Test your move to production and develop testing strategies.	All
Move to Production	Freeze production database, move copy of production to production database, stamp database.	All

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**Important!** If you are upgrading to a new PeopleSoft release, use this table only as a supplemental source of upgrade information. Whenever a new version of PeopleSoft software is delivered, Change Assistant templates that specify step-by-step instructions on upgrading your system are delivered as well.

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## CHAPTER 2

# Install the Software

This chapter discusses:

- Understanding Installing Your Software
- Installing the New Release
- Applying PeopleTools Patches
- Installing Change Assistant
- Applying Updates Required for Upgrade
- Creating and Configuring an Upgrade Job
- Setting Configuration Manager Profile
- Reviewing Upgrade Step Properties

---

## Understanding Installing Your Software

In this task, if you have not done so already, you will install the software required for your upgrade. You will download the Enterprise PeopleTools Installation guide for your database platform, from Customer Connection.

---

**Important!** You can only complete the first step in this task, “Installing the New Release,” at this time. When the Upgrade for your product is available on Customer Connection, you may continue with this task, as the files you need will not be available until that time. Remember, you must complete all steps in this documentation before beginning your upgrade.

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## Task 2-1: Installing the New Release

To upgrade, you must first install the new release or service pack. Download the Enterprise PeopleTools Installation guide for your database platform. Then download application-specific addendums for the product lines you are installing.

See Customer Connection (Implement, Optimize, + Upgrade, Implementation Guide, Implementation Documentation and Software, Installation Guide and Notes.)

Install your new PeopleSoft software and Demo database following the instructions in the Enterprise PeopleTools Installation guide for your database platform along with the application installation guide for your product line.

---

**Warning!** *DO NOT INSTALL ANY APPLICATION FIXES, BUNDLES, OR MAINTENANCE PACKS AT THIS TIME!* Installing application fixes, including fixes to the Demo database used as your Source database during the upgrade process and/or your Copy of Production database you use during your Move to Production test passes, can break data conversion and other scripts for the upgrade. The only fixes you can apply before or during the upgrade are *Required for Installation, Required for Upgrade and any other fixes from the Upgrade Page*. You can apply Application fixes, bundles, and maintenance packs after you complete the upgrade.

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## Task 2-2: Applying PeopleTools Patches

Now is a good time to download and apply Required for Upgrade PeopleTools fixes from Updates and Fixes on Customer Connection. This will bring you completely up to date with any changes made to PeopleTools that affect the upgrade process.

PeopleTools patches should only be applied to your source database at the beginning or end of an upgrade pass. If you apply a PeopleTools patch at the beginning of the upgrade pass to your source database, the changes will automatically be migrated to the target database. You can apply PeopleTools patches to the target upgrade database at the end of an upgrade pass if the patches were not applied to the source database in the beginning of the upgrade.

Apply all required for upgrade PeopleTools patches from Customer Connection. Navigate to Updates and Fixes, Required for Install or Upgrade. Select the Product Line PeopleTools, Product PeopleTools, and the PeopleTools Release that applies to you. Select the Required for Upgrade radio button, and click the right-hand arrow to search. Follow the instructions in the patch documentation to apply the PeopleTools changes.

---

## Task 2-3: Installing Change Assistant

Now that you have PeopleTools installed, you need to install PeopleSoft Change Assistant for your new release in order to run your upgrade and to apply application patches and fixes that are required for upgrade. Follow the installation instructions in the document *PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades* found on your Customer Connection Upgrade page. This document describes how to set up Change Assistant and the Environment Management options, how to navigate through Change Assistant, how to use it for updates, how to use the update templates, how to set up your upgrade templates, and how to run your upgrade process.

---

**Note.** If an older version of Change Assistant is already installed on the workstation, remove the older version. Then install the new Change Assistant.

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In this upgrade you will need to use Change Assistant to run your upgrade and to apply fixes to your new release Demo database and Copy of Production database. Once Change Assistant has been installed, you can open it by selecting Start, Programs, PeopleSoft 8.4, Change Assistant.

See *PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades*.



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## Task 2-4: Applying Updates Required for Upgrade

This section discusses:

- Understanding Required for Upgrade Updates
- Applying Baseline Files From the Upgrade Page
- Applying Required for Upgrade Updates

### Understanding Required for Upgrade Updates

Now is a good time to download and apply all files and objects from the Upgrade page on Customer Connection, and to download all Required for Upgrade fixes from Updates and Fixes on Customer Connection. This brings you completely up to date with any changes made to the upgrade process or conversion code.

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**Note.** You cannot continue with this task until the Upgrade Documentation for your product is made available on Customer Connection. Once the Upgrade Scripts and Templates and Upgrade Documentation are on Customer Connection, complete the remaining tasks in this chapter before beginning the actual upgrade.

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This is just one place that you can apply updates. There are other places in the upgrade process where applying updates may be applicable as well. How you apply the update varies depending on where you are in the upgrade. The big picture of where, when, and how to apply upgrade fixes is discussed in the Upgrade Documentation in the appendix, “Applying Fixes Required for Upgrade.”

See Upgrade documentation, “Appendix: Applying Fixes Required for Upgrade.”

### Task 2-4-1: Applying Baseline Files From the Upgrade Page

The files attached to the Upgrade page on Customer Connection are considered baseline. You must apply these before you apply any other fixes from Customer Connection.

You can find the Upgrade page in Customer Connection by navigating to Customer Connection, Implement Optimize + Upgrade, Upgrade Guide, Upgrade Documentation and Software, Upgrade Documentation and Scripts, Release, Enterprise. Choose the PeopleSoft release you are upgrading to, and find the specific upgrade path you are performing. On the upgrade page, you will see a section heading titled “Upgrade Scripts and Templates.” Follow the instructions there to apply this baseline code.

### Task 2-4-2: Applying Required for Upgrade Updates

Change Packages are found on Customer Connection by navigating to Updates + Fixes, Required for Install or Upgrade. Select the Product Line and Release that you are upgrading to, as well as the Required for Upgrade radio button.

You should apply all fixes listed under the product line/release, even if you have not licensed the product the fix is listed under. There are many interdependencies between products and database objects. If you do not apply the fix, you may be introducing another error in a different area of the conversion code.

Some of the fixes will list a specific upgrade path. You should apply these fixes even if they are targeted for a different upgrade path. There may be interdependencies between the upgrade programs for various paths and if you do not apply all fixes you may introduce errors.

To apply Required for Upgrade patches:

1. Download Required for Upgrade Change Package(s) using the “Download Change Package” functionality in Change Assistant.
2. Use Change Assistant to install/apply the update(s) into your Demo database. Review the documentation included with each update prior to applying each update. There may be manual steps that need to be performed to successfully apply the update.

See Enterprise PeopleTools PeopleBook, PeopleSoft Software Updates, “Applying Updates,” for your current release.

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## Task 2-5: Creating and Configuring an Upgrade Job

In order to run an upgrade using Change Assistant, you need to configure Change Assistant as well as an upgrade job. Launch Change Assistant and perform the following steps:

1. Configure the Change Assistant options.
  - a. Select Tools, Options.
  - b. On the Change Assistant tab, select the Perform Application Upgrade mode.
  - c. Check the Enable Server Processing check box if you will be using Change Assistant to run processes on a separate host server.
  - d. Fill in the rest of the information on this tab and all other active tabs.
  - e. Click OK when finished.

See PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades on your Customer Connection Upgrade home page.

See Customer Connection, Support, Documentation, Documentation Updates, Enterprise, PeopleTools, Change Assistant, Using Change Assistant for Application Upgrades.

2. Import the upgrade template contained within the UpgradeTemplates.exe file that you downloaded from the Upgrade homepage on Customer Connection.
  - a. Select File, Import Template.
  - b. Select the template for your product and path.
  - c. Click Import.
3. Define the upgrade environment information for the upgrade.
  - a. Select File, New Environment.
  - b. Name the environment for this upgrade pass.
  - c. Click OK.
  - d. Fill in all required information on each screen.

See Customer Connection, Support, Documentation, Documentation Updates, Enterprise, PeopleTools, Change Assistant, Using Change Assistant for Application Upgrades.

4. Set the Documentation Directory.

Change Assistant can display the HTML upgrade documentation in the documentation pane.

- a. Select Edit, Set Documentation Directory.

- b. Enter or browse to the directory containing the HTML documentation and click OK.

See PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades on your Customer Connection Upgrade home page, Configuring Change Assistant for Upgrades, Setting the Documentation Directory.

5. Create the Upgrade Job for the Initial Upgrade Pass.

The upgrade job contains all steps specific to your upgrade environment.

See PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades on your Customer Connection Upgrade home page, Configuring Change Assistant for Upgrades, Working with Upgrade Jobs.

For additional information on Change Assistant see the references below.

See PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades on your Customer Connection Upgrade home page, Installing and Configuring Change Assistant, Specifying Change Assistant Options.

See Customer Connection, Support, Documentation, Documentation Updates, Enterprise, PeopleTools, Change Assistant, Using Change Assistant for Application Upgrades.

See Enterprise PeopleTools PeopleBooks, PeopleSoft Software Updates, for your current release, Configuring and Running Environment Management Components, Understanding the Environment Management Framework.

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## Task 2-6: Setting Configuration Manager Profile

When you create your Change Assistant job, Change Assistant edits some of the workstation Configuration Manager profiles. Now you need to verify the other settings that are used during the upgrade. These are settings on the workstation and you need to do this for each workstation you may use during the upgrade.

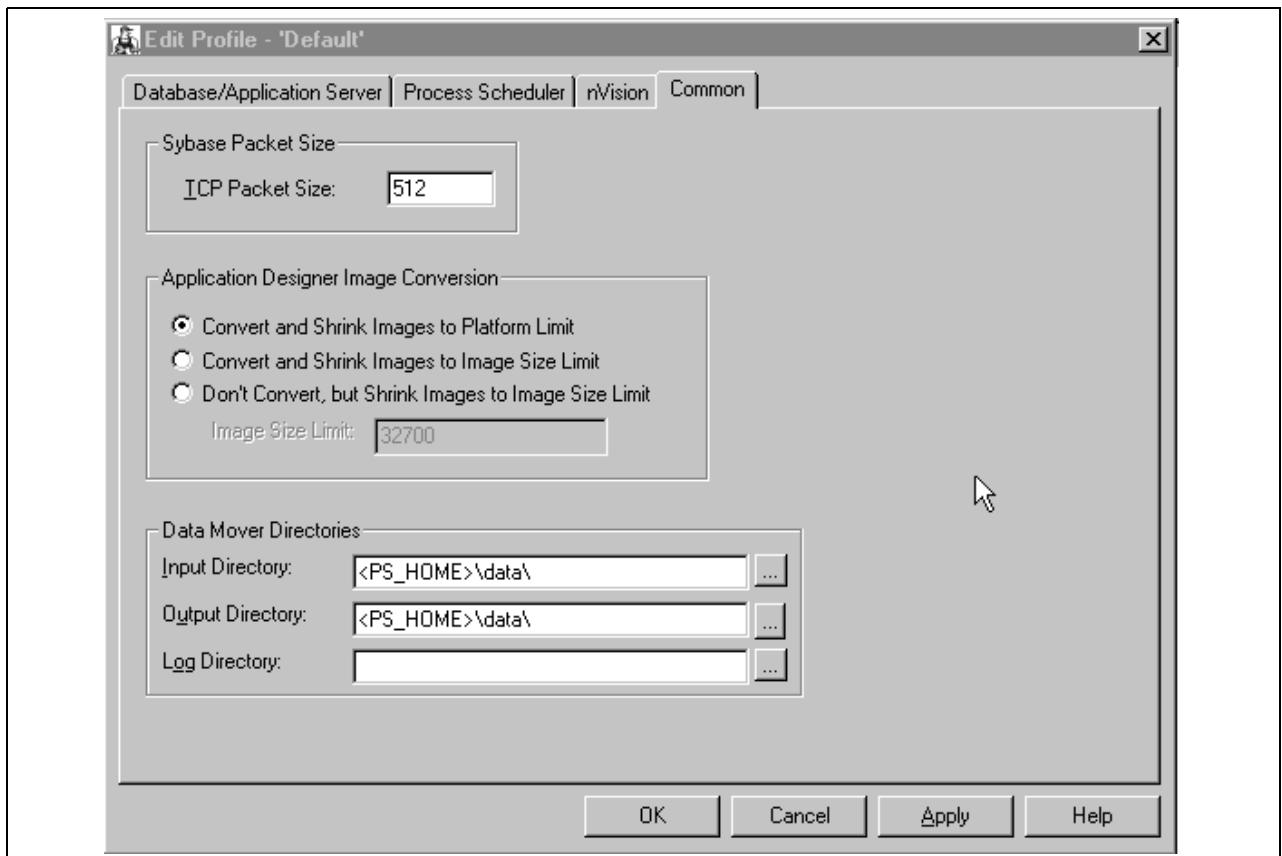
---

**Note.** If you are performing an upgrade where your old and new releases of PeopleTools are both 8.4x releases, verify that the Configuration Manager settings are appropriate for your *old* release PS\_HOME (for example, similar to your current production environment). Change Assistant uses the information in your Configuration Manager profile to run automated steps on the old release early in the upgrade. You will update Configuration Manager to point to your *new* release PS\_HOME later in the upgrade.

---

To set the profile:

1. Open Configuration Manager.
2. On the Profile tab, select the Default profile, click on Edit and go to the Common tab.



Edit Profile – 'Default': Common tab

3. The Input Directory must be *PS\_HOME\data\*, substituting PS\_HOME with your directory. The Output Directory must be the same.
4. The Log Directory is set by Change Assistant and should be left as is.
5. Select the Process Scheduler tab and verify your SQR settings. Change Assistant will use these settings to launch SQR.

## Task 2-7: Reviewing Upgrade Step Properties

When you open the upgrade template using PeopleSoft Change Assistant, you will see various properties for each step. PeopleSoft includes several of those properties in the upgrade documentation. At the end of each upgrade step, you see a description of the properties used during that step. The following graphic provides an example of the information you see in the upgrade documentation:

Properties				
Database Orientation	Initial or MTP	Products	Platforms	Languages
Target	Both	All	All	All

Property Box example

This table describes the possible values in the step properties tables:

Category	Values	Definition
Database Orientation	Source	The step runs on the Source database. During your initial pass, your Source database is the new Demo database from PeopleSoft. For Test Move to Production passes, Source indicates the database you upgraded (your Copy of Production) in your initial pass.
	Target	The step runs on the Target database. This is your Copy of Production database.
	Current Demo	The step runs on the current Demo database. This is the demo database of your <i>old</i> PeopleSoft release.
Initial or MTP	Initial	The step runs in the Initial pass of the upgrade only.
	Move to Production	The step runs only in Move to Production upgrade passes. The step is not applicable to the Initial pass.
	Both	The step runs in both the Initial and Move to Production upgrade passes.
Products	All	You run the step regardless of which products you are upgrading.
	Specific product names	You run the step only if you are upgrading the products specified. You specified which products you are upgrading when you set up your Change Assistant job configuration.
Platforms	All	You run the step regardless of which platform your database uses.
	Specific platform names	<p>You run the step only if your database uses the specified platforms. You specified which platform you are using when you set up your Change Assistant job configuration. The following are platform names that will appear:</p> <ul style="list-style-type: none"> <li>• DB2 z/OS</li> <li>• DB2 UNIX/NT</li> <li>• MS SQL Server</li> <li>• Informix</li> <li>• Oracle</li> <li>• Sybase</li> </ul>

Category	Values	Definition
Languages	All	You run the step regardless of which language your database uses.
	Specific language names	You run the step only if your database uses the languages specified. You specified which languages are installed on your database when you set up your Change Assistant job configuration.

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**Note.** DB2 UDB for OS/390 and z/OS is the official IBM name for the DBMS. In the current PeopleTools release, PeopleSoft no longer supports the OS/390 operating system, only z/OS, its replacement. For the sake of brevity, this documentation sometimes refers to DB2 UDB for OS/390 and z/OS as DB2 z/OS, and it sometimes refers to DB2 UDB for Linux, UNIX, and Windows as DB2 UNIX/NT.

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See PeopleSoft Enterprise PeopleTools Change Assistant for Upgrades, on your Customer Connection Upgrade homepage.

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