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# PeopleTools 8.59 Upgrade

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PeopleTools 8.59 Upgrade  
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# About This Documentation

This preface discusses:

- Understanding This Documentation
- Prerequisites
- Audience
- Organization
- Typographical Conventions
- Products
- Related Information
- Comments and Suggestions

## **Understanding This Documentation**

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This documentation is designed to direct you through the process of upgrading to your new PeopleSoft release. This section describes information that you should know before you begin working with PeopleSoft products and documentation, including PeopleSoft documentation conventions.

## **Prerequisites**

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Before you begin the technical part of your upgrade, ensure that you have downloaded, read, and completed the tasks detailed in the document "Getting Started on Your PeopleTools Upgrade." You must complete the tasks set forth in that guide before beginning the actual upgrade. Go to My Oracle Support and search for the upgrade home page for your PeopleTools release level.

## **Audience**

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This documentation is written for the individuals responsible for upgrading to your new PeopleSoft release. This documentation assumes that you have a basic understanding of the PeopleSoft system. One of the most important components of a successful upgrade of your PeopleSoft installation is your on-site expertise.

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

Oracle recommends that you complete training before performing an upgrade.

See Oracle University <http://education.oracle.com>.

## Organization

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This documentation is divided into chapters that represent major milestones in the upgrade process.

This documentation may also contain appendixes. When additional information is required to complete an upgrade task, you will be directed to the appropriate appendix.

## Typographical Conventions

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To help you locate and understand information easily, this documentation uses the conventions listed in the following table:

Convention	Description
Monospace	Indicates a PeopleCode program or other code, such as scripts that you run during the upgrade. Monospace also indicates messages that you may receive during the upgrade process.
<i>Italics</i>	Indicates field values, emphasis, and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example:  Enter the letter <i>O</i> .
Initial Caps	Field names, commands, and processes are represented as they appear on the window, menu, or page.
lower case	File or directory names are represented in lower case, unless they appear otherwise on the interface.  Scripts are represented in lower case and may not exactly match the case of the generated scripts.
Menu, Page	A comma (,) between menu and page references indicates that the page exists on the menu. For example, "Select Use, Process Definitions" indicates that you can select the Process Definitions page from the Use menu.
Cross-references	Cross-references that begin with <i>See</i> refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation.  Cross-references under the heading <i>See Also</i> refer you to additional documentation that has more information regarding the subject.
" " (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meaning.

Convention	Description
⇒ (line-continuation arrow)	A line-continuation arrow inserted at the end of a line of code indicates that the line of code has been wrapped at the page margin. The code should be viewed or entered as a continuous line of code, without the line-continuation arrow.
<b>Note.</b> Note text.	Text that begins with <i>Note</i> indicates information that you should pay particular attention to as you work with your PeopleSoft system.
<b>Important!</b> Important note text.	A note that begins with <i>Important!</i> is crucial and includes information about what you need to do for the system to function properly.
<b>Warning!</b> Warning text.	A note that begins with <i>Warning!</i> contains crucial configuration information or implementation considerations; for example, if there is a chance of losing or corrupting data. Pay close attention to warning messages.

## Products

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This documentation may refer to these products and product families:

- Oracle's PeopleSoft Application Designer
- Oracle's PeopleSoft Change Assistant
- Oracle's PeopleSoft Data Mover
- Oracle's PeopleSoft Process Scheduler
- Oracle's PeopleSoft Pure Internet Architecture
- Oracle's PeopleSoft Campus Solutions
- Oracle's PeopleSoft Customer Relationship Management
- Oracle's PeopleSoft Financial Management
- Oracle's PeopleSoft Human Capital Management
- Oracle's PeopleSoft Enterprise Learning Management
- Oracle's PeopleSoft PeopleTools
- Oracle's PeopleSoft Enterprise Performance Management
- Oracle's PeopleSoft Interaction Hub
- Oracle's PeopleSoft Supply Chain Management

See <http://www.oracle.com/us/products/applications/peoplesoft-enterprise/index.html> for a list of Oracle's PeopleSoft products.

## Related Information

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Oracle provides additional information that may help with your upgrade. The following information is available on My Oracle Support:

- *New Feature Overview.* Before you begin your upgrade, read the New Feature Overview to determine what has changed in the system and to familiarize yourself with the new features. The New Feature Overview also indicates whether you need to upgrade other portions of your system, such as your relational database management system (RDBMS) software or batch files.

Go to My Oracle Support and search for the New Feature Overview for your release level.

- *Installation Guides.* Before you begin your upgrade, ensure that you have installed PeopleSoft PeopleTools and completed the installation of your PeopleSoft application, if applicable.

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

## Comments and Suggestions

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

PSOFT-Infodev\_US@oracle.com

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

## Chapter 1

# Preparing for Your PeopleTools Upgrade

This chapter discusses:

- Understanding PeopleTools Upgrade Preparation
- Preparing Your PeopleTools Upgrade Job
- Verifying the Database User
- Performing Script Modifications
- Shrinking Images
- Preserving PeopleTools Configuration Data
- Converting Database Data Types

## **Understanding PeopleTools Upgrade Preparation**

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In this chapter, you will modify upgrade scripts and the upgrade template to create a nearly automated upgrade.

## **Task 1-1: Preparing Your PeopleTools Upgrade Job**

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This section discusses:

- Understanding PeopleTools Upgrade Job Preparation
- Running the PeopleTools Filter Query
- Running the PeopleTools System Filter Query

## **Understanding PeopleTools Upgrade Job Preparation**

This task runs steps to update your PeopleTools upgrade job.

### **Task 1-1-1: Running the PeopleTools Filter Query**

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or later.

This step runs a filter query to filter steps out of your upgrade job that are not required for your specific environment. For example, steps will be filtered based on whether or not a table exists on your Target database.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 1-1-2: Running the PeopleTools System Filter Query

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or later.

This step runs a filter query to filter steps out of your upgrade job that are not required for your specific environment. For example, steps will be filtered based on whether or not your database is ANSI.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 1-2: Verifying the Database User

In this task, you verify that the user performing the upgrade steps has proper permissions to complete the upgrade. Ensure that your upgrade user has PeopleSoft administrator privileges. This allows access to the PeopleSoft portal to make necessary security changes for the upgrade and to run the Portal Application Engine upgrade program. You use this ID to update the security setting for your other users so they can sign in after the upgrade.

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**Warning!** You must perform this step now using your old version of PeopleSoft PeopleTools. If you skip this step, or if your user has insufficient PeopleSoft administrator privileges, you will not be able to complete your upgrade. You cannot complete this step later in the upgrade process. Perform the following steps to grant administrator privileges now.

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To grant your upgrade user PeopleSoft administrator privileges:

1. From the browser, select PeopleTools, Security, User Profiles, User Profiles.
2. Select the user ID for your upgrade user.
3. Select the Roles tab.
4. Add the role *PeopleSoft Administrator* if it is not already granted to your upgrade user.
5. Save the user profile.

See the online product documentation for PeopleTools: Security Administration for your new release.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 1-3: Performing Script Modifications

This section discusses:

- Understanding Script Modifications
- Copying the Materialized View Scripts
- Copying the PTDDLUPG Script
- Editing the PTDDLUPG Script
- Editing the GRANT Script
- Editing the UPGGRANT\_855 Script
- Editing the PTxxxTLS Scripts
- Editing the DB2 Scripts
- Editing the DDL Parameters
- Editing the Change Assistant Job for Compare
- Editing the Change Assistant Job for PDB
- Editing the Change Assistant Job for UTS

### Understanding Script Modifications

In this task, you perform preparation steps and make manual modifications to scripts delivered with your new PeopleSoft release. You must make the following modifications before proceeding with the remainder of your upgrade.

#### Task 1-3-1: Copying the Materialized View Scripts

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

In this step, you copy the upggrant.sql script to the *PS\_HOME\SCRIPTS* directory. If you are an Oracle/UNIX customer, transfer the file from the UNIX file server (*PS\_HOME/SCRIPTS/UNIX*) to your Windows file server *PS\_HOME\SCRIPTS* directory. If you are an Oracle/NT customer, you can find the file in *PS\_HOME\SCRIPTS\NT*. The upggrant.sql script assumes that you are using the PSADMIN role. If you are *NOT* using the PSADMIN role, then edit the script for the correct role name.

Additionally, copy the utlxmv.sql script to the *PS\_HOME\SCRIPTS* directory. If you are an Oracle/UNIX customer, transfer the file from the UNIX database server (*\$ORACLE\_HOME/rdbms/admin*) to your Windows file server *PS\_HOME\SCRIPTS* directory. If you are an Oracle/NT customer you can find the file at *%ORACLE\_HOME\rdbms\admin*.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-3-2: Copying the PTDDLUPG Script

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

In this step, you copy the `ptddlupg.sql` script to the `PS_HOME\SCRIPTS` directory. If you are an Oracle/UNIX customer, transfer the file from the UNIX file server (`PS_HOME/SCRIPTS/UNIX`) to your Windows file server `PS_HOME\SCRIPTS` directory. If you are an Oracle/NT customer, you can find the file in `PS_HOME\SCRIPTS\NT`.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-3-3: Editing the PTDDLUPG Script

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

In this step, you edit files depending on your database platform. Refer to the following table to determine the appropriate file to modify.

The following table shows the database platform and script name:

Database Platform	Script Name
DB2 z/OS (EBCDIC)	<code>ptddlupg.sql</code>
DB2 z/OS (Unicode)	<code>ptddlupgu.sql</code>
Oracle	<code>ptddlupg.sql</code>

Edit the appropriate file, located at `PS_HOME\SCRIPTS\` to add site-specific tablespace names, tablespace parameters, database names, and STOGROUPs as applicable for your database platform. PeopleSoft PeopleTools delivers new tablespaces in the new PeopleSoft release. The `ptddlupg.sql` script builds new tablespaces as part of the upgrade, so you need to remove any tablespaces from the script that already exist in your database. Review the script with your database administrator and follow the instructions in the script for your platform.

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**Note.** Comments in the script indicate the specific PeopleTools release in which the tablespace was introduced.

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**Note.** If you are an Oracle customer, you need to edit the script to ensure that all of the DDL within this script is permissible for the access ID because the `ptddlupg.sql` script will be automatically run later in the upgrade using the access ID.

---

**Note.** If you are a DB2 z/OS customer, you need to edit the `ptddlupg.sql` or `ptddlupgu.sql` script generated during installation. This script needs to be placed in the `PS_HOME\SCRIPTS` directory so it can be run later during the upgrade.

---

See Performing Updates to PeopleTools System Tables, Updating PeopleTools System Tables.

See Performing Updates to PeopleTools System Tables, Creating Tablespaces for DB2 ANSI.

See Performing Updates to PeopleTools System Tables, Creating Tablespaces for DB2 Unicode.

See Performing Updates to PeopleTools System Tables, Creating Tablespaces.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

## Task 1-3-4: Editing the GRANT Script

Edit `PS_HOME\SCRIPTS\grant .sql` and make the necessary modifications as documented in the script.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS MS SQL Server	All

## Task 1-3-5: Editing the UPGGRANT\_855 Script

PeopleSoft Change Assistant will display this step if you are upgrading from PeopleSoft PeopleTools 8.54 or earlier.

As of PeopleSoft PeopleTools 8.55, the Oracle in-memory feature is supported on Oracle 12c or later, but additional privileges need to be granted to use the new feature. The `PS_HOME\SCRIPTS\upggrant_855.sql` script assumes that you are using the PSADMIN role. If you are using Oracle 12c or later and *not* using the PSADMIN role, then edit the script for the correct role name.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-3-6: Editing the PTxxxTLS Scripts

This step applies only if you are running on a DB2 z/OS platform.

To edit the ptxxxtls scripts:

1. Edit all of the scripts in the *PS\_HOME*\SCRIPTS directory on the file server that conform to this file naming convention:

```
ptxxxtls.dms
ptxxxtlsyyy.dms
```

The *xxx* represents a PeopleSoft PeopleTools release greater than your current PeopleSoft PeopleTools release and *yyy* represents the three-letter language code.

2. Uncomment and modify the set owner ID command within each script, as in the following example:

```
set execute_sql set current sqlid = 'OwnerId In Upper Case';
```

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 1-3-7: Editing the DB2 Scripts

Perform this step only if your database platform is DB2 z/OS. DB2 z/OS scripts that create tables need the `set current sqlid` statement so that the tables are created with the correct owner ID. Open each script listed below, then uncomment and modify all of the DB2-specific statements to reflect your environment.

For SQL scripts, if the script does not contain DB2-specific statements, add the following line to the top of the script and edit it for your environment:

```
set current sqlid = 'OWNERID (in uppercase)';
```

The following table lists SQL scripts in the PS\_HOME\SCRIPTS directory on your file server that you need to edit:

SQL Scripts	Note
createutssequenceobject.sql	Additionally, edit the script for the logical database name as specified in the script. This script is only run in upgrades from PeopleSoft PeopleTools 8.57 or lower. There is no need to edit the script if you are upgrading from PeopleTools 8.58 or higher.
enableuts.sql	This script is only run in upgrades where you are enabling Universal Tablespaces (UTS) for the first time during the PeopleTools Upgrade. If you are already using UTS in your old PeopleTools release (8.58 or higher) there is no need to edit this script.

For PeopleSoft Data Mover scripts (DMS), if the script does not contain DB2-specific statements, add the following line to the top of the script and edit it for your environment:

```
set execute_sql set current sqlid = 'OWNERID (in uppercase)';
```

The following table lists DMS scripts in the PS\_HOME\SCRIPTS directory on your file server that you need to edit:

DMS Scripts	Note
encrypt.dms	N/A
msgt1supg.dms	N/A
pslanguages.dms	N/A
ptdbstamp.dms	N/A
ptpsstatus.dms	N/A
ptrecfield.dms	N/A
ptpswdhistoryupgimp.dms	This script is only run in upgrades from PeopleSoft PeopleTools 8.52 or lower. There is no need to edit the script if you are upgrading from PeopleTools 8.53 or higher.
ptsysi.dms	N/A

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

## Task 1-3-8: Editing the DDL Parameters

Edit the *PS\_HOME\SCRIPTS\ddlxxx.dms* script for your database platform, as specified in the table below:

Script	Platform
ddl <sub>db2</sub> .dms	DB2 z/OS
ddl <sub>ora</sub> .dms	Oracle

At the bottom of this script, there will be an insert into PSDDLDEFPARMS. This insert contains default information used when creating a table, an index, a unique index, or a tablespace. Verify with your database administrator that the last value for each row is appropriate for your environment by checking the values currently stored in your PSDDLDEFPARMS table. Otherwise, the values will be reset to the default values delivered in this script.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

## Task 1-3-9: Editing the Change Assistant Job for Compare

Later in the upgrade, the steps to compare the objects in the PeopleTools projects are set to automatically run. The compare results will be useful for analyzing customizations on PeopleTools objects, however this compare is optional and may not need to be run every time you perform the PeopleTools-only upgrade. Regardless of whether the compare is run, the upgrade will still overwrite any customized objects with the new PeopleSoft PeopleTools definitions when you copy the project.

If you do not want to run the compare during the upgrade, mark the following steps as complete in your upgrade job in PeopleSoft Change Assistant.

To set the step as complete:

1. In PeopleSoft Change Assistant, select the step in "Applying PeopleTools Changes," Reviewing Select PeopleTools Objects.
2. Select Edit, Complete, or press F7.
3. Repeat step 2 for the step "Applying PeopleTools Changes," Reviewing Additional PeopleTools Objects.

---

**Note.** Do not change any of the compare options within the step properties for the step "Reviewing Select PeopleTools Objects". Not all compare features may be available at that point in time. You may update the report filter check box grid or deselect compare languages, but do not change any other compare options.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
All	Target	All	All	All

### Task 1-3-10: Editing the Change Assistant Job for PDB

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

If your database is a pluggable database (PDB), the following steps will need to run against the container database (CDB) during the upgrade. You will need to set these steps as manual stops so your database administrator can execute these steps as *sysdba* on the CDB during the upgrade.

To set the steps as manual stops:

1. In PeopleSoft Change Assistant, select the step "Applying PeopleTools Changes," Rebuilding Oracle Indexes, Setting the Ignore Descending Index Parameter.
2. Select Edit, Step Properties.
3. Change the Script/Procedure value from SQLScriptDBO to ManualStop.
4. Click OK.
5. Repeat steps 1-4 for "Applying PeopleTools Changes," Rebuilding Oracle Indexes, Resetting the Ignore Descending Index Parameter.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-3-11: Editing the Change Assistant Job for UTS

PeopleSoft Change Assistant will display this step if your environment does not have Universal Tablespaces (UTS) enabled on the old PeopleTools release.

If you will be using UTS in the new PeopleTools release, then mark all the steps in the following task as complete in your upgrade job in PeopleSoft Change Assistant. The steps in the task will be displayed until the first time UTS is enabled in PeopleSoft.

To set the step as complete:

1. In PeopleSoft Change Assistant, select all the steps in "Applying PeopleTools Changes," Migrating Records to New Tablespaces.
2. Select Edit, Complete, or press F7.

If you will *not* be using UTS in the new PeopleTools release, then mark the following step as complete in your upgrade job in PeopleSoft Change Assistant. The listed step should only be run the first time UTS is enabled in PeopleSoft.

1. In PeopleSoft Change Assistant, select the step "Applying PeopleTools Changes," Performing Updates to PeopleTools System Tables, Updating the Database for Universal Tablespaces.
2. Select Edit, Complete, or press F7.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

## Task 1-4: Shrinking Images

---

If you have customized images stored in your database, you may need to shrink these images before updating PeopleSoft PeopleTools system tables later in the upgrade. Large image fields could cause that step to fail because it is not possible to bind long raw data that is longer than 32 KB.

To shrink images using a PeopleSoft PeopleTools release higher than 8.44.14:

1. Launch Configuration Manager and select the Profile tab.
2. Select the profile for the upgrade database and click Edit.
3. Select the Common tab.
4. Select the option that is labeled either Convert and Shrink Images to Image Size Limit, or Convert DIB and BMP images to JPG.
5. Click OK.

---

**Note.** If you shrink images again, select Don't Convert, but Shrink Images to Image Size Limit. Specify the number of bytes for the image size limit.

---

6. Launch PeopleSoft Application Designer.
7. Select Tools, Upgrade, Convert Images...
8. Select Convert Static Images in Image Catalog.
9. Click Start to convert or shrink images.
10. Select Tools, Upgrade, Convert Images...
11. Select Convert Dynamic Images for fields. Select the box for all of the fields listed.  
Select the box for all of the fields listed.
12. Click Start to convert or shrink images.

See "Applying PeopleTools Changes," Performing Updates to PeopleTools System Changes, Updating PeopleTools System Tables.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-5: Preserving PeopleTools Configuration Data

This section discusses:

- Understanding PeopleTools Configuration Data Preservation
- Saving Transparent Data Encryption Information
- Saving Oracle Fine Grained Auditing Information

### Understanding PeopleTools Configuration Data Preservation

In this task you run scripts to preserve your PeopleTools configuration data. You will disable certain functionality and save configuration data for use at the end of the upgrade.

#### Task 1-5-1: Saving Transparent Data Encryption Information

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.50 or higher.

If you have defined encrypted fields within PeopleSoft PeopleTools for Oracle's Transparent Data Encryption (TDE) feature, note that all metadata field definitions are delivered from PeopleSoft applications without any encryption attributes enabled. PeopleSoft applications will not deliver any metadata indicating that encryption is enabled for any field for an initial installation database file, project, or a PeopleSoft PeopleTools or PeopleSoft application patch. If you customize any fields by adding TDE encryption, you will need to keep track of the fields and their associated record definitions and ensure that you maintain the desired encryption status throughout any upgrades that you perform.

If you have TDE enabled, run `PS_HOME\SCRIPTS\preupgtdeprocess.sql`. This script clears the TDE encryption algorithm currently defined in the PeopleSoft metadata. The script also creates two projects, ENCRYPTEDFLDSB and ENCRYPTEDTBLSB. The project ENCRYPTEDFLDSB contains fields that currently have distinct encrypted columns and the project ENCRYPTEDTBLSB contains recfields that currently have distinct encrypted columns, as indicated in the Oracle database catalog.

You will need the information in the projects and the log file that results from running this script in order to reimplement TDE after the upgrade.

See "Completing Database Changes," Enabling Oracle Transparent Data Encryption.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-5-2: Saving Oracle Fine Grained Auditing Information

If you have implemented Oracle's Fine Grained Auditing (FGA) feature on PeopleSoft tables, disable it for the duration of the upgrade to improve upgrade performance.

To disable Fine Grained Auditing:

1. Run *PS\_HOME\SCRIPTS\preupfgareport.sql*. This script reports on the current (pre-upgrade) FGA policies stored in *USER\_AUDIT\_POLICIES*, detailing all columns by table for all tables with FGA policies. Keep this report to use at the end of the final pass of the upgrade.
2. Run *PS\_HOME\SCRIPTS\preupfgaprocess.sql*. This script generates the scripts *pscreatefga.sql* and *psdisablefga.sql*.
3. Run the generated *psdisablefga.sql* to disable FGA policies.

You will run the generated *pscreatefga.sql* script at the end of the final pass of the upgrade. Do not run it at this time.

See the online product documentation for PeopleTools: Data Management for your new release for more information about administering PeopleSoft databases on Oracle.

See "Completing Database Changes," Enabling Oracle Fine Grained Auditing.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6: Converting Database Data Types

---

This section discusses:

- Understanding Converting Database Data Types
- Updating Statistics Before Platform Changes
- Running the Long Data Audit
- Validating the Microsoft Database
- Reviewing Microsoft Settings
- Editing the Current Release GRANT Script
- Creating the Microsoft Conversion Project

- Generating the Microsoft Conversion Script
- Running the Microsoft Conversion Script
- Granting Permissions to the CONNECT ID
- Running the Microsoft Conversion Report
- Validating the Oracle Database
- Creating Oracle Audit Tables
- Auditing Duplicate Length Constraints
- Auditing Disabled Constraints
- Reviewing Oracle Settings
- Generating Oracle Conversion Scripts
- Running Long to LOB Script 1
- Running Long to LOB Script 2
- Running Long to LOB Script 3
- Running Long to LOB Script 4
- Running Long to LOB Script 5
- Running Long to LOB Script 6
- Running Long to LOB Script 7
- Running Long to LOB Script 8
- Auditing the Long to LOB Conversion
- Running CLS Drop Indexes Script 1
- Running CLS Drop Indexes Script 2
- Running CLS Drop Indexes Script 3
- Running CLS Drop Indexes Script 4
- Running CLS Drop Indexes Script 5
- Running CLS Drop Indexes Script 6
- Running CLS Drop Indexes Script 7
- Running CLS Drop Indexes Script 8
- Running Character Length Script 1
- Running Character Length Script 2
- Running Character Length Script 3
- Running Character Length Script 4
- Running Character Length Script 5
- Running Character Length Script 6
- Running Character Length Script 7
- Running Character Length Script 8
- Running CLS Rebuild Indexes Script 1
- Running CLS Rebuild Indexes Script 2
- Running CLS Rebuild Indexes Script 3

- Running CLS Rebuild Indexes Script 4
- Running CLS Rebuild Indexes Script 5
- Running CLS Rebuild Indexes Script 6
- Running CLS Rebuild Indexes Script 7
- Running CLS Rebuild Indexes Script 8
- Auditing Character Length Semantics
- Reviewing Conversion Reports
- Updating Database Options
- Creating the Oracle VARCHAR2 Conversion Project
- Populating the Oracle VARCHAR2 Conversion Project
- Generating the Oracle VARCHAR2 Conversion Script
- Editing the Oracle VARCHAR2 Conversion Script
- Running the Oracle VARCHAR2 Conversion Script

## Understanding Converting Database Data Types

As of PeopleSoft PeopleTools 8.54, new database data types are supported for PeopleTools system databases running Microsoft SQL Server 2005 or later and Oracle 9i or later. If you are using a PeopleSoft application database (for example, HCM, FSCM, CRM, or ELM), you should not run this conversion as part of the PeopleTools only upgrade. Do *not* run this task unnecessarily.

For Microsoft SQL Server 2005 and later, the data types VARCHAR, NVARCHAR, VARBINARY(MAX), and VARCHAR(MAX) are now supported. Databases on Microsoft SQL Server 2000 and earlier will not use these new data types. The data types as defined in PeopleSoft Application Designer are not changed; only the database-level definition will be different:

- Records with fields defined as PeopleSoft CHAR(N) will now use VARCHAR(N).
- Records with fields defined as PeopleSoft NCHAR(N) will now use NVARCHAR(N).
- Records with fields defined as PeopleSoft Long Character(N) will now use VARCHAR(N) if N is <=4000 and VARCHAR(MAX) if N is > 4000 for non-Unicode.
- Records with fields defined as PeopleSoft Long Character(N) will now use NVARCHAR(N) if N is <=4000 and VARCHAR(MAX) if N is > 4000 for Unicode databases.
- Records with fields defined as PeopleSoft IMAGE will now use VARBINARY(MAX).

For Oracle 9i or later, the data types CLOB and BLOB are now supported. In addition, the Character Length Semantics feature is also supported for Unicode databases when creating PeopleSoft CHAR fields and LONG CHARACTER fields with specified lengths less than 1334:

- Records with fields defined as PeopleSoft IMAGE or PeopleSoft LONG CHARACTER with Raw Binary will now use BLOB.
- Records with fields defined as PeopleSoft LONG CHARACTER with no length specified, length greater than 1333 (UNICODE), or length greater than 1333 (ANSI) will now use CLOB.

## Task 1-6-1: Updating Statistics Before Platform Changes

For Oracle platforms, contact your database administrator to update the statistics on the database catalog. This will improve performance for subsequent steps in the upgrade. Typically only the users *sys* and *sysdba* have the authority to perform this task.

The following command updates the statistics on the database catalog:

```
EXEC DBMS_STATS.GATHER_SCHEMA_STATS ( 'SYS' );
```

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-2: Running the Long Data Audit

This step runs longs-audit.sql, which audits for any fields exceeding the actual data length for PeopleSoft long character columns. You will review the output in a later step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-3: Validating the Microsoft Database

This step runs dbsettings.sql, which checks the Microsoft SQL Server version. The data type conversion is supported only with Microsoft SQL Server 2005 or later. You will review the output in a later step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-4: Reviewing Microsoft Settings

If you are upgrading a PeopleTools system database, the data type update and a minimum of Microsoft SQL Server 2005 are required. You will run a conversion process that will substitute the old data types for new ones. The data type conversion is supported for Microsoft SQL Server 2005 or later with PeopleSoft PeopleTools 8.54 or later on a PeopleTools system database. If you are using a delivered PeopleSoft application database, you should *not* run this conversion as part of this upgrade. Examine the log file from the step Validating the Microsoft Database to ensure that you are running a supported version of Microsoft SQL Server. Do *not* perform the rest of this task if you do not meet the qualifications.

Examine the log file from the step Running the Long Data Audit to determine whether there are any fields shorter than length 4000 in the database that exceed the actual data length defined for the PeopleSoft long character fields. Prior to PeopleSoft PeopleTools 8.48, all PeopleSoft long character fields were created using the TEXT SQL Server data type, and no matter the length defined by the PeopleSoft Application Designer, the data in the field could grow as much as the TEXT limits on SQL Server. After the data type conversion, the length specified in PeopleSoft Application Designer will be enforced for all fields shorter than length 4000, except for those with length zero. If your data is larger than the length defined in PeopleSoft Application Designer, then you must correct the length using PeopleSoft Application Designer or change the data itself using your SQL query tool. You must decide whether you want a change in the field length definition or a change in the data. The log file created by longs-audit.sql will only show all of the fields that contain data exceeding a length between 1 and 4000 and will be empty if this condition does not occur with no other action to take.

Resolve these problems before continuing to the next step, otherwise the conversion process will fail. If necessary, contact your database administrator for assistance in modifying the fields. If no fields are listed in the log file, no further action is needed and you may proceed with the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-5: Editing the Current Release GRANT Script

Edit your current release PS\_HOME\SCRIPTS\grant.sql and make the necessary modifications as documented in the script.

---

**Note.** You will edit the new release PS\_HOME\SCRIPTS\grant.sql separately in a later step.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-6: Creating the Microsoft Conversion Project

This step runs mssnewtype.sql, which generates and populates the MSSNEWTYP project. The project contains all of the records that need to be modified to use the newly supported data types.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-7: Generating the Microsoft Conversion Script

This step generates the SQL script `mssnewtype_alter.sql` to alter the records in the MSSNEWTYPE project. The generated script will alter the tables with the new data types.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-8: Running the Microsoft Conversion Script

This step runs the generated script from the previous step. This will alter the existing tables to use the new data types. All of the tables will be copied into their new representation using the new data types and all of the additional padding blanks derived from the use of the old data types will be truncated.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 1-6-9: Granting Permissions to the CONNECT ID

This step runs the `grant.sql` script. This script grants select access to the CONNECT ID for tables necessary for sign-in.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

### Task 1-6-10: Running the Microsoft Conversion Report

This step runs conversion-audit.sql, which audits for all unconverted fields. You will review the output in a later step.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

### Task 1-6-11: Validating the Oracle Database

This step runs the dbsettings.sql script, which queries the database to determine the value of the NLS\_LENGTH\_SEMANTICS parameter. You will review the output in a later step.

There are two possible conversions that may occur depending on whether or not the database is Unicode. The Long to LOB conversion will apply to all databases, Unicode or ANSI. CHARACTER LENGTH SEMANTICS (CLS) only applies to Unicode databases. The CLS conversion has a dependency on the init.ora parameter NLS\_LENGTH\_SEMANTICS. The init.ora parameter NLS\_LENGTH\_SEMANTICS=CHAR, must be enabled for PeopleSoft Unicode databases prior to executing the conversion. If the database being converted is ANSI, then this setting is not necessary.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-12: Creating Oracle Audit Tables

This step runs precnvadt1a.sql, which drops and re-creates some temporary tables required by the pre-conversion audit SQRs.

If the tables being dropped, CHECK\_CONSTRAINTS, DUPLICATE\_CONSTRAINTS, and DROP\_CONSTRAINTS, don't exist, the execution of this script will generate the following error, which can safely be ignored:

```
ORA-00942: table or view does not exist
```



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-13: Auditing Duplicate Length Constraints

This step runs `precnvadt1.sqr`, which checks for duplicate length constraints. This condition can generally exist if the database was created using the Oracle Import utility and `CONSTRAINTS=Y` was enabled, which is the default setting. You will review the output in a later step.

---

**Note.** If this SQR needs to be rerun for any reason, you *must* run `precnvadt1a.sql` before rerunning `precnvadt1.sqr`.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-14: Auditing Disabled Constraints

This step runs `precnvadt2.sqr`, which checks for 'not\_validated' constraints. Although this condition should not exist in a production database, it may have occurred if data was imported with external utilities, such as SQL Loader. You will review the output in a later step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-15: Reviewing Oracle Settings

The data type conversion is only supported for Oracle 9i or later when you are upgrading to PeopleSoft PeopleTools 8.54 or later on a PeopleTools system database. If you are using a delivered PeopleSoft application database, you should *not* run this conversion as part of this upgrade. Do *not* perform the rest of this task if you do not meet the qualifications.

For Unicode databases, examine the log file from the step Auditing Duplicate Length Constraints. If there are any duplicate length constraints, those duplicate constraints must be dropped. Run the utility SQL script, `PS_HOME\SCRIPTS\gendropdupconstraints.sql`, to generate the script `dropdupconstraints.sql`, containing an `ALTER TABLE TABLE_NAME DROP CONSTRAINT` for every duplicate constraint found. Run the `dropdupconstraints.sql` to resolve the duplicate length constraints.

For Unicode databases, examine the log file from the step Auditing Disabled Constraints. If there are any disabled or invalidated constraints, these constraints should be validated again. Run the utility SQL script, `PS_HOME\SCRIPTS\genrevalidateconstraints.sql` to generate the script `revalidateconstraints.sql`, containing an `ALTER TABLE TABLE_NAME ENABLE VALIDATE CONSTRAINT CONSTRAINT_NAME` for every invalid constraint found. Run the `revalidateconstraints.sql` to enable the constraints.

For Unicode databases, examine the log file from the step Validating the Oracle Database to determine whether the values in the `init.ora` file are set properly. For Unicode databases, the `NLS_LENGTH_SEMANTICS` parameter needs to have a value of `CHAR`. This indicates that `CHARACTER_LENGTH_SEMANTICS` is enabled and the conversion can continue. If you need to enable Character Length Semantics, work with your database administrator to modify the `init.ora` for the Target database's SID and set `NLS_LENGTH_SEMANTICS` to `CHAR`. Then stop and restart the database SID for the setting to take effect.

---

**Note.** The `NLS_LENGTH_SEMANTICS` parameter should be set to `CHAR` *only* at this point in the upgrade, and should not be set to `CHAR` earlier in the upgrade. If it is set at the time of database creation, the data type conversion scripts will fail with an `ORA-30556` error due to the existence of functional indexes on the table.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-16: Generating Oracle Conversion Scripts

Work with your database administrator to set the following `init.ora` parameters for the Target database's system identifier (SID). Stop and restart the database SID for the following settings to take effect:

- Set the following `init.ora` parameters:

```
db_block_size=8192
```

```
db_file_multiblock_read_count=8
```

```
job_queue_processes=10
```

```
memory_target=6G
```

```
memory_max_target=8GB
```

```
parallel_max_servers=8
```

```
sga_max_size=350M
```

```
sga_target=300M
```

```
workarea_size_policy=AUTO
```

2. Pre-allocate the PSTEMP tablespace to at least 10 GB.
3. Pre-allocate the PSDEFAULT tablespace to at least 2 GB with 10-MB local uniform extents.
4. Ensure that you have at least six redo logs sized at 500 MB each.

The Oracle data types script generation program is a Java program that connects to an Oracle database. The prerequisites are Java and the Oracle JDBC Drivers.

The Java JDK required for this conversion program to run (Version 1.5) will automatically be picked up by the .bat file if the *PS\_HOME* environment variable is set.

---

**Note.** When setting environment variables or directories to reference paths, if any of your paths contain spaces, they will need to be wrapped in double quotes; for example, SET PS\_HOME = "PS\_HOME\_location".

---

To verify whether the *PS\_HOME* environment variable is set:

1. At the workstation command prompt, enter the following:

```
echo %PS_HOME%;
```

This should return a path, for example:

```
c:\PSOFT\PT852
```

2. If the *PS\_HOME* environment variable is not set, then set it in the command prompt window by entering the following at the workstation command prompt:

```
SET PS_HOME=PS_Home_location
```

The Oracle JDBC drivers will automatically be picked up by the .bat file provided that the %ORACLE\_HOME% environment variable is set.

To verify whether the *ORACLE\_HOME* environment variable is set:

1. At the workstation command prompt, enter the following:

```
echo %ORACLE_HOME%;
```

This should return a path, for example:

```
c:\oracle\product\10.2.0\client_1;
```

2. If the *ORACLE\_HOME* environment variable is not set, then set it in the command prompt window by entering the following at the workstation command prompt:

```
SET ORACLE_HOME=Oracle_Home_location
```

The Oracle data types script generation program is executed using the *PS\_HOME*\utility\PSORADDataTypesConversion.bat file, which requires six input parameters:

- **THREADS:** The number of Java threads that the conversion script generation creates to produce the scripts. Oracle recommends 10 threads for running this program on Windows.
- **ACCESSID:** The access ID for the database to be converted.
- **ACCESSIDPW:** The access password for the database to be converted.
- **DBNAME:** The database name.
- **OUTPUTDIR:** A directory path to redirect the generated conversion scripts to a user-specified directory. This must be set to the PeopleSoft Change Assistant output directory for your upgrade pass. PeopleSoft Change Assistant will run the generated scripts later in the upgrade.
- **ORACLEVERSION:** The version of Oracle Connectivity that you are using (12).

Example:

```
PS_HOME\utility\PSORADDataTypesConversion.bat 10 SYSADM SYSADM MYDB c:⇒
\upgrade\output\Change_Assistant_job_directory 12
```

In the example command line above:

- THREADS = 10
- ACCESSID = SYSADM
- ACCESSIDPW = SYSADM
- DBNAME = MYDB
- OUTPUTDIR = c:\upgrade\output\Change\_Assistant\_job\_directory
- ORACLEVERSION = 12

Open a command prompt window on the client workstation and execute the Oracle data types script generation program *PS\_HOME\utility\PSORADDataTypesConversion.bat*. The program will display and write a log (PsOraCnv.log) to the directory specified by the OUTPUTDIR parameter indicating the status of the conversion program. Review PsOraCnv.log and ensure that the conversion scripts were generated cleanly.

For ANSI databases, only LONGTOLOBALTER conversion scripts are generated. For Unicode databases, four sets of scripts are generated: LONGTOLOBALTER conversion scripts, CLSDROPINDEXES scripts, CHARACTERLENGTHSEMANTICSALTER scripts, and CLSREBUILDINDEXES scripts.

After successfully running the conversion program, verify that the generated SQL scripts are located in the staging PeopleSoft Change Assistant output directory for your upgrade pass. Later in the upgrade, PeopleSoft Change Assistant will automatically run the SQL scripts later in the upgrade from the PeopleSoft Change Assistant output directory for your upgrade pass.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-17: Running Long to LOB Script 1

This step runs longtlobalter1.sql, which was generated using PSORADDataTypesConversion.bat. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-18: Running Long to LOB Script 2

This step runs longtlobalter2.sql, which was generated using PSORADDataTypesConversion.bat. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-19: Running Long to LOB Script 3

This step runs `longtolobalter3.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-20: Running Long to LOB Script 4

This step runs `longtolobalter4.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-21: Running Long to LOB Script 5

This step runs `longtolobalter5.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-22: Running Long to LOB Script 6

This step runs `longtolobalter6.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-23: Running Long to LOB Script 7

This step runs `longtolobalter7.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-24: Running Long to LOB Script 8

This step runs `longtolobalter8.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle long to LOB conversion scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-25: Auditing the Long to LOB Conversion

This step runs `l2laudit.sqr` to report on the output of the long to LOB conversion. You will review the report output in a later step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-26: Running CLS Drop Indexes Script 1

This step runs `clsdropindexes1.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-27: Running CLS Drop Indexes Script 2

This step runs `clsdropindexes2.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-28: Running CLS Drop Indexes Script 3

This step runs `clsdropindexes3.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-29: Running CLS Drop Indexes Script 4

This step runs `clsdropindexes4.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-30: Running CLS Drop Indexes Script 5

This step runs `clsdropindexes5.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-31: Running CLS Drop Indexes Script 6

This step runs `clsdropindexes6.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-32: Running CLS Drop Indexes Script 7

This step runs `clsdropindexes7.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-33: Running CLS Drop Indexes Script 8

This step runs `clsdropindexes8.sql`, which was generated using `PSORADDataTypesConversion.bat`. All of the indexes in the script must be successfully dropped before altering tables. The drop indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-34: Running Character Length Script 1

This step runs `characterlengthsemanticsalter1.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-35: Running Character Length Script 2

This step runs `characterlengthsemanticsalter2.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-36: Running Character Length Script 3

This step runs `characterlengthsemanticsalter3.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-37: Running Character Length Script 4

This step runs `characterlengthsemanticsalter4.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-38: Running Character Length Script 5

This step runs `characterlengthsemanticsalter5.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-39: Running Character Length Script 6

This step runs `characterlengthsemanticsalter6.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-40: Running Character Length Script 7

This step runs `characterlengthsemanticsalter7.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-41: Running Character Length Script 8

This step runs `characterlengthsemanticsalter8.sql`, which was generated using `PSORADDataTypesConversion.bat`. The Oracle character length semantics conversion scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-42: Running CLS Rebuild Indexes Script 1

This step runs `clsrebuildindexes1.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-43: Running CLS Rebuild Indexes Script 2

This step runs `clsrebuildindexes2.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-44: Running CLS Rebuild Indexes Script 3

This step runs `clsrebuildindexes3.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-45: Running CLS Rebuild Indexes Script 4

This step runs `clsrebuildindexes4.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-46: Running CLS Rebuild Indexes Script 5

This step runs `clsrebuildindexes5.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-47: Running CLS Rebuild Indexes Script 6

This step runs `clsrebuildindexes6.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-48: Running CLS Rebuild Indexes Script 7

This step runs `clsrebuildindexes7.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 1-6-49: Running CLS Rebuild Indexes Script 8

This step runs `clsrebuildindexes8.sql`, which was generated using `PSORADDataTypesConversion.bat`. The table alters must have successfully run prior to rebuilding indexes. The rebuild indexes scripts are designed to run concurrently to improve performance.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-50: Auditing Character Length Semantics

This step runs `clsaudit.sqr` to report on the output of the character length semantics conversion. You will review the report output in a later step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-51: Reviewing Conversion Reports

To review the conversion report for Microsoft, examine the log file from the step "Running the Microsoft Conversion Report." It contains a list of unconverted columns on tables along with its old data type. Fields on tables with no PeopleSoft Application Designer definition will be included in this log. Any unresolved errors from the step "Running the Microsoft Conversion Script" will also be included. If you are using these tables, it is possible to update them manually to use the new data types with a SQL query tool or with an ETL tool. Be very cautious when changing a table, as this could result in data loss or affected functionality. Once any underlying problems have been resolved, you may rerun all of the previous steps in this task to reconvert any remaining objects listed by the audit report.

To review the conversion reports for Oracle, examine the log files from running the `longtlobalter*.sql` scripts. If the database is Unicode, also examine the log files for the `characterlengthsemantics*.sql` scripts. Review the output from the step "Auditing the Long to LOB Conversion." `l2audit.sqr` reports on any unconverted long raw columns. The table name, column name, and column data type are listed. For Unicode databases, review the output from the step "Auditing Character Length Semantics." `clsaudit.sqr` reports on any unconverted character length columns (Unicode only). Correct any errors listed on the log files or conversion reports before proceeding with the upgrade. You can manually convert any tables listed in the audit, or resolve errors that led to the unconverted columns and rerun the conversion.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server Oracle	All

## Task 1-6-52: Updating Database Options

This step runs `upgdboptions_enable.sql`. This script updates the database to indicate that the new data types are now enabled.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server Oracle	All

## Task 1-6-53: Creating the Oracle VARCHAR2 Conversion Project

In this step, you create an empty `PTUPGVARCHARTOLOB` project. This project will be used in the data type conversion to convert any records containing fields with lengths between 1334 and 2000 to CLOB data types.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-54: Populating the Oracle VARCHAR2 Conversion Project

This step runs `ptupgvchartolob_populate.sql`, which populates the `PTUPGVARCHARTOLOB` project with the records containing recfields with lengths between 1334 and 2000. These fields need to be converted from VARCHAR2 to CLOB.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-55: Generating the Oracle VARCHAR2 Conversion Script

This step generates the SQL script `ptupgvchartolob_alter.sql` to alter the records in the `PTUPGVARCHARTOLOB` project. The generated script will alter the tables with the new data types.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-56: Editing the Oracle VARCHAR2 Conversion Script

In this step, you edit the ptupgvchartolob\_alter.sql script for tablespace names and sizing. If you are not using the PeopleSoft tablespace names, you need to review and modify the script created previously in the step "Generating the Oracle VARCHAR2 Conversion Script." Have your database administrator review these scripts and modify the tablespace names appropriately. The script can be found in your PeopleSoft Change Assistant output directory for this upgrade pass.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 1-6-57: Running the Oracle VARCHAR2 Conversion Script

This step runs the ptupgvchartolob\_alter.sql script. This will alter the existing tables to use the new data types.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All



## Chapter 2

# Preparing Your Database for Upgrade

This chapter discusses:

- Understanding Database Preparation
- Updating Statistics
- Running Initial Audit Reports
- Reviewing Table Row Counts
- Preparing Your Database
- Dropping PeopleTools Tables

## Understanding Database Preparation

---

In this chapter, you start preparations for the technical portion of the upgrade. Preparation tasks include updating statistics, cleaning audits, and running and reviewing pre-upgrade reports. These tasks do not use the new installed PeopleSoft version. Use your current codeline and PeopleSoft PeopleTools version to perform these tasks.

## Task 2-1: Updating Statistics

---

This section discusses:

- Understanding Updating Statistics
- Running Initial Update Statistics for DB2 zOS
- Generating Initial Update Stats Script for Oracle
- Running Initial Update Statistics for Oracle
- Running Initial Update Statistics for Microsoft

## Understanding Updating Statistics

This task updates statistics on your Target database to improve the performance of your compare and copy processes. Later in the upgrade, your statistics will be updated again due to changes in the database structure.

See *Getting Started on Your PeopleTools Upgrade*, "Appendix: Improving Performance."

## Task 2-1-1: Running Initial Update Statistics for DB2 zOS

Contact your database administrator to have the statistics updated on your DB2 z/OS database before proceeding with your upgrade.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

## Task 2-1-2: Generating Initial Update Stats Script for Oracle

This step runs the ptgentabstats.sql script to create the ptupdtabstats.sql script. The ptupdtabstats.sql script will be run in the next step to update statistics on your Oracle database for populated PeopleSoft tables.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 2-1-3: Running Initial Update Statistics for Oracle

This step runs the ptupdtabstats.sql script, which was generated in the previous step. This script updates statistics on your Oracle database for populated PeopleSoft tables in order to improve the performance of the compare and copy processes.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 2-1-4: Running Initial Update Statistics for Microsoft

This step runs the updstats.sql script to update statistics on your Microsoft SQL Server database to improve the performance of the compare and copy processes.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Microsoft SQL Server	All

## Task 2-2: Running Initial Audit Reports

This section discusses:

- Understanding Running Initial Audit Reports
- Running the Initial DDDAUDIT Report
- Running the Initial SYSAUDIT Report
- Running the Initial SYSAUD01 Report
- Running the Initial SWPAUDIT Report
- Creating the INITALTAUD Project
- Running the Initial Alter Audit
- Reviewing the Initial Audits

### Understanding Running Initial Audit Reports

In this task, you run and review your initial DDDAUDIT, SYSAUDIT, SYSAUD01 (if applicable), SWPAUDIT, and Alter Audit reports. Running these reports ensures that your database is as clean as possible for the remainder of the upgrade.

#### Task 2-2-1: Running the Initial DDDAUDIT Report

DDDAUDIT is an SQR script that compares your production SQL data tables with the PeopleSoft PeopleTools record definitions to identify inconsistencies.

In this step, DDDAUDIT is run using SQR from your current (old) PeopleSoft release against the Copy of Production to ensure that you are starting with a clean database.

You will review the output from the report in a later step.

See Reviewing the Initial Audits.

See the online product documentation PeopleTools: System and Server Administration for your current release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-2-2: Running the Initial SYSAUDIT Report

SYSAUDIT is an SQR script used to identify "orphaned" PeopleSoft objects. For example, SYSAUDIT can identify a module of PeopleCode that exists but does not relate to any other objects in the system. SYSAUDIT also identifies other inconsistencies within your database.

In this step, SYSAUDIT is run using SQR from your current (old) PeopleSoft release against the Copy of Production to ensure that you are starting with a clean database.

You will review the output from the report in a later step.

See *Reviewing the Initial Audits*.

See the online product documentation *PeopleTools: System and Server Administration* for your current release.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-2-3: Running the Initial SYSAUD01 Report

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.52.

SYSAUD01 is an SQR script used to identify "orphaned" PeopleSoft objects. SYSAUD01 also identifies other inconsistencies within your database.

In this step, SYSAUD01 is run using SQR from your current (old) PeopleSoft release against the Copy of Production to ensure that you are starting with a clean database.

You will review the output from the report in a later step.

See *Reviewing the Initial Audits*.

See the online product documentation *PeopleTools: System and Server Administration* for your current release.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-2-4: Running the Initial SWPAUDIT Report

SWPAUDIT is an SQR script used to identify potentially "orphaned" PeopleSoft objects in a multilingual database. For example, SWPAUDIT can identify a base and related-language record with mismatched key fields. This type of issue may cause inconsistent behavior between base and non-base language usage, or between pre-swapped and post-swapped databases.

SWPAUDIT should be run against your database before you run the PeopleSoft Data Mover command SWAP\_BASE\_LANGUAGE. It can optionally be run again after a swap, or any time, to check database integrity in a multilingual context. If you are upgrading a database that has already been swapped, it is not mandatory to run SWPAUDIT again before proceeding with the upgrade.

In this step, SWPAUDIT is run using SQR from your current (old) PeopleSoft release against the Copy of Production.

You will review the output from the report in a later step.

See [Reviewing the Initial Audits](#).

See the online product documentation [PeopleTools: Global Technology](#) for your current release, "Using Related Language Tables," [Swapping the Base Language](#).

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All Non-English

## Task 2-2-5: Creating the INITALTAUD Project

In this step, you create the INITALTAUD project and use it to run your initial Alter Audit. Creating this new project now ensures that all of the records with the type *Table* in your system are audited. This project also includes any custom records that you created in your system.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-2-6: Running the Initial Alter Audit

To verify that the PeopleSoft PeopleTools definitions are synchronized with the underlying SQL data tables in your database, run the PeopleSoft PeopleTools alter record process on all records in your system. This process, called an Alter Audit, compares the data structures of your database tables with the PeopleSoft PeopleTools definitions to identify inconsistencies. The Alter Audit then creates SQL scripts with the data definition language (DDL) changes that are required to synchronize your database with the PeopleSoft PeopleTools definitions.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-2-7: Reviewing the Initial Audits

In this step, you review the audits that you performed earlier in this task. Review the audits before proceeding with the upgrade.

Review the output from the SYSAUDIT, SYSAUD01 (if applicable), SWPAUDIT (if applicable), and DDDAUDIT reports and correct any discrepancies. When application tables are deleted from PeopleSoft Application Designer, they are not automatically deleted from the system tables. Oracle takes this precaution in case you have customized information that you want to preserve. When you review your DDDAUDIT listing, these tables are listed as a discrepancy between the PeopleSoft application and the database.

Now you must decide whether to drop these tables or retain them. In most cases, you will want to drop the tables, using your SQL tool to drop the tables from the system catalogs. If you have customized information or processes that access these tables, you may want to retain them in the system tables even though they will no longer be accessed or updated by the PeopleSoft system. Drop any unnecessary deleted tables now so that your future DDDAUDIT reports will be as clean as possible.

The Alter Audit produces your named scripts from the previous step. These scripts contain SQL that corrects any discrepancies between your PeopleSoft PeopleTools record definitions and the database system catalog table definitions. Review the Alter Audit output and correct any discrepancies.

---

**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.

---

**Note.** For Microsoft SQL Server platform, if your database has tables containing the MSSCONCATCOL column, you will see SQL to alter the tables and re-create their associated indexes, even though the underlying tables and indexes may not have changed.

---

**Note.** You will rerun the DDDAUDIT, SYSAUDIT, and SWPAUDIT SQR (if applicable) scripts later in the upgrade. If you want to preserve the log files generated by PeopleSoft Change Assistant from this run, you will need to rename the files manually after completing this task.

---

See the online product documentation PeopleTools: System and Server Administration for your current release.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-3: Reviewing Table Row Counts

You may find it helpful to run a report that identifies any table without rows; that is, any table not used in your production database. This information can help you determine the impact of a change from the new release. The UPGCOUNT process reports the row counts of all PeopleSoft tables in your database. You can find the resulting report, UPGCOUNT.LIS, in the TEMP directory specific to your machine.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-4: Preparing Your Database

---

This section discusses:

- Understanding Database Preparation
- Verifying Database Integrity
- Purging Message Queues
- Saving a Copy of RecField Definitions
- Saving a Copy of PeopleTools Database Settings
- Deleting DDDAUDIT Output Data
- Deleting Object Permission Data
- Deleting Operator Language Data
- Deleting Performance Monitor System Default Data
- Exporting Password History Data
- Preparing for the Password History Data Upgrade

### Understanding Database Preparation

In this task, you perform a variety of steps in preparation for the PeopleSoft PeopleTools upgrade. These steps prevent errors in tasks later in the upgrade.

#### Task 2-4-1: Verifying Database Integrity

Have a database consistency check performed on your Target database to ensure that it is clean and to minimize any potential upgrade errors due to possible database corruption. Work with your database administrator to ensure that the check that is run is similar to the one shown for your database platform in the following table.

This table lists database platforms and commands to run a database consistency check:

Platform	Command
Microsoft SQL Server	DBCC CHECKDB
Oracle	dbv

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server Oracle	All

### Task 2-4-2: Purging Message Queues

Ensure that all of your message transactions are complete before starting the upgrade. Message functionality and structure changed in the new release, which will prevent old messages from processing successfully.

This step runs the following PeopleSoft Data Mover script (DMS), found in the *PS\_HOME\SCRIPTS* directory of your old release codeline, on your Copy of Production database to purge your message queues:

```
appmsgpurgeall.dms
```

---

**Warning!** A script of the same name is found in the codeline of the release to which you are upgrading. Do not use this script; it will not run successfully.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 2-4-3: Saving a Copy of RecField Definitions

This step runs *ptrecfield.dms* from your new release codeline. This script creates a copy of the contents of *PSRECFIELD* before the upgrade is begun. It is used by the PeopleTools data conversion code to determine the structure of tables that may have been impacted by fixes you applied.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 2-4-4: Saving a Copy of PeopleTools Database Settings

This step runs *ptpsstatus.dms* from your new release codeline. This script creates a copy of the contents of *PSSTATUS* before the upgrade is begun. It is used by the PeopleTools data conversion code to determine your original PeopleTools release and/or PeopleTools patch level.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 2-4-5: Deleting DDDAUDIT Output Data

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53.

In this step, the PeopleTools table PS\_PTUPGDDDDOUTPUT is truncated to ensure the successful completion of your upgrade. Because the primary key index on this table changed in PeopleTools 8.54, the data stored in this table needs to be deleted to ensure that the index can be successfully created later in the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 2-4-6: Deleting Object Permission Data

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.55 or earlier.

In this step, the PeopleTools table PS\_APPDES\_OBJ\_PERM is truncated to ensure the successful completion of your upgrade. Because the primary key index on this table changed in PeopleTools 8.56, the data stored in this table needs to be deleted to ensure that the index can be successfully created later in the upgrade. The data stored in this table will be reloaded later in the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 2-4-7: Deleting Operator Language Data

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.54 or 8.55.

In this step, the PeopleTools table PSOPRDEFN\_LANG is truncated to ensure the successful completion of your upgrade. Because the primary key index on this table changed in PeopleTools 8.56, the data stored in this table needs to be deleted to ensure that the index can be successfully created later in the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-4-8: Deleting Performance Monitor System Default Data

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.45 through 8.53.

In this step, the PeopleTools table PSPMSYSDEFAULTS is truncated to ensure the successful completion of your upgrade. Because a primary key index was added to this table as of PeopleTools 8.54, the data stored in this table needs to be deleted to ensure that the index can be successfully created later in the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-4-9: Exporting Password History Data

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.52 or earlier.

This step runs ptpswdhistoryupgexp.dms from your new release codeline. This script exports the contents of PSPSWDHISTORY to a ptpswdhistory.dat file for use in preserving password history during the PeopleTools upgrade and data conversion.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-4-10: Preparing for the Password History Data Upgrade

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.52 or earlier.

This step runs `ptpswdhistoryupgimp.dms` from your new release codeline. This script creates a copy of the contents of `PSPSWDHISTORY` on your database and clears out the contents of the original `PSPSWDHISTORY` table. This is to ensure that the table can be altered successfully in the new PeopleTools release and that password history data is preserved during the upcoming upgrade data conversion.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 2-5: Dropping PeopleTools Tables

---

This section discusses:

- Understanding Dropping PeopleTools Tables
- Dropping PeopleSoft Update Manager Tables

### Understanding Dropping PeopleTools Tables

In this task, you drop PeopleSoft PeopleTools tables to ensure the successful completion of your upgrade.

#### Task 2-5-1: Dropping PeopleSoft Update Manager Tables

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53.

In this step, the PeopleTools tables `PS_PTACPTMPLTDEFN` and `PS_PTACPTMPLTSTEP` are dropped to ensure the successful completion of your upgrade. Neither table contains data and both can be safely dropped.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS MS SQL Server	All



## Chapter 3

# Applying PeopleTools Changes

This chapter discusses:

- Understanding PeopleTools Changes
- Creating Updated Release Scripts
- Performing Updates to PeopleTools System Tables
- Updating the Environment Configuration
- Turning Off Change Control
- Loading Model Definition Data
- Loading Message Data
- Reviewing Select PeopleTools Objects
- Copying Select Objects from PeopleTools Projects
- Populating Tablespace Data
- Building the Updated PeopleTools Project
- Reviewing Additional PeopleTools Objects
- Copying Projects
- Migrating Records to New Tablespaces
- Creating PeopleTools Temporary Tables
- Loading Base Data
- Loading PeopleTools Data
- Loading Language Data
- Loading PeopleTools Definition Group
- Compiling Directive PeopleCode
- Converting PeopleTools Objects
- Creating Views
- Creating All Triggers
- Regenerating Sync IDs
- Clearing the Rowset Cache
- Creating Global Temporary Tables
- Rebuilding Oracle Indexes
- Synchronizing Database Objects
- Updating Object Version Numbers
- Dropping PeopleTools Tables After Data Conversion

- Backing Up After the PeopleTools Upgrade

## Understanding PeopleTools Changes

---

To implement a successful upgrade, you must apply the necessary PeopleSoft PeopleTools changes. This involves updating the following PeopleSoft PeopleTools features: system tables, copying and building projects, loading seed data, and converting objects. From this point forward, you run all steps using your newly installed version of the software.

**Important!** From this point forward, run all steps using the new release of PeopleSoft PeopleTools unless otherwise indicated.

**Note.** Unless otherwise indicated, all scripts can be found in your new release PeopleSoft codeline *PS\_HOME\SCRIPTS* directory. The actual script name is indicated in the description of each step in uppercase letters.

## Task 3-1: Creating Updated Release Scripts

---

This section discusses:

- Understanding Updated Release Script Creation
- Creating the Universal Tablespaces Sequence Object
- Running a DBTSFIX Report
- Editing DBTSFIX Output Scripts

### Understanding Updated Release Script Creation

In this task you make manual modifications to release scripts delivered with your new PeopleSoft release. You must make the following modifications before proceeding with the remainder of your upgrade.

#### Task 3-1-1: Creating the Universal Tablespaces Sequence Object

PeopleSoft Change Assistant will display this step if you are upgrading from PeopleTools 8.57 or earlier.

This step runs `createutssequenceobject.sql`, which must be executed to define a DB2 z/OS sequence object for every PeopleSoft database where you intend to use DB2 z/OS Universal Tablespaces (UTS). PeopleTools will use the sequence object to derive DB2 database names for use with UTS. This sequence object can be created regardless of the actual usage of UTS in the new PeopleTools release.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All



## Task 3-1-2: Running a DBTSFIX Report

PeopleSoft Change Assistant will not display this step if you are a DB2 z/OS customer and are already using Universal Tablespaces (UTS) on your old PeopleTools release.

The dbtsfix.sqr script aligns the tablespaces in the delivered release scripts with the Target database used during the upgrade. This process generates new release scripts, conforming to the RELxxxdbtsfix.sql naming convention that you run in a later task. Run this script to preserve your existing table-to-tablespace mapping in the Target database. The result of this task will be a RELxxxdbtsfix.sql script in which xxx represents a release number (for example, 852, 853, 854, and so on) associated with your particular path.

---

**Note.** If you are a DB2 z/OS customer, review the SET CURRENT APPLICATION COMPATIBILITY comment at the beginning of the script. If your DB2 subsystem is running at a Function Level that prevents use of segmented tablespaces, you'll need to uncomment and modify this line so that the script can run successfully.

---

**Important!** Do not run the new release script at this point. You will be instructed to run this script later in the upgrade process.

---

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle DB2 z/OS	All

## Task 3-1-3: Editing DBTSFIX Output Scripts

PeopleSoft Change Assistant will not display this step if you are a DB2 z/OS customer and are already using Universal Tablespaces (UTS) on your old PeopleTools release.

Edit the generated RELxxxDBTSFIX scripts according to the comments within each script. Verify that the data definition language (DDL) is accurate for your environment for tablespaces, database names, owner IDs, and so forth. The scripts can be found in your PeopleSoft Change Assistant output directory for this upgrade path.

---

**Warning!** Do not run output scripts at this time. At this point in the upgrade process, you must only review the DBTSFIX output scripts.

---

**Note.** If you are a DB2 z/OS customer, when you upgrade from one PeopleSoft release to the next, it is possible to move tables from a tablespace using a 4-KB buffer pool to one using a 32-KB buffer pool. The tablespaces PSIMAGE, PSIMGR, and PSIMAGE2 use 32-KB buffer pools in Oracle-delivered applications. To maintain the tablespace schema used at your site, the dbtsfix.sqr script will revise the upgrade scripts with the database and tablespace information from your database (the Target database). Tables assigned to tablespaces PSIMAGE, PSIMGR, or PSIMAGE2 in the upgrade scripts are the exception to this approach. Note that Oracle has reassigned some tables to PSIMAGE2 because they now require a 32-KB buffer pool. You must manually edit the "Create Table" statements in the upgrade scripts to replace the tablespace name PSIMAGE, PSIMGR, or PSIMAGE2 with an appropriate tablespace name in your implementation that utilizes a 32-KB buffer pool. For DB2 z/OS customers, the database name must also be replaced with the value corresponding to the tablespace that you are using.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle DB2 z/OS	All

## **Task 3-2: Performing Updates to PeopleTools System Tables**

---

This section discusses:

- Understanding Updating PeopleTools System Tables
- Creating Tablespaces for DB2 ANSI
- Creating Tablespaces for DB2 Unicode
- Creating Tablespaces
- Updating System Catalog Views
- Updating PeopleSoft Database Roles
- Creating the Oracle Materialized Views Table
- Updating Additional PeopleSoft Database Roles
- Updating PeopleTools System Tables
- Running the DBTSFIX Report for PeopleTools 8.59
- Editing the DBTSFIX Script for PeopleTools 8.59
- Running the REL859 DBTSFIX Script
- Updating the PeopleTools Database Stamp
- Granting Privileges to the CONNECT ID
- Encrypting Passwords
- Updating the Database for Universal Tablespaces
- Updating PeopleTools Patch Information
- Rerunning Update Statistics for DB2 zOS
- Regenerating Update Statistics Script for Oracle
- Rerunning Update Statistics for Oracle

## **Understanding Updating PeopleTools System Tables**

In this task, you update your PeopleSoft PeopleTools system tables by running various scripts.

### Task 3-2-1: Creating Tablespaces for DB2 ANSI

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier and if your database is DB2 EBCDIC.

This step runs the PTDDLUPG script, which builds new tablespaces as part of the upgrade to the new PeopleSoft release.

See [Editing the PTDDLUPG Script](#).

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-2: Creating Tablespaces for DB2 Unicode

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier and if your database is DB2 Unicode.

This step runs the PTDDLUPGU script, which builds new tablespaces as part of the upgrade to the new PeopleSoft release.

See [Editing the PTDDLUPG Script](#).

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-3: Creating Tablespaces

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

This step runs the PTDDLUPG script, which builds new tablespaces as part of the upgrade to the new PeopleSoft release.

See [Editing the PTDDLUPG Script](#).

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 3-2-4: Updating System Catalog Views

This step runs the updobj.sql script, which re-creates system catalog views that both PeopleSoft Data Mover and PeopleSoft PeopleTools use.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

## Task 3-2-5: Updating PeopleSoft Database Roles

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

This step runs the upgrant.sql script as the system user, which updates the PeopleSoft PSADMIN role. The upgrant.sql script assumes that you are using the PSADMIN role.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 3-2-6: Creating the Oracle Materialized Views Table

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

This step runs the Oracle RDBMS script utlxmv.sql, which creates the MV\_CAPABILITIES\_TABLE for Materialized Views.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-2-7: Updating Additional PeopleSoft Database Roles

PeopleSoft Change Assistant will display this step if you are upgrading from PeopleSoft PeopleTools 8.54 or earlier.

Contact your database administrator to run the `upgrant_855.sql` script.

---

**Note.** If your database is a pluggable database (PDB), this script will need to be executed as `sysdba` in the PDB.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-2-8: Updating PeopleTools System Tables

PeopleSoft Change Assistant will not display this step if you are a DB2 z/OS customer and are already using Universal Tablespace (UTS) on your old PeopleTools release.

Release scripts are SQL scripts that modify the underlying table structure of a database so that it is compatible with a more recent PeopleSoft PeopleTools release. They are located in the `PS_HOME\SCRIPTS` directory. Release scripts can be identified by their common naming standard, `relxxx.sql` in which `xxx` designates a PeopleSoft PeopleTools release number.

These release (REL) scripts alter and update your PeopleSoft PeopleTools tables to the current release. PeopleSoft Change Assistant determines which `RELxxx` scripts to run based on the PeopleSoft PeopleTools release of your upgrade database.

If you created `RELxxxDBTSFIX` (in which `xxx` is a PeopleSoft PeopleTools release) earlier in your upgrade, the procedure will look at your Output folder and will know to run `RELxxxDBTSFIX`. If you did not run `DBTSFIX`, PeopleSoft Change Assistant will run `RELxxx`.

---

**Note.** This step runs at least one script. Do not proceed to the next step until these scripts run successfully.

---

See the product documentation for PeopleTools: Change Assistant and Update Manager for your new release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-2-9: Running the DBTSFIX Report for PeopleTools 8.59

PeopleSoft Change Assistant will display this step only if you are already using Universal Tablespaces (UTS) on your old PeopleTools release.

The dbtsfix.sql script aligns the tablespaces in the delivered release scripts with the Target database used during the upgrade. This process generates a new release script applicable for your environment, either rel859DBTSFIX.sql or rel859uDBTSFIX.sql, that you run in a later task.

---

**Note.** Review the SET CURRENT APPLICATION COMPATIBILITY comment at the beginning of the script. If your DB2 subsystem is running at a Function Level that prevents use of segmented tablespaces, you will need to uncomment and modify this line so that the script can run successfully.

---

**Important!** Do not run the new release script at this point. You will be instructed to run this script later in the upgrade process.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-10: Editing the DBTSFIX Script for PeopleTools 8.59

PeopleSoft Change Assistant will display this step only if you are already using Universal Tablespaces (UTS) on your old PeopleTools release.

Edit the generated rel859DBTSFIX.sql or rel859uDBTSFIX.sql script according to the comments within the script. Verify that the data definition language (DDL) is accurate for your environment for tablespaces, database names, owner IDs, and so forth. The script can be found in your PeopleSoft Change Assistant output directory for this upgrade path.

---

**Important!** Do not run the output script at this time. At this point in the upgrade process, you must only review the DBTSFIX output scripts.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-11: Running the REL859 DBTSFIX Script

PeopleSoft Change Assistant will display this step only if you are already using Universal Tablespaces (UTS) on your old PeopleTools release.

Release scripts are SQL scripts that modify the underlying table structure of a database so that it is compatible with a more recent PeopleSoft PeopleTools release. They are located in the PS\_HOME\SCRIPTS directory. Release scripts can be identified by their common naming standard, relxxx.sql, in which xxx designates a PeopleSoft PeopleTools release number. These release (REL) scripts alter and update your PeopleSoft PeopleTools tables to the current release.

Earlier in the upgrade you created and edited either rel859DBTSFIX.sql or rel859uDBTSFIX.sql from the delivered rel859.sql or rel859u.sql script. Change Assistant will look at your Output folder and will know to run rel859DBTSFIX.sql or rel859uDBTSFIX.sql. If you did not run DBTSFIX, PeopleSoft Change Assistant will run rel859.sql or rel859u.sql as appropriate for your environment.

See the product documentation for PeopleTools: Change Assistant and Update Manager for your new release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-12: Updating the PeopleTools Database Stamp

This step runs ptdbstamp.dms, which updates your database with the version of PeopleSoft PeopleTools being applied.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-2-13: Granting Privileges to the CONNECT ID

This step runs the grant.sql script. This script grants select access to the CONNECT ID for tables necessary for sign-in.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-2-14: Encrypting Passwords

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.54 or earlier.

This step runs encrypt.dms. This script encrypts passwords with the latest hashing scheme used in the current PeopleSoft PeopleTools release.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-2-15: Updating the Database for Universal Tablespaces

PeopleSoft Change Assistant will display this step if your environment does not have Universal Tablespaces (UTS) enabled on the old PeopleTools release. If you will be using UTS as of the new PeopleTools release, you will need to run this step. This step will automatically be skipped if UTS was already enabled in a previous PeopleTools upgrade.

This step runs enableuts.sql, which updates the database to indicate the use of DB2 z/OS UTS. If you plan to use UTS for DB2 z/OS, DATABASE\_OPTIONS must be updated to the value set by this script.

---

**Warning!** Once you have enabled UTS support through enableuts.sql and have begun to use UTS, you cannot revert DATABASE\_OPTIONS to its pre-enabled state. Be sure that you want to implement UTS before running this step.

---



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-16: Updating PeopleTools Patch Information

This step runs `ptpatch.dms`, which updates your database with the version of the PeopleSoft PeopleTools patch being applied.

---

**Note.** You only need to run this step if you are applying a PeopleSoft PeopleTools patch as part of the upgrade process. This step will be skipped if the patch script does not exist.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-2-17: Rerunning Update Statistics for DB2 zOS

Earlier in the upgrade process, you updated your statistics for DB2 z/OS. Due to changes in the database structure, you must update statistics again to improve the performance of your compare and copy. Contact your database administrator to have the statistics updated on your database before proceeding with your upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-2-18: Regenerating Update Statistics Script for Oracle

This step runs the `ptgentabstats.sql` script in order to create the `ptupdtabstats.sql` script. `ptupdtabstats.sql` will be run in the next step to update statistics on your Oracle database for populated PeopleSoft tables.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-2-19: Rerunning Update Statistics for Oracle

Earlier in the upgrade process, you updated your statistics for Oracle. Due to changes in the database structure, you must update statistics again to improve the performance of your compare and copy. This step runs the ptupdtabstats.sql script, which was generated in the previous step. This script updates statistics on your Oracle database for populated PeopleSoft tables.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 3-3: Updating the Environment Configuration

This task updates your Change Assistant database definition for your upgrade database setting the value of the current PS\_HOME in the Change Assistant database definition to the new PS\_HOME value of that same definition.

**Note.** If you need to restart your Change Assistant job from an earlier point in the upgrade, you will also need to update your database definition back to the original values for your upgrade database *and* rerun this task.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-4: Turning Off Change Control

This task executes a SQL statement that turns off the Change Control feature to improve performance for the upgrade copy. One of the tasks for completing database changes will remind you to turn this feature on again, if you want to use it.

See "Completing Database Changes," Reviewing Change Control.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-5: Loading Model Definition Data

---

This section discusses:

- Understanding Loading Model Definition Data
- Loading Model Definitions for DB2 zOS
- Loading Model Definitions for Oracle
- Loading Model Definitions for Microsoft

### Understanding Loading Model Definition Data

In this task, you load model definition scripts for your database platform and populate DDL model definitions. This step runs the DDL model definition script applicable to your database platform. If required by your database platform, you modified this script in the task Performing Script Modifications, to use your site-specific information.

See Performing Script Modifications.

### Task 3-5-1: Loading Model Definitions for DB2 zOS

This step runs the ddldb2.dms script to populate DDL model definitions for the DB2 z/OS platform.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-5-2: Loading Model Definitions for Oracle

This step runs the ddlora.dms script to populate DDL model definitions for the Oracle platform.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-5-3: Loading Model Definitions for Microsoft

This step runs the ddlmss.dms script to populate DDL model definitions for the Microsoft SQL Server.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	MS SQL Server	All

### Task 3-6: Loading Message Data

---

This step runs the msgtlsupg.dms script, which loads system messages in the message catalog.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-7: Reviewing Select PeopleTools Objects

---

Earlier in the upgrade you had the opportunity to mark this task as complete if you did not wish to run this optional compare. In this task, Change Assistant runs a compare to identify any PeopleSoft PeopleTools records, fields, or indexes that you may have customized. This task only identifies the customized PeopleSoft PeopleTools objects. You still must overwrite the customized objects with the new PeopleSoft PeopleTools definitions when you copy the project. The other object types may be compared later in the upgrade.

During the upgrade process, you copy PeopleSoft PeopleTools objects into your database. PeopleSoft PeopleTools functionality, such as Security, is built using PeopleSoft PeopleTools objects, and it is possible that you could have modified the objects that make up a product like Security.

---

**Warning!** Do not change the delivered PeopleSoft PeopleTools objects. The delivered objects are integral to the smooth operation of your system, and the modification of these objects could cause system instability.

When you perform the copy of the PeopleSoft PeopleTools projects during the upgrade, you may overwrite modifications that you have made. Excluding any PeopleSoft PeopleTools-delivered objects from the upgrade may result in instability due to dependencies on specific objects.

---

**Note.** If you are applying this PeopleSoft PeopleTools upgrade to your Demo database, you do not need to run this task. You should only consider running this task when you are applying this upgrade to other environments.

---

You will overwrite the customized objects with the new PeopleSoft PeopleTools definitions when you copy the PeopleSoft PeopleTools projects in a later task. You must not make any modifications that will affect PeopleSoft PeopleTools objects when re-implementing your customizations after the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-8: Copying Select Objects from PeopleTools Projects

---

This section discusses:

- Understanding Copying Select Objects from PeopleTools Projects
- Copying Select Objects from the PPLTLS84CUR Project
- Copying Select Objects from the PATCH Project
- Copying Select Objects from the PPLTLS84CURDEL Project

### Understanding Copying Select Objects from PeopleTools Projects

In this task, you copy selected objects from projects. The copy process overwrites all customizations, which can include configuration settings stored on the PeopleSoft PeopleTools objects. Oracle recommends that you verify the results of all copied projects. After a project has been copied, each object is identified with a check mark in the Done column. You can view these results from the Upgrade tab in PeopleSoft Application Designer. It is also recommended that you copy the PeopleSoft PeopleTools projects with the *Take Action* flags set as they originally were set when the database was delivered.

You will copy the remaining objects from the projects in a later task.

See the product documentation for PeopleTools: PeopleSoft Application Designer Developer's Guide for your new release.

### Task 3-8-1: Copying Select Objects from the PPLTLS84CUR Project

This process copies records, fields, and indexes to the database that are necessary for the proper operation of PeopleSoft PeopleTools. The PPLTLS84CUR project contains all PeopleSoft PeopleTools objects that have been created or updated since PeopleSoft PeopleTools 8.40 was released.

Before the copy of records and fields, the upgrade process detects if the object definition exists or not. The PPLTLS84CUR project is delivered with an action of CopyProp to prevent the possible overwrites of custom field labels and recfields. When the upgrade process detects that a given field or record does not exist, it changes that action so that the entire definition can be copied. You can ignore any errors that you may receive at this time similar to the following examples:

Changed Action from CopyProp to Copy, definition does not exist on target.

Definition Name: *OBJECTNAME* not copied, entire definition already copied.

These warnings occur because the PeopleSoft PeopleTools project contains fields along with their field label. This is necessary so that the software does not overwrite any customized field labels on PeopleSoft field objects.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-8-2: Copying Select Objects from the PATCH Project

This process copies records, fields, and indexes to the database that are necessary for the proper operation of PeopleSoft PeopleTools. The PATCH85X project contains all PeopleSoft PeopleTools objects that have been updated in the patch.

---

**Note.** Perform this process only if you are applying a PeopleSoft PeopleTools patch that includes a database project. Check the patch documentation to verify whether a database project was delivered with the patch. This step will be skipped if the patch project does not exist.

---

See "Installing the Software," Installing the New Release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-8-3: Copying Select Objects from the PPLTLS84CURDEL Project

This process deletes obsolete PeopleSoft PeopleTools records, fields, and indexes from your database.

The copy process detects whether any deleted fields are in use on other objects, such as records. You may see the following kind of warning during the copy:

Field *FIELDNAME* is in use on at least one record.

You must clean up any objects that reference deleted fields after the upgrade. When the PeopleSoft PeopleTools upgrade process deletes a field, it no longer exists in the new release, but you may still have objects that reference the deleted field. After fixing any objects that reference the field, delete the field from your system.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-9: Populating Tablespace Data

This section discusses:

- Populating Updated Tablespace Data
- Updating Tablespace Names

### Task 3-9-1: Populating Updated Tablespace Data

This step populates all tablespace information in the PSRECTBLSPC table. This step runs the setspace.sql script, which ensures that the correct tablespace information is populated for tasks later in the upgrade process.

The values stored in the DDLSPACENAME field are updated with current values found in the system catalog for tables already defined in your database. If you modified tablespace names from the delivered names, this step makes those same changes in the PeopleSoft record definition.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle DB2 z/OS	All

### Task 3-9-2: Updating Tablespace Names

The setspace.sql script identifies the tables with an invalid tablespace or database name/tablespace combination. However, the PeopleSoft PeopleTools metadata tables in your Target database contain the database/tablespace values as delivered by Oracle. The setspace.sql corrects these values for those tables defined in DB2. For those tables that are defined in the PeopleSoft PeopleTools metadata tables, but have not been defined in DB2, you need to review the setspace.sql script for those tables that are reported as not defined in the database, but where the database/tablespace combination is valid. If the report shows an invalid database/tablespace combination, or shows Oracle-delivered tablespace names instead of your Target database and tablespace names, you can correct the database and tablespace names.

To correct the database and/or tablespace names use one of the following options:

- Generate the alter/create scripts and globally edit the scripts, changing the database/tablespace values to those of your Target database.
- Directly update the PSRECTBLSPC table with your Target database names before generating the alter/create

scripts.

This will ensure that the database name/tablespace names in the generated alter/create scripts will be correct. The syntax to update the PSRECTBLSPC table is as follows:

```
UPDATE PSRECTBLSPC SET DBNAME = dbname, DDLSPACENAME = tablespace name⇒
WHERE DDLSPACENAME = tablespace identified in SETSPACE OUTPUT AND⇒
DBNAME = database identified in SETSPACE OUTPUT;
```

If you are using the delivered tablespaces, you can omit the references to DDLSPACENAME in the SQL statement above.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

## Task 3-10: Building the Updated PeopleTools Project

---

This section discusses:

- Merging the PeopleTools Projects
- Generating the Updated PeopleTools Script
- Editing the Updated PeopleTools Script
- Running the Updated PeopleTools Script

### Task 3-10-1: Merging the PeopleTools Projects

In this step, the PPLTLS84CUR project definition is merged with the PATCH85X project definition for the new release so that the PPLTLS84CUR project definition is updated with any new records delivered in the PeopleTools Patch.

---

**Note.** This step will be skipped if the patch project does not exist.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All



## Task 3-10-2: Generating the Updated PeopleTools Script

This step generates the SQL script to create and alter records of the type Table that are delivered in the PPLTLS84CUR project. The tables are altered to add new columns, rename existing columns, and change columns that have modified properties, such as length, and delete columns. The script will also create new indexes, re-create modified indexes, and create triggers. The script name is:

```
ppltls84curtables.sql
```

---

**Note.** For DB2 z/OS sites, if this step takes an exceptionally long time, performing a RUNSTATS on the system catalog tablespace SYSDBASE may improve performance.

---

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-10-3: Editing the Updated PeopleTools Script

In this step, you edit the ppltls84curtables.sql script that was generated in the previous step for tablespace names and sizing. If you are running on a RDBMS platform that uses tablespaces, and you are *not* using the PeopleSoft tablespace names, have your database administrator review this script and modify the tablespace names appropriately. The script can be found in your PeopleSoft Change Assistant output directory for this upgrade path.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

## Task 3-10-4: Running the Updated PeopleTools Script

This step runs the script you generated in this task to create all records of the type Table. This creates new table structures, alters existing PeopleSoft table structures, creates new indexes, re-creates modified indexes, and creates triggers.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-11: Reviewing Additional PeopleTools Objects

Earlier in the upgrade you had the opportunity to mark this task as complete if you did not wish to run this optional compare. You might have already performed an optional compare on PeopleSoft PeopleTools records, fields, and indexes. In this task you may *optionally* compare the remaining PeopleTools object types.

During the upgrade process, you copy PeopleSoft PeopleTools objects into your database. PeopleSoft PeopleTools functionality, such as Security, is built using PeopleSoft PeopleTools objects, and it is possible that you could have modified the objects that make up a product like Security.

**Warning!** Do not change the delivered PeopleSoft PeopleTools objects. The delivered objects are integral to the smooth operation of your system, and the modification of these objects could cause system instability.

When you perform the copy of the PeopleSoft PeopleTools projects during the upgrade, you may overwrite modifications that you have made. Excluding any PeopleSoft PeopleTools-delivered objects from the upgrade may result in instability due to dependencies on specific objects.

**Note.** If you are applying this PeopleSoft PeopleTools upgrade to your Demo database, you do not need to run this task. You should only consider running this task when you are applying this upgrade to other environments.

You will overwrite the customized objects with the new PeopleSoft PeopleTools definitions when you copy the PeopleSoft PeopleTools projects in a later task. You must not make any modifications that will affect PeopleSoft PeopleTools objects when re-implementing your customizations after the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-12: Copying Projects

This section discusses:

- Understanding Copying Projects
- Copying the PPLTLS84CUR Project
- Copying the PPLTLS84CURDEL Project
- Copying the PATCH85X Project

- Merging the PeopleTools Projects Again

## Understanding Copying Projects

Earlier in the upgrade you copied records, fields, and indexes. In this task, you copy the remaining object types from the PeopleTools projects. The copy process overwrites all customizations, which can include configuration settings stored on the PeopleSoft PeopleTools objects.

Oracle recommends that you verify the results of all copied projects. After a project has been copied, each object is identified with a check mark in the Done column. You can view these results from the Upgrade tab in PeopleSoft Application Designer. It is also recommended that you copy the PeopleSoft PeopleTools projects with the take action flags set as they originally were set when the database was delivered.

See the product documentation for PeopleTools: PeopleSoft Application Designer Developer's Guide for your new release.

### Task 3-12-1: Copying the PPLTLS84CUR Project

This process copies the remaining objects to the database that are necessary for the proper operation of PeopleSoft PeopleTools. Records, fields, and indexes were copied earlier in the upgrade in a separate step. The PPLTLS84CUR project contains all PeopleSoft PeopleTools objects that have been created or updated since PeopleSoft PeopleTools 8.40 was released.

Before the copy of records and fields, the upgrade process detects if the object definition exists or not. The PPLTLS84CUR project is delivered with an action of `CopyProp` to prevent the possible overwrites of custom field labels and recfields. When the upgrade process detects that a given field or record does not exist, it changes that action so that the entire definition can be copied. You can ignore any errors that you may receive at this time similar to the following examples:

```
Changed Action from CopyProp to Copy, definition does not exist on target.
```

```
Definition Name: OBJECTNAME not copied, entire definition already copied.
```

These warnings occur because the PeopleSoft PeopleTools project contains fields along with their field label. This is necessary so that the software does not overwrite any customized field labels on PeopleSoft field objects.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-12-2: Copying the PPLTLS84CURDEL Project

This process deletes the remaining specified PeopleSoft PeopleTools objects from your database. Records, fields, and indexes were deleted earlier in the upgrade in a separate step.

The copy process detects whether any deleted fields are in use on other objects, such as records. You may see the following kind of warning during the copy:

```
Field FIELDNAME is in use on at least one record.
```

You must clean up any objects that reference deleted fields after the upgrade. When the PeopleSoft PeopleTools upgrade process deletes a field, it no longer exists in the new release, but you may still have objects that reference the deleted field. After fixing any objects that reference the field, delete the field from your system.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-12-3: Copying the PATCH85X Project

This process copies the remaining patch objects to the database that are necessary for the proper operation of PeopleSoft PeopleTools. The PATCH85X project contains all PeopleSoft PeopleTools objects that have been updated in the patch.

---

**Note.** Perform this process only if you are applying a PeopleSoft PeopleTools patch that includes a database project. Check the patch documentation to verify whether a database project was delivered with the patch. This step will be skipped if the patch project does not exist.

---

See "Installing the Software," Installing the New Release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-12-4: Merging the PeopleTools Projects Again

In this step, the PPLTLS84CUR project definition is merged with the PATCH85X project definition for the new release so that the PPLTLS84CUR project definition is updated with any new records delivered in the PeopleTools Patch. This updated project will be used later in the upgrade when creating PeopleTools views.

---

**Note.** This step will be skipped if the patch project does not exist.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-13: Migrating Records to New Tablespaces

---

This section discusses:

- Understanding Record Migration to New Tablespaces
- Copying the PT84TBLSPC Project
- Building the Tablespace Alter Script
- Editing the Tablespace Alter Script
- Running the Tablespace Alter Script

### Understanding Record Migration to New Tablespaces

In this task you migrate the tables delivered in the PT84TBLSPC project to the correct tablespaces. Prior to starting this task, you may find it useful to compare the PT84TBLSPC project to find out which tables were assigned to a different tablespace in the new release.

---

**Note.** For DB2 z/OS platforms, PeopleSoft Change Assistant will display the steps in this task if your environment does not have Universal Tablespaces (UTS) enabled on the old PeopleTools release. If you will be using UTS in the new PeopleTools release, then you should have marked all the steps in this task as complete in your upgrade job in PeopleSoft Change Assistant earlier in the upgrade. There is no need to run the steps in this task if UTS is enabled on the new PeopleTools release.

---

### Task 3-13-1: Copying the PT84TBLSPC Project

This process copies the records that moved to different tablespaces in the new release of PeopleSoft PeopleTools. The upgrade copy options are set to Copy From Source for record DDL to pick up the new tablespace information.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-13-2: Building the Tablespace Alter Script

This step generates the SQL script to alter records of the type Table that are delivered in the PT84TBLSPC project. The tables are altered to move them to the correct tablespaces for the new release of PeopleSoft PeopleTools. The script name is:

```
tablespacealtertables.sql
```

---

**Note.** For DB2 z/OS sites, if this step takes an exceptionally long time, performing a RUNSTATS on the system catalog tablespace SYSDBASE may improve performance.

---

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-13-3: Editing the Tablespace Alter Script

In this step, you edit the `tablespacealtertables.sql` script for tablespace names and sizing. If you are running on an RDBMS platform that uses tablespaces, and you are *not* using the PeopleSoft tablespace names, you need to review and modify the scripts above. Have your database administrator review these scripts and modify the tablespace names appropriately. The script can be found in your PeopleSoft Change Assistant output directory for this upgrade path.

---

**Note.** If you are a DB2 z/OS customer, you must edit the scripts for database name regardless of whether you are using the delivered PeopleSoft tablespace names.

---

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-13-4: Running the Tablespace Alter Script

This step runs the `tablespacealtertables.sql` script to move the tables to the new tablespaces.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

## Task 3-14: Creating PeopleTools Temporary Tables

---

This section discusses:

- Understanding PeopleTools Temporary Tables Creation
- Creating the PeopleTools Temporary Tables Project
- Filtering the PeopleTools Temporary Tables Project
- Generating the PeopleTools Temporary Tables Script
- Editing the PeopleTools Temporary Tables Script
- Running the PeopleTools Temporary Tables Script

### Understanding PeopleTools Temporary Tables Creation

In this task, you perform steps to create PeopleTools temporary tables.

#### Task 3-14-1: Creating the PeopleTools Temporary Tables Project

This step creates a project named PTTEMPTABS, which contains all records of the type Temporary Table.

##### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

#### Task 3-14-2: Filtering the PeopleTools Temporary Tables Project

This step removes all non-PeopleTools temporary tables from the PTTEMPTABS project. After running this step, only PeopleTools-delivered temporary tables remain in the project.

##### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

#### Task 3-14-3: Generating the PeopleTools Temporary Tables Script

This step generates the ptemptabs.sql script to drop and re-create all PeopleTools-owned temporary tables in the PTTEMPTABS project. Processes use the temporary tables dynamically in your system. They can be safely dropped at this time because they do not contain transaction data required by your PeopleSoft system.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-14-4: Editing the PeopleTools Temporary Tables Script

In this step, you edit the `pttemptabs.sql` script that was generated in the previous step for tablespace names and sizing. If you are running on a RDBMS platform that uses tablespaces, and you are not using the PeopleSoft tablespace names, have your database administrator review this script and modify the tablespace names appropriately. The script can be found in your PeopleSoft Change Assistant output directory for this upgrade path.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-14-5: Running the PeopleTools Temporary Tables Script

This step runs the `pttemptabs.sql` script, which drops and re-creates the PeopleTools-owned records of the type Temporary Table in the PTTEMPTABS project.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-15: Loading Base Data

---

These PeopleSoft Data Mover scripts (DMSs) initialize and modify the data in various PeopleSoft PeopleTools tables required for the system to execute properly. This step runs scripts conforming to the `ptxxx.tls.dms` naming convention, where `xxx` represents a PeopleSoft PeopleTools release number that is greater than your current PeopleSoft PeopleTools release. For some upgrades, no data scripts are required. In this case, PeopleSoft Change Assistant continues to the next step without producing a log file.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-16: Loading PeopleTools Data

---

This section discusses:

- Loading Additional System Data
- Loading English Messages
- Loading Stored Statements Data
- Resetting the File Processing Functionality

### Task 3-16-1: Loading Additional System Data

This step runs ptsysi.dms, which imports additional PeopleTools system data that was not previously loaded in the step Loading Base Data.

---

**Note.** Some of the data will be imported using the ignore dups option. These data loads will give the message "Error: duplicate SQL rows" and then give a "Successful completion" message. These error messages can be ignored because duplicate data is expected.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-16-2: Loading English Messages

This step runs the msgtleng.dms script, which loads English messages into your database.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-16-3: Loading Stored Statements Data

Loading the stored statements ensures that the dynamic SQL statements will work correctly with the delivered COBOL programs.

This step runs the storept.dms script, which loads the dynamic SQL used by the PeopleSoft PeopleTools-delivered COBOL.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-16-4: Resetting the File Processing Functionality

This step runs the ptfx\_libon.dms script, which resets the File Processing mode to the default value.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-17: Loading Language Data

---

This section discusses:

- Populating the Language Table
- Loading the Language Data
- Populating Arabic Translations
- Populating Bulgarian Translations
- Populating Canadian French Translations
- Populating Croatian Translations
- Populating Czech Translations
- Populating Danish Translations
- Populating Dutch Translations
- Populating Finnish Translations
- Populating French Translations
- Populating German Translations

- Populating Greek Translations
- Populating Hebrew Translations
- Populating Hungarian Translations
- Populating Italian Translations
- Populating Japanese Translations
- Populating Korean Translations
- Populating Malay Translations
- Populating Norwegian Translations
- Populating Polish Translations
- Populating Portuguese Translations
- Populating Romanian Translations
- Populating Russian Translations
- Populating Serbian Translations
- Populating Simplified Chinese Translations
- Populating Slovak Translations
- Populating Slovenian Translations
- Populating Spanish Translations
- Populating Swedish Translations
- Populating Thai Translations
- Populating Traditional Chinese Translations
- Populating Turkish Translations
- Populating UK English Translations
- Populating Vietnamese Translations
- Cleaning Up Orphaned Language Data

### Task 3-17-1: Populating the Language Table

This step runs the `pslanguages.dms` script. This script populates the `PSLANGUAGES` table with character set information and other language-specific data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-17-2: Loading the Language Data

If your database has languages installed in addition to English, you must populate the `PSLANGUAGES` table.

To load language data:

1. From the DMS that was created for your PeopleSoft 8.x database installation, find the UPDATE to PSLANGUAGES.

The statement should look similar to the following:

```
UPDATE PSLANGUAGES SET INSTALLED=1 WHERE LANGUAGE_CD = 'xxx';
```

2. Run the SQL command identified above using your SQL tool.

Your database is now updated with the language data.

---

**Note.** If you have any custom languages defined, you will need to re-enter your custom language information back into PSLANGUAGES before completing the upgrade.

---

See the product documentation for PeopleTools: Global Technology for your current release, "Adding New Languages," Adding New Language Codes to the System.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All Non-English

## Task 3-17-3: Populating Arabic Translations

This step runs the ptara.dms script. This script loads all of the Arabic translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Arabic

## Task 3-17-4: Populating Bulgarian Translations

This step runs the ptbul.dms script. This script loads all of the Bulgarian translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Bulgarian

### Task 3-17-5: Populating Canadian French Translations

This step runs the `ptcfr.dms` script. This script loads all of the Canadian French translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Canadian French

### Task 3-17-6: Populating Croatian Translations

This step runs the `ptcro.dms` script. This script loads all of the Croatian translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Croatian

### Task 3-17-7: Populating Czech Translations

This step runs the `ptcze.dms` script. This script loads all of the Czech translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Czech

### Task 3-17-8: Populating Danish Translations

This step runs the `ptdan.dms` script. This script loads all of the Danish translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Danish

## Task 3-17-9: Populating Dutch Translations

This step runs the `ptdut.dms` script. This script loads all of the Dutch translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Dutch

## Task 3-17-10: Populating Finnish Translations

This step runs the `ptfin.dms` script. This script loads all of the Finnish translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Finnish

## Task 3-17-11: Populating French Translations

This step runs the `ptfra.dms` script. This script loads all of the French translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	French

### Task 3-17-12: Populating German Translations

This step runs the ptger.dms script. This script loads all of the German translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	German

### Task 3-17-13: Populating Greek Translations

This step runs the ptgrk.dms script. This script loads all of the Greek translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Greek

### Task 3-17-14: Populating Hebrew Translations

This step runs the ptheb.dms script. This script loads all of the Hebrew translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Hebrew

### Task 3-17-15: Populating Hungarian Translations

This step runs the pthun.dms script. This script loads all of the Hungarian translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Hungarian

## Task 3-17-16: Populating Italian Translations

This step runs the ptita.dms script. This script loads all of the Italian translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Italian

## Task 3-17-17: Populating Japanese Translations

This step runs the ptjpn.dms script. This script loads all of the Japanese translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Japanese

## Task 3-17-18: Populating Korean Translations

This step runs the ptkor.dms script. This script loads all of the Korean translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Korean



### Task 3-17-19: Populating Malay Translations

This step runs the ptmay.dms script. This script loads all of the Malay translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Malaysian

### Task 3-17-20: Populating Norwegian Translations

This step runs the ptnor.dms script. This script loads all of the Norwegian translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Norwegian

### Task 3-17-21: Populating Polish Translations

This step runs the ptpol.dms script. This script loads all of the Polish translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Polish

### Task 3-17-22: Populating Portuguese Translations

This step runs the ptpor.dms script. This script loads all of the Portuguese translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Portuguese

## Task 3-17-23: Populating Romanian Translations

This step runs the ptrom.dms script. This script loads all of the Romanian translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Romanian

## Task 3-17-24: Populating Russian Translations

This step runs the ptrus.dms script. This script loads all of the Russian translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Russian

## Task 3-17-25: Populating Serbian Translations

This step runs the ptser.dms script. This script loads all of the Serbian translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Serbian

### Task 3-17-26: Populating Simplified Chinese Translations

This step runs the ptzhs.dms script. This script loads all of the Simplified Chinese translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Simplified Chinese

### Task 3-17-27: Populating Slovak Translations

This step runs the ptslk.dms script. This script loads all of the Slovak translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Slovak

### Task 3-17-28: Populating Slovenian Translations

This step runs the ptslv.dms script. This script loads all of the Slovenian translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Slovenian

### Task 3-17-29: Populating Spanish Translations

This step runs the ptesp.dms script. This script loads all of the Spanish translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Spanish

## Task 3-17-30: Populating Swedish Translations

This step runs the ptsve.dms script. This script loads all of the Swedish translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Swedish

## Task 3-17-31: Populating Thai Translations

This step runs the ptha.dms script. This script loads all of the Thai translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Thai

## Task 3-17-32: Populating Traditional Chinese Translations

This step runs the ptzht.dms script. This script loads all of the Traditional Chinese translations for PeopleTools objects and PeopleTools data.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Traditional Chinese

### Task 3-17-33: Populating Turkish Translations

This step runs the pttur.dms script. This script loads all of the Turkish translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Turkish

### Task 3-17-34: Populating UK English Translations

This step runs the ptuke.dms script. This script loads all of the UK English translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	UK English

### Task 3-17-35: Populating Vietnamese Translations

This step runs the ptvie.dms script. This script loads all of the Vietnamese translations for PeopleTools objects and PeopleTools data.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	Vietnamese

### Task 3-17-36: Cleaning Up Orphaned Language Data

This step runs the Application Engine program PTIACLNLNGCA. This Application Engine program removes any orphaned related language objects that do not have a matching base language object.

---

**Note.** PTIACLNLNGCA will remove orphaned language objects for both PeopleTools and non-PeopleTools objects.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All non-English

## Task 3-18: Loading PeopleTools Definition Group

This task runs the ptdefnsec.dms script that loads the PeopleTools definition security group. This ensures that the definition security group is updated with the PeopleTools objects introduced in this release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-19: Compiling Directive PeopleCode

PeopleSoft Change Assistant will display this task only if you are upgrading from PeopleSoft PeopleTools 8.53 or later.

This task compiles all directive PeopleCode.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-20: Converting PeopleTools Objects

This section discusses:

- Loading Conversion Data
- Reporting Conversion Details
- Running PeopleTools Data Conversion

### Task 3-20-1: Loading Conversion Data

This step runs the ptupgconv.dms script, which imports PeopleSoft PeopleTools data conversion Application Engine driver data into your database.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-20-2: Reporting Conversion Details

This step runs the ptuconv.sqr script. It details which sections will be called by the Upgrade Driver program and what they are doing. Each of the upgrade data conversion sections contains comments that describe the processing done by the section. The information contained in the report is used to evaluate the conversions run in the next step and any actions that are required as a result of the conversion.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-20-3: Running PeopleTools Data Conversion

The Upgrade Driver Application Engine program, PTUPGCONVERT, runs additional PeopleSoft PeopleTools upgrade data conversions. The program then reads the table PS\_PTUPGCONVERT, selecting all rows with the group number of 01 and ordering them by the sequence number on the row. A list of Application Engine library sections that must be run for data conversion is returned. The program then calls each section in the order of the sequence number. Review the output file generated in the previous step for more details on the conversions run in this step.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-21: Creating Views

---

This section discusses:

- Understanding Creating Views
- Creating Updated PeopleTools Views
- Checking for Invalid Views
- Checking for Invalid Views on Microsoft
- Creating an Invalid Views Project
- Creating the Invalid Views
- Checking for Additional Invalid Views
- Running a Filter Query on Invalid Views Results
- Creating an Additional Invalid Views Project
- Creating Additional Invalid Views

### Understanding Creating Views

This task runs steps to re-create the views that were impacted by PeopleTools records delivered in the upgrade.

#### Task 3-21-1: Creating Updated PeopleTools Views

This step creates all views defined in the PPLTLS84CUR project. These PeopleTools views are either new or changed across PeopleTools releases and need to be re-created.

---

**Note.** For DB2 z/OS, Oracle, and MSS platforms, this step will also create any indexes defined on Materialized views.

---

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

#### Task 3-21-2: Checking for Invalid Views

This step runs `dddinvs.sqr`, which identifies existing non-PeopleTools views impacted when the underlying PeopleTools table or view was dropped. On the Oracle platform, these are the views that went into an invalid state when the underlying PeopleTools table or view was changed or re-created during the upgrade. On the DB2 z/OS platform, these are the views that were automatically dropped when the underlying PeopleTools table or view was altered or re-created during the upgrade.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-21-3: Checking for Invalid Views on Microsoft

This step runs `dddinvws.sqr`, which identifies existing non-PeopleTools views impacted when the underlying PeopleTools table or view was dropped. These are the views that went into an invalid state when the underlying PeopleTools table or view was changed or re-created during the upgrade.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Microsoft SQL Server	All

### Task 3-21-4: Creating an Invalid Views Project

This step creates and populates the PTUVIEW project with the views identified by running `dddinvws.sqr` from the previous step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-21-5: Creating the Invalid Views

This step creates all views defined in the PTUVIEW project. It also generates the SQL script `ptuview_crtvw.sql`, which shows the view SQL that was executed for each view.

---

**Note.** For DB2 z/OS, Oracle, and MSS platforms, this step will also create any indexes defined on Materialized views.

---

**Important!** Review the log to find any views that failed to be created. All views should be created at this time, so those errors are not acceptable and should be corrected.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-21-6: Checking for Additional Invalid Views

This step re-runs `dddinvws.sqr` to identify any additional dependent views that were impacted due to the creation of the views defined in the PTUVIEW project. On the Oracle platform, these are the views that went into an invalid state when the underlying view was re-created during the build of the PTUVIEW project. On the DB2 z/OS platform, these are the views that were automatically dropped when the underlying view was re-created during the build of the PTUVIEW project.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-21-7: Running a Filter Query on Invalid Views Results

This step runs a filter query to filter the remaining steps in this task. If the running of `dddinvws.sqr` in the previous step returned no additional invalid views, then the remaining steps in this task will be skipped.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-21-8: Creating an Additional Invalid Views Project

This step is only applicable if the second iteration of running `dddinvws.sqr` identified any newly invalid views. This step creates and populates the PTUVIEW2 project with the views identified by running `DDDINVWS.SQR` from the previous step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-21-9: Creating Additional Invalid Views

This step creates all views defined in the PTUVIEW2 project. It also generates the SQL script ptuview2\_crtvw.sql, which shows the view SQL that was executed for each view.

**Note.** For DB2 z/OS and Oracle platforms, this step will also create any indexes defined on Materialized views.

**Important!** Review the log to find any views that failed to be created. All views should be created at this time, so those errors are not acceptable and should be corrected.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS Oracle	All

### Task 3-22: Creating All Triggers

This task uses a DMS to create all triggers. Database triggers are database objects that are used to update tables with version information for PeopleSoft Mobile and Optimization functionality.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-23: Regenerating Sync IDs

This task executes the AE\_SYNCIDGEN Application Engine program to regenerate synchronization IDs. PeopleSoft PeopleTools uses synchronization IDs to give each row a unique identifier.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-24: Clearing the Rowset Cache

---

This step runs `clear_rowset_cache.dms`, which removes RowsetCache objects from the database. The structure of RowsetCache objects may not be compatible across PeopleSoft PeopleTools releases. New RowsetCache objects will automatically be generated after the old RowsetCache objects have been cleared out. This will ensure proper operation of your application with the new PeopleSoft PeopleTools release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 3-25: Creating Global Temporary Tables

---

This section discusses:

- Understanding Global Temporary Tables Creation
- Creating the Global Temporary Tables Project
- Filtering the Global Temporary Tables Project
- Generating the Global Temporary Tables Script
- Editing the Global Temporary Tables Script
- Running the Global Temporary Tables Script

## Understanding Global Temporary Tables Creation

As of PeopleTools 8.54, Global Temporary tables are now supported on the Oracle database platform. With PeopleTools 8.53 or earlier, all temporary tables were created as regular temporary tables. Prior to the upgrade, you may have applied application maintenance to your database that included Global Temporary tables; these Global Temporary tables were created as regular temporary tables on your old release. These Global Temporary tables need to be re-created at this point in the upgrade in their correct format.

PeopleSoft Change Assistant will display and run the steps in this task only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier. If no records are defined as Global Temporary tables, PeopleSoft Change Assistant will automatically skip this task.

See the product documentation for PeopleTools: Application Engine, PeopleTools: Data Management, and PeopleTools: PeopleSoft Application Designer Developer's Guide for more information on Global Temporary Tables.

### Task 3-25-1: Creating the Global Temporary Tables Project

This step creates the UPG\_GTT project and inserts all records of the type Temporary Table.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-25-2: Filtering the Global Temporary Tables Project

This step runs *PS\_HOME/SCRIPTS/upg\_gtt\_filter.sql*. This script removes any temporary tables from the UPG\_GTT project that do not have the Global Temporary table property selected. This ensures that only Global Temporary tables remain in the project.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-25-3: Generating the Global Temporary Tables Script

This step generates the *upg\_gtt\_crttbl.sql* script. This script drops and re-creates records of the type Temporary Table in the database that have the Global Temporary table property defined in Application Designer. Temporary tables are handled separately from records of the type Table.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 3-25-4: Editing the Global Temporary Tables Script

In this step, you edit the `upg_gtt_crttbl.sql` script for tablespace names and sizing. If you are not using the PeopleSoft tablespace names, have your database administrator review and modify the `upg_gtt_crttbl.sql` script. The script can be found in your PeopleSoft Change Assistant output directory for this upgrade path.

---

**Warning!** Ensure that the tablespaces used by these tables are appropriate for use by global temporary tables. Global temporary tables must utilize temporary tablespaces and cannot be placed in a regular tablespace. You may need to drop and re-create these tablespaces as temporary tablespaces to ensure the generated script can run successfully.

---

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 3-25-5: Running the Global Temporary Tables Script

This step runs the `pttstemptabs_crttbl.sql` script to re-create Global Temporary Tables.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 3-26: Rebuilding Oracle Indexes

---

This section discusses:

- Understanding Rebuilding Oracle Indexes
- Generating the Drop Descending Index Script
- Generating the Create Ascending Index Script
- Dropping Descending Indexes
- Setting the Ignore Descending Index Parameter
- Rebuilding Dropped Indexes
- Resetting the Ignore Descending Index Parameter

## Understanding Rebuilding Oracle Indexes

PeopleSoft Change Assistant will display and run this task only if you are upgrading from PeopleSoft PeopleTools 8.53 or earlier.

As of PeopleTools 8.54, descending indexes are no longer supported on Oracle platforms. In this task you will convert any descending indexes to ascending indexes by running scripts that drop your descending indexes and re-create them as ascending indexes.

### Task 3-26-1: Generating the Drop Descending Index Script

This step runs *PS\_HOME/SCRIPTS/postupgdropdescindexes.sql*. This script generates *psdropdescindexes.sql*, which contains drop index statements for all indexes owned by the ACCESSID that contain the DESC clause.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-26-2: Generating the Create Ascending Index Script

This step runs *PS\_HOME/SCRIPTS/postupgcreatedescindexes.sql*. This script generates *pscreatedescindexes.sql*, which contains create index statements for all indexes owned by the ACCESSID that previously contained the DESC clause. The indexes in the generated script will be created as ascending indexes.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-26-3: Dropping Descending Indexes

This step runs *psdropdescindexes.sql*, which drops all indexes owned by the ACCESSID that contain the DESC clause.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-26-4: Setting the Ignore Descending Index Parameter

This step runs *PS\_HOME/SCRIPTS/postupgsetdescindextrue.sql* as the system user to set the `_ignore_desc_in_index` parameter to true.

**Note.** If your database is a pluggable database (PDB), you should have set this step to run manually during the upgrade. Contact your database administrator to run *postupgsetdescindextrue.sql* against the container database (CDB) as *sysdba*.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-26-5: Rebuilding Dropped Indexes

This step runs *pscreatedescindexes.sql*, which re-creates all indexes owned by the ACCESSID that used to contain the DESC clause. These indexes are created as ascending indexes.

**Note.** If any ascending indexes already exist on the table with an identical column list as a former descending index, then the index in the *pscreatedescindexes.sql* script will fail with an ORA-01408 error. In that case, you must manually determine which of the duplicate indexes needs to be retained versus deleted.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

### Task 3-26-6: Resetting the Ignore Descending Index Parameter

This step runs *PS\_HOME/SCRIPTS/postupgsetdescindexfalse.sql* as the system user to reset the `_ignore_desc_in_index` parameter back to false.

**Note.** If your database is a pluggable database (PDB), you should have set this step to run manually during the upgrade. Contact your database administrator to run *postupgsetdescindexfalse.sql* against the container database (CDB) as *sysdba*.



## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## **Task 3-27: Synchronizing Database Objects**

This section discusses:

- Understanding Database Object Synchronization
- Setting Index Attributes
- Setting Temporary Table Attributes
- Setting Table Attributes

### Understanding Database Object Synchronization

This task runs steps to update and populate table attributes.

#### Task 3-27-1: Setting Index Attributes

This step runs setindex.sqr, which updates index overrides stored in the PSIDXDDLPARM table. The values stored in the PARMVALUE field are updated with current values found in the system catalog.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

#### Task 3-27-2: Setting Temporary Table Attributes

This step runs settmpin.sqr, which populates the PeopleSoft PeopleTools table PSRECTBLSPC with the table name, database name, and tablespace name information for the temporary table instances created on the database in a previous step. This information will be required by processes that perform in-stream RUNSTATS (%UpdateStats) on the temporary table instances.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS	All

### Task 3-27-3: Setting Table Attributes

This step runs `setspace.sqr`, which populates all tablespace information in the `PSRECTBLSPC` table. The values stored in the `DDLSPACENAM` field are updated with current values found in the system catalog. If you modified tablespace names from the delivered names, this step makes those same changes in the PeopleSoft record definition.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle DB2 z/OS	All

### Task 3-28: Updating Object Version Numbers

---

In this task, you run the `VERSION` Application Engine program. This ensures that all of your version numbers are correct and, if not, resets them to 1.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-29: Dropping PeopleTools Tables After Data Conversion

---

This section discusses:

- Understanding Dropping PeopleTools Tables After Data Conversion
- Dropping the Upgrade Copy of RecField Definitions
- Dropping the Upgrade Copy of Password History
- Dropping the Upgrade Copy of PeopleTools Settings

## Understanding Dropping PeopleTools Tables After Data Conversion

In this task, you drop tables that were created earlier in the upgrade to temporarily hold old release data and that were used during data conversion. These tables are no longer needed and should be dropped to ensure clean audits at the end of the upgrade.

### Task 3-29-1: Dropping the Upgrade Copy of RecField Definitions

In this step, the cloned table PSRECFIELD\_UPG that was created in the beginning of the PeopleTools upgrade is dropped. The old release data is no longer needed.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-29-2: Dropping the Upgrade Copy of Password History

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.52 or earlier.

In this step, the cloned table PPSWDHIST\_TMP that was created in the beginning of the PeopleTools upgrade is dropped. The old release data is no longer needed.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 3-29-3: Dropping the Upgrade Copy of PeopleTools Settings

In this step, the cloned table PSSTATUS\_UPG that was created in the beginning of the PeopleTools upgrade is dropped. The old release data is no longer needed.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## **Task 3-30: Backing Up After the PeopleTools Upgrade**

---

Back up your upgrade database now. This enables you to restart your upgrade from this point, in case you experience any database integrity problems during the remaining tasks in the upgrade process.

### **Properties**

<b>Database Orientation</b>	<b>Pass Type</b>	<b>Products</b>	<b>Platforms</b>	<b>Languages</b>
Target	All	All	All	All

## Chapter 4

# Completing Database Changes

This chapter discusses:

- Understanding Database Changes
- Updating Language Data
- Setting Up Security
- Running the Final Audit Reports
- Booting Servers
- Reviewing PeopleTools Functionality
- Enabling Oracle Transparent Data Encryption
- Enabling Oracle Fine Grained Auditing
- Reviewing Change Control
- Updating Application Objects

## Understanding Database Changes

---

You made various changes in the previous chapters, and now it is time to complete these changes and test your upgraded database. You will run reports to audit your database and then turn Change Control back on.

## Task 4-1: Updating Language Data

---

This section discusses:

- Understanding Updating Language Data
- Running the TSRECPOP Script

## Understanding Updating Language Data

In this task, you run scripts to modify data in PeopleSoft PeopleTools-related language tables.

---

**Note.** For DB2 z/OS customers, Oracle recommends that you run RUNSTATS against the system catalog tables at this time.

---

## Task 4-1-1: Running the TSRECPOP Script

In this step, the TSRECPOP script initializes and modifies the data in PeopleSoft PeopleTools-related language architecture tables.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-2: Setting Up Security

---

This section discusses:

- Understanding Security
- Synchronizing CREF Permissions

### Understanding Security

In this task you perform steps to set up security, grant access to the user ID, set up permissions lists, and grant access to navigation and home pages.

#### Task 4-2-1: Synchronizing CREF Permissions

This step runs the Application Engine program PORTAL\_CSS, which synchronizes Portal Registry Structures and Permission Lists for all Portal Registry Definitions in the Upgrade database. The Portal Registry Structures, as copied from the new release, do not initially reference any permission lists on the Upgrade database. The synchronization process matches the existing permission lists to the appropriate Registry Structures. Review any messages received during the running of this process with your Portal Administrator.

See the online product documentation for PeopleTools: Portal Technology for your new release.

**Note.** If the permission lists for your upgrade user do not allow you access to a component, you will encounter this error when running the security synchronization process for that page: `Security synchronization failed for Portal Object`. This error may indicate other problems with the component or folder, but you should check your security first.

---

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-3: Running the Final Audit Reports

---

This section discusses:

- Running the Final DDDAUDIT Report
- Running the Final SYSAUDIT Report
- Running the Final SWPAUDIT Report
- Creating the FNLALTAUD Project
- Running the Final Alter Audit
- Reviewing the Final Audits

### Task 4-3-1: Running the Final DDDAUDIT Report

DDDAUDIT is an SQR that compares your production SQL data tables with the PeopleSoft PeopleTools record definitions to uncover inconsistencies. You can expect some errors from this report. You will review the output from the report in another step.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 4-3-2: Running the Final SYSAUDIT Report

SYSAUDIT is an SQR that identifies *orphaned* PeopleSoft objects. For example, SYSAUDIT will identify a module of PeopleCode that exists but does not relate to any other objects in the system. SYSAUDIT also identifies other inconsistencies within your database.

#### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

### Task 4-3-3: Running the Final SWPAUDIT Report

SWPAUDIT is an SQR that checks database integrity in a multilingual context. For example, SWPAUDIT can identify a base and related-language record with mismatched key fields.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All non-English

## Task 4-3-4: Creating the FNLALTAUD Project

In this step, you create the FNLALTAUD project and use it to run your final Alter Audit. Creating this new project now ensures that all the records in your system are audited, including SQL tables. This project also includes any custom records that you have created in your system.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-3-5: Running the Final Alter Audit

Run the PeopleSoft PeopleTools alter record process on all tables in your system to check whether the PeopleSoft PeopleTools definitions are synchronized with the underlying SQL data tables in your database. This process is called an Alter Audit. An Alter Audit compares the data structures of your database tables with the PeopleSoft PeopleTools definitions to uncover inconsistencies. The Alter Audit then creates an SQL script with the DDL changes needed to synchronize your database with the PeopleSoft PeopleTools definitions.

The Alter Audit script is built using the FNLALTAUD project created in the previous step.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-3-6: Reviewing the Final Audits

The Alter Audit process creates SQL scripts that correct any discrepancies between your PeopleSoft PeopleTools record definitions and the database system catalog table definitions. Review the Alter Audit output and correct any discrepancies noted by running the generated scripts with your platform-specific SQL tool. The script names are:

```
fnlaltaud_alttbl.sql
```



fnlaltaud\_crtidx.sql

---

**Note.** The Alter Audit process also creates the script `fnlaltaud_crttrg.sql`, which re-creates all database triggers. You do not need to run this script, since all database triggers were created in a previous task.

---

**Note.** For the Microsoft SQL Server platform, if your database has tables containing the MSSCONCATCOL column, you will see SQL to alter the tables and re-create their associated indexes, even though the underlying tables and indexes may not have changed.

---

Review the output from the SYSAUDIT, SWPAUDIT (if applicable), and DDDAUDIT reports and correct any discrepancies.

Your DDDAUDIT listing shows some expected discrepancies. Tables and views deleted from PeopleSoft Application Designer are not automatically deleted from the system tables. Oracle takes this precaution in case you have customized information that you want to preserve. Therefore, the report lists any tables and views that the new release does not have. Review these tables to verify that you do not wish to preserve any custom data, and then drop the tables and views.

Similarly, your SYSAUDIT report may have some errors due to references to obsolete PeopleSoft-owned objects. Invalid references are not automatically cleaned up during the upgrade in case you have customizations that you want to modify. For instance, if a PeopleSoft Permission List is deleted, and you have a Role that still refers to that Permission List, then it will appear on the SYSAUDIT report.

See the online product documentation for PeopleTools: Data Management for your new release.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-4: Booting Servers

---

Deploy PS\_HOME and create new domains using the PeopleTools DPK for your new PeopleTools release. Clear your client workstation browser cache and boot your application servers, web servers, and process scheduler servers. At this point in the upgrade, complete any necessary remaining installation tasks.

See the PeopleTools Deployment Packages Installation guide for your new release.

As an alternative to manually booting up the servers, you can use an Oracle VM template, if one is available and suitable for your new release configuration. Please refer to the Oracle Virtualization information out on My Oracle Support for more information about using Oracle VM templates on PeopleSoft.

---

**Note.** After applying this release, the Help, About dialog box will show the version of PeopleSoft PeopleTools to which you upgraded.

---

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-5: Reviewing PeopleTools Functionality

---

PeopleSoft Online Help provides details about the current PeopleSoft PeopleTools functionality. There are many new features delivered in the new release that you may want to use. You should now review the PeopleSoft Online Help and the PeopleTools Deployment Packages Installation guide for your new release to configure your environment properly. This may include, but is not limited to, configuring and starting a process scheduler and a report server, and reviewing portal settings.

See PeopleTools on the Oracle Help Center, <https://docs.oracle.com/en/applications/peoplesoft/peopletools/index.html>.

See the PeopleTools Deployment Packages Installation guide for your new release.

To review the PeopleSoft PeopleTools New Feature Overview, go to My Oracle Support and search for the PeopleSoft PeopleTools New Feature Overview for your new release.

You should review the following considerations:

- If you applied a PeopleSoft PeopleTools patch as part of the upgrade, review the patch's README file, especially anything documented in the Patch Notes or Additional Considerations sections. All of the steps included in the PeopleTools Patch Change Package were covered as part of applying the PeopleTools Upgrade Change Package. The scripts run in the patch deliver data in an incremental fashion versus the composite scripts used in the upgrade, but any database changes delivered in the patch were also included in the upgrade.

- Oracle has updated the themes that define the look of the user interface. Various user interface options were delivered with your current PeopleSoft release. The following table lists the theme or style available for each PeopleSoft release:

Theme Name	Release
Classic (deprecated as of PeopleTools 8.50)	PeopleSoft 8.4 applications and pre-8.50 PeopleTools system databases
Light blue (deprecated as of PeopleTools 8.50)	NA
Dark blue	PeopleSoft 8.8, 8.9, and 9.0 applications and 8.51 or later PeopleTools system databases
SWAN	PeopleSoft 9.1 applications
Tangerine, Tangerine_ALT, and Fluid	PeopleSoft 9.2 applications

Your style settings were retained during the upgrade, but your theme may have been updated.

See the product documentation for PeopleTools: Portal Technology for your new release for more information about using PeopleTools branding features.

- Review your PeopleSoft Portal settings, as the values may have changed during the upgrade. See the product documentation for PeopleTools: Portal Technology for your new release for more information about understanding changes in portal configuration settings.
- As of PeopleTools 8.55, if you are an Oracle database customer, the set of privileges given to the access ID has been refined even further. If you are upgrading from PeopleSoft PeopleTools 8.54 or earlier, restrict the access ID privileges after completing the final pass of the upgrade. See the PeopleSoft 9.2 Application Installation guide for your new release, appendix "Synchronizing the ACCESSID User."
- Password security has been enhanced as of PeopleSoft PeopleTools 8.53. Your passwords will automatically use the stronger hashing method the next time your passwords are changed using the new PeopleTools release.
- For XSL template users, BI Publisher (BIP) report definitions using XSL templates that were created using PeopleSoft PeopleTools 8.52 or earlier are incompatible with the newer BIP Core engine used in PeopleSoft PeopleTools 8.53. Regenerate your XSL template(s) using the current version of the BIP Template Builder plug-in that is available to download through PeopleSoft Pure Internet Architecture on the Design Helper page. (Select Reporting Tools, BI Publisher, Setup, Design Helper.) Reassociate the updated XSL template with the BIP report definition under the Template tab, replacing the previous version.
- As of PeopleTools 8.54, if you are an Oracle database customer, you can now use Materialized Views. Any views that are defined as Materialized Views were created earlier in the upgrade. You will need to set the appropriate refresh schedules for these Materialized Views, otherwise the information contained in the views will become stale and inaccurate. You can find the Materialized View Maintenance Page by navigating to PeopleTools, Utilities, Administration, Materialized Views, Maintain Materialized Views. Additionally, if you were already using Materialized Views in PeopleTools 8.54, after the upgrade review your Materialized View settings and make sure all of your materialized views are set as enabled. After enabling the materialized views, re-create any materialized views as needed. See the product documentation for PeopleTools: Data Administration for your new release for more information about Materialized Views.
- As of PeopleTools 8.54, partitioning is supported on Oracle platforms. The upgrade process preserved

partitioning on existing tables and indexes. Table partitioning information is stored in PTTBLPARTDDL and index partitioning information is stored in PTIDXPARTDDL. You can query these records to find the Oracle-delivered partitioning recommendations, if any. Review the delivered application partitioning recommendations, make any necessary changes for your specific environment, and then apply the changes to your environment.

See the product documentation for PeopleTools: Data Management, Maintaining Partition Definitions for more information about partitioning on Oracle platforms.

- As of PeopleTools 8.54, global temporary tables are supported on Oracle platforms. Oracle delivered the PSGTT01 tablespace as part of the upgrade. If you want to assign tables to this tablespace within Application Designer's Change Space functionality, you can either already have a PeopleSoft table created in this tablespace and then run setspace.sql to synchronize the metadata, or you can insert the tablespace into the PSTBLSPPCAT table

See the new release product documentation for PeopleTools: Data Management.

- As of PeopleTools 8.55, SAP Crystal Reports and Business Objects Enterprise (BOE) are no longer supported. Crystal Reports and BOE will not work on any environments that are running on PeopleSoft PeopleTools 8.55. Review Tech Update: Oracle Retires Support for Crystal Reports (My Oracle Support, Doc ID 1927865.1) for more information.
- As of PeopleTools 8.55, the Namespace Alias feature is enhanced and can be used for mapping environment information when cloning or changing middle tier components. If you used this functionality in 8.54 or 8.55 with SES, you can continue to use Namespace Alias with Elasticsearch in PeopleTools 8.56. You will need to delete any old Namespace Alias settings for SES and then build initial indexes for Elasticsearch. If you did not use Namespace Alias in an earlier PeopleTools version, then no action is required for upgrade.

See the product documentation for PeopleTools: Search Technology, Administering Search Framework for more information about setting Namespace Aliases.

- As of PeopleTools 8.56, Elasticsearch is the only supported search engine; SES and Verity can no longer be used. For more information on how this affects your specific environment and your upgrade plans, please review Tech Update - Oracle Finds a New Search Engine for PeopleSoft (My Oracle Support, Doc ID 2180927.1). Additionally, review the PeopleTools Elasticsearch Home Page (My Oracle Support, Doc ID 2205540.2) for complete instructions for implementing or upgrading to the correct version of Elasticsearch for your new PeopleTools release.
- Password security has been enhanced as of PeopleSoft PeopleTools 8.57. In order to take advantage of the AES algorithm, reset the following passwords using PeopleTools 8.57 or later: CONNECT ID password, domain password, Access ID password. This is not applicable to user passwords.
- If you compared PeopleTools objects during the upgrade, evaluate the compare reports to help identify whether the delivered objects conflict with any of your customizations. The compare report will also show any changes that are delivered in the new PeopleTools release. If you need to re-implement your customizations after the upgrade, you should avoid changing delivered PeopleTools objects because they may be updated in both PeopleTools patches as well as future PeopleTools releases.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-6: Enabling Oracle Transparent Data Encryption

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Oracle's Transparent Data Encryption (TDE) feature was disabled at the beginning of the upgrade. If you had TDE enabled prior to the upgrade, then after finishing the upgrade you need to re-enable TDE by running scripts in the sequence specified in the following procedure.

To re-enable TDE:

1. Run *PS\_HOME\SCRIPTS\postupgtdeprocess1.sql*.

The script *postupgtdeprocess1.sql* performs similarly to the script *preupgtdeprocess.sql*, which you ran at the beginning of the upgrade, to find any tables that are encrypted, generate a list of fields that need to have the PeopleSoft metadata encryption attribute re-enabled, and create the ENCRYPTEDTBLSA project. The ENCRYPTEDTBLSB project is compared with the ENCRYPTEDTBLSA project, and the resulting list of differences between the recfields is input to the script *postupgtdeprocess2.sql*.

See "Preparing for Your PeopleTools Upgrade," Preserving PeopleTools Configuration Data, Saving Transparent Data Encryption Information.

2. Run *PS\_HOME\SCRIPTS\postupgtdeprocess2.sql*.

The script *postupgtdeprocess2.sql* generates four scripts, which you will run in the next step to reapply TDE to the records identified by the *postupgtdeprocess1.sql*. Review the generated scripts (particularly *pstderebuildfuncidx.sql*) to make sure that the syntax, sizing, and tablespace information is intact and is not split at the end of a line. If necessary, modify the scripts as needed for your environment.

3. Run the scripts that were generated when you ran *postupgtdeprocess2.sql* in the following order:

- *pstdedropfuncidx.sql*
- *pstdereencrypt.sql*
- *pstderebuildfuncidx.sql*
- *pstdereencryptmetadata.sql*

4. Run *PS\_HOME\SCRIPTS\postupgtdevalidation.sql*.

The script *postupgtdevalidation.sql* validates that all tables and columns that were encrypted before the upgrade have maintained encryption. It lists any records that contain encrypted fields, but were not included in the ENCRYPTEDTBLSB project. It also sets the value for the TDE algorithm defined within PSOPTIONS.

See the online product documentation for PeopleTools: Data Management for your new release for more information about administering PeopleSoft databases on Oracle.

### Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 4-7: Enabling Oracle Fine Grained Auditing

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After completing the final pass of the upgrade, you can re-enable Oracle Fine Grained Auditing (FGA).

To re-enable FGA:

1. Review the log file generated by running `preupfgareport.sql` at the beginning of the upgrade.
2. Edit the script `pscreatefga.sql`, generated earlier in the upgrade, to remove any entries that no longer apply to the new release as some of the tables and columns referenced in the script may have been removed during the upgrade.

You may want to enable FGA on additional tables and columns in the new release.

3. After editing the script, run the `pscreatefga.sql` script to re-enable Oracle Fine Grained Auditing.

See "Preparing for Your PeopleTools Upgrade," Preserving PeopleTools Configuration Data, Saving Oracle Fine Grained Auditing Information.

See the online product documentation for PeopleTools: Data Management for your new release for more information about administering databases on Oracle.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	Oracle	All

## Task 4-8: Reviewing Change Control

Earlier in the upgrade process, in the beginning of the chapter "Applying PeopleTools Changes," the Change Control feature was disabled. In this step, you re-enable Change Control, if your site uses this functionality.

To turn on Change Control:

1. Sign in to the Target database using PeopleSoft Application Designer.
2. Select Tools, Change Control, Administrator.

The following example shows the options available on the Change Control Administrator dialog box:



Change Control Administrator dialog box

3. Set "Use change control locking" and "Use change control history" according to your site specifications.

See "Applying PeopleTools Changes," Turning Off Change Control.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

## Task 4-9: Updating Application Objects

If you are a PeopleSoft Application customer, there may be additional fixes or Change Packages that need to be applied to your database to ensure compatibility of your application with the latest PeopleTools release. Review and perform any of the following instructions that apply for your application:

- For PeopleSoft Interaction Hub customers, review *E-PORTAL: Applications Portal's PeopleTools Upgrade Impacts* (Doc ID1340982.1) on My Oracle Support for any application resolutions that must be applied after upgrading to this PeopleSoft PeopleTools release.
- For PeopleSoft CRM customers, review *CRM Worklist trigger is removed after upgrading PeopleTools to 8.53* (Doc ID 1511408.1) on My Oracle Support for any application changes that must be applied after upgrading to this PeopleSoft PeopleTools release.
- For PeopleSoft HCM customers upgrading from 8.50 or lower, review *Activating New HCM 9.1 Features Which are Dependent on Tools 8.51.02 + (Company Directory, Org Viewer, Talent Summary, Manager Dashboard, SES and ELM Dashboard)* (Doc ID 1265184.1) on My Oracle Support for any application changes that must be applied after upgrading to this PeopleSoft PeopleTools release.
- For PeopleSoft 9.2 customers, review *PeopleTools Upgrade Impacts for PeopleSoft 9.2 Applications* (Doc ID 2295148.2) on My Oracle Support for any application resolutions that must be applied after upgrading to this PeopleSoft PeopleTools release.
- For PeopleSoft 9.2 Application customers, review the instructions regarding the Object Delta Change Package to perform additional steps that should be completed after upgrading to this PeopleSoft PeopleTools release.

See the product documentation for PeopleTools: Change Assistant and Update Manager for your new release for more information about Creating and Applying Object Delta Change Package.

## Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	All	All

