ORACLE
PeopleSoft

PeopleTools 8.57 Upgrade

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Upgrade

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Understanding This Documentation

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

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

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

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

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.
Italics	Indicates field values, emphasis, and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example: Enter the letter *O*.
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 *See* refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation. Cross-references under the heading *See Also* refer you to additional documentation that has more information regarding the subject.
" " (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meaning.

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.
Note. Note text.	Text that begins with *Note* indicates information that you should pay particular attention to as you work with your PeopleSoft system.
Important! Important note text.	A note that begins with *Important!* is crucial and includes information about what you need to do for the system to function properly.
Warning! Warning text.	A note that begins with *Warning!* contains 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

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

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

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
- Cleaning Up PeopleTools Data
- Shrinking Images
- Preserving PeopleTools Configuration Data
- Converting Database Data Types
- Creating Updated Release Scripts

Understanding PeopleTools Upgrade Preparation

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

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

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.

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.

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
- Preparing for the Integration Broker Conversion

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)	ptddlupg.sql
DB2 z/OS (Unicode)	ptddlupgu.sql
DB2 LUW (ANSI)	ptddlupg.sql
DB2 LUW (Unicode)	ptddlupgu.sql
Oracle	ptddlupg.sql

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.

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

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.

See Performing Updates to PeopleTools System Tables, Creating Tablespaces.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 z/OS DB2 LUW 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 DB2 LUW 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 PeoleTools 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 pt*xxx*tls 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)';
```

For PeopleSoft Data Mover scripts (DMSs), 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)';
```

Following is a list of scripts in the PS_HOME\SCRIPTS directory on your file server that you need to edit:

`msgtlsupg.dms`

`pslanguages.dms`

`tlsupgnoncomp.dms`

`encrypt.dms`

`ptrecfield.dms`

`ptpswdhistoryupgimp.dms`

`ptsysi.dms`

`ptdbstamp.dms`

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\ddl*xxx*.dms script for your database platform, as specified in the table below:

Script	Platform
`ddldb2.dms`	DB2 z/OS
`ddldbx.dms`	DB2 LUW
`ddlora.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 DB2 LUW Oracle	All

Task 1-3-9: Preparing for the Integration Broker Conversion

This section discusses:

- Understanding Integration Broker Conversion
- Editing PTIBUPGRADE.DMS
- Editing PTUPGIBDEL.SQL
- Editing the Change Assistant Template

Understanding Integration Broker Conversion

In this step, you edit various Integration Broker scripts that are run during the upgrade. You also need to modify PeopleSoft Change Assistant step properties with an updated script name so that the upgrade does not error out on an incorrect script name.

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.47 or earlier. You must perform this step if you are upgrading from PeopleSoft PeopleTools 8.47 or earlier.

Editing PTIBUPGRADE.DMS

Edit *PS_HOME*\SCRIPTS\ptibupgrade.dms and make the necessary modifications as documented in the script. User level node security and transactional security have been added as of PeopleSoft PeopleTools 8.48. Service namespace information, a low-level user on the node, and a low-level permission list for service operations, need to be specified. Consult with your Integration Broker specialist for assistance.

Editing PTUPGIBDEL.SQL

Edit *PS_HOME*\SCRIPTS\ptupgibdel.sql to delete data from the tables that only exist in the old PeopleSoft PeopleTools release. Open the script and modify it as follows.

To modify the ptupgibdel.sql script:

1. Search for the string `?--- End of PT8.xx ---?` in which *xx* represents the last two digits of the PeopleSoft PeopleTools release from which you are upgrading.
2. Delete the entire portion of the script below this string.
3. Save the script as *PS_HOME*\SCRIPTS\ptupgibdel8*xx*.sql in which *xx* represents the last two digits of the PeopleSoft PeopleTools release from which you are upgrading, as determined in step 1.

Important! Save the script using the naming convention shown above. This will preserve the original script for use in updating other databases at different PeopleSoft PeopleTools releases and assist in running the script automatically.

Editing the Change Assistant Template

Follow this procedure to edit your PeopleSoft Change Assistant template so that the correct script is run.

To edit the template:

1. In PeopleSoft Change Assistant, in the task Performing Updates to PeopleTools System Tables, right-click the step Cleaning Up Message Data, and then select Step Properties.
2. Change the Script/Procedure value from *ptupgibdel8xx* to the specific name that you used in step 3 of the procedure Editing ptupgibdel.sql, without the .sql extension.
3. Click OK.

Properties

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

Task 1-4: Cleaning Up PeopleTools Data

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.46, 8.47, 8.48, 8.49, 8.50, or 8.51. In this step, you modify or delete PeopleSoft PeopleTools data prior to performing the PeopleSoft PeopleTools upgrade. This is necessary so that tables can be altered and indexes can be created successfully later in the upgrade.

Use the following instructions for your specific PeopleSoft PeopleTools release:

- If you are upgrading from PeopleSoft PeopleTools 8.46, 8.47, 8.48, or 8.49:

  PSLOCALEORDER has three fields defined: ISO_LOCALE, SEQNUM, and ISO_LOCALE_CHILD. This table is used internally by PeopleSoft PeopleTools to prioritize locales when consuming a remote WSRP service description. Priority is defined by the SEQNUM field.

  See the product documentation for PeopleTools: Portal Technology for more information about language support for consuming and producing remote portlets.

  As of PeopleSoft PeopleTools 8.50, a unique index with the keys ISO_LOCALE and SEQNUM will be created for the PSLOCALEORDER table. You need to ensure that PSLOCALEORDER does not contain any duplicates so that the unique index can be created successfully later in the upgrade. To determine whether you have any rows of data that share the same set of values for ISO_LOCALE and SEQNUM, run the following SQL:

  ```
  SELECT ISO_LOCALE, SEQNUM, COUNT(SEQNUM) AS NUMBER_OF_DUPLICATE_ROWS⇒
   FROM PSLOCALEORDER GROUP BY ISO_LOCALE, SEQNUM HAVING COUNT(SEQNUM) > 1;
  ```

  This SQL will return the number of duplicate rows that share the same set of values for ISO_LOCALE and SEQNUM. If any rows are returned, decide which row of data you want to keep and delete the other rows.

After deleting the duplicate rows, rerun the above SQL to verify that no further duplicates exist.

- If your are upgrading from PeopleSoft PeopleTools 8.50 or 8.51:

  PSCUBRUNCNTL is the run control table that stores the set of parameters required for running the process to build Essbase cube. The run control table should be keyed by user ID and run control ID.

  See the PeopleTools: PeopleSoft Process Scheduler PeopleBook for your current release, "Submitting and Scheduling Process Requests," Understanding Run Control IDs.

  Prior to PeopleSoft PeopleTools 8.52, CUB_OUTLINEID, CUB_CONNECTID, ANALYSIS_DB_APP, and ANALYSIS_DB_NAME were incorrectly defined as keys, causing non-unique run control IDs to be created. As of PeopleSoft PeopleTools 8.52, a unique index with the keys OPRID and RUN_CNTL_ID will be created for the PSCUBRUNCNTL table. You need to ensure that PSCUBRUNCNTL does not contain any duplicates so that the unique index can be created successfully later in the upgrade. To determine whether you have any rows of data that share the same set of values for OPRID and RUN_CNTL_ID, run the following SQL:

  ```
  SELECT OPRID, RUN_CNTL_ID, COUNT(RUN_CNTL_ID) AS NUMBER_OF_DUPLICATE_⇒
  ROWS FROM PSCUBRUNCNTL GROUP BY OPRID, RUN_CNTL_ID HAVING COUNT(RUN_⇒
  CNTL_ID) > 1;
  ```

  This SQL will return the number of duplicate rows that share the same set of values for OPRID and RUN_CNTL_ID. If any rows are returned, decide which row of data you want to keep and delete the other rows. After deleting the duplicate rows, rerun the above SQL to verify that no further duplicates exist.

Properties

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

Task 1-5: 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.

If you are using a PeopleSoft PeopleTools release earlier than 8.44.15, you will need to manually save and temporarily remove any custom images greater than 32 KB. Using your SQL query tool, run the following SQL to identify images greater than 32 KB:

```
-- CREATE A TABLE TO HOLD THE CONVERTED IMAGE
CREATE TABLE PS_CONVIMG (CONTNAME VARCHAR2(30), IMAGESIZE BLOB);
-- LOAD CONVERTED DATA INTO THE TABLE
INSERT INTO PS_CONVIMG SELECT CONTNAME,TO_LOB(CONTDATA) FROM PSCONTDEFN;
-- RETRIEVE IMAGES OVER 32K
SELECT CONTNAME, DBMS_LOB.GETLENGTH(IMAGESIZE) IMAGESIZE FROM PS_⇒
CONVIMGWHERE DBMS_LOB.GETLENGTH(IMAGESIZE) > 32768;
```

To manually save images greater than 32 KB:

1. In PeopleSoft Application Designer, insert your images into a project.

   Select Insert, Definitions into Project.
2. Save the project.
3. Copy the images to file.

   Select Tools, Upgrade, Copy Project to File.
4. Delete the rows for the images in your project from the PSCONTDEFN table.
5. When you are finished with the upgrade, copy the project from file to restore your custom images.

   Select Tools, Upgrade, Copy Project from File.

See "Applying PeopleTools Changes," Updating PeopleTools System Tables.

Properties

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

Task 1-6: 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 1-6-1: 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 Application Changes," Enabling Oracle Transparent Data Encryption.

Properties

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

Task 1-6-2: 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\preupgfgareport.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\preupgfgaprocess.sql. This script generates the scripts pscreatefga.sql and psdisablefga.sql.
3. Run the generated psdisablefga.sql to disable FGA polices.

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 Application Changes," Enabling Oracle Fine Grained Auditing.

Properties

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

Task 1-7: 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
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- Running Long to LOB Script 7
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- Auditing the Long to LOB Conversion
- Running CLS Drop Indexes Script 1
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- Running CLS Drop Indexes Script 8
- Running Character Length Script 1
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- 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 1-7-1: 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 1-7-2: 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 1-7-3: 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 1-7-4: 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 1-7-5: 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 1-7-6: Creating the Microsoft Conversion Project

This step runs mssnewtype.sql, which generates and populates the MSSNEWTYPE 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 1-7-7: 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 1-7-8: 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 1-7-9: 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 1-7-10: 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 1-7-11: 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 1-7-12: 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 1-7-13: 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 1-7-14: 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 1-7-15: 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 1-7-16: 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:

1. 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\PSORADataTypesConversion.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\PSORADataTypesConversion.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\PSORADataTypesConversion.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 1-7-17: Running Long to LOB Script 1

This step runs longtolobalter1.sql, which was generated using PSORADataTypesConversion.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 1-7-18: Running Long to LOB Script 2

This step runs longtolobalter2.sql, which was generated using PSORADataTypesConversion.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 1-7-19: Running Long to LOB Script 3

This step runs longtolobalter3.sql, which was generated using PSORADataTypesConversion.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 1-7-20: Running Long to LOB Script 4

This step runs longtolobalter4.sql, which was generated using PSORADataTypesConversion.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 1-7-21: Running Long to LOB Script 5

This step runs longtolobalter5.sql, which was generated using PSORADataTypesConversion.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 1-7-22: Running Long to LOB Script 6

This step runs longtolobalter6.sql, which was generated using PSORADataTypesConversion.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 1-7-23: Running Long to LOB Script 7

This step runs longtolobalter7.sql, which was generated using PSORADataTypesConversion.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 1-7-24: Running Long to LOB Script 8

This step runs longtolobalter8.sql, which was generated using PSORADataTypesConversion.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 1-7-25: 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 1-7-26: Running CLS Drop Indexes Script 1

This step runs clsdropindexes1.sql, which was generated using PSORADataTypesConversion.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 1-7-27: Running CLS Drop Indexes Script 2

This step runs clsdropindexes2.sql, which was generated using PSORADataTypesConversion.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 1-7-28: Running CLS Drop Indexes Script 3

This step runs clsdropindexes3.sql, which was generated using PSORADataTypesConversion.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 1-7-29: Running CLS Drop Indexes Script 4

This step runs clsdropindexes4.sql, which was generated using PSORADataTypesConversion.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 1-7-30: Running CLS Drop Indexes Script 5

This step runs clsdropindexes5.sql, which was generated using PSORADataTypesConversion.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 1-7-31: Running CLS Drop Indexes Script 6

This step runs clsdropindexes6.sql, which was generated using PSORADataTypesConversion.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 1-7-32: Running CLS Drop Indexes Script 7

This step runs clsdropindexes7.sql, which was generated using PSORADataTypesConversion.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 1-7-33: Running CLS Drop Indexes Script 8

This step runs clsdropindexes8.sql, which was generated using PSORADataTypesConversion.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 1-7-34: Running Character Length Script 1

This step runs characterlengthsemanticsalter1.sql, which was generated using PSORADataTypesConversion.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 1-7-35: Running Character Length Script 2

This step runs characterlengthsemanticsalter2.sql, which was generated using PSORADataTypesConversion.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 1-7-36: Running Character Length Script 3

This step runs characterlengthsemanticsalter3.sql, which was generated using PSORADataTypesConversion.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 1-7-37: Running Character Length Script 4

This step runs characterlengthsemanticsalter4.sql, which was generated using PSORADataTypesConversion.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 1-7-38: Running Character Length Script 5

This step runs characterlengthsemanticsalter5.sql, which was generated using PSORADataTypesConversion.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 1-7-39: Running Character Length Script 6

This step runs characterlengthsemanticsalter6.sql, which was generated using PSORADataTypesConversion.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 1-7-40: Running Character Length Script 7

This step runs characterlengthsemanticsalter7.sql, which was generated using PSORADataTypesConversion.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 1-7-41: Running Character Length Script 8

This step runs characterlengthsemanticsalter8.sql, which was generated using PSORADataTypesConversion.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 1-7-42: Running CLS Rebuild Indexes Script 1

This step runs clsrebuildindexes1.sql, which was generated using PSORADataTypesConversion.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 1-7-43: Running CLS Rebuild Indexes Script 2

This step runs clsrebuildindexes2.sql, which was generated using PSORADataTypesConversion.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 1-7-44: Running CLS Rebuild Indexes Script 3

This step runs clsrebuildindexes3.sql, which was generated using PSORADataTypesConversion.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 1-7-45: Running CLS Rebuild Indexes Script 4

This step runs clsrebuildindexes4.sql, which was generated using PSORADataTypesConversion.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 1-7-46: Running CLS Rebuild Indexes Script 5

This step runs clsrebuildindexes5.sql, which was generated using PSORADataTypesConversion.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 1-7-47: Running CLS Rebuild Indexes Script 6

This step runs clsrebuildindexes6.sql, which was generated using PSORADataTypesConversion.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 1-7-48: Running CLS Rebuild Indexes Script 7

This step runs clsrebuildindexes7.sql, which was generated using PSORADataTypesConversion.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 1-7-49: Running CLS Rebuild Indexes Script 8

This step runs clsrebuildindexes8.sql, which was generated using PSORADataTypesConversion.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 1-7-50: 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 1-7-51: 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 longtolobalter*.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." l2laudit.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 1-7-52: 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 1-7-53: 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 1-7-54: Populating the Oracle VARCHAR2 Conversion Project

This step runs ptupgvarchartolob_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 1-7-55: Generating the Oracle VARCHAR2 Conversion Script

This step generates the SQL script ptupgvarchartolob_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 1-7-56: Editing the Oracle VARCHAR2 Conversion Script

In this step, you edit the ptupgvarchartolob_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 1-7-57: Running the Oracle VARCHAR2 Conversion Script

This step runs the ptupgvarchartolob_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

Task 1-8: Creating Updated Release Scripts

This section discusses:

- Understanding Updated Release Script Creation
- 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 1-8-1: Running a DBTSFIX Report

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 REL*xxx*dbtsfix.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 REL*xxx*dbtsfix.sql script in which *xxx* represents a release number (for example, 852, 853, 854, and so on) associated with your particular path.

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 LUW DB2 z/OS	All

Task 1-8-2: Editing DBTSFIX Output Scripts

Edit the generated REL*xxx*DBTSFIX 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 LUW DB2 z/OS	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 the Initial RUNSTATS Report for DB2 LUW
- Running Initial Update Statistics for DB2 LUW
- 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 zOS 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 the Initial RUNSTATS Report for DB2 LUW

This script creates the RUNSTATS.DAT file for the script to update the statistics for DB2 for Linux, UNIX and Windows.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 2-1-3: Running Initial Update Statistics for DB2 LUW

This step runs runstats.sql to update statistics on your DB2 for Linux, UNIX and Windows database.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 2-1-4: 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 2-1-5: 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 2-1-6: 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, 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 and DB2 LUW platforms, if your database has tables containing the MSSCONCATCOL or DBXCONCATCOL column, you will see SQL 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, SYSAUD01 (if applicable), 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 whether to accept a change from the New Release Demo database. 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
- Deleting DDDAUDIT Output Data
- Deleting Object Permission Data

- Deleting Operator Language Data
- Deleting Performance Monitor System Default Data
- Dropping Temporary Tablespaces
- Deleting Pagelet Wizard Data Manually
- Deleting Pagelet Wizard 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
DB2 LUW	`db2dart`
Microsoft SQL Server	`DBCC CHECKDB`
Oracle	`dbv`

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW 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: 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_PTUPGDDDOUTPUT 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 2-4-5: 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 2-4-6: 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 2-4-7: 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 2-4-8: Dropping Temporary Tablespaces

PeopleSoft Change Assistant will display this step only if you are upgrading from PeopleSoft PeopleTools 8.51. In this step, you will drop temporary tablespaces prior to performing the PeopleSoft PeopleTools upgrade.

If you are upgrading from PeopleSoft PeopleTools 8.51, drop the PSTBSPC and PSTBSP32 tablespaces, if they exist, from the PSPTDMO database, or from the database where the PeopleSoft PeopleTools tables are stored.

Properties

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

Task 2-4-9: Deleting Pagelet Wizard Data Manually

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.46, 8.47, 8.48, 8.49, 8.50, 8.51, or 8.52.

This step is only applicable if you have already upgraded your production application to PeopleSoft PeopleTools 8.46 or later.

In this step, you run a script to delete the common components Pagelet Wizard (PW) data to ensure that when the UPGPT846PP conversion program is run subsequently, the old existing common components PW data is not reentered into the PeopleSoft PeopleTools PW tables. If you do not run the script, then items that were removed from the PeopleSoft PeopleTools version of PW, but still exist in the common components version of PW, will be copied back into the PeopleSoft PeopleTools version when the UPGPT846PP conversion program is run.

The script also updates the common component portal option tables with the existing values in the PeopleSoft PeopleTools portal options tables. If you do not run the script, then changes made to the current PeopleSoft PeopleTools options tables may be overwritten with values from the common components portal options when the UPGPT846PP conversion program is run. The affected values include the default registry prefix, default owner ID, and the default style sheet.

Run the script only if both of the following conditions are met:

- Your current production application release database is already on PeopleSoft PeopleTools 8.46 or later.
- The PS_EOPPB_LINKPATHS table exists on the Target database.

If both of the above conditions are met, then run the following script:

```
ptppb_eoppb.dms
```

Properties

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

Task 2-4-10: Deleting Pagelet Wizard Data

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

This step is only applicable if you have already upgraded your production application to PeopleSoft PeopleTools 8.46 or later and the table PS_EOPPB_LINKPATHS exists in your Target database.

This step runs the ptppb_eoppb.dms script to delete the common component Pagelet Wizard (PW) data to ensure that when the UPGPT846PP conversion program is run subsequently, the old existing common components Pagelet Wizard data is not re-entered into the PeopleTools Pagelet Wizard tables. The script also updates the common component portal option tables with the existing values in the PeopleTools portal options tables. If the ptppb_eoppb.dms script doesn't run, then changes made to the current PeopleTools options tables may be overwritten with values from the common components portal options when the UPGPT846PP conversion program is run. The affected values include the default registry prefix, default owner ID, and the default style sheet.

Properties

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

Task 2-4-11: Exporting Password History Data

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.54 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 2-4-12: Preparing for the Password History Data Upgrade

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.54 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 the PS_PSMCFQUEUESLANG Table
- Dropping the PSOPTSTATUS Table
- 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 the PS_PSMCFQUEUESLANG Table

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.42 or 8.43.

In this step, the PeopleTools table PS_PSMCFQUEUESLANG is dropped to ensure the successful completion of your upgrade. The table does not contain data and can be safely dropped.

Properties

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

Task 2-5-2: Dropping the PSOPTSTATUS Table

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

In this step, the PeopleTools table PSOPTSTATUS is dropped to ensure the successful completion of your upgrade. The table will be converted into a view and can be safely dropped.

Properties

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

Task 2-5-3: 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_PTIACPTMPLTDEFN and PS_PTIACPTMPLTSTEP 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 LUW DB2 z/OS MS SQL Server	All

Chapter 3

Applying PeopleTools Changes

This chapter discusses:

- Understanding PeopleTools Changes
- Preparing for the DB2 Data Type Conversion
- 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
- Converting DB2 Data Types
- Loading Base Data
- Loading Language Data
- Loading PeopleTools Data
- Loading PeopleTools Definition Group
- Compiling Directive PeopleCode
- Converting PeopleTools Objects
- Creating Views
- Converting Integration Broker
- Converting Integration Broker Objects
- Creating All Triggers
- Regenerating Sync IDs
- Clearing the Rowset Cache
- Creating Global Temporary Tables
- Rebuilding Oracle Indexes

- Synchronizing Database Objects
- Updating Object Version Numbers
- Converting Oracle Time Data Types
- 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.

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: Preparing for the DB2 Data Type Conversion

This section discusses:

- Understanding the Conversion Preparation
- Editing the DB2 Data Type Conversion Script
- Running the DB2 Data Type Length Audit
- Reviewing the Initial Audits Before DB2 Conversion

Understanding the Conversion Preparation

In this task, you perform steps to prepare for the DB2 LOB data type conversion. You will edit scripts needed for the conversion, run audits to review data integrity for the conversion, and fix issues reported by the audits.

PeopleSoft Change Assistant will display the steps in this task only if you are upgrading from PeopleSoft PeopleTools 8.52 or earlier.

Task 3-1-1: Editing the DB2 Data Type Conversion Script

Edit the following SQL script and replace OWNER#ID in the script with the value found in the OWNERID column of the PS.PSDBOWNER table:

```
ptdb2lobposaudit.sql
```

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-1-2: Running the DB2 Data Type Length Audit

This step runs lobpraud.sqr, which lists the tables and fields where the average data length of the field in the table exceeds the PeopleSoft-defined field length of the Long Character field type.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-1-3: Reviewing the Initial Audits Before DB2 Conversion

Examine the log file from the previous step "Running the DB2 Data Type Length Audit." It contains a list of columns on tables where the average data length of the field in the table exceeds the PeopleSoft-defined field length of the Long Character field type. Fix the data contained in each field listed so that it is shorter than the PeopleSoft-defined field length before proceeding with the upgrade. After fixing the data, you may rerun all of the steps in this task to rerun this audit.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-2: Performing Updates to PeopleTools System Tables

This section discusses:

- Understanding Updating PeopleTools System Tables
- Cleaning Up Message Data
- 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
- Updating the PeopleTools Database Stamp
- Granting Privileges to the CONNECT ID
- Encrypting Passwords
- Updating the Database for Timestamp
- Updating PeopleTools Patch Information
- Enabling the DB2 CAST Function
- Rerunning Update Statistics for DB2 zOS
- Rerunning the RUNSTATS Report for DB2 LUW
- Rerunning Update Statistics for DB2 LUW
- 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.

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

Task 3-2-1: Cleaning Up Message Data

This step runs ptupgibdel8*xx*.sql, where *xx* represents the last two digits of the PeopleSoft PeopleTools release from which you are upgrading. Message functionality and structure changed as of PeopleSoft PeopleTools 8.48, and the old data is obsolete.

PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.47 or earlier. You must perform this step to clean out obsolete message data if you are upgrading from PeopleSoft PeopleTools 8.47 or earlier.

Properties

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

Task 3-2-2: 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 ANSI or 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 LUW DB2 z/OS	All

Task 3-2-3: 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 LUW DB2 z/OS	All

Task 3-2-4: 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 3-2-5: 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 3-2-6: 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 upggrant.sql script as the system user, which updates the PeopleSoft PSADMIN role. The upggrant.sql script assumes that you are using the PSADMIN role.

Properties

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

Task 3-2-7: 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 3-2-8: 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 upggrant_855.sql script.

Properties

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

Task 3-2-9: Updating PeopleTools System Tables

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, rel*xxx*.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 REL*xxx* scripts to run based on the PeopleSoft PeopleTools release of your upgrade database.

If you created `REL`*`xxx`*`DBTSFIX` (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 `REL`*`xxx`*`DBTSFIX`. If you did not run `DBTSFIX`, PeopleSoft Change Assistant will run `REL`*`xxx`*.

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 3-2-10: Updating the PeopleTools Database Stamp

This step runs ptdbstamp.sql, 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 3-2-11: 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 3-2-12: 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 3-2-13: Updating the Database for Timestamp

This step runs *PS_HOME/*SCRIPTS/upgdboptions_enabletimestamp.sql. This script updates the database to indicate that the new TIMESTAMP data types are now enabled. PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.49 or earlier.

Properties

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

Task 3-2-14: 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 3-2-15: Enabling the DB2 CAST Function

This step runs upgdb2dboptions_enable.sql, which updates the database to enable the conversion of the LONG VARCHAR FOR BIT DATA data type to the BLOB data type. PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.52 or earlier.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-2-16: 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 3-2-17: Rerunning the RUNSTATS Report for DB2 LUW

This script creates the RUNSTATS.DAT file for the script to update the statistics for DB2 for Linux, UNIX and Windows.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-2-18: Rerunning Update Statistics for DB2 LUW

Earlier in the upgrade process, you updated your statistics for DB2 for Linux, UNIX and Windows. Due to changes in the database structure, you must update statistics again to improve the performance of your compare and copy. This step runs `runstats.sql` to update statistics on your database.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-2-19: 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 3-2-20: 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 DB2 LUW
- 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 DB2 LUW

This step runs the ddldbx.dms script to populate DDL model definitions for DB2 for Linux, UNIX and Windows.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-5-3: 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 3-5-4: 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

Run this task to identify any PeopleSoft PeopleTools records, fields, or indexes that you 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. You will compare the other object types 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 will need to run this task when you are applying this upgrade to other environments.

To review PeopleSoft PeopleTools objects:

1. Open the PPLTLS84CUR project on your Target database.
   a. Launch PeopleSoft Application Designer and sign in to the Target database.
   b. Select Tools, Compare and Report..., From File...
   c. Navigate to *PS_HOME*\projects and select the PPLTLS84CUR project.

      Note. It is OK to have the project definition overwritten by the project that is being copied from file.
2. Select object types Records, Fields, and Indexes *only*.
3. Select Options.
4. Select a value for Target Orientation.
5. For Comparison, use one of these options:
   - For Comparison by Release, select the highest release in the list.
   - For Compare by Date, select a date.
6. Under Compare Languages, select Common and English.
7. If you have non-English languages loaded, select the other languages that are loaded into your database.
8. On the Report Options tab, deselect the Generate Output to Tables check box.
9. On the Report Filter tab, click Default.

   This will cause only customizations to appear on the compare reports.
10. Click OK.
11. Click Compare to start the compare process.
12. Evaluate the compare reports to identify whether the delivered objects conflict with any of your customizations.

    Note. To preserve the PPLTLS84CUR compare reports, you must perform one of the following actions: rename the reports, move the reports to a different folder, or reset the Compare Report Output Directory.

    To reset the Compare Report Output Directory, in PeopleSoft Application Designer, select Tools, Options. On the General tab, change the path specified for the Report Output Directory.

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
- Creating the DB2 Tablespace Audit Project
- Auditing DB2 Tablespace Assignments
- Updating Tablespace Names
- Updating DB2 Tablespace Assignments

Task 3-9-1: Populating Updated Tablespace Data

This step populates all tablespace information in the PSRECTBLSPC table. This step runs the setspace.sqr 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 LUW DB2 z/OS	All

Task 3-9-2: Creating the DB2 Tablespace Audit Project

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

This step creates the empty project PTUPGLOBDB2TS. This project will be populated in the next step, Auditing DB2 Tablespace Assignments, which runs the lobdb2ts.sqr.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-9-3: Auditing DB2 Tablespace Assignments

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

This step runs lobdb2ts.sqr, which audits the tablespace information stored in the PeopleSoft system for records with Long, Image, or Attachment fields to make sure the tablespace has a sufficiently large page size. lobdb2ts.sqr reports on any records in a tablespace with an insufficiently sized page size as well as any such records assigned to a nonexistent tablespace. Any problematic records are automatically reassigned to the PSIMAGE2 tablespace in the PeopleSoft PeopleTools metadata after running the SQR. These records are also inserted into the PTUPGLOBDB2TS project. If there are no records fitting this criteria, then both the SQR report and the project will be empty.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-9-4: Updating Tablespace Names

The setspace.sqr 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.sqr 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.sqr 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.

Additionally, if you are upgrading from 8.53 or higher on DB2 LUW, review the output from the lobdb2ts.sqr script in order to review the reassignment of any PeopleTools records with Long, Image, or Attachment field types to a tablespace with a sufficiently large page size. Any problematic records reported by the SQR were inserted into the PTUPGLOBDB2TS project for your convenience and automatically reassigned to the PSIMAGE2 tablespace. If there are no records fitting this criteria then both the SQR report and the project will be empty.

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 DB2 LUW	All

Task 3-9-5: Updating DB2 Tablespace Assignments

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

This step runs lobexaud.sqr, which audits the tablespace information stored in the PeopleSoft system and, if needed, reassigns records to a platform-specific tablespace with a sufficiently large page size and buffer pool size. This is to ensure the success of any subsequent steps to create or alter tables. Tables that are updated will be reassigned to the PSIMAGE2 tablespace. lobexaud.sqr reports on the old tablespace name and the table/record name for the records that are updated by the audit program.

See "Converting DB2 Data Types," Understanding the DB2 Data Type Conversion.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	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 and PATCH856 projects definitions are merged together so that the PPLTLS84CUR project definition is updated with any new records that might have been 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 DB2 LUW 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 compared PeopleSoft PeopleTools records, fields, or indexes. In this task you will 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 will need to run this task when you are applying this upgrade to other environments.

To review PeopleSoft PeopleTools objects:

1. Open the PPLTLS84CUR project on your Target database.
   a. Launch PeopleSoft Application Designer and sign in to the Target database.
   b. Select Tools, Compare and Report..., From File...
   c. Navigate to *PS_HOME*\projects and select the PPLTLS84CUR project.

      Note. It is OK to have the project definition overwritten by the project that is being copied from file.

2. Select all object types *except* Records, Fields, and Indexes.
3. Select Options.
4. Select a value for Target Orientation.
5. For Comparison, use one of these options:
   - For Comparison by Release, select the highest release in the list.
   - For Compare by Date, select a date.

6. Under Compare Languages, select Common and English.
7. If you have non-English languages loaded, select the other languages that are loaded into your database.
8. On the Report Options tab, deselect the Generate Output to Tables check box.
9. On the Report Filter tab, click Default.

   This will cause only customizations to appear on the compare reports.
10. Click OK.
11. Click Compare to start the compare process.
12. Evaluate the compare reports to identify whether the delivered objects conflict with any of your customizations.

Note. To preserve the PPLTLS84CUR compare reports, you must perform one of the following actions: rename the reports, move the reports to a different folder, or reset the Compare Report Output Directory.

To reset the Compare Report Output Directory, in PeopleSoft Application Designer, select Tools, Options. On the General tab, change the path specified for the Report Output Directory.

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

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 3-13: 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.

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 DB2 LUW 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 DB2 LUW 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 DB2 LUW 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 DB2 LUW 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 pttemptabs.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 DB2 LUW 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: Converting DB2 Data Types

This section discusses:

- Understanding DB2 Data Type Conversion
- Creating the DB2 Conversion Project
- Populating the DB2 Conversion Project
- Generating DB2 Conversion Scripts
- Editing DB2 Conversion Scripts
- Altering DB2 Conversion Tables
- Creating DB2 Conversion Indexes
- Creating DB2 Conversion Triggers
- Auditing After the DB2 Conversion
- Reviewing DB2 Conversion Reports
- Disabling the DB2 CAST Function

Understanding DB2 Data Type Conversion

As of PeopleSoft PeopleTools 8.53, LOB data types, as well as a length threshold for Long Character fields, are now supported on DB2 LUW. The data types as defined in PeopleSoft Application Designer are not changed; only the database-level definition will be different.

Note. PeopleSoft Change Assistant will display the steps in this task only if you are upgrading from PeopleSoft PeopleTools 8.52 or earlier.

The following table lists DB2 LUW non-Unicode data types that are available as of PeopleSoft PeopleTools 8.53:

PS Field Type	Current Data Type	Data Type as of PeopleTools 8.53
Long Character (0)	LONG VARCHAR	CLOB
Long Character (n) n > 0, n<=2000	LONG VARCHAR	VARCHAR(n)
Image	LONG VARCHAR FOR BIT DATA	BLOB
Attachment	LONG VARCHAR FOR BIT DATA	BLOB

The following table lists DB2 LUW Unicode data types that are available as of PeopleSoft PeopleTools 8.53:

PS Field Type	Current Data Type	Data Type as of PeopleTools 8.53
Long Character (0)	LONG VARGRAPHIC	DBCLOB
Long Character (n) n > 0, n<=4000	LONG VARGRAPHIC	VARGRAPHIC(n)
Image	LONG VARCHAR FOR BIT DATA	BLOB
Attachment	LONG VARCHAR FOR BIT DATA	BLOB

Task 3-15-1: Creating the DB2 Conversion Project

In this step, you create an empty PTUPGDB2LOBCONV project. This project will be used in the data type conversion.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-15-2: Populating the DB2 Conversion Project

This step runs ptupgdb2lobconv.sql, which populates the PTUPGDB2LOBCONV 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	DB2 LUW	All

Task 3-15-3: Generating DB2 Conversion Scripts

This step builds the PTUPGDB2LOBCONV project and generates the SQL scripts ptupgdb2lobconv_altertables.sql, ptupgdb2lobconv_createindexes.sql, and ptupgdb2lobconv_createtriggers.sql. The generated scripts will alter tables and re-create indexes and triggers for tables in the PTUPGDB2LOBCONV project.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-15-4: Editing DB2 Conversion Scripts

In this step, you edit the DB2 conversion scripts 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 DB2 Conversion Scripts." 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.

The script names for your upgrade path are:

```
ptupgdb2lobconv_altertables.sql
ptupgdb2lobconv_createindexes.sql
ptupgdb2lobconv_createtriggers.sql
```

In a Move to Production pass, you may encounter errors with dropping nonexistent temporary tables if the number of temporary table instances for a specific record decreased between passes. Modify the alter script as needed to remove any extra temporary table instances.

Ensure that all corresponding LOB tablespaces exist, or reassign to another tablespace as needed. When the conversion scripts are generated, PeopleTools assumes that the matching LOB tablespaces exist for the base tablespace.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-15-5: Altering DB2 Conversion Tables

This step runs the ptupgdb2lobconv_altertables.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	DB2 LUW	All

Task 3-15-6: Creating DB2 Conversion Indexes

This step runs the ptupgdb2lobconv_createindexes.sql script. This will re-create the indexes for the tables being altered in the DB2 data type conversion.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-15-7: Creating DB2 Conversion Triggers

This step runs the ptupgdb2lobconv_createtriggers.sql script. This will re-create the triggers for the tables being altered in the DB2 data type conversion.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-15-8: Auditing After the DB2 Conversion

This step runs the ptdb2lobposaudit.sql script that you created earlier in the upgrade. This audit verifies that all of the old data types were converted from LONG VARCHAR and LONG VARGRAPHIC to the new data types CLOB, DBCLOB, and BLOB. It also verifies whether any Long Character field in PSDBFIELD with a length less than the documented MAXLENGTH was converted to VARCHAR(n) or VARGRAPHIC(n).

This audit will go against the system catalog for every single record in PSRECDEFN of the type *Table* or *Temporary Table.* For each of these records, it will check whether any column refers to the old data type. If it finds any table with old data types, it will add that record/table name and the column name to the report.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-15-9: Reviewing DB2 Conversion Reports

Examine the log file from the step "Auditing After the DB2 Conversion." The file contains a list of unconverted columns on tables and any unresolved errors from the step "Altering DB2 Conversion Tables," "Creating DB2 Conversion Indexes," and "Creating DB2 Conversion Triggers." If you are using these tables, you can update them manually to use the new data types with an ETL or SQL query tool. Be very cautious when changing a table because this could result in data loss or affected functionality. 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	DB2 LUW	All

Task 3-15-10: Disabling the DB2 CAST Function

This step runs upgdb2dboptions_disable.sql, which resets the database setting to use the LOB data types.

Properties

Database Orientation	Pass Type	Products	Platforms	Languages
Target	All	All	DB2 LUW	All

Task 3-16: 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 pt*xxx*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 3-17: 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

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 pttha.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 3-18: Loading PeopleTools Data

This section discusses:

- Loading Additional System Data
- Loading Noncomparable Objects
- Loading English Messages
- Loading English String Data
- Loading Stored Statements Data
- Resetting the File Processing Functionality
- Cleaning Up Orphaned Language Data

Task 3-18-1: 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 3-18-2: Loading Noncomparable Objects

This step runs the tlsupgnoncomp.dms script. This script loads the TLSUPGNONCOMP project and all PeopleSoft PeopleTools-owned object definitions that cannot be delivered using Copy Project to File.

Properties

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

Task 3-18-3: 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 3-18-4: Loading English String Data

This step runs the ptstreng.dms script, which loads English string data into the STRINGS_TBL table.

Note. The non-English language data was loaded in the task Loading Base Data.

Properties

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

Task 3-18-5: 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 3-18-6: 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 3-18-7: 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 3-19: 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 3-20: 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 3-21: Converting PeopleTools Objects

This section discusses:

- Updating the REN Server Configuration
- Populating MCF Data
- Converting Portal Objects
- Encrypting Connector Passwords
- Loading Conversion Data

- Reporting Conversion Details
- Running PeopleTools Data Conversion
- Completing the PeopleTools Conversion

Task 3-21-1: Updating the REN Server Configuration

This step runs the Application Engine program UPGMCF843, which converts real-time event notification (REN) server configuration information to the new format. REN servers run in the application server domain. They are used for the PeopleSoft PeopleTools MultiChannel Framework (MCF) and Reporting Window output option. The program converts standard REN server configurations to the new format, including MCF cluster information. All REN server configuration information is now stored within the database. You must upgrade old REN server configurations before attempting to boot with the new version of PeopleSoft PeopleTools. If you did not have any REN servers configured prior to starting the upgrade, then the UPGMCF843 program does not make any changes. If one of your configurations cannot be converted, error messages will be written in the Application Engine message log. PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.42 or earlier.

After running this step, you should also check the PSRENCONFIG.TXT file located in each application server domain that started an old REN server. (The file will not exist in domains that did not start a REN server.) Each old file should be replaced with the new template file located at *PS_HOME/* APPSERV/REN/PSRENCONFIG.TXT. Old template files cannot be used with the new version of REN server. If you customized your old configuration files, manually edit the new files and update them with your customizations.

Properties

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

Task 3-21-2: Populating MCF Data

This step runs the Application Engine program MCF_UPGR_SND, which populates the PS_MCFEM_MAIL_DSCR table with data. In PeopleSoft PeopleTools 8.44, the REPLY_TO header functionality was added. The field PS_MCFEM_MAIL_DSCR.MCF_REPLY_TO is populated with the values stored in PS_MCFEM_MAIL_MAIN.MCF_EMAIL_SENDER. PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.43 or earlier.

Properties

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

Task 3-21-3: Converting Portal Objects

This step runs the Application Engine program UPG844PORTAL, which splits PSPRSMDEFN.PORTAL_URLTEXT into segments and stores them in separate columns: PORTAL_URI_SEG1, PORTAL_URI_SEG2, PORTAL_URI_SEG3, and PORTAL_URI_SEG4. This is performed for PeopleSoft Component URLs to extract values for Menu, Component, and Market. Values for Record, Field, Event, and Function Names are extracted from PeopleSoft URLs. PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.43 or earlier.

There may be some errors or messages in your log. Following is a list of some of the errors and what to do about them:

- `Not authorized CRef: Portal Object Name (95,5032).`

  This means that you do not have proper privileges to run this conversion. You need to grant the user ID that you are using to upgrade Portal Administrator permissions.
- `Security synchronization failed for Portal Object: Portal Object Name (96,61).`

  This is not a fatal error. It may be caused by a content reference that contains invalid URL text and indicates that there was an internal error writing to the security table. The invalid URL text may be pointing to a component or script that does not exist in the database. You need to fix the content reference and then rerun the UPG844PORTAL process.
- `Cref Portal Object Name points to Menu: Menu Name, Component Component Name which doesn't exist. (96,80).`

  The content reference is pointing to an invalid Menu/Component combination. You need to fix the content reference so that it points at a valid Menu/Component combination and then rerun the UPG844PORTAL process.
- `Duplicate key. Portal: Portal Name, Obj Name: Portal Object Name, Nodename: Node, URL: URL (133,4).`

  This portal object has the same URL as another portal object. Delete or modify this object to remove the conflict and then rerun the UPG844PORTAL process.

See the product documentation for PeopleTools: Portal Technology for your new release.

Properties

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

Task 3-21-4: Encrypting Connector Passwords

This step runs the Application Engine program UPGRDPASSWDS, which encrypts the password property field for the POP3Target, FTPTarget, GetMailTarget, and JMSTarget connectors. PeopleSoft Change Assistant will display and run this step only if you are upgrading from PeopleSoft PeopleTools 8.43 or earlier.

Properties

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

Task 3-21-5: 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 3-21-6: 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 3-21-7: 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 3-21-8: Completing the PeopleTools Conversion

The PeopleSoft PeopleTools 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 a group number of 02 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 report generated by ptuconv.sqr for details on the conversions run in this step.

Properties

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

Task 3-22: 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 3-22-1: 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 3-22-2: Checking for Invalid Views

This step runs dddinvws.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 DB2 LUW Oracle	All

Task 3-22-3: 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 3-22-4: 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 3-22-5: 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 3-22-6: 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 DB2 LUW Oracle	All

Task 3-22-7: 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 DB2 LUW Oracle	All

Task 3-22-8: 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 DB2 LUW Oracle	All

Task 3-22-9: 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 DB2 LUW Oracle	All

Task 3-23: Converting Integration Broker

This section discusses:

- Understanding Converting Integration Broker
- Updating Integration Broker Defaults
- Creating Integration Broker Objects
- Saving Application Messaging Objects
- Exporting Node Transactions
- Preparing Integration Broker Deletes
- Deleting Application Messaging Objects
- Deleting Node Transactions

Understanding Converting Integration Broker

PeopleSoft Change Assistant will display and run the steps in this task only if you are upgrading from PeopleSoft PeopleTools 8.47 or earlier.

Task 3-23-1: Updating Integration Broker Defaults

This step runs the ptibupgrade.dms script. This script populates the default values specified earlier in the upgrade.

Properties

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

Task 3-23-2: Creating Integration Broker Objects

The PeopleSoft PeopleTools 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 a group number of 03 and ordering them by the row sequence number. A list of Application Engine library sections that must be run for data conversion is returned. The program then calls each section in the sequence number order. Review the report generated by ptuconv.sqr for details on the conversions run in this step.

Properties

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

Task 3-23-3: Saving Application Messaging Objects

This step copies the PTUPGIBCLONE project to the *PS_HOME*\projects directory. This project was created by the UPGPT848IBUG Application Engine program and contains objects that were successfully converted. The objects are copied to file as a precautionary measure because they will be deleted from the upgrade database.

After running this step, save the exported project in a permanent location where it can be accessed post-upgrade in case there is a need to review or import the old objects.

Properties

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

Task 3-23-4: Exporting Node Transactions

This step runs ptupg_trx_export.dms to save out the old preconversion node transaction data. The generated .dat file is written to the PeopleSoft Data Mover output directory defined in PeopleSoft Configuration Manager, which should be your *PS_HOME*\data directory.

After running this step, save PTUPG_TRX_EXPORT.DAT in a permanent location where it can be accessed post-upgrade in case there is a need to review or import the old objects.

Properties

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

Task 3-23-5: Preparing Integration Broker Deletes

This step copies the PTUPGIBDELETE project to your *PS_HOME*\projects directory in preparation for deleting the obsolete pre-conversion object definitions from the upgrade database. This project was created by the UPGPT848IBUG Application Engine program and contains the same objects as PTUPGIBCLONE.

Properties

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

Task 3-23-6: Deleting Application Messaging Objects

This step copies the PTUPGIBDELETE project definition from file. Since the actions in the project are set to Delete, this will delete the obsolete preconversion object definitions from the upgrade database.

Properties

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

Task 3-23-7: Deleting Node Transactions

This step runs ptupg_trx.dms, which removes obsolete node transaction data associated with the obsolete objects in the PTUPGIBDELETE project. This script was generated by the UPGPT848IBUG Application Engine program.

Properties

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

Task 3-24: Converting Integration Broker Objects

In this task, the PeopleTools 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 a group number of 04 and ordering them by the row sequence number. A list of Application Engine library sections that must be run for data conversion is returned. The program then calls each section in the sequence number order. Review the report generated by ptuconv.sqr for details on the conversions that are run in this step.

Properties

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

Task 3-25: 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 3-26: 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 3-27: 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 3-28: 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 3-28-1: 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 3-28-2: 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 3-28-3: 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 3-28-4: 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 3-28-5: 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 3-29: 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 3-29-1: 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 3-29-2: 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 3-29-3: 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 3-29-4: 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.

Properties

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

Task 3-29-5: 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 3-29-6: 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.

Properties

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

Task 3-30: 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 3-30-1: 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 3-30-2: 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 3-30-3: 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 LUW DB2 z/OS	All

Task 3-31: 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 3-32: Converting Oracle Time Data Types

This section discusses:

- Understanding Oracle Time Data Types Conversion
- Backing Up Before Converting Data Types
- Creating Conversion Audit Tables
- Auditing Date to Timestamp Conversion
- Creating the PTTSTEMPTABS Project
- Filtering the Timestamp Temporary Tables Project
- Building the Timestamp Temporary Tables Project
- Editing the Timestamp Temporary Tables Script
- Generating Timestamp Conversion Scripts
- Creating Timestamp Temporary Tables
- Running Drop Indexes Script 1
- Running Drop Indexes Script 2
- Running Drop Indexes Script 3
- Running Drop Indexes Script 4
- Running Drop Indexes Script 5

- Running Drop Indexes Script 6
- Running Drop Indexes Script 7
- Running Drop Indexes Script 8
- Running Alter Timestamps Script 1
- Running Alter Timestamps Script 2
- Running Alter Timestamps Script 3
- Running Alter Timestamps Script 4
- Running Alter Timestamps Script 5
- Running Alter Timestamps Script 6
- Running Alter Timestamps Script 7
- Running Alter Timestamps Script 8
- Running Rebuild Indexes Script 1
- Running Rebuild Indexes Script 2
- Running Rebuild Indexes Script 3
- Running Rebuild Indexes Script 4
- Running Rebuild Indexes Script 5
- Running Rebuild Indexes Script 6
- Running Rebuild Indexes Script 7
- Running Rebuild Indexes Script 8

Understanding Oracle Time Data Types Conversion

In PeopleSoft PeopleTools 8.50 and higher, the TIMESTAMP data type is now supported for the PeopleSoft TIME and DATETIME field types. These data type changes are mandatory, and the DATE data type will no longer be used for the TIME and DATETIME fields.

PeopleSoft Change Assistant will display and run the steps in this task *only* if you are upgrading from PeopleSoft PeopleTools 8.49 or earlier.

Task 3-32-1: Backing Up Before Converting Data Types

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.

Important! 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 3-32-2: Creating Conversion Audit Tables

This step runs pretscnvadt1a.sql, which drops and re-creates some temporary tables required by the pre-conversion audit SQRs. If the tables being dropped, DERIVEDPSSQLTABLEANDINDEX, DROP_FUNCIDX_CANDIDATES, and DERIVEDTABLESWITHFUNCINDEXES, don't exist, the execution of this script will generate the following error, which you can safely ignore:

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

Properties

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

Task 3-32-3: Auditing Date to Timestamp Conversion

This step runs tscaudit.sqr, which reports which columns by table are candidates for DATE to TIMESTAMP data type conversion.

Note. If this SQR needs to be rerun for any reason, you must run pretscnvadt1a.sql before rerunning tscaudit.sqr.

Properties

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

Task 3-32-4: Creating the PTTSTEMPTABS Project

This step creates the PTTSTEMPTABS project and inserts all records of the type Temporary Table.

Properties

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

Task 3-32-5: Filtering the Timestamp Temporary Tables Project

This step run *PS_HOME*/SCRIPTS/pttstemptabs_filter.sql. This script removes any temporary tables from the PTTSTEMPTABS project that do not contain either a PSTIME or PSDATETIME field type.

Properties

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

Task 3-32-6: Building the Timestamp Temporary Tables Project

This step generates the pttstemptabs_crttbl.sql script to drop and re-create the records of the type Temporary Table in the database that contain a PSTIME or PSDATETIME field type. 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 3-32-7: Editing the Timestamp Temporary Tables Script

In this step, you will edit the pttstemptabs_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 script above. 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	Oracle	All

Task 3-32-8: Generating Timestamp Conversion Scripts

This section discusses:

- Setting Parameters for the Database System Identifier
- Verifying Environment Variables
- Setting the Script Generation Parameters
- Executing the Script Generation Program

Setting Parameters for the Database System Identifier

Work with your database administrator to set init.ora parameters for the Target database's system identifier (SID). You must stop and restart the database SID for these settings to take effect.

To set the parameters:

1. 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.

Verifying Environment Variables

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\PT850
   ```

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\10.1.0\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
   ```

Setting the Script Generation Parameters

You execute the Oracle data types script generation program using the *PS_HOME*\utility\PSORATimestampConversion.bat file, which requires six input parameters. Set the following parameters:

- 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.
- SCRIPTQTY: The number of concurrent scripts to generate. This parameter is mandatory. The recommendation is 8 as the upgrade template is set up to run 8 sets of scripts. If you choose a different number, then you will need to modify the upgrade template and either remove the steps corresponding to the extra scripts, or add additional steps to run the additional scripts.
- ORACLEVERSION: The version of Oracle Connectivity that you are using (12).

Example:

```
PS_HOME\utility\PSORATimestampConversion.bat SYSADM SYSADM MYDB c:\upgrade⇒
\output\Change_Assistant_job_directory 8 12
```

In the example command line above:

- ACCESSID = SYSADM
- ACCESSIDPW = SYSADM
- DBNAME = MYDB
- OUTPUTDIR = c:\upgrade\output\Change_Assistant_job_directory
- SCRIPTQTY = 8
- ORACLEVERSION = 12

Executing the Script Generation Program

Open a command prompt window on the client workstation and execute the Oracle data types script generation program *PS_HOME*\utility\PSORATimestampConversion.bat.

The program will display and write a log (PsTSOraCnv.log) to the directory specified by the OUTPUTDIR parameter indicating the status of the conversion program. Review PsOraCnvTS.log and ensure that the conversion scripts were generated cleanly.

For all databases, ANSI or Unicode, the following three sets of scripts are generated:

- dropindexesn.sql
- altertimestampsn.sql
- rebuildindexesn.sql

After successfully running the conversion script generation program, verify that the generated SQL scripts are located in the PeopleSoft Change Assistant output directory for your upgrade pass. Later in the upgrade, PeopleSoft Change Assistant will automatically run the SQL scripts 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 3-32-9: Creating Timestamp Temporary Tables

This step runs the pttstemptabs_crttbl.sql script to re-create Temporary Tables using PSTIME or PSDATETIME fields.

Properties

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

Task 3-32-10: Running Drop Indexes Script 1

This step runs dropindexes1.sql, which was generated using PSORATimestampConversion.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 3-32-11: Running Drop Indexes Script 2

This step runs dropindexes2.sql, which was generated using PSORATimestampConversion.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 3-32-12: Running Drop Indexes Script 3

This step runs dropindexes3.sql, which was generated using PSORATimestampConversion.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 3-32-13: Running Drop Indexes Script 4

This step runs dropindexes4.sql, which was generated using PSORATimestampConversion.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 3-32-14: Running Drop Indexes Script 5

This step runs dropindexes5.sql, which was generated using PSORATimestampConversion.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 3-32-15: Running Drop Indexes Script 6

This step runs dropindexes6.sql, which was generated using PSORATimestampConversion.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 3-32-16: Running Drop Indexes Script 7

This step runs dropindexes7.sql, which was generated using PSORATimestampConversion.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 3-32-17: Running Drop Indexes Script 8

This step runs dropindexes8.sql, which was generated using PSORATimestampConversion.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 3-32-18: Running Alter Timestamps Script 1

This step runs altertimestamps1.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-19: Running Alter Timestamps Script 2

This step runs altertimestamps2.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-20: Running Alter Timestamps Script 3

This step runs altertimestamps3.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-21: Running Alter Timestamps Script 4

This step runs altertimestamps4.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-22: Running Alter Timestamps Script 5

This step runs altertimestamps5.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-23: Running Alter Timestamps Script 6

This step runs altertimestamps6.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-24: Running Alter Timestamps Script 7

This step runs altertimestamps7.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-25: Running Alter Timestamps Script 8

This step runs altertimestamps8.sql, which was generated using PSORATimestampConversion.bat. The tables must be altered successfully before continuing on and rebuilding indexes. The Oracle DATE to TIMESTAMP alter scripts are designed to run concurrently to improve performance.

Properties

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

Task 3-32-26: Running Rebuild Indexes Script 1

This step runs rebuildindexes1.sql, which was generated using PSORATimestampConversion.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 3-32-27: Running Rebuild Indexes Script 2

This step runs rebuildindexes2.sql, which was generated using PSORATimestampConversion.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 3-32-28: Running Rebuild Indexes Script 3

This step runs rebuildindexes3.sql, which was generated using PSORATimestampConversion.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 3-32-29: Running Rebuild Indexes Script 4

This step runs rebuildindexes4.sql, which was generated using PSORATimestampConversion.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 3-32-30: Running Rebuild Indexes Script 5

This step runs rebuildindexes5.sql, which was generated using PSORATimestampConversion.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 3-32-31: Running Rebuild Indexes Script 6

This step runs rebuildindexes6.sql, which was generated using PSORATimestampConversion.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 3-32-32: Running Rebuild Indexes Script 7

This step runs rebuildindexes7.sql, which was generated using PSORATimestampConversion.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 3-32-33: Running Rebuild Indexes Script 8

This step runs rebuildindexes8.sql, which was generated using PSORATimestampConversion.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 3-33: 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

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 3-33-1: 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 3-33-2: Dropping the Upgrade Copy of Password History

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

In this step, the cloned table PSPSWDHIST_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 3-34: 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

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

Chapter 4

Completing Database Changes

This chapter discusses:

- Understanding Database Changes
- Updating Language Data
- Booting Servers
- Setting Up Security
- Reviewing PeopleTools Functionality
- Enabling Oracle Transparent Data Encryption
- Enabling Oracle Fine Grained Auditing
- Running the Final Audit Reports
- 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: 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 4-3: 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 homepages.

Task 4-3-1: 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 4-4: Reviewing PeopleTools Functionality

PeopleSoft Hosted 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 Hosted 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 PeopleSoft Hosted Online Help
https://docs.oracle.com/cd/E17566_01/epm91pbr0/eng/psbooks/psft_homepage.htm.

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.

- Integration Broker was rewritten in PeopleSoft PeopleTools 8.48.

  If you use Integration Broker, you will need to perform setup configuration and review the explanation of metadata mapping.

  See the product documentation for PeopleTools: PeopleSoft Integration Broker for your new release for more information about understanding migrated integration metadata.

- In PeopleSoft PeopleTools 8.50, if you are a Microsoft SQL Server customer, you need to use an access ID that is not a system administrator access ID. If you are upgrading from PeopleSoft PeopleTools 8.49 or earlier, enable and configure the access ID 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."

- 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 PeopleSoft PeopleTools 8.51, if you are an Oracle database customer, you can now restrict the access ID to the minimum privileges needed to run PeopleSoft applications. Additionally, as of PeopleTools 8.55, the set of privileges 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, Materialized View Maintenance.

  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.sqr to synchronize the metadata, or you can insert the tablespace into the PSTBLSPCCAT 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.

Properties

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

Task 4-5: Enabling Oracle Transparent Data Encryption

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 4-6: Enabling Oracle Fine Grained Auditing

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 preupgfgareport.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 4-7: 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 4-7-1: 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 4-7-2: 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 4-7-3: 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 4-7-4: 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 4-7-5: 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 4-7-6: 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 Microsoft SQL Server and DB2 DB2 LUW platforms, if your database has tables containing the MSSCONCATCOL or DBXCONCATCOL column, you will see SQL 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, 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 4-8: 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