
PeopleSoft 9.2 Application Installation for Oracle (PeopleSoft PeopleTools 8.61)

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About This Documentation

This preface discusses:

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

Understanding This Documentation

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

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

Addenda to the recent PeopleTools installation guides are periodically posted in My Oracle Support on the same page as the initial posting.

This documentation includes the instructions for installing Oracle's PeopleSoft PeopleTools and PeopleSoft applications. You also need the installation instructions that are specific to your PeopleSoft application, which are provided in a separate document for the PeopleSoft application. For instance, if you are installing Oracle's PeopleSoft Customer Relationship Management (CRM), you need both this installation guide and the additional instructions provided for installing PeopleSoft CRM.

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

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

Audience

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

You should be familiar with your environment, including operating system, hardware, and RDBMS, and have the necessary skills, permissions, and access 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, Linux or UNIX

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

The PeopleSoft Training Center includes various choices for training, including instructor-led training offered by Oracle partners.

See PeopleSoft Information Portal, https://docs.oracle.com/cd/E52319_01/infoportal/training.html.

Typographical Conventions

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

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

Convention	Description
Cross-references	Cross-references that begin with <i>See</i> refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation. Cross-references under the heading <i>See Also</i> refer you to additional documentation that has more information regarding the subject.
⇒ (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.
" " (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meaning.
Note. Note text.	Text that begins with <i>Note</i> , 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 <i>Important!</i> 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 <i>Warning!</i> contains critical configuration information or implementation considerations; for example, if there is a chance of losing or corrupting data. Pay close attention to warning messages.

Products

This documentation may refer to these products and product families:

- Oracle® Enterprise Manager
- Oracle® Tuxedo
- Oracle® WebLogic Server
- Oracle's PeopleSoft Application Designer
- Oracle's PeopleSoft Change Assistant
- Oracle's PeopleSoft Change Impact Analyzer
- Oracle's PeopleSoft Data Mover
- Oracle's PeopleSoft Process Scheduler
- Oracle's PeopleSoft Pure Internet Architecture
- Oracle's PeopleSoft Customer Relationship Management
- Oracle's PeopleSoft Enterprise Learning Management
- Oracle's PeopleSoft Enterprise Performance Management

- Oracle's PeopleSoft Financial Management
- Oracle's PeopleSoft Human Capital Management
- Oracle's PeopleSoft Interaction Hub
- Oracle's PeopleSoft Pay/Bill Management
- Oracle's PeopleSoft PeopleTools
- Oracle's PeopleSoft Staffing Front Office
- Oracle's PeopleSoft Supply Chain Management

See the Products area on the Oracle web site, <https://www.oracle.com/products/oracle-a-z.html>.

Related Information

Oracle provides reference information about PeopleSoft PeopleTools and your particular PeopleSoft Application. You can access documentation for recent releases of PeopleSoft PeopleTools and PeopleSoft Applications at the PeopleSoft page in the Oracle Help Center. You can also find documentation by searching for the product name on My Oracle Support.

- PeopleSoft on the Oracle Help Center

You can access PeopleSoft Online Help, or download the PeopleBooks PDFs, from the PeopleSoft page in the Oracle Help Center. Select PeopleTools or your PeopleSoft application from the navigation list on the left. On the page for the selected product application, select the PeopleTools release or image number at the top and go to the Online Help and PeopleBooks section.

See Oracle Help Center, <https://docs.oracle.com/en/applications/peoplesoft/index.html>.

- *PeopleTools: Getting Started with PeopleTools* for your release.

This documentation provides a high-level introduction to PeopleTools technology and usage.

See PeopleTools on the Oracle Help Center,
<https://docs.oracle.com/en/applications/peoplesoft/peopletools/index.html>.

- PeopleSoft Application Fundamentals for your PeopleSoft Application and release

This documentation provides essential information about the setup, design, and implementation of your PeopleSoft Application.

See Oracle Help Center, <https://docs.oracle.com/en/applications/peoplesoft/index.html>.

- Installation guides

You can find the installation guides for PeopleSoft PeopleTools and your PeopleSoft application on the appropriate Oracle Help Center page. Select your release or update image at the top and then go to the Install and Upgrade section.

- My Oracle Support

This support platform requires a user account to log in. Contact your PeopleSoft representative for information.

See My Oracle Support, <https://support.oracle.com>.

You can find several pages which compile documentation, links, and known issues for various PeopleSoft product areas. For a list of many of the PeopleSoft pages, select the PeopleSoft tab on the Oracle Information Center Catalog.

See Oracle Information Center Catalog, My Oracle Support, Doc ID 50.2.

To install additional component software products for use with PeopleSoft products, including those products that are packaged with your PeopleSoft products as well as products from other vendors, you should refer to the documentation provided with those products, as well as this documentation. For those additional components that are offered by Oracle, such as Oracle Middleware products, see the documentation on the Oracle Help Center.

See Oracle Help Center, <https://docs.oracle.com/en/>.

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 PeopleSoft documentation and other Oracle reference and training materials. Please send your suggestions to:

PSOFT-Infodev_US@oracle.com

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

Part I

Mandatory Installation

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

Chapter 1

Preparing for Installation

This chapter discusses:

- Understanding the PeopleSoft Installation
- Understanding the PeopleSoft Installation Using Deployment Packages
- Reviewing Hardware Requirements
- Reviewing Software Requirements
- Installing Required Packages for Oracle 19c on Linux
- Reviewing the System Parameters on Linux, AIX, or Solaris
- Reviewing the Oracle Central Inventory File Location and Permissions on Linux, AIX, or Solaris
- Using Oracle Software Delivery Cloud to Obtain Installation Files
- Considering Project Planning
- Planning Your Initial Configuration
- Planning Database Creation
- Planning Multilingual Strategy
- Installing Supporting Applications
- Deploying PeopleSoft Environments in Containers
- Installing the Database Engine
- Installing Oracle Net on the Server
- Installing Oracle Net on Your Workstation
- Testing Oracle Net Connectivity
- Performing Backups

Understanding the PeopleSoft Installation

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

- Before you begin your PeopleSoft installation, use the PeopleSoft hardware and software requirements information in the My Oracle Support Certifications area to verify that you have the correct hardware and software in place to support a successful installation. In addition to the information in the Certifications area, review the application-specific hardware and software documentation available on My Oracle Support.

See hardware and software requirements for PeopleSoft PeopleTools and your PeopleSoft application on My Oracle Support.

See My Oracle Support, Certifications.

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

- The installation of the PeopleSoft deployment packages (DPKs) includes the necessary additional component software, such as Oracle Tuxedo and Oracle WebLogic. If you must install the additional component software manually, without using the DPKs, use the My Oracle Support Certifications area to determine the latest certified versions of additional components, such as Oracle Tuxedo, which are supported for the PeopleSoft PeopleTools release you are installing.
- If you will be upgrading your current release after you perform this installation, you also need to install Change Assistant. The page on My Oracle Support containing your upgrade documentation and files includes information.
- For critical issues related to the installation process, see the My Oracle Support web site.
- You will use the PeopleSoft application deployment packages (DPKs) for your PeopleSoft installation. The DPKs deliver pre-installed PeopleSoft components, which can be installed on virtualization platforms as well as directly on traditional, non-virtual machines ("bare-metal").

Review the known issues on the PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2, for any issues related to the PeopleSoft application DPK installation.

- For online technical support information, use the My Oracle Support web site. My Oracle Support includes tools for self-directed searches of information including reference documents and problem resolutions, as well as service request management tools.

See My Oracle Support, <https://support.oracle.com>.

- To download software and documentation, use the Oracle Software Delivery Cloud portal, and My Oracle Support.

See Oracle Software Delivery Cloud, <https://edelivery.oracle.com>.

See My Oracle Support, <https://support.oracle.com>.

- Be aware that not all application releases are certified and supported to run on all PeopleSoft PeopleTools releases. Check the PeopleSoft policy information on My Oracle Support for further details on the support policy for your particular application. If you are planning to do a PeopleTools-only upgrade, do not continue until you have verified that your application is supported on the target PeopleSoft PeopleTools release.

See Lifetime Support Summary for PeopleSoft Releases, My Oracle Support, Doc ID 2238983.2.

- This installation guide may refer you to other PeopleSoft documentation resources for more information or instructions. You can access Oracle's PeopleSoft Hosted Documentation online during the installation process. For PeopleSoft PeopleTools 8.53 and later, you also have the option to install PeopleSoft Online Help documentation, a dynamic, interactive, accessible HTML version of the documentation known as "PeopleBooks."
- See the PeopleSoft Tech Updates for news about new certifications, end of support or third party retirement notices as well as any other platform related information.

See Tech Update - Main Page, My Oracle Support, Doc ID 764222.1.

See Also

Oracle PeopleSoft on Oracle Help Center, <https://docs.oracle.com/en/applications/peoplesoft/index.html>

"Installing PeopleSoft Online Help"

"Installing PeopleSoft Change Assistant"

Understanding the PeopleSoft Installation Using Deployment Packages

This section discusses:

- Understanding the PeopleSoft Deployment Packages Required for Installation
- Reviewing the PeopleSoft PeopleTools DPKs
- Reviewing the PeopleSoft Application Images
- Reviewing the Installation Choices
- Reviewing the Full-Tier DPK Installation Process (Linux or Microsoft Windows)
- Reviewing the DPK Installation Process for a User-Created Database (AIX, Linux, Microsoft Windows, or Solaris)

Understanding the PeopleSoft Deployment Packages Required for Installation

To install PeopleSoft applications built on PeopleSoft PeopleTools 8.61 (PeopleSoft 9.2 applications as well as PeopleSoft Interaction Hub 9.1), you will use the PeopleSoft Application Images, which are comprised of deployment packages (DPKs). For most installation scenarios, you will also download the PeopleSoft PeopleTools DPKs separately.

The PeopleSoft DPKs are the delivery method for many PeopleSoft installation, upgrade, and maintenance products. This documentation refers to the set of DPKs that are used for a fresh installation of a PeopleSoft application environment as PeopleSoft Application Images. These images can also be deployed differently, and used for applying maintenance for PeopleSoft applications. In that use case, they are typically referred to as PeopleSoft Update Images, or PIs.

See PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2, for information on applying maintenance updates with the PIs.

See *PeopleSoft PeopleTools 8.61 Deployment Packages Installation*, "Learning About the PeopleSoft Deployment Process."

See Oracle's PeopleSoft Virtualization Products, My Oracle Support, Doc ID 1538142.1.

The PeopleSoft DPKs deliver pre-installed PeopleSoft components that can be deployed onto your environment. The PeopleSoft DPKs offer the flexibility of deployment on supported operating system platforms, both directly on physical machines, and on virtualization platforms. The DPKs are available on My Oracle Support and Oracle Software Delivery Cloud as zip files, and are delivered with a setup script that automates the procedure to set up a PeopleSoft environment. The script is an interactive script that verifies that the downloaded DPKs are correct, and prompts the user for the information required to set up the environment. The script also enables a user to choose various types of environments, such as a full tier, including a PeopleSoft database, or a mid-tier, with Application Server, web server and Process Scheduler, that connects to an existing database.

See "Installing the PeopleSoft Homes," Reviewing the DPK Setup Script Options.

The DPKs are delivered with the PeopleSoft Puppet modules, which are initialization and management scripts based upon the open-source Puppet software. In addition to the convenience of using the interactive DPK setup script, you can take advantage of the Puppet Hiera functionality to customize and control the installation. Note that some installation scenarios require customizations to complete the deployment.

See "Completing the DPK Initialization with Customizations."

This section describes the DPKs used in the PeopleSoft installation and overviews of the installation process for various scenarios. The PeopleSoft Application Images are available as Microsoft Windows, Linux, and Oracle VM VirtualBox DPKs. The VirtualBox DPKs are used for PUM maintenance, and are not covered in this documentation. The PeopleSoft PeopleTools 8.61 DPKs are available for IBM AIX, Linux, Microsoft Windows, and Oracle Solaris on SPARC operating systems. For information on operation system support for your database platform, see the Certification information on My Oracle Support.

See [Reviewing the Installation Choices](#).

Note. Oracle recommends that you use the Native OS for Linux or Native OS for Windows DPKs for a fresh installation, not the VirtualBox DPKs.

Note. Oracle supports a number of versions of UNIX and Linux, in addition to Microsoft Windows, for the PeopleSoft installation. Throughout this book, there are references to operating systems. Where necessary, this book refers to specific operating systems by name (for example, Oracle Solaris, IBM AIX, or Linux); however for simplicity and brevity, the word UNIX is sometimes used to refer to all UNIX-like operating systems, including IBM AIX, Linux, and Oracle Solaris for SPARC. For information on operation system support for your database platform, see the Certification information on My Oracle Support.

Reviewing the PeopleSoft PeopleTools DPKs

The PeopleSoft PeopleTools DPKs are delivered for each PeopleTools patch. The files are double-zipped. This table describes the downloaded zip files and the embedded zip files. When you follow the instructions provided in this documentation you will extract the first zip file to get the DPK setup script. When you run the setup script, it takes care of extracting the remaining zip files. Do not unzip before reading the instructions.

Downloaded Zip Files	Embedded Zip Files	Description
PEOPLETOOLS-<OS>-8.61.xx_1of4.zip	The setup folder and other files	Setup DPK
PEOPLETOOLS-<OS>-8.61.xx_2of4.zip	PT-DPK-<OS>-8.61.xx-1of2.zip	PeopleTools server, Part 1
PEOPLETOOLS-<OS>-8.61.xx_3of4.zip	PT-DPK-<OS>-8.61.xx-2of2.zip	PeopleTools server, Part 2
PEOPLETOOLS-<OS>-8.61.xx_4of4.zip	PTC-DPK-<OS>-8.61.xx-1of1.zip	PeopleTools Client for 8.61

The filenames include the following:

- <OS> is one of these operating systems:

Note. This includes the available DPKs. Check My Oracle Support Certifications for support information for your environment.

- AIX for IBM AIX
- LNX for Linux
- WIN for Microsoft Windows
- SOL for Oracle Solaris

- xx refers to the patch number.

Reviewing the PeopleSoft Application Images

The PeopleSoft application software is delivered in the PeopleSoft Application Images posted on My Oracle Support. The DPKs that comprise the PeopleSoft Application Images are double-zipped. When you follow the instructions provided in this documentation you will extract the first zip file to get the DPK setup script. When you run the setup script, it takes care of extracting the remaining zip files. Do not unzip before reading the instructions.

The first four zip files in the PeopleSoft Application Images are the same type as the four zip files in the PeopleTools patches; that is, two PeopleTools server DPKs, a PeopleTools client DPK, and a setup DPK. However, because the PeopleSoft Application Images and the PeopleTools patches follow different schedules, the patch releases will not be the same.

Note. The PeopleTools Client DPKs are specific to Microsoft Windows operating systems. The operating system for the PeopleTools server DPKs that are packaged with the PeopleSoft Application Image is the same as the other DPKs that make up the PeopleSoft Application Image.

This table describes the zip files that you download for the Native Linux and Windows DPKs, and the embedded zip files. Note that the content description is also available in the manifest that is posted on the same pages where you can find links to the most current image. On the PeopleSoft Update Manager (PUM) Home Page, select the PeopleSoft Update Images tab, and then select the update image home page for your PeopleSoft application. The links and manifest are located in the Update Image Link section.

See *PeopleSoft Deployment Packages for Update Images Installation (PeopleSoft PeopleTools 8.61)*, PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2.

Downloaded Zip Files	Files After First Extraction ¹	Description
<Product>-920-UPD-<PI_Number>-<OS>_1of11.zip	The setup folder and other files	Setup DPK
<Product>-920-UPD-<PI_Number>-<OS>_2of11.zip	PT-DPK-<OS>-8.61.xx-1of2.zip	PeopleTools server, Part 1
<Product>-920-UPD-<PI_Number>-<OS>_3of11.zip	PT-DPK-<OS>-8.61.xx-2of2.zip	PeopleTools server, Part 2
<Product>-920-UPD-<PI_Number>-<OS>_4of11.zip	PTC-DPK-WIN8.59.xx-1of1.zip	PeopleTools Client for 8.59
<Product>-920-UPD-<PI_Number>-<OS>_5of11.zip	PTC-DPK-WIN8.60.xx-1of1.zip	PeopleTools Client for 8.60
<Product>-920-UPD-<PI_Number>-<OS>_6of11.zip	PTC-DPK-WIN8.61.xx-1of1.zip	PeopleTools Client for 8.61
<Product>-920-UPD-<PI_Number>-<OS>_7of11.zip	ODC-DPK-WIN-19.3.0.0-xxxxxx-1of1.zip	Oracle Database client
<Product>-920-UPD-<PI_Number>-<OS>_8of11.zip	ODS-DPK-<OS>-19.3.0.0-xxxxxx-1of1.zip	Oracle Database server

Downloaded Zip Files	Files After First Extraction ¹	Description
<Product>-920-UPD-<PI_Number>-<OS>_9of11.zip	APP-DPK-<OS>-<Product_Name>92-8.61.xx-1of3.zip	PeopleSoft Application DPK, Part 1
<Product>-920-UPD-<PI_Number>-<OS>_10of11.zip	APP-DPK-<OS>-<Product_Name>92-8.61.xx-2of3.zip	PeopleSoft Application DPK, Part 2
<Product>-920-UPD-<PI_Number>-<OS>_11of11.zip	APP-DPK-<OS>-<Product_Name>92-8.61.xx-3of3.zip	PeopleSoft Application DPK, Part 3

¹ The filenames will vary depending upon the date posted or the associated release and patch. Note that the DPK setup script will carry out the first extraction. The names are given here for information.

The filenames for the downloaded zip files have the following format:

<Product>-920-UPD-<PI_Number>-<OS>_#ofn.zip

For example:

HCM-920-UPD-047-LNX_1of11.zip

HCM-920-UPD-047-LNX_2of11.zip

[...]

HCM-920-UPD-047-LNX_11of11.zip

The files names are comprised of the following parts:

- <Product> is an abbreviation that represents the PeopleSoft application name, as described in the following table.

PeopleSoft Application	Product Name Abbreviation
PeopleSoft Customer Relationship Management	CRM
PeopleSoft Campus Solutions	CS
PeopleSoft Enterprise Learning Management	ELM
PeopleSoft Financials and Supply Chain Management	FSCM
PeopleSoft Human Capital Management	HCM
PeopleSoft Interaction Hub	IH

- <PI_Number> is the PI image number, such as 047.
- <OS> is one of these operating systems:
 - LNX for the Native OS DPKs for Oracle Linux
 - WIN for the Native OS DPKs for Microsoft Windows
 - OVA for the VirtualBox DPKs
- n represents the total number of zip files.

Reviewing the Installation Choices

This section includes overviews of the methods to install the PeopleSoft Application Images, depending upon your operating system and other components.

If you want to use the PeopleSoft 9.2 Application PIs to create a PeopleSoft Update Manager (PUM) source for applying updates and fixes, see *PeopleSoft Deployment Packages for Update Images Installation*.

See PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2.

Installation Format	Operating System	Oracle Database	Overview Section
PeopleTools and PeopleSoft Application DPKs	- Linux - Microsoft Windows	Pre-configured Oracle 19c Multitenant Note. The term pluggable database is sometimes used to describe an Oracle multitenant setup.	Reviewing the Full-Tier DPK Installation (Linux or Microsoft Windows)
PeopleTools and PeopleSoft Application DPKs	- AIX - Linux - Microsoft Windows - Solaris for SPARC	User-created database on supported Oracle RDBMS	Reviewing the DPK Installation for a User-Created Database (AIX, Linux, Microsoft Windows, or Solaris)
PeopleTools and PeopleSoft Application DPKs	Linux	Full-tier (FRESH) deployment uses a pre-configured Oracle 19c multitenant database. Mid-tier deployment installs only application server, web server, and Process Scheduler.	Deploying PeopleSoft DPKs in Containers

Reviewing the Full-Tier DPK Installation Process (Linux or Microsoft Windows)

These are the high-level steps for using the PeopleSoft Application Images to perform a fresh installation (that is, you are not upgrading or updating an existing environment) with the full-tier deployment.

This document uses the term "full tier" to refer to a complete PeopleSoft environment. This includes the Oracle 19c Database server and pre-configured PeopleSoft application database along with the application server, Process Scheduler, and PIA.

1. Download the Native OS DPKs for Linux or Windows for your PeopleSoft 9.2 application.
2. Use the PeopleTools DPK setup script in full-tier mode to deploy the full PeopleSoft environment, including a pre-configured DEMO or SYS database, application server, Process Scheduler, and PIA.

See "Performing a Full-Tier Installation."

Reviewing the DPK Installation Process for a User-Created Database (AIX, Linux, Microsoft Windows, or Solaris)

These are the high-level steps for using the PeopleSoft Application Images to perform a fresh installation (that is, you are not upgrading or updating an existing environment) in which you manually create the database.

Note. You can create the database using any Oracle Database version that is supported for the current PeopleSoft PeopleTools release. See the My Oracle Support Certifications for the current PeopleSoft PeopleTools release.

1. Locate the Native OS DPKs for your PeopleSoft 9.2 application, and download the PeopleSoft Application DPK, Part 1.

For installations on IBM AIX, Linux, or Solaris for SPARC, download the Native OS DPKs for Linux. For installations on Microsoft Windows, download the Native OS DPKs for Windows. Do not unzip the file. If you need to FTP the file, use binary mode.

See "Installing the PeopleSoft Homes," Obtaining the PeopleSoft Application and PeopleTools DPKs.

2. Download the PeopleTools 8.61 DPKs.
 - Select the operating system you want to install on. The PeopleTools 8.61 DPKs are available for AIX, Linux, Microsoft Windows, and Solaris for SPARC.
 - Select the PeopleTools patch release specified for the PeopleSoft 9.2 application.
3. Before running the DPK setup script, review the setup script options. Certain installation situations require a customized procedure.

See "Installing the PeopleSoft Homes," Reviewing the DPK Setup Script Options.

4. Use the DPK setup script from the PeopleTools DPKs to carry out one of these steps.

See "Installing the PeopleSoft Homes," Reviewing the DPK Setup Script Options.

- Install *PS_HOME* and *PS_APP_HOME* only.
PS_HOME includes the PeopleTools utilities that you use in the next step. *PS_APP_HOME* includes the files needed to create an application database.
- Alternatively, use the script to install only the mid-tier software.
 Install *PS_HOME*, *PS_APP_HOME*, Oracle Tuxedo, Oracle WebLogic, and JDK without setting up the PeopleSoft domains.

Note. When you run the DPK setup script, you will specify either FRESH or PUM installation type. To create your own database, you must specify the FRESH installation type in order to install the necessary files in *PS_APP_HOME*

5. Create a DEMO or SYS database.
6. Use the PeopleTools DPK setup script to complete the setup of the PeopleSoft domains.
 - a. If you did not install Oracle Tuxedo, Oracle WebLogic in step 4, use the DPK setup script to perform a mid-tier deployment.
 The mid-tier deployment installs Oracle Tuxedo, Oracle WebLogic, and JDK, as well as deploying and setting up the PeopleSoft domains.

Note. Because you already installed *PS_HOME* and *PS_APP_HOME*, the script skips those installations.

- b. If you installed Oracle Tuxedo, Oracle WebLogic, and JDK in step 4, configure the application server, PeopleSoft Pure Internet Architecture (PIA) and Process Scheduler domains.

Use the DPK setup script to deploy and set up the application server, Process Scheduler and PIA domains.

See "Installing the PeopleSoft Homes," Reviewing the DPK Setup Script Options.

Alternatively, use PSADMIN and the PIA silent installation process to set up the domains.

See "Configuring the Application Server on Windows."

See "Configuring the Application Server on UNIX"

See "Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode."

See "Setting Up Process Scheduler on Windows."

See "Setting Up Process Scheduler on UNIX."

7. Complete optional tasks, such as installing and compiling COBOL.

Task 1-1: Reviewing Hardware Requirements

This section discusses:

- Reviewing Hardware Requirements for Microsoft Windows
- Reviewing Hardware Requirements on AIX, Linux, or Solaris

Task 1-1-1: Reviewing Hardware Requirements for Microsoft Windows

You can install the PeopleSoft Application Image deployment packages (DPKs) or PeopleSoft PeopleTools DPKs directly on a system running a Microsoft Windows operating system. The PeopleSoft Application Images and PeopleSoft PeopleTools DPKs are certified to run on those Microsoft Windows operating systems that are certified for the current PeopleSoft PeopleTools release. The Microsoft Windows system can be a physical computer (sometimes called "bare-metal") or a virtual machine.

Oracle strongly recommends that you dedicate a Microsoft Windows machine for the PeopleTools client. This should be a machine that is not used for other PeopleSoft purposes.

See "Deploying the PeopleTools Client DPK," Deploying the PeopleTools Client DPK in Standalone Mode, for information on installing the PeopleTools client utilities.

- *Host computer:* The PeopleSoft DPKs can be deployed directly on any supported Microsoft Windows host, bare-metal or virtual.

If you deploy on a virtual host computer, you are responsible for provisioning the virtual machine before beginning the deployment.

- *Host operating system:* The host operating system (OS) must be a 64-bit platform that is certified by Oracle for PeopleSoft systems.

Note. My Oracle Support Certification notes include information about the PeopleSoft PeopleTools components that are certified for each operating system. Some OSs are certified only for browsers and clients. If you want to deploy a full PeopleSoft environment, verify that the OS you want to use is certified for server installation.

See My Oracle Support, Certifications.

See PeopleSoft PeopleTools Certifications, My Oracle Support, Doc ID 747587.1, for help searching PeopleSoft Certifications.

- *RAM (Memory):* A minimum of 8 GB RAM is required to run a PeopleSoft environment.

- *CPU Capabilities for the PeopleTools Client*: To run Change Assistant on a Microsoft Windows server requires a virtual machine with a 4-core CPU or a physical machine with a 2-core CPU.
- *Disk space*: The disk space requirements vary depending upon the type of environment you set up. See "Preparing to Deploy," Understanding PeopleSoft Components.
 - 25–35 GB free disk space for the downloaded DPK zip files
 - 150 GB free disk space is required to deploy and set up a full tier PeopleSoft environment.
 - 25 GB free disk space is required to deploy and set up a mid-tier PeopleSoft environment.

Note. You may remove some of the downloaded DPK zip files after you have successfully initialized your PeopleSoft environment. This documentation uses *DPK_INSTALL* to refer to the directory holding the downloaded DPK zip files. It is important that you retain the *DPK_INSTALL\setup* directory because it holds all the scripts required when you use the DPK setup script commands to deploy a PeopleSoft environment and when you remove a deployed PeopleSoft environment using the DPK setup script with the cleanup option.

See Also

Tech Update - Main Page, My Oracle Support, Doc ID 764222.1

Task 1-1-2: Reviewing Hardware Requirements on AIX, Linux, or Solaris

You can install the PeopleSoft Application Image deployment packages (DPKs) directly on a system running an Oracle Linux operating system. You can install the PeopleSoft PeopleTools deployment packages (DPKs) directly on a system running an IBM AIX, Linux, or Solaris operating system. The PeopleSoft Application Images and PeopleSoft PeopleTools DPKs are certified to run on those operating systems that are certified for the current PeopleSoft PeopleTools release. The AIX, Linux, or Solaris system can be a physical computer (sometimes called "bare-metal") or a virtual machine.

- *Host computer*: The PeopleSoft DPKs can be deployed on any supported AIX, Linux, or Solaris host, either a physical computer or virtual machine. The PeopleSoft DPKs can also be deployed on Oracle Exalogic Elastic Cloud.

If you deploy on a virtual host computer, you are responsible for provisioning the virtual machine before beginning the deployment.

- *Host operating system*: The host operating system must be a 64-bit platform that is certified by Oracle for PeopleSoft systems.

For full-tier installations on Linux, the minimum version is Oracle Linux 7.9.

See My Oracle Support, Certifications.

See PeopleSoft PeopleTools Certifications, My Oracle Support, Doc ID 747587.1, for help searching PeopleSoft Certifications.

- *RAM (Memory)*: A minimum of 8 GB RAM is required to run a PeopleSoft environment.
- *Disk space*: The disk space requirements vary depending upon the type of environment you set up. See "Preparing to Deploy," Understanding PeopleSoft Components.
 - 25–35 GB free disk space for the downloaded DPK zip files
 - 150 GB free disk space is required to deploy and set up a full tier PeopleSoft environment.
 - 25 GB free disk space is required to deploy and set up a mid-tier PeopleSoft environment.

Note. You may remove some of the downloaded DPK zip files after you have successfully initialized your PeopleSoft environment. This documentation uses *DPK_INSTALL* to refer to the directory holding the downloaded DPK zip files. It is important that you retain the *DPK_INSTALL/setup* directory because it holds all the scripts required when you use the DPK setup script commands to deploy a PeopleSoft environment and when you remove a deployed PeopleSoft environment using the DPK setup script with the cleanup option.

See Also

My Oracle Support, Certifications.

Tech Update - Main Page, My Oracle Support, Doc ID 764222.1

Task 1-2: Reviewing Software Requirements

This section discusses:

- Reviewing Software Requirements on Microsoft Windows
- Reviewing Software Requirements on Linux
- Reviewing Software Requirements on AIX
- Reviewing Software Requirements on Solaris
- Using the Correct PeopleTools DPKs

Task 1-2-1: Reviewing Software Requirements on Microsoft Windows

Here are the software requirements for using the PeopleSoft Deployment Packages on a Microsoft Windows machine:

- Administrative permission
- Read, write, and execute permission on the default temporary folder.

The deployment of a PeopleSoft environment by the DPKs installs required supporting software, such as Oracle WebLogic and Oracle Tuxedo. The DPK process to install this software uses the default temporary folders, as specified by the environment variable for the operating system. The user running the DPK setup script must have read/write/execute permission to these default temporary folders for successful DPK installation, or the deployment steps that install these components will fail.

- The DPK setup script can be run from any drive, regardless of the drive where the Windows operating system is installed.

If you run the DPK setup script from one drive and specify the installation location in another drive, it is a good idea to also specify where to save the installation log.

By default, the DPK setup script generates an installation log under the directory where the DPKs reside. If you want the log to be saved in a different location, use the DPK setup script `log_file` option. For example, if you stage the DPKs in the directory *DPK_INSTALL*, and use the same set of DPKs for different deployments to different installation locations, the log files for all the deployments will be generated in the same place, *DPK_INSTALL/setup*, and will overwrite each other. To avoid this, direct the log files for each deployment to different locations, such as the deployment directory. For example:

```
Run 1: psft-dpk-setup.bat --env_type midtier --log_file d:\psft_run1\logs
Run 2: psft-dpk-setup.bat --env_type midtier --log_file e:\psft_run2\logs
```

See "Installing the PeopleSoft Homes," Reviewing the DPK setup Script Options.

- Web Browser

You need a version certified for the current PeopleSoft PeopleTools release for end-users.

See PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2.

See My Oracle Support, Certifications.

- Zip utility

You need a utility that is able to extract (unzip) the DPK zip files for your operating system.

- Verify that the PATHEXT environment variable includes the extension .bat.

This is a requirement for running Puppet. For example:

```
PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
```

- Check for the PERLSUB environment variable.

The deployment of a full PeopleSoft environment includes the installation of Oracle 19c Database server, which requires the version of Perl that is packaged with the Oracle Database Server DPK. The deployment may fail if your system has a previously-set PERLSUB environment variable, because the DPK setup will try to use the Perl installation specified by the PERLSUB environment variable. To avoid this conflict, check for the PERLSUB environment variable, and if it exists, remove or rename it before the deployment.

- Check for the USERPROFILE environment variable.

If USERPROFILE is set, verify that there is full access to the location set by this environment variable.

- These Puppet components are included with the DPKs.

The DPK setup script installs open-source Puppet software that has been modified for the PeopleSoft installation. This modification allows the Puppet software to be installed in the location specified by the DPK setup script. You may see this referred to as the "Relocatable Puppet."

- PeopleTools 8.61.02 and earlier includes Puppet Agent 6.28.0 (open source, and stand-alone architecture), Ruby 2.5.9, Facter 4.3.1, and Hieria 3.12.0.
- PeopleTools 8.61.03 and later includes Puppet Agent 8.3.1 (open source, and stand-alone architecture), Ruby 3.2.2, Facter 4.5.1, and Hieria 3.12.0.

- Python 3.11 is included with the DPKs.

- Microsoft Visual C++ Redistributable files

The current PeopleSoft PeopleTools release was developed using Microsoft Visual Studio 2022. PeopleSoft PeopleTools programs require Microsoft Visual C++ Redistributable for Visual Studio 2022 files to be present or the programs will not run. The required Visual C++ Redistributable for Visual Studio 2022 packages are installed by the DPK setup script. After you have completed the PeopleSoft installation, if necessary, you can install the files from *PS_HOME\setup\psvcrt*.

- Java JDK 11 is included with the DPKs.

JDK 11 is used by the application server, Process Scheduler, web server, and life-cycle management processes. Note that Java 11 includes only JDK, not JRE.

- Specifying PS_APP_HOME

The DPK setup script creates the installation location for the PeopleSoft application files, *PS_APP_HOME*, in a default location. If you want to use an existing *PS_APP_HOME*, or specify a non-default location, follow the instructions to perform the deployment using the DPK customizations.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- Specifying PS_CUST_HOME

If you wish to use a *PS_CUST_HOME* location to store your site's custom files, you must perform the deployment using the DPK customizations, and specify the *PS_CUST_HOME* location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

Task 1-2-2: Reviewing Software Requirements on Linux

Here are the software requirements for using the PeopleSoft Deployment Packages on a Linux machine:

- You must have root access to deploy the PeopleSoft DPKs.

See "Deploying the PeopleSoft Homes," Deploying as a Non-Root User on Linux, AIX, or Solaris.

- Read, write, and execute permission on the default temporary folder.

The deployment of a PeopleSoft environment by the DPKs installs required supporting software, such as Oracle WebLogic and Oracle Tuxedo. The DPK process to install this software uses the default temporary folders, as specified by the environment variable for the operating system. The user running the DPK setup script must have read, write, and execute permission to these default temporary folders for successful DPK installation, or the deployment steps that install these components will fail.

- Verify the umask value.

For a default deployment (that is, with no customizations) run by the root user, the DPK setup script uses the system umask value when it creates users (for example, psadm1, psadm2, psadm3, oracle2, and esadm1) and user home directories. Be sure that the umask value allows the DPK-created users the necessary access to the user home directories and other directories they need to use.

See Using the PeopleSoft Installation.

- If you are installing the PeopleSoft DPKs on a supported version of Oracle Linux with Unbreakable Enterprise Kernel (UEK), apply the latest UEK kernel from the Oracle YUM repository at <http://public-yum.oracle.com/index.html>.
- Operating system requirements for Oracle 19c Database server

The deployment of a full PeopleSoft environment includes the installation of Oracle 19c Database server. If you are deploying a full PeopleSoft environment (full-tier deployment), you must fulfill the prerequisites for the Oracle 19c Database server on your Linux operating system. Ensure that you install the required packages before beginning the deployment.

See the section Installing Required Packages for Oracle 19c on Linux for more information.

- Zip utility

You need a utility that is able to extract (unzip) the DPK zip files for your operating system; for example, tar or unzip.

- Specifying *PS_APP_HOME*

The DPK setup script creates the installation location for the PeopleSoft application files, *PS_APP_HOME*, in a default location. If you want to use an existing *PS_APP_HOME*, or specify a non-default location, follow the instructions to perform the deployment using the DPK customizations.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- Specifying *PS_CUST_HOME*

If you wish to use a *PS_CUST_HOME* location to store your site's custom files, you must perform the deployment using the DPK customizations, and specify the *PS_CUST_HOME* location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- These Puppet components are included with the DPKs.

The DPK setup script installs open-source Puppet software that has been modified for the PeopleSoft installation. This modification allows the Puppet software to be installed in the location specified by the DPK setup script. You may see this referred to as the "Relocatable Puppet."

- PeopleTools 8.61.02 and earlier includes Puppet Agent 6.28.0 (open source, and stand-alone architecture), Ruby 2.5.9, Facter 4.3.1, and Hieria 3.12.0.
- PeopleTools 8.61.03 and later includes Puppet Agent 8.3.1 (open source, and stand-alone architecture), Ruby 3.2.2, Facter 4.5.1, and Hieria 3.12.0.
- Python 3.11 is included with the DPKs.
- Java JDK 11 is included with the DPKs.

JDK 11 is used by the application server, Process Scheduler, web server, and life-cycle management processes. Note that Java 11 includes only JDK, not JRE.

Task 1-2-3: Reviewing Software Requirements on AIX

Here are the software requirements for using the PeopleSoft Deployment Packages on an IBM AIX machine:

- You must have root access to deploy the PeopleSoft DPKs.

See "Deploying the PeopleSoft Homes," Deploying as a Non-Root User on Linux, AIX, or Solaris.

- Read, write, and execute permission on the default temporary folder.

The deployment of a PeopleSoft environment by the DPKs installs required supporting software, such as Oracle WebLogic and Oracle Tuxedo. The DPK process to install this software uses the default temporary folders, as specified by the environment variable for the operating system. The user running the DPK setup script must have read, write, and execute permission to these default temporary folders for successful DPK installation, or the deployment steps that install these components will fail.

- Verify the umask value.

For a default deployment (that is, with no customizations) run by the root user, the DPK setup script uses the system umask value when it creates users (for example, psadm1, psadm2, psadm3, oracle2, and esadm1) and user home directories. Be sure that the umask value allows the DPK-created users the necessary access to the user home directories and other directories they need to use.

See Using the PeopleSoft Installation.

- Utilities for extracting the DPK zip files

You need both the gunzip and unzip utilities for your operating system in order to extract the DPK zip files, and the PATH for the root user must include the gunzip and unzip locations.

- OpenSSL

Obtain the latest version of OpenSSL for your AIX operating system from your IBM support contact, and install it on the host.

- JDK 11

You must manually install JDK 11 from the IBM web site. The minimum supported version is IBM Semeru Certified Edition JDK 11.0.12.1 or later. To obtain 64-bit IBM JDK for IBM AIX:

1. Go to the IBM JDK download and service site.

<https://www.ibm.com/support/pages/java-sdk>

Note. You need a user name and password for downloading IBM JDK. If you don't have the required credentials, contact IBM AIX support.

2. Select Downloads.
3. Select the link for IBM Semeru Runtime Certified Edition, Version 11.
4. Provide the required information to sign in.
5. Install the JDK on the AIX computer where you will install the PeopleSoft AIX DPK.
6. Make a note of the installation location.

For the AIX DPK installation, you must perform the deployment using the DPK customizations, and specify the AIX JDK installation location.

See "Completing the DPK Initialization With Customizations," Preparing the Customization File for JDK on AIX.

- IBM XL C++ Runtime 17.1.1 or later

Ensure that IBM XL C++ Runtime 17.1.1 or later is present on the system.

For example, use this command to check for the presence of IBM XL C++ Runtime 17.1.1 or later:

```
bash-4.2$ lslpp -l libc++.rte
```

You should see version 17.1.1 or later listed in the results; for example:

Fileset	Level	State	Description
Path: /usr/lib/objrepos			
libc++.rte	17.1.1.4	COMMITTED	IBM XL C++ Runtime for AIX 7.1 and later

Also, ensure that a symlink is present that points to libc++.a from the xlc installed location. For example, use this command to verify the symlink:

```
bash-5.1$ ls -l /usr/lib/libc++.a
```

The result should indicate a symlink.

```
lrwxrwxrwx 1 bin bin 25 Feb 06 2024 /usr/lib/libc++.a -> /usr/lpp/xlc/C/lib/libc++.a
bash-5.1$
```

Note. The line-continuation arrow (=>) is part of this document and would not be seen in the results.

- Specifying PS_APP_HOME

The DPK setup script creates the installation location for the PeopleSoft application files, *PS_APP_HOME*, in a default location. If you want to use an existing *PS_APP_HOME*, or specify a non-default location, follow the instructions to perform the deployment using the DPK customizations.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- Specifying PS_CUST_HOME

If you wish to use a *PS_CUST_HOME* location to store your site's custom files, you must perform the deployment using the DPK customizations, and specify the *PS_CUST_HOME* location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- These Puppet components are included with the DPKs.

The DPK setup script installs open-source Puppet software that has been modified for the PeopleSoft installation. This modification allows the Puppet software to be installed in the location specified by the DPK

setup script. You may see this referred to as the "Relocatable Puppet."

- PeopleTools 8.61.02 and earlier includes Puppet Agent 6.28.0 (open source, and stand-alone architecture), Ruby 2.5.9, Facter 4.3.1, and Hiera 3.12.0.
- PeopleTools 8.61.03 and later includes Puppet Agent 8.3.1 (open source, and stand-alone architecture), Ruby 3.2.2, Facter 4.5.1, and Hiera 3.12.0.
- Python 3.11 is included with the DPKs.

Task 1-2-4: Reviewing Software Requirements on Solaris

Here are the software requirements for using the PeopleSoft Deployment Packages on Solaris:

- You must have root access to deploy the PeopleSoft DPKs.

See "Deploying the PeopleSoft Homes," Deploying as a Non-Root User on Linux, AIX, or Solaris.

- Read, write, and execute permission on the default temporary folder.

The deployment of a PeopleSoft environment by the DPKs installs required supporting software, such as Oracle WebLogic and Oracle Tuxedo. The DPK process to install this software uses the default temporary folders, as specified by the environment variable for the operating system. The user running the DPK setup script must have read, write, and execute permission to these default temporary folders for successful DPK installation, or the deployment steps that install these components will fail.

- Verify the umask value.

For a default deployment (that is, with no customizations) run by the root user, the DPK setup script uses the system umask value when it creates users (for example, psadm1, psadm2, psadm3, oracle2, and esadm1) and user home directories. Be sure that the umask value allows the DPK-created users the necessary access to the user home directories and other directories they need to use.

See Using the PeopleSoft Installation.

- Zip utility

You need a utility that is able to extract (unzip) the DPK zip files for your operating system; for example, tar or unzip.

- OpenSSL

Obtain the latest version of OpenSSL for your operating system and install it on the host.

- Specifying PS_APP_HOME

The DPK setup script creates the installation location for the PeopleSoft application files, *PS_APP_HOME*, in a default location. If you want to use an existing *PS_APP_HOME*, or specify a non-default location, follow the instructions to perform the deployment using the DPK customizations.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- Specifying PS_CUST_HOME

If you wish to use a *PS_CUST_HOME* location to store your site's custom files, you must perform the deployment using the DPK customizations, and specify the *PS_CUST_HOME* location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

- These Puppet components are included with the DPKs.

The DPK setup script installs open-source Puppet software that has been modified for the PeopleSoft installation. This modification allows the Puppet software to be installed in the location specified by the DPK setup script. You may see this referred to as the "Relocatable Puppet."

- PeopleTools 8.61.02 and earlier includes Puppet Agent 6.28.0 (open source, and stand-alone architecture), Ruby 2.5.9, Facter 4.3.1, and Hieria 3.12.0.
 - PeopleTools 8.61.03 and later includes Puppet Agent 8.3.1 (open source, and stand-alone architecture), Ruby 3.2.2, Facter 4.5.1, and Hieria 3.12.0.
 - Python 3.11 is included with the DPKs.
 - Java JDK 11 is included with the DPKs.
- JDK 11 is used by the application server, Process Scheduler, web server, and life-cycle management processes. Note that Java 11 includes only JDK, not JRE.

Task 1-2-5: Using the Correct PeopleTools DPKs

The DPKs are based on a specific PeopleTools release and patch number. Ensure that the entire set of downloaded DPKs you use for deployment is on the same PeopleTools patch release. The DPK zip file names include the PeopleTools release and patch number. For example, the "8.61.05" in the zip file name PEOPLETOOLS-WIN-8.61.05_1of4.zip refers to release 8.61 and patch 5.

See "Preparing for Installation," Reviewing the PeopleSoft PeopleTools DPKs.

It is necessary to use downloaded DPKs with the same PeopleTools release and patch. If you mix DPKs with different PeopleTools release and patch, there may be issues with environment deployment or cleanup of a deployed environment.

Task 1-3: Installing Required Packages for Oracle 19c on Linux

This section discusses:

- Reviewing the Requirements for Oracle 19c on Linux
- Installing Required Packages for Linux 7.x for On-premises Environments
- Installing Required Packages for Linux 8.x for On-premises Environments
- Installing Required Packages for Linux 8.x for Oracle Cloud Infrastructure Environments

Reviewing the Requirements for Oracle 19c on Linux

The deployment of a full PeopleSoft environment includes the installation of Oracle 19c Database server. If you are deploying a full PeopleSoft environment (full-tier deployment), you must fulfill the prerequisites for the Oracle 19c Database server on your Linux operating system. Ensure that you install the required packages before beginning the deployment. For complete information, consult the installation documentation for Oracle 19c Database server.

See Installing the Oracle Preinstallation RPM From Unbreakable Linux Network in the Database Installation Guide for Linux, Oracle 19c Database documentation, <https://docs.oracle.com/en/database/oracle/oracle-database/19/ldb1/index.html>.

My Oracle Support Certification notes include information about the PeopleSoft PeopleTools components that are certified for each operating system. Review the information for Oracle Database Server and Linux operating systems.

See My Oracle Support, Certifications, https://support.oracle.com/epmos/faces/CertifyHome?_adf.ctrl-state=zqvfs9v8l_4&_afzLoop=145874269658082.

See Also

Oracle Database (RDBMS) on Unix AIX, HP-UX, Linux, Solaris and MS Windows Operating Systems Installation and Configuration Requirements Quick Reference (12.1/12.2/18c/19c), My Oracle Support, Doc ID 1587357.1, <https://support.oracle.com/epmos/faces/DocumentDisplay?id=1587357.1>

Requirements for Installing Oracle Database 19c on OL7 or RHEL7 64-bit (x86-64), My Oracle Support, Doc ID 2551169.1, <https://support.oracle.com/epmos/faces/DocumentDisplay?id=2551169.1>

Requirements for Installing Oracle Database/Client 19c on OL8 or RHEL8 64-bit (x86-64), My Oracle Support, Doc ID 2668780.1, <https://support.oracle.com/epmos/faces/DocumentDisplay?id=2668780.1>

Task 1-3-1: Installing Required Packages for Linux 7.x for On-premises Environments

This section applies to installations with on-premises hosts and supported Linux 7.x operating systems. Before you install the PeopleSoft environment, carry out these steps.:

1. As the root user, download and install the Oracle preinstallation RPM.

Here are examples of commands to install the RPM:

- On Oracle Linux 7.x:

```
# yum -y install oracle-database-preinstall-19c
```

- On Red Hat Enterprise Linux 7.x:

```
# curl -o oracle-database-preinstall-19c-1.0-1.el7.x86_64.rpm https://yum.oracle.com/repo/OracleLinux/OL7/latest/x86_64/getPackage/oracle-database-preinstall-19c-1.0-1.el7.x86_64.rpm
# yum -y localinstall oracle-database-preinstall-19c-1.0-1.el7.x86_64.rpm
```

2. As the root user, check for glibc packages.

For example, use this command on both Oracle Linux and Red Hat Enterprise Linux:

```
# rpm -qa | grep glibc
```

3. Look for glibc-devel.x86_64 in the results from the previous step.

If glibc is not present, you must install it. There are various ways to install glibc. Here is one example:

```
# yum install glibc-devel
```

Task 1-3-2: Installing Required Packages for Linux 8.x for On-premises Environments

This section applies to installations with on-premises hosts and supported Linux 8.x operating systems. Before you install the PeopleSoft environment, carry out these steps:

1. As the root user, download and install the Oracle preinstallation RPM.

Here are examples of commands to install the RPM:

- On Oracle Linux 8.x:


```
# yum -y install oracle-database-preinstall-19c
```

- On Red Hat Enterprise Linux 8.x:

```
# curl -o oracle-database-preinstall-19c-1.0-1.el8.x86_64.rpm https://yum.oracle.com/repo/OracleLinux/OL8/latest/x86_64/getPackage/oracle-database-preinstall-19c-1.0-1.el8.x86_64.rpm
# yum -y localinstall oracle-database-preinstall-19c-1.0-1.el8.x86_64.rpm
```

2. As the root user, check for glibc packages.

For example, use this command on both Oracle Linux and Red Hat Enterprise Linux:

```
# rpm -qa | grep glibc
```

3. Look for glibc-devel.x86_64 in the results from the previous step.

If glibc is not present, you must install it. There are various ways to install glibc. Here is one example:

```
# yum install glibc-devel
```

Task 1-3-3: Installing Required Packages for Linux 8.x for Oracle Cloud Infrastructure Environments

This section applies to installations with Oracle Cloud Infrastructure (OCI) hosts and supported Linux 8.x operating systems. On OCI Linux hosts, if the yum commands above fail to install the required packages, use the following commands to enable additional repositories.

```
sudo yum config-manager --enable ol8_baseos_latest
sudo yum config-manager --enable ol8_appstream
```

Retry the command to install the preinstallation package.

```
sudo yum -y install oracle-database-preinstall-19c
```

Task 1-4: Reviewing the System Parameters on Linux, AIX, or Solaris

This section discusses:

- Understanding the System Parameters on Linux, AIX, or Solaris
- Reviewing the sysctl Parameters
- Reviewing the ulimit Parameters

Understanding the System Parameters on Linux, AIX, or Solaris

The generated YAML file for UNIX operating systems includes settings for certain system parameters. When you run the DPK setup script on Linux, AIX, or Solaris, the script overwrites existing system-level parameters that are different from the values in *BASE_DIR*/dpk/puppet/production/data/psft_unix_system.yaml.

It is possible to perform a deployment and make certain changes to the way that the DPK deployment handles these system parameters. Be aware, however, that the values listed in the `psft_unix_system.yaml` file are the minimum requirements for the DPK deployment.

Deployments by the root user

If the root user performs the entire deployment and does not want the system-level parameters to be updated by the DPK setup script, perform a customized deployment as described in the following two sections, *Reviewing the sysctl Parameters* and *Reviewing the ulimit Parameters*.

Non-root deployments

When a deployment is performed by a non-root user, the root user must first run a `prereq` step. If the root user does not want the system parameters to be updated by the DPK setup script, the root user should run the `prereq` step *without* the `syscfg` option.

See "Installing the PeopleSoft Homes," *Deploying as a Non-Root User on Linux, AIX, or Solaris*.

Task 1-4-1: Reviewing the sysctl Parameters

If you do not want the DPK setup script to overwrite the `sysctl` parameters, you can perform one of these customized deployments:

- If the existing `sysctl` settings on your system meet the DPK requirements, you can change the value of the parameter `setup_syscfg` from `true` to `false`.

This change will prevent the DPK setup script from overwriting the parameters.

See "Completing the DPK Initialization with Customizations," *Preparing the Customization File to Change the setup_sysctl Parameter*.

- If you want to allow the DPK setup script to change the `sysctl` settings on your system, retain the parameter `setup_syscfg: true`, and specify values for the following `sysctl` parameters that are greater than those given in the generated `psft_unix_system.yaml` file.

```
sysctl:
  kernel.msgmnb:      65538
  kernel.msgmni:      1024
  kernel.msgmax:      65536
  kernel.shmmax:      68719476736
  kernel.shmall:      4294967296
  kernel.core_uses_pid: 1
  net.ipv4.tcp_keepalive_time: 90
  net.ipv4.tcp_timestamps: 1
  net.ipv4.tcp_window_scaling: 1
  net.ipv4.ip_local_port_range: '10000 65500'
```

See "Completing the DPK Initialization with Customizations," *Preparing the Customization File to Overwrite the sysctl Parameters*.

Task 1-4-2: Reviewing the ulimit Parameters

The `psft_unix_system.yaml` file includes the following `ulimit` parameters. These are the minimum requirements for the deployment. If you do not want the DPK setup script to overwrite the `ulimit` parameters, you can perform a customized deployment and specify values for the `ulimit` parameters that are greater than those given in the generated `psft_unix_system.yaml` file.

```
ulimit:
```

```
group:
  hard.nofile: 65536
  soft.nofile: 65536
  hard.nproc: 65536
  soft.nproc: 65536
  hard.core: unlimited
  soft.core: unlimited
  hard.memlock: 500000
  soft.memlock: 500000
  hard.stack: 102400
  soft.stack: 102400

user:
  hard.nofile: 131072
  soft.nofile: 131072
  hard.nproc: 131072
  soft.nproc: 131072
  hard.core: unlimited
  soft.core: unlimited
  hard.memlock: 500000
  soft.memlock: 500000
```

See "Completing the DPK Initialization with Customizations," Preparing the Customization File to Overwrite the ulimit Parameters.

Task 1-5: Reviewing the Oracle Central Inventory File Location and Permissions on Linux, AIX, or Solaris

This section discusses:

- Understanding the Oracle Central Inventory File (oraInst.loc)
- Understanding the DPK Setup Script prereq Step
- Running as a Non-Root User

Understanding the Oracle Central Inventory File (oraInst.loc)

The installation of Oracle products on Linux, AIX, and Solaris creates a central inventory location file named oraInst.loc. If you have previously installed Oracle software on the system, the oraInst.loc file may already exist. The oraInst.loc file is installed by default under the /etc directory on Linux and AIX, and under /var/opt/oracle on Solaris.

This file identifies the name of the Oracle Inventory group, and the path of the Oracle central inventory directory. The Oracle Inventory group is an operating system group that has permission to write to the central inventory. The central inventory directory holds the Oracle inventory.xml file, which lists the installation locations for Oracle products. For a PeopleSoft installation, the Oracle 19c Database Server and Database Client will use this central inventory location. If the file is not set up correctly, or does not have the correct permissions, it may lead to problems with the installation of Oracle database software.

See *Database Installation Guide for Linux*, "Determining if an Oracle Inventory and Oracle Inventory Group Exist."

The oraInst.loc file contains only the following two lines:

```
inventory_loc=central_inventory_location
inst_group=Oracle_inventory_group
```

Understanding the DPK Setup Script prereq Step

Before a non-root user runs a mid-tier or full-tier deployment, the root user must run the DPK setup script with the `--prereq` option. The script performs validations and sets up a default central inventory location with the correct permissions if none exists.

Note. If you are performing the entire DPK deployment as the root user, you do not need to run the DPK setup script with the `--prereq` option first.

- If `oraInst.loc` exists (`/etc/oraInst.loc` on Linux or AIX, or `/var/opt/oracle/oraInst.loc` on Solaris), the script performs several validations.

If all of the validations are successful, the DPK setup script uses the location set for `inventory_loc` in `oraInst.loc` for the Oracle 19c Database Server and Database Client installation locations.

If any of the validations fails, the script exits. If the `oraInst.loc` file is not accessible, or if the entries are not valid, the script instructs you to delete it and rerun the DPK setup script with the `--prereq` option.

The validations include:

- The existing `oraInst.loc` file must be accessible for reading.
- The entries for `inventory_loc` and `inst_group` are present.
- The directory defined by `inventory_loc` is present.
- The group defined by `inst_group` is present.
- If all validations are successful, the script sets the permission to 775 for the directory defined by `inventory_loc`.

Setting the permission to 775 gives the directory owner and group read, write, and execute permission, and all others read and execute access.

- The script sets the group ownership for the directory defined by `inventory_loc` to `inst_group`.
- If `oraInst.loc` does not exist (`/etc/oraInst.loc` on Linux or AIX, or `/var/opt/oracle/oraInst.loc` on Solaris), the DPK setup script uses the location `/srv/dpk/oracle` for the central inventory location and the group `oinstall` for `inst_group`. The script:
 - Checks for the `oinstall` group, and creates it if it does not exist.
 - Checks for the `/srv/dpk/oracle` directory, and creates it if it does not exist.
 - Sets the group ownership for the `/srv/dpk/oracle` directory to `oinstall`.
 - Sets the permission to 775 for the `/srv/dpk/oracle` directory.

On Linux only, after either successfully validating an existing `oraInst.loc`, or creating a valid central inventory location, the script prompts the root user to give non-root users the necessary access to the central inventory location. If you answer Yes to the prompt:

- The script verifies that the user name entered belongs to a valid user.
If the user is not valid, the script exits. Identify the correct user name for a valid non-root user and rerun the DPK setup script with the `--prereq` option.
- The script adds the non-root user to the group defined by `inst_group` in the existing `oraInst.loc` file or to the newly created `oinstall` group.
- If the non-root user is added successfully, you are prompted to give access to more users.

For information on managing Linux users, groups, and permissions, see the documentation for your Linux operating systems.

To verify that a non-root user, such as `psftuser`, belongs to the correct group, such as `oinstall`, sign in to the `psftuser` account as root, and run the `id` command. The list of groups should include `oinstall`; for example:

```
uid=1223 (psftuser) gid=8500 (dba) groups=8500 (dba), 56789 (oinstall)
```

To verify that the central inventory location, such as `/srv/dpk/oracle`, has the correct permission, use a command to list the directory contents. The listing includes the read, write, and execute permissions (rwx), user, group, size, and file name.

```
cd /srv/dpk
ls -al
total 12
drwxr-xr-x  3 root      root      4096 Jul 16 18:17 .
drwxr-xr-x  3 root      root      4096 Jul 16 18:17 ..
drwxrwxr-x  4 psftuser oinstall 4096 Jul 16 19:58 oracle
```

Task 1-5-1: Running as a Non-Root User

Before and after a non-root user deploys the DPKs, the root user must perform the following steps:

1. Run one of the DPK setup prereq steps.

To validate and set up a default central inventory location for Oracle central inventory location:

```
./psft-dpk-setup.sh --prereq
```

2. Run the mid-tier or full-tier deployment.
3. Run the DPK setup post-configuration step.

For mid-tier deployments, this step completes the Oracle Database Client setup.

For full-tier deployment, this step completes the Oracle Database Server setup and sets up the NFS shares.

```
./psft-dpk-setup.sh --postcfg --psft_base_dir BASE_DIR
```

Task 1-6: Using Oracle Software Delivery Cloud to Obtain Installation Files

Before beginning the installation, you should have obtained the PeopleSoft installation software by downloading the necessary zip files from the Oracle Software Delivery Cloud portal or My Oracle Support. Use the information available in the PeopleSoft documentation and My Oracle Support Certifications to be sure that you obtain all the zip files required for your environment.

See Oracle Software Delivery Cloud, <https://edelivery.oracle.com>.

See My Oracle Support, <https://support.oracle.com>.

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

Note. If your PeopleSoft installation uses Oracle SOA Suite, note that the 32-bit versions of the Oracle SOA Suite 10g media components on the Oracle Software Delivery Cloud portal are certified to run on the Linux x86-64 and the Microsoft Windows 64-bit operating system platforms.

See Also

Downloading Software from Oracle Software Delivery Cloud, My Oracle Support, Doc ID 2098595.1

Task 1-7: Considering Project Planning

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

Search for the term "maintenance schedules" on My Oracle Support. You can find schedules by year and quarter for PeopleSoft PeopleTools and PeopleSoft applications. The schedules include lists of bundles and maintenance packs for individual products.

Task 1-8: Planning Your Initial Configuration

This section discusses:

- Understanding Workstations
- Understanding PeopleSoft Servers and Clients
- Defining the PeopleTools Client
- Defining the File Server
- Defining the Database Server
- Defining the Application Server
- Defining the Process Scheduler (Batch) Server
- Defining Installation Locations
- Defining the Web Server

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

Understanding Workstations

Using the PeopleTools Development Environment (Microsoft Windows-Based Clients)

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

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

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

See *Installing Supporting Applications*.

You need to have the PeopleTools Development Environment set up to create your database. For more information on setting up the PeopleTools Development Environment, refer to the product documentation for PeopleSoft Configuration Manager.

See the *PeopleTools: System and Server Administration* product documentation for more information about using PeopleSoft Configuration Manager.

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

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

Using Workstations Equipped with Supported Web Browsers

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

See *PeopleTools: Portal Technology*.

See My Oracle Support, Certifications.

Understanding PeopleSoft Servers and Clients

Here is a summary of the functionality included in the PeopleSoft servers and clients:

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

See Defining the File Server

- *PeopleTools Client*

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

See Defining the PeopleTools Client.

- *Application Server*

PSADMIN and COBOL for remote call

- *Database Server*

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

- *Process Scheduler Server*

PSADMIN, COBOL, and SQR.

- *Web Server*

The Web Server contains all the scripts file, Portal Search data files, and PeopleSoft Pure Internet Architecture (PIA) installation tools that can assist in setting up a web server domain. However, to run the PeopleSoft Pure Internet Architecture, the client workstation only needs a web browser that is HTML 4.0 compliant.

Task 1-8-1: Defining the PeopleTools Client

The PeopleTools Client is the environment repository for the PeopleSoft PeopleTools Development environment. The PeopleTools Client provides two-tier and three-tier connectivity to PeopleSoft applications.

To install the PeopleTools Client, use the script included with the PeopleTools Client DPK. Keep in mind that the PeopleTools Client can be installed *only* on supported Microsoft Windows operating systems.

Note. The client may be referred to as the PeopleTools Client, PT Client, or PeopleSoft Microsoft Windows client in this documentation.

See "Deploying the PeopleTools Client DPK."

Task 1-8-2: Defining the File Server

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

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

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

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

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

In some cases you may choose to set up local copies of the PeopleSoft executables on the PeopleTools Development Environment and Windows batch servers, rather than mapping to a shared directory on the file server.

Task 1-8-3: Defining the Database Server

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

See Planning Database Creation.

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

Task 1-8-4: Defining the Application Server

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

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

If you are installing on an Oracle for UNIX RDBMS, you can install the application server on the same machine as the database server, a configuration called *logical three-tier*. You can also install application servers on one or more separate UNIX or Microsoft Windows machines. This configuration is called *physical three-tier*. (See the Certification area on My Oracle Support for information on supported operating systems for PeopleSoft Application Servers.)

If you are installing on an Oracle for Windows RDBMS, you may use a Microsoft Windows application server. This application server can be installed on the same machine as the Oracle database server, but for Windows installations you will most likely get better results by installing one or more dedicated application servers (that is, a physical three-tier configuration).

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

See Also

PeopleTools: Portal Technology

Task 1-8-5: Defining the Process Scheduler (Batch) Server

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

With Oracle Windows databases, a Process Scheduler server running on the batch server may point to and invoke files that are physically located on the file server. With an Oracle UNIX database, the SQR and COBOL files must be installed to the batch server, and COBOL source files must be compiled.

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

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

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

See Also

PeopleTools: Process Scheduler

Task 1-8-6: Defining Installation Locations

Understanding Installation Locations

As you proceed through the PeopleSoft PeopleTools installation, you are asked to specify several installation locations. Use the information in this section to choose how to specify the installation locations for the various components in a PeopleSoft installation.

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

Defining the DPK Base Directory

When you use the PeopleSoft DPKs to install a PeopleSoft environment, you specify a base directory, referred to in this documentation as *BASE_DIR*. The DPK setup script creates the following directories under *BASE_DIR*:

- *BASE_DIR/db*

This directory is used for an Oracle RDBMS full-tier installation. It is empty in other installations.

- Oracle database server software is installed by default in *BASE_DIR/db/oracle-server*.

- For a full-tier installation, Oracle container database (CDB) and pluggable database (PDB) files and tables for the PeopleSoft application are installed by default in *BASE_DIR/db/oradata*.
- *BASE_DIR/dpk*
 - The script uses this directory to extract the archives from the PeopleSoft DPKs.
 - The Puppet YAML files for the installation configuration are installed in *BASE_DIR/dpk/puppet/production*.
- *BASE_DIR/lcm*
The script uses this directory to install Change Assistant and directories used for PeopleSoft Automated Updates.
See *PeopleTools Change Assistant and Update Manager*, "Using PeopleSoft Automated Updates."
- *BASE_DIR/psft_puppet_agent*
The script uses this directory to install Puppet software.
See Reviewing Software Requirements.
- *BASE_DIR/pt*
The script deploys the PeopleSoft components to the following installation locations:
 - *PS_HOME* is installed by default in *<BASE_DIR>/pt/ps_home<peopletools_patch_version>*, where *<peopletools_patch_version>* is the full release; for example, *ps_home8.61.12*.
 - *PS_APP_HOME* is installed by default in *<BASE_DIR>/pt/<app>_app_home*, where *<app>* is the PeopleSoft product, such as *fscm_app_home*.
 - The Oracle Tuxedo software is installed by default in *BASE_DIR/pt/bea/tuxedo*.
 - The Oracle WebLogic software is installed by default in *BASE_DIR/pt/bea/wlserver*.
 - The supported JDK software is installed by default in *BASE_DIR/pt/jdk*.
 - If you perform a full-tier installation in which you specify install type PUM, the files needed to install the supported versions of the PeopleSoft PeopleTools client software are installed in *BASE_DIR/pt/tools_client*.
Use the *BASE_DIR/pt/tools_client* files to install the PeopleTools Client in Update Manager mode.

Defining PS_HOME

The *PS_HOME* directory holds the PeopleSoft PeopleTools files. For information on setting up *PS_HOME* as a read-only environment, see the *PeopleTools: System and Server Administration* product documentation on securing *PS_HOME* and *PS_CFG_HOME*.

PS_HOME can be used in the following ways:

- Multiple hosts can access *PS_HOME* on a shared (Microsoft Windows) or mounted (UNIX) location.
- Several Application Server, PIA, and Process Scheduler domains can use the same *PS_HOME*.

Defining PS_APP_HOME

The *PS_APP_HOME* location holds the PeopleSoft application files, in a location that is separate from *PS_HOME*. The *PS_APP_HOME* location is sometimes referred to as "Application Home."

Note. The PeopleSoft DPK setup requires that *PS_APP_HOME* be installed to a different location than *PS_HOME*. In earlier PeopleSoft releases, it was possible to set up an environment with the *PS_APP_HOME* location the same as the *PS_HOME* location. This configuration is not supported for the DPK installations.

When you run the DPK setup process, you will specify either FRESH or PUM installation type. If you want to create your own database, you must specify the FRESH installation type in order to install the necessary files in *PS_APP_HOME*.

Defining PS_CFG_HOME

The *PS_CFG_HOME* location holds the configuration files for the application server, batch server, web server (PIA), and search server domains. This location is sometimes referred to as "Config Home."

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

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

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

The DPK deployment creates the *PS_CFG_HOME* directory in the following locations. The configuration and log files for the application server, Process Scheduler server, and search server are installed below these locations.

Linux, AIX, or Solaris

- When performing the entire installation as the root user, *PS_CFG_HOME* is installed in:

`<USER_HOME>/psft/pt/<peopletools_major_version>`

You supply the location for the *USER_HOME* when you run the DPK setup script. The default value is /home. For example, /home/psftuser/psft/pt/8.61.

- When deploying the environment as a non-root user, *PS_CFG_HOME* is installed in:

`<prompted_ps_cfg_home>/psft/pt/<peopletools_major_version>`

You supply the location for *prompted_ps_cfg_home* when you run the DPK setup script. For example, /opt/pscfg/psft/pt/8.61.

Microsoft Windows:

`%USERPROFILE%\psft\pt\<peopletools_major_version>`. For example, C:\Users\psftuser\psft\pt\8.61.

Note. The *PS_CFG_HOME* directory is associated with the *PS_HOME* from which it was originally generated. The DPK deployment process supports a single *PS_CFG_HOME* to be used for all domains for a given environment.

This server domain configuration allows for a more flexible installation. You also have the opportunity to place different security restrictions on the binary and configuration files. For installations using DPKs, use the Puppet customizations to change *PS_CFG_HOME*.

Defining PS_CUST_HOME

The *PS_CUST_HOME* location holds customized file system objects (that is, objects you provide as opposed to being installed with the software).

Anything that is changed from the file system objects that are delivered with the PeopleSoft application installation should be placed here. The sub-directory structure must mirror the *PS_APP_HOME* upon which it is based. For example, when you install your PeopleSoft application, the directory structure includes SQR scripts in *PS_APP_HOME/sqr*. If you have customized SQR scripts, you would place them in *PS_CUST_HOME/sqr*.

To define a *PS_CUST_HOME* location, use the Puppet customizations.

Defining PIA_HOME

When you install the PeopleSoft Pure Internet Architecture, the files are installed in the *PIA_HOME* directory. The *PIA_HOME* location holds the webserv directory, and the files for the PeopleSoft Pure Internet Architecture installation. The directory where you install PeopleSoft Pure Internet Architecture under *PS_CFG_HOME* is not the same as the location where you install PeopleSoft PeopleTools and the PeopleSoft application software, *PS_HOME*. You have the option to specify the installation location for the *PS_CFG_HOME* and the PeopleSoft Pure Internet Architecture by using the Puppet customizations.

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

See the product documentation for using the %V Meta variable in *PeopleTools: System and Server Administration* product documentation for more information about setting the *PS_CFG_HOME* environment variable.

Task 1-8-7: Defining the Web Server

A web server is required to run the PeopleSoft Pure Internet Architecture. The PeopleSoft Pure Internet Architecture is certified to work with the Oracle WebLogic Server J2EE web application servers (also commonly referred to as web servers).

Refer to the Certifications page on My Oracle Support for web server support information.

To find support information for the HTTP servers that can be used as reverse proxy servers (RPS), see the Oracle WebLogic documentation, included with Oracle Fusion Middleware.

See Oracle Help Center, Middleware Documentation, <https://docs.oracle.com/en/middleware/index.html>.

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

When you use the DPK setup script to install a PeopleSoft environment, default initialization installs a single web server domain with a single web site. You can also use the following methods to create and manage web server domains:

- Use the DPK customizations to create a non-default PIA domain, or to create more than one web site.
See "Completing the DPK Initialization with Customizations," Preparing the Customization File for PeopleSoft Domain Definitions.
- After you have installed an environment, use the PSADMIN utility to create additional domains or manage existing domains.

Note that you cannot use PSADMIN to create a multi-server domain.

See *PeopleTools: System and Server Administration*, "Using the Web (PIA) Server Menu."

- Use the silent mode installation to install and configure a web server domain.
You must use the silent mode installation to create a multi-server domain.
See "Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode."

Task 1-9: Planning Database Creation

This section discusses:

- Understanding Database Creation
- Determining Databases and Database Names
- Defining Oracle and PeopleSoft Databases
- Using Oracle Pluggable Databases

Understanding Database Creation

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

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

It is important to note the distinction between an Oracle database and a PeopleSoft database, which is a set of SQL objects that reside within a single Oracle database and share the same owner ID. Oracle recommends that you install only one PeopleSoft database per Oracle instance. For details, see the section "Defining Oracle and PeopleSoft Databases" later in this task.

If you are installing PeopleSoft software on an Oracle Real Application Cluster (RAC) database, you must use the manual procedure for database setup, and complete other configuration procedures.

See "Creating a Database Manually (on UNIX or Windows)."

See the information on setting up the PeopleSoft installation with Oracle RAC in the *PeopleTools: Data Management* product documentation.

Before installing PeopleSoft software, you should install the Oracle RDBMS software. This documentation does not cover installation of Oracle software. Please refer to the Oracle RDBMS installation documentation that accompanied your Oracle software for information.

You need to install 64-bit server and client Oracle RDBMS software for your PeopleSoft installation. The PeopleSoft PeopleTools database server, Application Server, and Process Scheduler, as well as the PeopleTools Client features, require 64-bit connectivity.

Task 1-9-1: Determining Databases and Database Names

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

- Are limited to eight characters, all UPPERCASE.
- Capture information about the PeopleSoft product line and the type of database.

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

Task 1-9-2: Defining Oracle and PeopleSoft Databases

An Oracle database is a set of SQL objects defined by one system catalog in the SYSTEM tablespace and one SID (system identifier), using one instance of the Oracle server executables and associated files. The Oracle database is commonly referred to as the *Oracle SID*.

A PeopleSoft database is a set of SQL objects defined as having the same owner ID. These tables are always contained within a single Oracle database. A PeopleSoft database includes the PeopleSoft objects and application data for one or more products in a PeopleSoft product line.

This owner ID (an Oracle user ID) may also be referred to as an Oracle schema or Oracle logical database. Each PeopleSoft database needs its own owner. We refer to this as the *PeopleSoft owner ID*, which is also the PeopleSoft access ID.

Note. You must limit the owner ID (access ID) to eight characters or less.

Refer to your Oracle database platform documentation for information about access ID and password length requirements, and work with your database administrator to set the password.

We recommend that you install no more than one PeopleSoft database per Oracle instance. When each PeopleSoft database has its own instance, the system is more robust for the following reasons:

- Your developers can bring down their instance of the Oracle server executables, but the others will remain running.
- You have added security with one PeopleSoft database per Oracle instance.
- It is more efficient to tune each instance to the requirements of its corresponding PeopleSoft application database.

If you are unable to run extra Oracle database instances because of resource limitations, such as memory and system semaphores, you can install multiple PeopleSoft databases in the same Oracle instance. Keep the following points in mind if installing multiple PeopleSoft databases within one Oracle database instance:

- When supporting multiple databases in one Oracle instance, increase maxdatafiles from the default of 32 when you create the database.
Check the limits of maxdatafiles for your operating system and increase the value accordingly.
- You need to increase the size of the tablespaces if you use the same ones for each PeopleSoft database schema.
Sharing tablespaces is not recommended.
- Each PeopleSoft database should have different operator IDs (also known as user IDs) to avoid problems with passwords.
- Each PeopleSoft database needs its own PeopleSoft database name.

This is the database name users enter during the PeopleSoft logon process. It appears in the following locations:

Location	Reference
PeopleSoft logon screen	Database Name
TNSNAMES.ORA	The service name defined in TNSNAMES.ORA must be the same as that in PS.PSDBOWNER.

Location	Reference
PS.PSDBOWNER table	DBNAME column A single table, PS.PSDBOWNER, is created in the Oracle SID as part of the database creation procedures. PS.PSDBOWNER is maintained and acts as directory during the sign-on process to all of the PeopleSoft databases in the Oracle database/SID. There is a single row in the PS.PSDBOWNER for each PeopleSoft DB contained in the SID.

This table includes an example of four PeopleSoft databases, uses, and IDs, in one Oracle database:

Database Use	PeopleSoft Database Name	Owner ID and Access ID (Oracle Schema)	Owner/Access Password	SID
Testing	HRTST	sysadm	<i>password</i>	hrdm
Development	HRDVLP	sysadm2	<i>password2</i>	hrdm
Training	HRTRAIN1	sysadm3	<i>password3</i>	hrdm
Training	HRTRAIN2	sysadm4	<i>password4</i>	hrdm

Task 1-9-3: Using Oracle Pluggable Databases

The current PeopleSoft PeopleTools release supports the Oracle Database multitenant architecture, with pluggable databases. The Pluggable Databases (PDB) functionality is an Oracle Enterprise Edition database feature that enables an Oracle database to function as a container database. A container database (CDB) is an Oracle database that includes one or more pluggable databases (PDBs). A PDB is a portable collection of schemas, schema objects, and non-schema objects that appears to an Oracle Net client as a non-CDB. For an introduction to the Oracle multitenant architecture, PDBs, and CDBs, see the Oracle database documentation.

Using the Oracle multitenant architecture with pluggable databases, a single database instance can host multiple PeopleSoft application databases.

The owners of PDBs and CDBs and their relationship to PeopleSoft users can be described as follows:

- CDB Administrator (Common User)

A common user is a database user that has the same identity in the root and in every existing and future PDB. Every common user can connect to and perform operations within the root, and within any PDB in which it has privileges. Every common user is either Oracle-supplied or user-created. Examples of Oracle-supplied common users are SYS and SYSTEM.

In PeopleSoft PeopleTools, the Oracle database user who belongs to the ORA_DBA group acts as a CDB Administrator.

- PDB Administrator (Local User)

A local user is a database user that is not common and can operate only within a single PDB. The PeopleSoft PeopleTools Access ID acts as the PDB Administrator.

This documentation includes the instructions for creating CDBs and PDBs with both the Database Configuration Wizard (on UNIX) and manually (on UNIX or Microsoft Windows).

See Also

Oracle Multitenant Administrator's Guide, 19c "Introduction to the Multitenant Architecture,"
<https://docs.oracle.com/en/database/oracle/oracle-database/19/multi/introduction-to-the-multitenant-architecture.html#GUID-267F7D12-D33F-4AC9-AA45-E9CD671B6F22>

PeopleTools: Data Management, "Using Pluggable Databases"

Task 1-10: Planning Multilingual Strategy

This section discusses:

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

Understanding Multilingual Issues

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

- Database base language
- Additional languages (if any)
- Database character set (AL32UTF8 recommended)

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

In considering which languages to include, whether for pre-translated objects or for your own application development, keep in mind that certain languages require a Unicode database. Oracle recommends Unicode character sets rather than non-Unicode character sets, including Western European and Japanese Shift-JIS, for all installations and upgrades regardless of the languages used.

See *Selecting a Database Character Set*.

Language Code	Language	Database Character Set
ARA	Arabic	Unicode only
CFR	Canadian French	Unicode recommended

Language Code	Language	Database Character Set
CZE	Czech	Unicode only
DAN	Danish	Unicode recommended
DUT	Dutch	Unicode recommended
ENG	US English	Unicode recommended
FIN	Finnish	Unicode recommended
ESP	Spanish	Unicode recommended
FRA	French	Unicode recommended
GER	German	Unicode recommended
HUN	Hungarian	Unicode only
ITA	Italian	Unicode recommended
JPN	Japanese	Unicode recommended
KOR	Korean	Unicode only
NOR	Norwegian	Unicode recommended
POL	Polish	Unicode only
POR	Portuguese	Unicode recommended
ROM	Romanian	Unicode only
RUS	Russian	Unicode only
SVE	Swedish	Unicode recommended
THA	Thai	Unicode only
TUR	Turkish	Unicode only
UKE	United Kingdom English	Unicode recommended
ZHS	Simplified Chinese	Unicode only
ZHT	Traditional Chinese	Unicode only

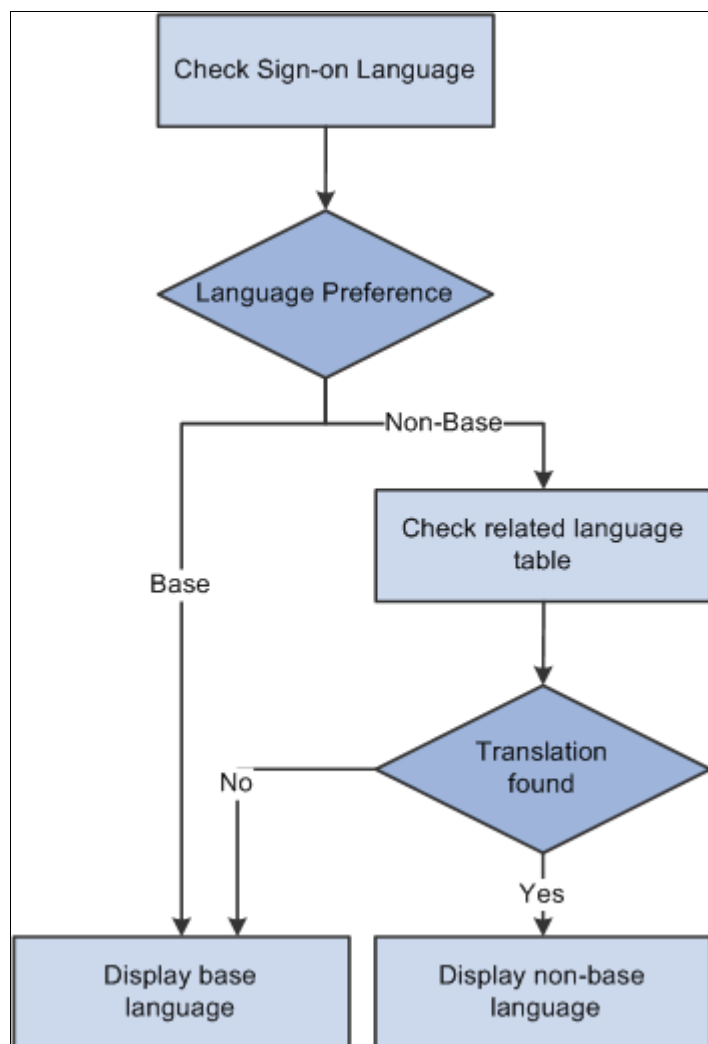
See Also

PeopleTools: Global Technology

Task 1-10-1: Choosing a Base Language

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

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



Language selection process using the base language and the preferred language

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

Task 1-10-2: Selecting Additional Languages

Oracle provides translations of all end-user objects with the global multi-language files. When you install your PeopleSoft environment, the DPK setup script asks whether you want multi-language support. It is much easier to install the multi-language files upon initial database creation than to add the languages later in your implementation process, so Oracle recommends that you decide whether to include additional languages now. There is no limit to the number of languages that can coexist in a single PeopleSoft database; however, remember that each language will require additional storage space, primarily for PeopleSoft PeopleTools objects.

Task 1-10-3: Selecting a Database Character Set

This section discusses:

- Understanding Character Sets
- Using Unicode Databases

Understanding Character Sets

Oracle recommends Unicode AL32UTF8, but also supports non-Unicode (legacy) character sets, in PeopleSoft databases.

The following table lists a selection of character sets, descriptions, and languages that the PeopleSoft software supports for Oracle databases:

Legacy Character Set	Description	Languages Supported
WE8ISO8859P1	Western European ISO 8859-1	All Western European (English, French, Spanish, Portuguese, German, Dutch, and so on)
WE8ISO8859P15	Western European ISO 8859-15	All Western European (English, French, Spanish, Portuguese, German, Dutch, and so on), and includes the euro symbol
WE8MSWIN1252	Western European MS Windows CP1252	All Western European (English, French, Spanish, Portuguese, German, Dutch and so on), and includes the euro symbol
US7ASCII	US 7-bit ASCII	English

Legacy Character Set	Description	Languages Supported
JA16SJIS Note. The Shift-JIS character set JA16SJISTILDE is also supported.	Japanese Shift-JIS 16-bit The JA16SJIS and JA16SJISTILDE character sets are essentially the same, except for the way that the wave dash and the tilde are mapped to and from Unicode.	Japanese, English

See *PeopleTools: Global Technology*, "Selecting and Configuring Character Sets."

Using Unicode Databases

To create an Oracle Unicode database, you must specify the character set as either AL32UTF8 or UTF8 in the CREATE DATABASE statement. The default value for an Oracle Unicode database is AL32UTF8, although UTF8 is also supported. The difference between the two is that the newer AL32UTF8 supports Unicode supplementary characters.

In addition, you must specify the init.ora parameter NLS_LENGTH_SEMANTICS as CHAR or BYTE based on the database used, as described in the following sections:

See Creating an INIT<SID>.ORA File in "Creating a Database Manually on Windows" or "Creating a Database on UNIX."

See "Creating a Database Manually on UNIX," Creating an Oracle Instance.

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

Note. The characters required for the English language exist in all Unicode and non-Unicode character sets. For example, Japanese and English can coexist in a single Unicode or non-Unicode database.

If you plan on installing or supporting a combination of languages that do not share the same character set, you should use a Unicode database.

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

See Understanding Multilingual Issues.

See Understanding Character Sets.

Task 1-11: Installing Supporting Applications

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

COBOL

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

contain COBOL programs.

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

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

See Using Visual COBOL with PeopleSoft, My Oracle Support, Doc ID 2523494.1.

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

See "Installing and Compiling COBOL on Windows."

See "Installing and Compiling COBOL on UNIX."

- For UNIX servers, install Micro Focus Visual COBOL or IBM Compiler for IBM AIX.
- For Microsoft Windows servers, install the appropriate version of Micro Focus Visual COBOL
- If all your servers are on Microsoft Windows operating systems, Oracle recommends that you install a COBOL compiler on the file server.

You can install PeopleSoft PeopleTools plus any patches on the file server, compile your COBOL there, and then copy the COBOL binaries to your application and batch servers.

- If your application and batch servers are on UNIX, we recommend that you designate a single server as the compile server, so that you can compile COBOL from this central location and then distribute it to the rest of your application and batch servers.

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

Note that the compile server must have the same operating system as any destination application or batch servers. For example, if your compile server is an IBM AIX machine, you can only copy COBOL compiled there to other IBM AIX application and batch servers. Oracle recommends this approach. It will help you keep your COBOL source code in sync and only requires that you install COBOL in a single location.

- The format of COBOL source file names of patches or customizations on the file server should always be UPPERCASE.cbl to ensure compatibility with your UNIX servers.

SQR

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

JDK

See the section Reviewing Software Requirements for the JDK version required for the current PeopleSoft PeopleTools release.

OpenSearch

OpenSearch is the supported search engine for the PeopleSoft Search Framework. Oracle provides OpenSearch as deployment packages (DPKs) for Microsoft Windows and Linux. The DPK delivers the required OpenSearch, OpenSearch Dashboards, and Logstash (OSK) software versions, Java-based plug-ins needed for integration with PeopleSoft environments, and customized code where required. OpenSearch Dashboards is used for analytics and data visualizations, and Logstash is used for PeopleSoft Health Center and as part of the external data integration feature. Be sure to obtain and use the OSK DPKs provided for use with the PeopleSoft installation.

See PeopleSoft Search and Insights Home Page, My Oracle Support, Doc ID 2205540.2.

Oracle Tuxedo

The installation of Oracle Tuxedo is required for a basic PeopleSoft PeopleTools installation. When you use the PeopleSoft DPKs for either a full-tier installation using the PeopleSoft Application Images or for a mid-tier installation using the PeopleTools DPKs, Oracle Tuxedo is installed as part of the installation. If for some reason you need to install Oracle Tuxedo separately, see the chapter "Installing Oracle Tuxedo."

Microsoft Office

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

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

See Also

My Oracle Support, Certifications

Task 1-12: Deploying PeopleSoft Environments in Containers

You can run PeopleSoft applications built on the current PeopleSoft PeopleTools Release in containers. Using the delivered DPKs along with a new API and scripts, you can build a Podman container for the middle tier, and search components (OpenSearch, OpenSearch Dashboards, and Logstash).

See *PeopleSoft PeopleTools 8.61 Deployment Packages*, "Deploying PeopleSoft DPKs in Containers."

Task 1-13: Installing the Database Engine

This section discusses:

- Understanding the Database Engine
- Creating a Seed Database

Understanding the Database Engine

If you have not already done so, install the Oracle database engine on your database server.

When installing the Oracle RDBMS, installation option selection influences the resulting generated Oracle Shared Library. The PeopleSoft product calls the Oracle Shared library when making calls to the Oracle RDBMS.

Task 1-13-1: Creating a Seed Database

Create the seed database during the installation of your Oracle database engine. This will not be your PeopleSoft database, so keep it small and give it a name that is not related to your application. After successfully installing your Oracle database engine, use the seed database to test Oracle Net connectivity from your application servers, batch servers, and workstations.

Task 1-14: Installing Oracle Net on the Server

You need to carry out this step for the database server, batch server, and application server. You need to load the Oracle Net listener and the communication protocol adapter you are using, such as TCP/IP, IPX, or NetBIOS.

Additionally you should do the following:

- Configure the listener to start automatically upon booting.
Refer to your Oracle documentation for details on setting up the listener.
- Verify that Oracle Net is loaded on the database server by connecting to a database using SQL*PLUS.

Issue the complete connect string including the TCP/IP address or some other node identifier. For example, if you are on TCP/IP, your logon might resemble the following example:

```
oracleid/password@TNS:service_name
```

Note. If you have someone outside your company install Oracle Net, make sure that they install the workstation end as well. Also, make sure they demonstrate connectivity between the workstations and the database server.

- Set required Oracle network configuration file parameters.

Note. For the Query Administration feature to cancel queries to work successfully, your application server must be using a remote network connection (for example, Oracle Net). In addition, you need to set the `SQLNET.EXPIRE_TIME = nn` parameter in the `SQLNET.ORA` network configuration file, as discussed below. If you are using a local connection, cancelling a query will not work. However, the `BEQUEATH_DETACH=YES` parameter in the `SQLNET.ORA` network configuration file should also be set to keep UNIX defunct processes from being created on aborted batch server processes.

See *PeopleTools: Query*, "Using Query Administration," Managing Currently Running Queries.

Oracle requires its PeopleSoft customers to use one of the following two Oracle `SQLNET.ORA` parameters to force the Oracle database server to terminate "dead" or "defunct" threads: `SQLNET.EXPIRE_TIME` or `BEQUEATH_DETACH`.

- The Dead Connection Detection parameter, `SQLNET.EXPIRE_TIME = nn`, applies only to connections being done through Oracle Net (for example, through `tnsnames.ora`).

This parameter sets a dead connection time-out value. Oracle Net sends a probe periodically to verify that a client-server connection is still active. (Oracle recommends a value of 10. The time increment is in minutes.) This ensures that connections are not left open indefinitely, due to an abnormal client termination. (Client in this context can be an application server thread.) If the probe finds a dead connection or a connection that is no longer in use, it returns an error, causing the server process to exit.

Note. Be sure to set this parameter in the `SQLNET.ORA` on the server side.

Note. This parameter works with all the supported versions of Oracle with PeopleTools 8.51 and higher.

Limitations on using the dead connection detection feature are:

- Dead connection detection is not allowed on bequeathed connections.
- Though very small, a probe packet generates additional traffic that may downgrade network performance.
- The server may need to perform additional processing to distinguish the connection probing event from other events that occur, depending on which operating system is in use.

This may also downgrade network performance.

- The parameter Turn Off Unix Signal Handling, `BEQUEATH_DETACH=YES`, applies only to local connections using the BEQ protocol.

Because the client application spawns a server process internally through the Bequeath protocol as a child process, the client application becomes responsible for cleaning up the child process when it completes. When the server process completes its connection responsibilities, it becomes a defunct process. Signal handlers are responsible for cleaning up these defunct processes. Setting this parameter configures the client profile to pass this process to the UNIX init process by disabling signal handlers.

Task 1-15: Installing Oracle Net on Your Workstation

You must install Oracle Net on each workstation that will connect to the PeopleSoft database server in a two-tier connection. Workstations making a three-tier connection normally do not need connectivity software. However, bear in mind that batch processes (such as COBOL and SQR) that are executed on the client workstation require that database connectivity software be installed on the client workstation. This is necessary because these batch processes must maintain their own SQL connection to the database server.

Note. You must also install Oracle Net on each application server and batch server that will connect to the PeopleSoft database server.

Oracle Net works with many communication protocols, so ensure that the listener on your database server is using the same protocol as the workstation. Also, keep in mind that the client workstations need simultaneous access to the database server (through Oracle Net) and to the PeopleSoft PeopleTools software on the file server.

You must use the same version of Oracle Net on your workstations, applications servers, batch servers, and database servers. Note as well that you must install the necessary protocol driver for your environment, such as the Oracle TCP/IP Adapter.

Note. Ensure that Oracle Net client connectivity is installed prior to performing a PeopleSoft workstation installation. Always check the most recent version of supported platforms on My Oracle Support for the currently supported Oracle Net versions.

See My Oracle Support, Certifications.

Task 1-16: Testing Oracle Net Connectivity

Once you have installed Oracle Net on the database server, application server, or workstation, test that the connection works using the SQL*PLUS utility provided with Oracle Net.

Connect to a database on your database server as the SYSTEM user, and issue the following SQL statement:

```
SQL> select * from all_users;
```

Note. Pinging or using Telnet does not test the Oracle Net connection.

Oracle, or your Oracle vendor, is best equipped to assist you if you have any problems installing any Oracle products or connecting to your Oracle database.

Task 1-17: Performing Backups

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

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

Chapter 2

Installing the PeopleSoft Homes

This chapter discusses:

- Obtaining the PeopleSoft Application Images and PeopleTools DPKs
- Using the PT-INFRA DPK for Additional Component Software
- Reviewing the DPK Setup Script Options
- Deploying as a Non-Root User on Linux, AIX, or Solaris
- Running the DPK Setup Script to Install PS_HOME and PS_APP_HOME
- Running the DPK Setup Script to Install All Software
- Removing a Deployed PeopleSoft Environment

Task 2-1: Obtaining the PeopleSoft Application Images and PeopleTools DPKs

If you have not already done so, this section describes how to locate and obtain the PeopleSoft Application Images and PeopleTools DPKs required for a fresh installation.

The PeopleSoft Application Images and PeopleTools DPKs are available on My Oracle Support. Contact Oracle if you need a user ID and password for My Oracle Support.

1. Go to the PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2, to find the information on locating and downloading the current PeopleSoft Application Image.

Note. On the PeopleSoft Update Manager Home Page, the term PeopleSoft Update Image (PI) is used for the images.

2. Select the tab PeopleSoft Update Image Home Pages, and select the link for your PeopleSoft application.
3. Expand the Update Image Link section, and then select the link for Native OS to find the details for the current PeopleSoft Application Image for Microsoft Windows and Linux.
4. In the Update Image Link table on the PeopleSoft Update Image Home Page, download or open the Update Image Manifest, and note the following:
 - The PeopleTools patch release in the Software Version Included column.
 - The file name for Application DPK Zip 1, normally *FILENAME_9of11.zip*.
5. To obtain the PeopleTools DPK, in My Oracle Support, select the Patches & Updates tab.
6. Select Product or Family (Advanced).
7. Specify the following information, and then click Search:
 - PeopleSoft Enterprise PT PeopleTools as the Product
 - The current PeopleSoft PeopleTools release, such as 8.61, as the Release

- Your operating system, Linux, IBM AIX, Microsoft Windows, or Oracle Solaris on SPARC, as the Platform
8. On the search results page, locate the PeopleTools patch corresponding to the patch release that you noted in step 4, and download the DPKs into a single directory, referred to in this documentation as *DPK_INSTALL*.

Note. You can also find links to the most recent PeopleTools patches on the PeopleSoft PeopleTools Patches Home Page, My Oracle Support, Doc ID 2062712.2.

9. To obtain the PeopleSoft Application DPK Zip1, return to the PeopleSoft Update Image Home Page, and in the Update Image Links table, select the link in the column *<Product> Update Image Link*.
10. From the patch page, download the zip file for Application DPK Zip 1 to the same *DPK_INSTALL* directory as in step 8.

For PeopleSoft installations on AIX, Linux, or Solaris, download the PeopleSoft Application DPK for Linux. Do not unzip the file at this point. If you download to a Microsoft Windows computer and FTP to your AIX, Linux, or Solaris computer, FTP in binary mode.

The first Application DPK Zip 1 includes the content needed for the PeopleSoft application, *PS_APP_HOME*. The other Application DPK files are not needed for this installation.

See "Preparing for Installation," Understanding the PeopleSoft Installation to review a list of the contents of the DPKs and file name syntax.

Task 2-2: Using the PT-INFRA DPK for Additional Component Software

The PT-INFRA DPKs contain supporting (third-party) software that is required for a PeopleSoft installation. The PT-INFRA DPKs are delivered as needed to provide security updates for one or more of the components. You can use the PT-INFRA DPKs to take advantage of up-to-date security updates (CPUs). When you use the PT-INFRA DPKs with a new installation the script installs the supporting software components with the updated CPUs. When you use the PT-INFRA DPKs with an existing installation, the script installs the CPUs on the existing third-party software installation.

The PT-INFRA DPKs include the following:

- Oracle Tuxedo
- Oracle WebLogic
- Oracle Database Client
- Java JDK

You can also use the PT-INFRA DPKs to update the JDK and Oracle Database Client for new or existing PeopleTools Client installations.

See *PT-INFRA Deployment Package Installation (PeopleSoft PeopleTools 8.61)*, PeopleSoft PeopleTools on Oracle Help Center, <https://docs.oracle.com/en/applications/peoplesoft/peopletools/index.html>.

Task 2-3: Reviewing the DPK Setup Script Options

This section discusses:

- Using the DPK Setup Script Options
- Preparing to Run the DPK Setup Script

Task 2-3-1: Using the DPK Setup Script Options

The PeopleSoft PeopleTools DPK setup script alleviates the installation process by automating most of the manual tasks on a virtual or bare-metal host running a supported operating system. By convention, the setup DPK is the first zip file (*FILENAME_1ofn.zip*) in the group of PeopleSoft DPK zip files you download from My Oracle Support.

The DPK setup zip file includes a script, *psft-dpk-setup*, that you use to set up a PeopleSoft environment. The DPK setup script offers a variety of options for setting up mid-tier components, *PS_HOME* and other installation folders, and PeopleSoft domains, depending upon the options you supply. The script is an interactive script that detects the downloaded DPKs and verifies that they are correct. It also prompts the user for input, and once that information is gathered, will set up a complete functional PeopleSoft environment.

Note. The DPK setup script does not provide any default passwords. It is a good idea to be prepared to supply passwords such as user ID, PeopleSoft Connect ID, Application Server Domain Connection, and so on.

When specifying directory locations, such as for the base directory and user home directory, enter the full path. For example, *C:/psft* on Microsoft Windows, or */ds1/psft* on Linux, AIX, or Solaris.

The following table lists the options available for the DPK setup script, *psft-dpk-setup.bat* for Microsoft Windows and *psft-dpk-setup.sh* for Linux, AIX, or Solaris. The suffix *<ext>* in the table refers to the operating system specific extension.

See the section *Preparing to Deploy with a Non-Root User* for additional script options.

See the chapter "Performing a Full-Tier Installation" to use the script to install a full PeopleSoft environment with a preconfigured Oracle 19c database.

Note that the command options require two dashes when running on Microsoft Windows, Linux, AIX, or Solaris.

Note. The commands in the table include line feeds to improve readability.

Deployment	DPK Setup Script Command
Perform the following: - Install Puppet software in <i>BASE_DIR/psft_puppet_agent</i>. - Install the software required for the mid-tier components, including Oracle Tuxedo, Oracle WebLogic, and Oracle database client. - Deploy and set up the domains for the mid-tier components (Application Server, web server, Process Scheduler and Oracle database client). The deployment sets up one each of Application Server, web server, and Process Scheduler domains. - Install the <i>PS_HOME</i> directory.	<pre>psft-dpk-setup.<ext> --env_type midtier or psft-dpk-setup.<ext> --env_type midtier --domain_type all</pre>

Deployment	DPK Setup Script Command
Perform the following: - Install Puppet software in <i>BASE_DIR/psft_puppet_agent</i>. - Install the software required for the mid-tier components, including Oracle Tuxedo, Oracle WebLogic and Oracle database client, without setting up the mid-tier domains. - Install the <i>PS_HOME</i> directory. *There is additional information following this table.	<pre>psft-dpk-setup.<ext> --env_type midtier --deploy_only or psft-dpk-setup.<ext> --env_type midtier --deploy_only --deploy_type all</pre>
- Install Puppet software in <i>BASE_DIR/psft_puppet_agent</i>. - Deploy the <i>PS_HOME</i> directory only. This option does not set up any domains. *There is additional information following this table.	<pre>psft-dpk-setup.<ext> --env_type midtier --deploy_only --deploy_type tools_home</pre>
- Install Puppet software in <i>BASE_DIR/psft_puppet_agent</i>. - Deploy and set up the domain for the Application Server only. - Install the Oracle Tuxedo and Oracle WebLogic software. Note. The deployment installs the binary files for all of the servers (Application Server, Process Scheduler, web server, database server) in <i>PS_HOME</i>.	<pre>psft-dpk-setup.<ext> --env_type midtier --domain_type appserver</pre>
- Install Puppet software in <i>BASE_DIR/psft_puppet_agent</i>. - Deploy and set up the domain for the Process Scheduler only. - Install the Oracle Tuxedo and Oracle WebLogic software. Note. The deployment installs the binary files for all of the servers (Application Server, Process Scheduler, web server, database server) in <i>PS_HOME</i>.	<pre>psft-dpk-setup.<ext> --env_type midtier --domain_type prcs</pre>

Deployment	DPK Setup Script Command
- Install Puppet software in <i>BASE_DIR</i>/psft_puppet_agent. - Deploy and set up the domain for PIA only. - Install the Oracle Tuxedo and Oracle WebLogic software. Note. Before beginning the PIA domain deployment, ensure that application server and Process Scheduler domains are available. Note. The deployment installs the binary files for all of the servers (Application Server, Process Scheduler, web server, database server) in <i>PS_HOME</i>.	<pre>psft-dpk-setup.<ext> --env_type midtier --domain_type pia</pre>
- Install Puppet software in <i>BASE_DIR</i>/psft_puppet_agent. - Deploy and set up the domains for the Application Server and the Process Scheduler. - Install the Oracle Tuxedo and Oracle WebLogic software. Note. The deployment installs the binary files for all of the servers (Application Server, Process Scheduler, web server, database server) in <i>PS_HOME</i>.	<pre>psft-dpk-setup.<ext> --env_type midtier --domain_type appbatch</pre>
- Install Puppet software in <i>BASE_DIR</i>/psft_puppet_agent. - Deploy the <i>PS_APP_HOME</i> directory only. This option does not set up any domains. *There is additional information following this table.	<pre>psft-dpk-setup.<ext> --env_type midtier --deploy_only --deploy_type app_home</pre>
- Install Puppet software in <i>BASE_DIR</i>/psft_puppet_agent. - Deploy the <i>PS_HOME</i> and <i>PS_APP_HOME</i> directories only. This option does not set up any domains. *There is additional information following this table.	<pre>psft-dpk-setup.<ext> --env_type midtier --deploy_only --deploy_type app_and_tools_home</pre>
Specify the full path of the downloaded DPKs. The script assumes that the downloaded DPKs are in the parent directory of the DPK setup script. If the DPKs are located in a different directory, use this option.	<pre>psft-dpk-setup.<ext> --env_type midtier --dpk_src_dir <full_DPK_path></pre>

Deployment	DPK Setup Script Command
Install a full PeopleSoft environment with a preconfigured Oracle 19c database. See "Performing a Full-Tier Installation"	<pre>psft-dpk-setup.<ext> or psft-dpk-setup.<ext> --env_type=> fulltier</pre>
Run the DPK setup script in silent mode for default initialization. You perform the deployment in silent mode by providing all the required information in a response file. See Running the DPK Setup Script in Silent Mode.	<pre>psft-dpk-setup.<ext> --silent --response_file=<response_file></pre>
Run the DPK setup script in silent mode with a customization file. Use this command to specify a customization YAML file. See Running the DPK Setup Script in Silent Mode.	<pre>psft-dpk-setup.<ext> --silent --response_file=<response_file> --customization_file=<dpk_> customization_file></pre>
Remove a deployed environment. See "Using and Maintaining the PeopleSoft Environment," Removing a Deployed PeopleSoft Environment.	<pre>psft-dpk-setup.<ext> --cleanup</pre>
List the DPK setup script usage.	<pre>psft-dpk-setup.<ext> --help</pre>
Specify the location for the installation log file by adding the log_file option to any of the other commands in this table.	Combine the option with the other DPK setup script commands listed in this table. Here are three examples: <pre>psft-dpk-setup.<ext> --env_type midtier --log_file <log file> psft-dpk-setup.<ext> --env_type midtier --deploy_only --log_file <log file> psft-dpk-setup.<ext> --env_type midtier --domain_type appserver --log_file <log file></pre>
This option requires the presence of the PT-INFRA DPK. Apply CPUs for installed software components on an existing environment. See <i>PT-INFRA Deployment Package Installation (PeopleSoft PeopleTools 8.61)</i>.	<pre>psft-dpk-setup.<ext> --psft_base_dir <full_path_base_> dir> --apply_infra_cpu</pre>

Note. If you want the DPK script log file to include debugging messages generated by Puppet, add the option `--debug` to any of the commands in this table. Note that running with this option increases the log file size. If you contact Oracle support regarding a deployment problem, Oracle support will request the log file. If the log file does not include the debugging messages it may not be helpful in resolving the issue.

* When you use the `--deploy_only` options on Linux, AIX, or Solaris operating systems, the deployment does not set environment variables needed for subsequent tasks. After the deployment is complete, you can set the environment variables using one of these methods:

- Change directory to `BASE_DIR/pt/ps_home8.61.xx` and run `./psconfig.sh`.
- Run the following command:

```
<PUPPET_DIR>/puppet apply --confdir=<BASE_DIR>/dpk/puppet
-e "include ::pt_profile::pt_psft_environment"
--logdest <DPK_INSTALL>/<log_file_name>
```

`PUPPET_DIR` is `BASE_DIR/psft_puppet_agent`.

Note. The command text given here includes line feeds for readability.

Task 2-3-2: Preparing to Run the DPK Setup Script

Include the following decisions in preparing to install with the DPK setup script:

- Non-root deployment

On Linux, AIX, or Solaris, you have the option to deploy the PeopleSoft environment as a non-root user.

See *Preparing to Run the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris*

- FRESH or PUM installation type

For this documentation, select a FRESH (new) installation, which enables you to make selections for RDBMS, Unicode, and multi-language support.

You must select the FRESH installation type to install the files necessary for a user-created database.

See "Preparing for Installation," *Reviewing the DPK Installation Process for a User-Created Database (AIX, Linux, Microsoft Windows, or Solaris)*.

The PUM installation type is used with the PeopleSoft Update Image DPKs to create and set up a PeopleSoft environment to be used as the source for the PeopleSoft Update Manager. If you select the PUM installation type, the DPK setup script installs an Oracle DEMO multi-lingual database without presenting you with other options. For the PUM installation type the script installs directories used by the PeopleSoft Update Manager process, including `PI_HOME` and `PS_APP_HOME`. It also installs and configures Change Assistant and supporting directories used for PUM Automated Updates.

For information on deploying the PeopleSoft Update Image DPKs, see *PeopleSoft Deployment Packages for Update Images Installation (PeopleSoft PeopleTools 8.61)*.

- Default or manual configuration

After extracting the DPKs, you are given the option to exit the process, create a customization file, and complete the configuration manually using the `psft_puppet_apply` script with a user-written customization file. Use the manual configuration if you want to change installation locations and so on.

See "Completing the DPK Initialization with Customizations."

Installing on an AIX operating system requires manual configuration using the customizations:

See *Reviewing the Software Requirements on AIX*

See *Preparing the Customization File for JDK on AIX*.

- User IDs and password

The DPK setup process does not include any default passwords. There are default users in some cases, which are included in the prompts. You must provide user IDs and passwords, as determined by the type of deployment.

The restrictions for special characters are listed in the following article.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

The DPK setup script prompts for the following user IDs and passwords:

- PeopleSoft Connect ID and password
- Database admin user (SYS/SYSTEM) password
- Database access ID (SYSADM) password
- PeopleSoft operator ID (such as PS or VP1) password
- (Optional) Application Server Domain Connection password
- Oracle WebLogic server administrator (system) password
- PTWEBSEVER web profile user password
- Integration Gateway administrator and password
- Integration Gateway keystore password

- Multi-language support

You are given the option to use the DPK setup script to deploy translated files to *PS_APP_HOME* for a multi-language installation.

- Unicode or non-Unicode

While running the DPK setup script, you can choose to install a Unicode or non-Unicode environment.

Alternatively, specify Unicode using the customizations and *psft_puppet_apply* script.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for Unicode.

- Specifying *PS_CUST_HOME*

You may wish to set up a *PS_CUST_HOME* (PeopleSoft Customization Home) directory in your environment to store your site's customized files, separate from *PS_HOME* and *PS_APP_HOME*. If you wish to use a *PS_CUST_HOME* for your environment, you must perform the deployment using the DPK customizations, and specify the *PS_CUST_HOME* location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for the PeopleSoft Homes.

Task 2-4: Deploying as a Non-Root User on Linux, AIX, or Solaris

This section discusses:

- Preparing to Run the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris
- Running the DPK Setup Prerequisite Step for Linux, AIX, or Solaris
- Running the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris
- Running the DPK Setup Post-Configuration Step

Preparing to Run the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris

Review the information in this section before deploying on Linux, AIX, or Solaris. You have the option of downloading the DPK zip files and deploying the PeopleSoft environment as a non-root user.

To run the DPK setup script as a non-root user, fulfill the following requirements:

- You can use an existing non-root user account. It is not necessary to create a new user.
- The deployment supports only a single non-root user who deploys into a single *BASE_DIR*.
- The non-root user's home directory must be writable.
- The non-root user must be configured to use the Bash, Bourne, or Korn shell.
- The non-root user must have permission to read and execute the *DPK_INSTALL* folder and its contents, including the downloaded zip files, and *DPK_INSTALL/setup*.

If the root user downloads the DPK zip files and saves them in *DPK_INSTALL*, the root user must ensure that the necessary permissions are granted to allow the non-root user to read and execute the files.

- Before a non-root user deploys the PeopleSoft environment, the root user must perform a prerequisite task.
- For a full-tier or mid-tier deployment, the root user must run the DPK setup script with the `-prereq` option to check the contents and permissions for the Oracle central inventory file and perform any actions required for the Oracle 19c Database Server and Database Client installation.

See "Preparing for Installation," Reviewing the Oracle Central Inventory File Location and Permissions on Linux, AIX, or Solaris.

After the non-root user completes the deployment:

- The non-root user owns all of the deployed environment, including *PS_HOME* and *PS_CFG_HOME*.
- The log files for the non-root deployment are saved in `<USER_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<USER_HOME>` is the home directory for the user running the script, and `<PID>` is a process ID.

For example, if the home directory for the root user is `/root`, when the root user runs the command `./psft-dpk-setup.sh --prereq`, the log file is `/root/psft_dpk_work/psft_dpk_setup_1234.log`.

For example, if the home directory for the non-root user is `/home/psft_user`, when the non-root user runs `./psft-dpk-setup.sh --midtier`, or another deployment command, the log file is `/home/psft_user/psft_dpk_work/psft_dpk_setup_5678.log`.

- If a non-root user reboots the Linux system after a mid-tier or full-tier deployment, the PeopleSoft domains (Application Server, Process Scheduler, web server) will not be restarted. This is because there are no Linux systemd services installed for a non-root user. The systemd services require root access.

The following table lists the high-level steps required to deploy a PeopleSoft environment by a non-root user, with a root user performing a prerequisite step. The table uses a mid-tier deployment as an example, but the process also applies to other deployments, such as deploying full-tier, or deploying PeopleSoft domains only, and so on.

Note. The commands in the table include line feeds to improve readability.

Step	Reference	Comment
1. Obtain DPKs and extract the first zip file.	Obtaining the PeopleSoft PeopleTools DPKs	NA
2. Select and run one or more prerequisite commands.	Running the DPK Setup Prerequisite Step for Linux, AIX, or Solaris	Important! This step must be run by the root user. This action is required once for each host.

Step	Reference	Comment
3. Run the DPK setup script. For example, to deploy a mid-tier environment: ./psft-dpk-setup.sh --env_type midtier	Running the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris	For other deployment options, see the table in the section Using the DPK Setup Script Options.
4. Run the post-configuration command. ./psft-dpk-setup.sh --postcfg --psft_base_dir BASE_DIR	Running the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris	Important! This step must be run by the root user.
4. If necessary, run the cleanup command. ./psft-dpk-setup.sh --cleanup	"Installing the PeopleSoft Homes," Using the DPK Setup Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris as a Non-Root User	Run cleanup of the environment (optional).
5. Source the script to set environment variables: source BASE_DIR/pt⇒ /psft_env.sh	"Completing the Installation," Setting Environment Variables for the Non-Root User on Linux, AIX, or Solaris	Before using PeopleSoft utilities and programs, source the script to set the required environment variables.

Task 2-4-1: Running the DPK Setup Prerequisite Step for Linux, AIX, or Solaris

This section discusses:

- Understanding the DPK Setup Prerequisite Step
- Running the DPK Setup Prerequisite Step to Validate the Oracle Central Inventory Location
- Running the DPK Setup Prerequisite Step to Validate the Oracle Central Inventory Location and Set the System Configuration (Linux only)

Understanding the DPK Setup Prerequisite Step

Before a non-root user can install the PeopleSoft environment, the root user must run one of the prerequisite commands in the following table:

Note. The commands include line feeds for readability.

DPK Setup Script Command	Action
./psft-dpk-setup.sh --prereq	Validate the Oracle central inventory location and set up a default central inventory location with the correct permissions if none exists.

DPK Setup Script Command	Action
<pre>./psft-dpk-setup.sh --prereq --syscfg</pre> Note. This command is supported only on Linux.	Set system configuration variables such as kernel parameters, user and group ulimits, as defined in <code>psft_unix_system.yaml</code> . Use this option in combination with the <code>--prereq</code> option.

Running the DPK Setup Prerequisite Step to Validate the Oracle Central Inventory Location

To run the prerequisite step without performing system configuration:

1. Open a terminal window as a user with root access, and extract the first zip file (*FILENAME_1ofn.zip*).
The extraction creates the *DPK_INSTALL/setup* folder and other files.

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

2. Change directory to *DPK_INSTALL/setup*.
3. Run the script as follows:

```
./psft-dpk-setup.sh --prereq
```

The DPK setup log is written to the file `<ROOT_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<ROOT_HOME>` is the home directory for the root user running the script, and `<PID>` is a process ID.

4. After the script completes successfully, log out and log in as a non-root user to deploy the PeopleSoft environment.

If the script exits with an exception, follow the instructions to correct the error, then rerun the script.

See "Preparing for Installation," Reviewing the Oracle Central Inventory File Location and Permissions on Linux, AIX, or Solaris.

Running the DPK Setup Prerequisite Step to Validate the Oracle Central Inventory Location and Set the System Configuration (Linux only)

To run the DPK setup script prerequisite step:

1. Open a terminal window as a user with root access, and extract the first zip file (*FILENAME_1ofn.zip*).
The extraction creates the *DPK_INSTALL/setup* folder and other files.

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

2. Change directory to *DPK_INSTALL/setup*.
3. Run the script as follows:

```
./psft-dpk-setup.sh --prereq --syscfg
```

Note. This command is supported only on Linux.

The DPK setup log is written to the file `<ROOT_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<ROOT_HOME>` is the home directory for the root user running the script, and `<PID>` is a process ID.

4. After the script completes successfully, log out and log in as a non-root user to deploy the PeopleSoft environment.

If the script exits with an exception, follow the instructions to correct the error, then rerun the script.

See "Preparing for Installation," Reviewing the Oracle Central Inventory File Location and Permissions on Linux, AIX, or Solaris.

Task 2-4-2: Running the DPK Setup Script as a Non-Root User on Linux, AIX, or Solaris

After the root user completes the prerequisite, start a terminal session as a non-root user and run the DPK setup script with the appropriate options. The following items are specific to the process when run by a non-root user.

See Reviewing the DPK Setup Script Options.

- The DPK setup script includes a prompt for `PS_CFG_HOME`.

The script validates whether the specified `PS_CFG_HOME` location is writable and has 10 GB free space.

- More than one non-root user can run the DPK setup script from the same `DPK_INSTALL/setup`.
- The non-root user must have permission to read and execute the `DPK_INSTALL` folder and its contents, including the downloaded zip files, and `DPK_INSTALL/setup`.

If the root user downloads the DPK zip files and saves them in `DPK_INSTALL`, the root user must ensure that the necessary permissions are granted to allow the non-root user to read and execute the files.

- The DPK setup log is written to the file `<USER_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<USER_HOME>` is the home directory for the user running the script, and `<PID>` is a process ID.

Task 2-4-3: Running the DPK Setup Post-Configuration Step

After the non-root user deploys the PeopleSoft environment, the root user must run the following command to create the Oracle central inventory file if necessary.

For full-tier installations, the command also installs the NFS shares.

```
./psft-dpk-setup.sh --postcfg --psft_base_dir BASE_DIR
```

See PeopleSoft Deployment Packages for Update Images Installation for information on using the NFS shares.

Task 2-5: Running the DPK Setup Script to Install PS_HOME and PS_APP_HOME

This section discusses:

- Understanding the PS_HOME and PS_APP_HOME Installation
- Installing PS_HOME and PS_APP_HOME on Microsoft Windows

- Installing PS_HOME and PS_APP_HOME on Linux, AIX, or Solaris as the Root User
- Installing PS_HOME and PS_APP_HOME on Linux, AIX, or Solaris as a Non-Root User
- Reviewing the Deployment Results

Understanding the PS_HOME and PS_APP_HOME Installation

Use the DPK setup script to install the PeopleSoft PeopleTools software in *PS_HOME* and the PeopleSoft application software in *PS_APP_HOME*, using the `--deploy_only --deploy_type app_and_tools_home` option. This deployment requires the presence of PeopleSoft application DPKs in the deployment directory, *DPK_INSTALL*.

Note. You can also use the DPK setup script to deploy *PS_HOME* or *PS_APP_HOME* individually. See Reviewing the DPK Setup Script Options.

This procedure assumes that you have downloaded all of the required PeopleSoft Application Image DPKs for Linux or Microsoft Windows, and saved them in a location referred to here as *DPK_INSTALL*.

Task 2-5-1: Installing PS_HOME and PS_APP_HOME on Microsoft Windows

To use the DPK setup script for deployment only:

1. Extract the first zip file (*FILENAME_1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* directory and other files.

2. Open a command prompt with Run as Administrator.
3. Change directory to *DPK_INSTALL/setup*.
4. Run the script with the options for deployment only.

Note. If you see an error message similar to "The application has failed to start because its side-by-side configuration is incorrect," it indicates that your machine does not include the necessary Microsoft C++ runtime libraries. Go to the Microsoft Web site, locate the Microsoft Visual C++ redistributable package for your system, and install as directed.

- If you extracted the first zip file into the same directory where you downloaded the zip files, use this command:

Note. Line feeds have been added to these examples for readability. Do not include the line feeds when entering the command.

```
psft-dpk-setup.bat --env_type midtier --deploy_only
--deploy_type app_and_tools_home
```

- If you extracted the first zip file into a different directory, include the option `dpk_src_dir` to specify the location of the downloaded zip files, such as *DPK_INSTALL*, as follows:

```
psft-dpk-setup.bat --dpk_src_dir DPK_INSTALL --env_type midtier
```

```
--deploy_only --deploy_type app_and_tools_home
```

5. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:                [ OK ]
Validating PeopleSoft Supported Platform:  [ OK ]
```

6. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory, referred to here as *BASE_DIR*.

The base directory is used to extract the DPKs as well as for deploying PeopleSoft components. The script creates the base directory if it does not exist.

Use forward slashes only (/) when specifying the base directory; for example, C:/psft. Do not use a base directory name that begins with a number.

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base directory: C:/psft
Are you happy with your answer? [Y|n|q]:
```

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. The messages have been truncated for brevity.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hiera Backend on this host:                [ OK ]
Checking if PeopleSoft DPKs are Present:                    [ OK ]
Checking if the Base Directory has Enough Free Space:        [ OK ]
```

```
Validating the PeopleSoft DPKs in the Windows Host:
[...]
Extracting the PeopleSoft DPK Archives in the Windows Host:
[...]
```

8. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR\dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Windows VM:
Generating eYAML Hiera Backend Encryption Keys:            [ OK ]
Updating the Puppet Hiera YAML Files in the Windows VM:    [ OK ]
Updating the Role in Puppet Site File for the Windows VM:  [ OK ]
```

9. Specify the information for your database platform.
 - a. For the database platform, enter ORACLE.

Enter the PeopleSoft database platform [ORACLE]: **ORACLE**

- b. Enter *y* (yes) to indicate that the database you are connecting to is a Unicode database, or *n* (no) for a non-Unicode database.

Is the PeopleSoft database unicode? [Y|n]: **y**

10. Enter *y* if you want the script to include multi-language files in the installation.

Do you want Multi Language support in PeopleSoft database? [y|N]: **y**

11. Enter *y* to continue with the script.

Are you happy with your answers? [y|n]: **y**

Encrypting the Passwords in the User Data: [OK]

Updating the Puppet Hiera YAML Files with User Data: [OK]

12. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

The components that are installed during a default initialization are described in the section *Reviewing the Installation Results*. The process for completing the initialization with customizations is described in the chapter "Completing the DPK Initialization with Customizations."

If you want to customize the PeopleSoft environment using the Puppet YAML files, answer *n* (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

13. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Deployment of PeopleSoft Components:

Deploying Application Components: [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [C:\DPK_INSTALL\setup\psft_dpk_setup.log] for the errors. After correcting the errors, run the following commands to continue with the setup of PeopleSoft environment.

Start a cmd window as Administrator and run C:\psft\psft_puppet_⇒ apply.cmd

Exiting the PeopleSoft environment setup process.

Upon successful completion, the DPK setup script displays the following message:

Starting the Deployment of PeopleSoft Components:

Deploying Application Components: [OK]

Deploying PeopleTools Components: [OK]

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file `psft_dpk_setup.log` in the same location as the DPK setup script.

Task 2-5-2: Installing PS_HOME and PS_APP_HOME on Linux, AIX, or Solaris as the Root User

To use the DPK setup script for deployment only:

1. Extract the first zip file (*FILENAME_1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* directory and other files.

2. Open a terminal window and change directory to *DPK_INSTALL/setup*.
3. As a user with root access, run the `psft-dpk-setup.sh` script with the options for deployment only.
 - If you extracted the first zip file into the same directory where you downloaded the zip files, run the script with no options, as follows:

Note. Line feeds have been added to these examples for readability. Do not include the line feeds when entering the command.

```
./psft-dpk-setup.sh --env_type midtier --deploy_only
--deploy_type app_and_tools_home
```

- If you extracted the first zip file into a different directory, use the option `dpk_src_dir` to specify the location of the downloaded zip files, such as *DPK_INSTALL*, as follows:

```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL --env_type midtier
--deploy_only --deploy_type app_and_tools_home
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

Validating User Arguments: [OK]

Validating PeopleSoft Supported Platform: [OK]

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory, referred to here as *BASE_DIR*.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The script creates the directory if it does not exist.

Use forward slashes only (/) when specifying the base directory; for example, /opt/oracle/psft. Do not use a base directory name that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter /ds1/psft/).

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

Enter the full path for the PeopleSoft Base Directory: **/opt/oracle/psft**
Are you happy with your answer? [Y|n|q]:

6. Specify a writable directory for the user home directory at the following prompt.

The PeopleSoft environment setup using DPKs creates local users on the host. These users deploy the PeopleSoft components and own the PeopleSoft runtime domains. Enter a new location to be used for creating the home directories for these local users, or specify the default home directory, /home. Enter the full path, and ensure that the directory is writable.

Enter the full path for the User Home directory
that is writable [/home]: **/ds1**
Are you happy with your answer? [y|n|q]:

If the script finds that the location you enter (either a new location or the default) is not writable, it exits with the following message.

The User does not have write permission to create the user's home directory under [*<user input>*] on the Linux Host.
Exiting the PeopleSoft environment setup process.

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. The messages have been truncated for brevity.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hiera Backend on this host:                      [ OK ]
Checking if PeopleSoft DPKs are Present:                         [ OK ]
Checking if the Base Directory has Enough Free Space:            [ OK ]

Validating the PeopleSoft DPKs in the Linux Host:
[...]
Extracting the PeopleSoft DPK Archives in the Linux Host:
[...]
```

8. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Linux Host:
Generating eYAML Hiera Backend Encryption Keys:                  [ OK ]
Updating the Puppet Hiera YAML Files in the Linux Host:          [ OK ]
```

Updating the Role in Puppet Site File for the Linux Host: [OK]

9. Specify the information for your database platform.

- a. For the database platform, enter ORACLE.

Enter the PeopleSoft database platform [ORACLE]: **ORACLE**

- b. Enter y (yes) to indicate that the database you are connecting to is a Unicode database, or n (no) for a non-Unicode database.

Is the PeopleSoft database unicode? [Y|n]: **y**

10. Enter y if you want the script to include multi-language files in the installation.

Do you want Multi Language support in PeopleSoft database? [y|N]:

11. Enter y to continue with the script.

Are you happy with your answers? [y|n]: y

Encrypting the Passwords in the User Data: [OK]

Updating the Puppet Hiera YAML Files with User Data: [OK]

12. If you want to continue running the initialization script using the default configuration, answer y (yes) to the following prompt, and continue with the next step.

The components that are installed during a default initialization are described in the section *Reviewing the Installation Results*. The process for completing the initialization with customizations is described in the chapter "Completing the DPK Initialization with Customizations."

If you want to customize the PeopleSoft environment using the Puppet YAML files, answer n (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

13. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Deployment of PeopleSoft Components:

Setting Up System Settings [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

From the shell, run `/opt/oracle/psft/psft_puppet_apply.sh`

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Deployment of PeopleSoft Components:

```
Setting Up System Settings           [ OK ]
Deploying Application Components:    [ OK ]
Deploying PeopleTools Components:   [ OK ]
```

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file `psft_dpk_setup.log` in the same location as the DPK setup script.

Task 2-5-3: Installing PS_HOME and PS_APP_HOME on Linux, AIX, or Solaris as a Non-Root User

If you are installing the PeopleSoft environment as a non-root user, ensure that you fulfill the prerequisites in the section Deploying as a Non-Root User on Linux, AIX, or Solaris.

To use the DPK setup script for deployment only:

1. Open a terminal window and change directory to `DPK_INSTALL/setup`.
2. Run the `psft-dpk-setup.sh` script with the options for deployment only.
 - If you extracted the first zip file into the same directory where you downloaded the zip files, run the script with no options, as follows:

```
./psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type=>
app_and_tools_home
```

- If you extracted the first zip file into a different directory, use the option `dpk_src_dir` to specify the location of the downloaded zip files, such as `DPK_INSTALL`, as follows:

```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL --env_type midtier -->
deploy_only --deploy_type app_and_tools_home
```

3. Answer `y` (yes) at the following prompt:

Starting the PeopleSoft Environment Setup Process:

```
You are running DPK setup without root/administrator access.
This is fine as long as the system administrator has performed
all necessary tasks and all prerequisites have been met.
Please see the documentation to determine the prerequisite tasks
that need to be performed to successfully run DPK set up
without root/administrator privilege.
Would you like to proceed with the setup as a non-root user? [y/n]: y
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by `[ OK ]` or `[FAILED]`.

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:           [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory, referred to here as *BASE_DIR*.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The script creates the directory if it does not exist.

Use forward slashes only (/) when specifying the base directory; for example, /opt/oracle/psft. Do not use a base directory name that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter /ds1/psft/).

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory: /opt/oracle/psft
Are you happy with your answer? [Y|n|q]:
```

6. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. The messages have been truncated for brevity. The messages vary depending upon the DPKs used.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hierarchical Backend on this host:           [ OK ]
Checking if PeopleSoft DPKs are Present:                     [ OK ]
Checking if the Base Directory has Enough Free Space:         [ OK ]
```

```
Validating the PeopleSoft DPKs in the Linux Host:
[...]
Extracting the PeopleSoft DPK Archives in the Linux Host:
[...]
```

7. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Linux Host:
Generating eYAML Hierarchical Backend Encryption Keys:       [ OK ]
Updating the Puppet Hierarchical YAML Files in the Linux Host: [ OK ]
Updating the Role in Puppet Site File for the Linux Host:    [ OK ]
```

8. Specify the information for your database platform.

- a. For the database platform, enter ORACLE.

```
Enter the PeopleSoft database platform [ORACLE]: ORACLE
```

- b. Enter y (yes) to indicate that the database you are connecting to is a Unicode database, or n (no) for a non-Unicode database.

Is the PeopleSoft database unicode? [Y|n]: **y**

9. Enter **y** if you want the script to include multi-language files in the installation.

Do you want Multi Language support in PeopleSoft database? [y|N]:

10. Enter **y** to continue with the script.

Are you happy with your answers? [y|n]: **y**

Encrypting the Passwords in the User Data: [OK]

Updating the Puppet Hiera YAML Files with User Data: [OK]

11. If you want to continue running the initialization script using the default configuration, answer **y** (yes) to the following prompt, and continue with the next step.

The components that are installed during a default initialization are described in the section *Reviewing the Installation Results*. The process for completing the initialization with customizations is described in the chapter "Completing the DPK Initialization with Customizations."

If you want to customize the PeopleSoft environment using the Puppet YAML files, answer **n** (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

12. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Deployment of PeopleSoft Components:

Setting Up System Settings [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following commands to continue with the setup of PeopleSoft environment.

From the shell, run /opt/oracle/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Deployment of PeopleSoft Components:

```

Setting Up System Settings           [ OK ]
Deploying Application Components:    [ OK ]
Deploying PeopleTools Components:   [ OK ]

```

The PeopleSoft Environment Setup Process Ended.

The setup.log is written to the file `<USER_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<USER_HOME>` is the home directory for the user running the script, and `<PID>` is a process ID.

Task 2-5-4: Reviewing the Deployment Results

This section describes some of the files and directories installed by the script. These are the standard default locations. If you want to change the installation locations, see "Completing the DPK Initialization with Customizations."

The script creates the following sub-directories under the user-specified base directory, `BASE_DIR`:

- `BASE_DIR/psft_puppet_agent`

The script uses this directory to install the Puppet software.

- `BASE_DIR/pt`

The script uses this directory to deploy the `PS_HOME` and `PS_APP_HOME` utilities and scripts, including the following:

- `PS_HOME` installed to the default location under the DPK base directory, `BASE_DIR/pt/ps_home8.61.xx`.
- `PS_HOME/appserv/PSADMIN.exe`
- `PS_HOME/bin/client/winx86/pscfcg.exe` (Configuration Manager)
- `PS_HOME/bin/client/winx86/psdmt.exe` (Data Mover)
- `PS_HOME/bin/client/winx86/pside.exe` (Application Designer)
- `PS_HOME/scripts`
- `PS_HOME/setup/PsMpPIAInstall` (PeopleSoft Pure Internet Architecture installer)
- `PS_HOME/setup/PsMpDbInstall` (Database installer)
- `PS_HOME/setup/PsCA` (Change Assistant installer)
- `PS_HOME/setup/PsCIA` (Change Impact Analyzer installer)
- Microsoft Windows DPKs include Microsoft Visual C++ Redistributable Packages for Visual Studio, which include required Microsoft C++ runtime libraries.
- `PS_APP_HOME` installed to the default location under the DPK base directory, `BASE_DIR/pt/<Product>_app_home`, where `<Product>` is the abbreviation for the PeopleSoft application; for example, `hcm_app_home` for PeopleSoft Human Capital Management.

Note. The DPK setup requires a decoupled `PS_APP_HOME`; that is, the installation location of `PS_APP_HOME` is different from `PS_HOME`.

Files for the specific PeopleSoft application, including files needed for database creation.

If you answered yes when asked whether you wanted multi-language support during the DPK setup script process, the files required for translations are installed under `BASE_DIR/pt/<Product>_app_home`.

- `BASE_DIR/dpk`

The script uses this directory to extract the archives from the PeopleSoft DPKs, and contains the Puppet YAML files for the deployment. Do not alter the installed Puppet YAML files.

See Completing the DPK Initialization with Customizations for information on creating a YAML file to customize the environment.

- *BASE_DIR/db*

This directory is not used for this deployment.

Task 2-6: Running the DPK Setup Script to Install All Software

This section discusses:

- Understanding the DPK Setup Deploying All Software
- Installing on Microsoft Windows
- Installing on Linux, AIX, or Solaris as the Root User
- Installing on Linux, AIX, or Solaris as a Non-Root User
- Reviewing the Installed Software

Understanding the DPK Setup Deploying All Software

Use these instructions to install all software required to continue with the PeopleSoft installation. This deployment uses the DPK setup script `--env_type midtier --deploy_only --deploy_type all` options to install the PeopleSoft PeopleTools software in *PS_HOME*, the PeopleSoft application software in *PS_APP_HOME*, and the software required for the mid-tier components. This deployment does not set up the PeopleSoft domains; you will do that in a later chapter.

If you plan to use the Database Configuration Wizard to create your PeopleSoft database on Linux, AIX, or Solaris platforms, Oracle Tuxedo is a prerequisite. Using the DPK setup script options in this section installs Oracle Tuxedo along with other software.

This procedure assumes that you have downloaded all of the required DPKs, and saved them in a location referred to here as *DPK_INSTALL*. This deployment requires the presence of the PeopleSoft application DPK (Application DPK, Part 1) in the deployment directory, *DPK_INSTALL*.

Note. The process to deploy all software includes the installation of Oracle RDBMS client software. If you want exclude that installation, see Preparing the Customization File to Exclude Oracle Database Client Installation in "Completing the DPK Initialization with Customizations."

Task 2-6-1: Installing on Microsoft Windows

To use the DPK setup script to deploy the software required to set up a PeopleSoft environment:

1. Extract the first zip file (*FILENAME_1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* directory and other files.

2. Open a command prompt with Run as Administrator.

3. Change directory to *DPK_INSTALL/setup*.
4. Run the script with the option for deployment only.

Note. If you see an error message similar to "The application has failed to start because its side-by-side configuration is incorrect," it indicates that your machine does not include the necessary Microsoft C++ runtime libraries. Go to the Microsoft Web site, locate the Microsoft Visual C++ redistributable package for your system, and install as directed.

- If you extracted the first zip file into the same directory where you downloaded the zip files, use this command:

```
psft-dpk-setup.bat --env_type midtier --deploy_only --deploy_type all
```
- If you extracted the first zip file into a different directory, include the option `dpk_src_dir` to specify the location of the downloaded zip files, such as *DPK_INSTALL*, as follows:

Note. A line feed has been added to this example for readability. Do not include the line feed when entering the command.

```
psft-dpk-setup.bat --dpk_src_dir DPK_INSTALL
--env_type midtier --deploy_only --deploy_type all
```

5. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

After the script completes the extraction, it deletes the original downloaded zip files.

See "Preparing for Installation," Understanding the PeopleSoft Installation Using Deployment Packages, for the filename syntax of the DPKs zip files.

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:                [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

6. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The script creates the directory if it does not exist.

Use forward slashes (/) to specify the base directory location; for example, C:/psft. Do not use a name for the base directory that begins with a number.

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permissions and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory: C:/psft
Are you happy with your answer? [Y|n|q]:
```

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. The messages vary depending upon the DPKs present, and have been truncated for brevity.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hiera Backend on this host:                      [ OK ]
Checking if PeopleSoft DPKs are Present:                        [ OK ]
Checking if the Base Directory has Enough Free Space:           [ OK ]

Validating the PeopleSoft DPKs in the Windows Host:
[...]
Extracting the Peoplesoft DPK Archives in Windows Host:
[...]
```

8. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR\dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Windows Host:
Generating eYAML Hiera Backend Encryption Keys:                [ OK ]
Updating the Puppet Hiera YAML Files in the Windows Host:      [ OK ]
Updating the Role in Puppet Site File for the Windows Host:    [ OK ]
```

9. Specify the information for your database platform.

- a. For the database platform, enter ORACLE.

Enter the PeopleSoft database platform [ORACLE]: **ORACLE**

- b. Enter y (yes) to indicate that the database you are connecting to is a Unicode database, or n (no) if it is a non-Unicode database.

Is the PeopleSoft database unicode? [Y|n]: **y**

10. Enter y if you want the DPK setup script to install files required for a multi-lingual installation.

Do you want Multi Language support in PeopleSoft database? [y|N]: **n**

11. Enter y to continue with the script.

```
Are you happy with your answers? [y|n]: y
Encrypting the Passwords in the User Data:                      [ OK ]
Updating the Puppet Hiera YAML Files with User Data:            [ OK ]
```

12. If you want to continue running the initialization script with the default configuration, answer y (yes) to the following prompt, and continue with the next step.

If you want to customize the PeopleSoft environment using the Puppet YAML files, answer n (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

13. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Deployment of PeopleSoft Components:

Deploying Application Components: [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [C:\DPK_INSTALL\setup\psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

Start a cmd window as Administrator and run C:\psft\psft_puppet_⇒
apply.cmd

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Deployment of PeopleSoft Components:

Deploying Application Components: [OK]
Deploying PeopleTools Components: [OK]

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file psft_dpk_setup.log in the same location as the DPK setup script.

Task 2-6-2: Installing on Linux, AIX, or Solaris as the Root User

To run the DPK setup script as the root user to deploy the software required to set up a PeopleSoft environment:

1. Extract the first zip file (*FILENAME_1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* directory and other files.

2. Open a terminal window and change directory to *DPK_INSTALL/setup*.
3. As a user with root access, run the script with the option for deployment only.
 - If you extracted the first zip file into the same directory where you downloaded the zip files, run the script as follows:
./psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type all

- If you extracted the first zip file into a different directory, use the option `dpk_src_dir` to specify the location of the downloaded zip files, such as `DPK_INSTALL`, as follows:

Note. A line feed has been added to this example for readability. Do not include the line feed when entering the command.

```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL --env_type midtier
--deploy_only --deploy_type all
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:                [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components.

Use forward slashes (/) to specify the directory; for example, `/opt/oracle/psft`. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter `/ds1/psft/`).

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory: /opt/oracle/psft
Are you happy with your answer? [Y|n|q]: y
```

6. Specify a writable directory for the user home directory at the following prompt.

The PeopleSoft environment setup using DPKs creates local users on the host. These users deploy the PeopleSoft components and own the PeopleSoft runtime domains. Enter a new location to be used for creating the home directories for these local users, or specify the default home directory, `/home`. Enter the full path, and ensure that the directory is writable.

```
Enter the full path for the User Home directory
that is writable [/home]: /ds1
Are you happy with your answer? [y|n|q]:
```

If the script finds that the location you enter (either a new location or the default) is not writable, it exits with the following message.

```
The User does not have write permission to create the user's home
directory under [<user input>] on the Linux Host.
Exiting the PeopleSoft environment setup process.
```

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in `DPK_INSTALL`, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. The messages vary depending upon the DPKs present, and have been truncated for brevity.

Note. The messages have been truncated here for brevity.

Installing PSFT Relocatable Puppet Software in the base directory:

[OK]

Installing eYAML Hiera Backend on this host: [OK]

Checking if PeopleSoft DPKs are Present: [OK]

Checking if the Base Directory has Enough Free Space: [OK]

Validating the PeopleSoft DPKs in the Linux Host:

[...]

Extracting the Peoplesoft DPK Archives in the Linux Host:

[...]

8. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR*\dpk) and updates the YAML files to reflect the type of PeopleSoft environment setup.

Setting up Puppet on the Linux VM:

Generating eYAML Hiera Backend Encryption Keys: [OK]

Updating the Puppet Hiera YAML Files in the Linux VM: [OK]

Updating the Role in Puppet Site File for the Linux VM: [OK]

9. Specify the information for your database platform.

- a. For the database platform, enter ORACLE.

Enter the PeopleSoft database platform [ORACLE]: **ORACLE**

- b. Enter y (yes) to indicate that the database you are connecting to is a Unicode database, or n (no) if it is a non-Unicode database.

Is the PeopleSoft database unicode? [Y|n]: **y**

10. Enter y if you want the DPK setup script to install files required for a multi-lingual installation.

Do you want Multi Language support in PeopleSoft database? [y|N]: **n**

11. Enter y to continue with the script.

Are you happy with your answers? [y|n]: **y**

Encrypting the Passwords in the User Data: [OK]

Updating the Puppet Hiera YAML Files with User Data: [OK]

12. If you want to continue running the initialization script with the default configuration, answer y (yes) to the following prompt, and continue with the next step.

If you want to customize the PeopleSoft environment using the Puppet YAML files, answer n (no) to stop the script.

See "Completing the DPK Initialization with Customizations."

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you

should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

13. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Deployment of PeopleSoft Components:

Setting Up System Settings: [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

From the shell, run /opt/oracle/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Deployment of PeopleSoft Components:

```
Setting Up System Settings:           [ OK ]
Deploying Application Components:     [ OK ]
Deploying PeopleTools Components:    [ OK ]
```

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file psft_dpk_setup.log in the same location as the DPK setup script.

Task 2-6-3: Installing on Linux, AIX, or Solaris as a Non-Root User

If you are installing the PeopleSoft environment as a non-root user, ensure that you fulfill the prerequisites in the section Deploying as a Non-Root User on Linux, AIX, or Solaris.

To run the DPK setup script as a non-root user to deploy the software required to set up a PeopleSoft environment:

1. Open a terminal window and change directory to *DPK_INSTALL/setup*.
2. Run the script with the option for deployment only.
 - If you extracted the first zip file into the same directory where you downloaded the zip files, run the script as follows:


```
./psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type all
```

- If you extracted the first zip file into a different directory, use the option `dpk_src_dir` to specify the location of the downloaded zip files, such as `DPK_INSTALL`, as follows:

Note. A line feed has been added to this example for readability. Do not include the line feed when entering the command.

```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL --env_type midtier
--deploy_only --deploy_type all
```

3. Answer *y* (yes) at the following prompt:

```
You are running DPK setup without root/administrator access.
This is fine as long as the system administrator has performed
all necessary tasks and all prerequisites have been met.
Please see the documentation to determine the prerequisite tasks
that need to be performed to successfully run DPK set up
without root/administrator privilege.
Would you like to proceed with the setup as a non-root user? [y/n]: y
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:                [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components.

Use forward slashes (/) to specify the directory; for example, `/opt/oracle/psft`. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter `/ds1/psft/`).

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory: /opt/oracle/psft
Are you happy with your answer? [Y|n|q]: y
```

6. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in `DPK_INSTALL`, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. The messages vary depending upon the DPKs present, and have been truncated for brevity.

Note. The messages have been truncated here for brevity.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
```



```
Installing eYAML Hiera Backend on this host:      [ OK ]
Checking if PeopleSoft DPKs are Present:        [ OK ]
Checking if the Base Directory has Enough Free Space: [ OK ]
```

```
Validating the PeopleSoft DPKs in the Linux Host:
[...]
Extracting the Peoplesoft DPK Archives in the Linux Host:
[...]
```

7. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR*\dpk) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Linux VM:
Generating eYAML Hiera Backend Encryption Keys:      [ OK ]
Updating the Puppet Hiera YAML Files in the Linux VM: [ OK ]
Updating the Role in Puppet Site File for the Linux VM: [ OK ]
```

8. Specify the information for your database platform.

a. For the database platform, enter ORACLE.

```
Enter the PeopleSoft database platform [ORACLE]: ORACLE
```

b. Enter *y* (yes) to indicate that the database you are connecting to is a Unicode database, or *n* (no) if it is a non-Unicode database.

```
Is the PeopleSoft database unicode? [Y|n]: y
```

9. Enter *y* if you want the DPK setup script to install files required for a multi-lingual installation.

```
Do you want Multi Language support in PeopleSoft database? [y|N]: n
```

10. Enter *y* to continue with the script.

```
Are you happy with your answers? [y|n]: y
Encrypting the Passwords in the User Data:      [ OK ]
Updating the Puppet Hiera YAML Files with User Data: [ OK ]
```

11. If you want to continue running the initialization script with the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

If you want to customize the PeopleSoft environment using the Puppet YAML files, answer *n* (no) to stop the script.

See "Completing the DPK Initialization with Customizations."

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

```
Do you want to continue with the default initialization process? [y|n]:
```

12. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Deployment of PeopleSoft Components:

Setting Up System Settings: [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

From the shell, run /opt/oracle/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Deployment of PeopleSoft Components:

```
Setting Up System Settings:           [ OK ]
Deploying Application Components:     [ OK ]
Deploying PeopleTools Components:    [ OK ]
```

The PeopleSoft Environment Setup Process Ended.

The setup.log is written to the file <USER_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log, where <USER_HOME> is the home directory for the user running the script, and <PID> is a process ID.

Task 2-6-4: Reviewing the Installed Software

This section describes some of the files and directories installed by the script. These are the standard default locations. If you want to change the installation locations, see "Completing the DPK Initialization with Customizations."

The script creates the following sub-directories under the user-specified base directory, *BASE_DIR*:

- *BASE_DIR*/psft_puppet_agent

The script uses this directory to deploy the Puppet software.

- *BASE_DIR*/pt

The script uses this directory to deploy the *PS_HOME* and *PS_APP_HOME* utilities and scripts, including the following:

- *PS_HOME* installed to the default location under the DPK base directory, *BASE_DIR*/pt/ps_home8.61.xx.
- *PS_HOME*/appserv/PSADMIN.exe
- *PS_HOME*/bin/client/winx86/pscfig.exe (Configuration Manager)
- *PS_HOME*/bin/client/winx86/psdmt.exe (Data Mover)
- *PS_HOME*/bin/client/winx86/pside.exe (Application Designer)
- *PS_HOME*/scripts

- *PS_HOME/setup/PsMpPIAInstall* (PeopleSoft Pure Internet Architecture installer)
- *PS_HOME/setup/PsMpDbInstall* (Database installer)
- *PS_HOME/setup/PsCA* (Change Assistant installer)
- *PS_HOME/setup/PsCIA* (Change Impact Analyzer installer)
- *PS_APP_HOME* installed to the default location under the DPK base directory, *BASE_DIR/pt/<Product>_app_home*, where *<Product>* is the abbreviation for the PeopleSoft application; for example, *hcm_app_home* for PeopleSoft Human Capital Management.

Note. The DPK setup requires a decoupled *PS_APP_HOME*; that is, the installation location of *PS_APP_HOME* is different from *PS_HOME*.

Files for the specific PeopleSoft application, including files needed for database creation.

If you answered yes when asked whether you wanted multi-language support during the DPK setup script process, the files required for translations are installed under *BASE_DIR/pt/<Product>_app_home*.

- Oracle Tuxedo software in the standard location, *<BASE_DIR>/pt/bea/tuxedo*
- Oracle Tuxedo services on Microsoft Windows:
ORACLE ProcMGR V22.1.0.0.0 and Tlisten 22.1.0.0.0
- Oracle WebLogic software in the standard location, *BASE_DIR/pt/bea/wlserver*
- Oracle Database Client software in the standard location, *BASE_DIR/pt/oracle-client*

Note. This is an Oracle 19c Database Client. The client can be used with any Oracle Database releases supported for the current PeopleSoft PeopleTools release. See the Certifications for PeopleSoft PeopleTools on My Oracle Support.

- Java software in the standard location, *BASE_DIR/pt/jdk*.
- *BASE_DIR/dpk*

The script uses this directory to extract the archives from the PeopleSoft DPKs, and contains the Puppet YAML files for the deployment. Do not alter the installed Puppet YAML files.

See Completing the DPK Initialization with Customizations for information on creating a YAML file to customize the environment.

- *BASE_DIR/db*

This directory is not used for this deployment.

Task 2-7: Removing a Deployed PeopleSoft Environment

This section discusses:

- Understanding the Removal Process
- Using the DPK Setup Script to Remove the PeopleSoft Environment on Microsoft Windows
- Using the DPK Setup Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris
- Using the DPK Setup Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris as a Non-Root User
- Using the *psft_puppet_apply.cmd* Script to Remove the PeopleSoft Environment on Microsoft Windows
- Using the *psft_puppet_apply.sh* Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris

- Manually Removing the PeopleSoft Environment on Microsoft Windows
- Manually Removing the PeopleSoft Environment on Linux, AIX, or Solaris

Understanding the Removal Process

The DPKs are based on a specific PeopleTools release and patch number. The DPK zip file names include the PeopleTools release and patch number. For example, the "8.61.05" in the zip file name `PEOPLETOOLS-WIN-8.61.05_1of4.zip` refers to release 8.61 and patch 5. To use the DPK setup script for cleanup, you must use the same DPK setup script (*DPK_INSTALL/setup*) that you used for deploying the PeopleSoft environment that you want to remove. Ensure that the correct script is available before proceeding further in the cleanup.

There will be times when an existing PeopleSoft environment needs to be completely removed. For example, applying a new PeopleSoft PeopleTools patch requires that an existing environment be cleaned up and a new one created. The cleanup that you perform with the DPK setup script conducts an orderly shutdown and removal of all the configured runtime domains — Application Server, Process Scheduler, and PIA domains. Additionally, it will remove all the deployed components. You can use the PeopleSoft DPK setup script cleanup for environments created with the default initialization or with the `psft_customizations.yaml` file.

Note. The Puppet software that is installed by the DPK setup script is not removed by the cleanup process.

In some cases the DPK setup script cleanup process may not remove all of the components. If that is the case, try one of the other methods described in this section.

Task 2-7-1: Using the DPK Setup Script to Remove the PeopleSoft Environment on Microsoft Windows

Use these steps to remove a deployed PeopleSoft environment using the PeopleSoft DPK setup script on Microsoft Windows:

1. Open a command prompt window; for example:
 - Select Start, and navigate to Accessories, Command Prompt.
 - Right-click and select Run as Administrator.
2. Go to *DPK_INSTALL/setup* and run one of the following commands:


```
psft-dpk-setup.bat --cleanup
```
3. Specify the base directory (*BASE_DIR*) that you want to remove.
Enter the PeopleSoft Base Folder specified during setup:

You see this prompt only when there is more than one deployment. For example:
 - You carried out deployment A followed by deployment B.
 - You removed the second deployment B. For the cleanup of deployment B, you do not see this prompt for the *BASE_DIR*.
 - You run the script a second time. At the prompt, specify the *BASE_DIR* for deployment A.
4. Wait until the process is complete.
The DPK setup script displays [OK] for each step of the process, and [FAILED] if any of the steps are not successful.
5. Review the cleanup log file in *DPK_INSTALL/setup*.
6. After completing these steps, verify that the DPK installation directories (*BASE_DIR/pt* and *BASE_DIR/db*)

have been cleared.

The cleanup process does not remove the *BASE_DIR*/dpk directory. Do not remove it manually if you want to use the *psft_apply_puppet.sh* process.

7. Verify that any services have been removed in the Microsoft Windows Services dialog box.
8. If any files or services remain, the cleanup process was not successful. Try running the process again, and if it is still not successful, you may need to carry out advanced cleanup.

See *Manually Removing the PeopleSoft Environment on Microsoft Windows*.

Task 2-7-2: Using the DPK Setup Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris

Use these steps to remove a deployed PeopleSoft environment using the PeopleSoft DPK setup script on Linux, AIX, or Solaris:

1. Open a terminal window as a user with root permission.
2. Go to *DPK_INSTALL*/setup and run one of the following commands:

```
sh psft-dpk-setup.sh --cleanup
```

3. Specify the base directory (*BASE_DIR*) that you want to remove.

Enter the PeopleSoft Base Folder specified during setup:

You see this prompt only when there is more than one deployment. For example:

- You carried out deployment A followed by deployment B.
- You removed the second deployment B. For the cleanup of deployment B, you do not see this prompt for the *BASE_DIR*.
- You run the script a second time. At the prompt, specify the *BASE_DIR* for deployment A.

4. Wait until the process is complete.

The DPK setup script displays [OK] for each step of the process, and [FAILED] if any of the steps are not successful.

5. Review the cleanup log file.

If you deployed as root, the cleanup log file is in *DPK_INSTALL*/setup.

6. Verify that the DPK installation directories (*BASE_DIR*/pt and *BASE_DIR*/db) have been cleared.

The cleanup process does not remove the *BASE_DIR*/dpk directory. Do not remove it manually if you want to use the *psft_apply_puppet.sh* process.

7. Check for leftover processes. If anything remains, the cleanup process was not successful.
8. Try running the cleanup process again, and if it is still not successful, you may need to carry out advanced cleanup.

See *Manually Removing the PeopleSoft Environment on Linux, AIX, or Solaris*.

Task 2-7-3: Using the DPK Setup Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris as a Non-Root User

If you deployed as a non-root user, after you use the `./psft-dpk-setup.sh --cleanup` command, you can find the cleanup log file in a directory of the deploying user's home directory, `USER_HOME`. The log file is appended with a process ID. For example, if the home directory is `/opt/userhome` and the PID is 1234, the cleanup log is `/opt/userhome/psft_dpk_work/psft_dpk_setup_cleanup_1234.log`.

If more than one non-root user deploys from the same `DPK_INSTALL`, the cleanup process will prompt for the correct `BASE_DIR`.

Task 2-7-4: Using the `psft_puppet_apply.cmd` Script to Remove the PeopleSoft Environment on Microsoft Windows

If the cleanup procedure using the DPK setup script was not entirely successful, the `BASE_DIR` folders may not be entirely cleared, or you may have trouble when carrying out another deployment. In case of a failed deployment, try running the `psft_puppet_apply.cmd` script as described here. This script sets environment variables and then runs the `puppet apply` command to remove the PeopleSoft environment.

To remove the environment on Microsoft Windows:

1. Run the command `psft-dpk-setup.bat --cleanup`.
2. If the script fails, you should see a message similar to the following:

```
The initialization of PeopleSoft environment setup failed. Check the
log file [C:\DPK_INSTALL\setup\psft_dpk_setup.log] for the errors.
After correcting the errors, run the following commands to continue
with the setup of PeopleSoft environment.
```

```
Start a cmd window as Administrator and run BASE_DIR\psft_puppet_⇒
apply.cmd
```

Leave the command window open while you complete the next step.

3. Open the file `BASE_DIR\dpk\puppet\production\data\defaults.yaml` in a text editor, such as Notepad.
4. Change the value of the `ensure` attribute from `present` to `absent`.
Save and close the defaults file.
5. Follow the instructions from step 2 to run the `psft_puppet_apply.cmd` script.

Task 2-7-5: Using the `psft_puppet_apply.sh` Script to Remove the PeopleSoft Environment on Linux, AIX, or Solaris

If the cleanup procedure using the DPK setup script was not entirely successful, the `BASE_DIR` folders may not be entirely cleared, or you may have trouble when carrying out another deployment. In case of a failed deployment, try running the `psft_puppet_apply.sh` script as described here. This script sets environment variables and then runs the `puppet apply` command to remove the PeopleSoft environment.

To remove the environment with the `psft_puppet_apply.sh` script on Linux, AIX, or Solaris:

1. Run the command `./psft-dpk-setup.sh --cleanup`.
2. If the script fails, you should see a message similar to the following:

The initialization of PeopleSoft environment setup failed. Check the log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following commands to continue with the setup of PeopleSoft environment.

From the shell, run `BASE_DIR/psft_puppet_apply.sh`

Leave the shell window open while you complete the next step.

3. Open the file `BASE_DIR/dpk/puppet/production/data/defaults.yaml` in a text editor, such as vi.
4. Change the value of the `ensure` attribute from `present` to `absent`.
Save and close the `defaults.yaml` file.
5. Follow the instructions from step 2 to run the `psft_puppet_apply.sh` script.

Task 2-7-6: Manually Removing the PeopleSoft Environment on Microsoft Windows

This section includes advanced steps to be used only if the cleanup procedures using the DPK setup script or `psft_puppet_apply` script in this section failed, or if you were not able to use the previous procedures for any reason.

If the cleanup process on Microsoft Windows was not totally successful, the `BASE_DIR` folders may not be entirely cleared, or you may have trouble when carrying out another deployment. Before carrying out the advanced steps in this section:

1. Run the command `psft-dpk-setup.bat --cleanup`.
2. If the script displays a `FAILED` message, run it again.
3. If it succeeds, check the `BASE_DIR` folders to be sure everything has been deleted.
4. If the `BASE_DIR` folders are not clear, or if a subsequent deployment is not successful, carry out the steps below.

For the advanced manual cleanup on Microsoft Windows, there are several steps. The steps in this section should be performed by someone familiar with modifying the Microsoft Windows registry. Depending upon where the cleanup process failed, some of the items mentioned in these steps may have already been removed. The user should remove whatever remains in this order:

1. Start the Microsoft Windows Services utility.
2. Stop the services `OracleServiceCDB<Product>` (for example, `OracleServiceCDBFSCM`) and `OracleOraDB19cHomeTNSListener<Listener_Name>` (for example, `OracleOraDB19cHomeTNSListenerpsft_listener`) by highlighting the names, right-clicking and selecting `Stop`.

Note. When you stop the service for the CDB (Oracle container database), you may see a message informing you that it will also stop the services for the PeopleSoft application server and Process Scheduler domains that were deployed for that database.

3. Stop the services for the PeopleSoft application server, Process Scheduler, and PeopleSoft PIA domains, if necessary.
4. Open a command prompt, running as administrator, and remove the two database services and the PeopleSoft domains services with the commands:

```
sc delete OracleServiceCDB<Product>
sc delete OracleOraDB19cHomeTNSListener<Listener_Name>
```

```
sc delete PsftAppServerDomain<Appserver_domain_name>Service
sc delete PsftPrsDomain<ProcSched_domain_name>Service
sc delete PsftPIADomain<PIA_domain_name>Service
```

5. In the Services window, stop ORACLE ProcMGR V22.1.0.0.0 and TListen 22.1.0.0.0 (Port 3050) by highlighting the names, right-clicking and selecting Stop.
6. In the Services window, right-click each of the services in step 5, select Properties, and copy the correct service name (rather than the alias).
7. Open a command prompt and remove the two preceding services with the command:

```
sc delete <service_name>
```

8. Open the Microsoft Windows registry; for example, select Start, Run, and enter regedit.
9. In the Registry Editor, locate the HKLM\SOFTWARE\ORACLE folder.

Select the following keys and verify that they contain references to the DPK installation locations in *BASE_DIR*:

- KEY_OraDB19Home1 (*BASE_DIR*\db by default)
- KEY_OraTux2210Home<date_time> (*BASE_DIR*\pt\bea\tuxedo by default)
- KEY_OracleWLHome<date_time> (*BASE_DIR*\pt\bea by default)

10. In the Registry Editor, locate the HKLM\SOFTWARE\ORACLE\TUXEDO folder.

Select the 22.1.0.0.0 key and verify that it contains references to the DPK installation locations in *BASE_DIR* (*BASE_DIR*\pt\bea\tuxedo by default).

11. In the Registry Editor, only for the keys from step 9 and 10 that reference the DPK installation locations, right-click and select Delete.
12. Close the Registry Editor window.
13. Open the file C:\Program Files\Oracle\Inventory\ContentsXML\inventory.xml in a text editor.
14. Locate the lines that reference the DPK deployment:

Note. This sample has been formatted for readability.

```
<HOME NAME="OracleWLHome<date_time>" LOC="C:/psft/pt/bea" TYPE="O" IDX=>
"16"/>
<HOME NAME="OraTux2210Home<date_time>" LOC="C:\psft\pt\bea\tuxedo" TYPE=>
"O"
IDX="17"/>
<HOME NAME="OraDB19Home1" LOC="C:\psft\db\oracle-server\19.3.0.0"
TYPE="O" IDX="18"/>
```

15. Delete only the lines referencing the DPK deployment, and save the file.
16. Remove everything under the *BASE_DIR* folder (*BASE_DIR*\db, *BASE_DIR*\dpk, and *BASE_DIR*\pt).

Note. If you performed a customized deployment, back up the psft_customizations.yaml file and any log files, to refer to if necessary. Save them outside of the *BASE_DIR*.

Note. You may get a message that some of the file names are too big for the recycle bin. Click OK to accept.

17. Remove C:\User\<username>\psft\pt\8.61 (PS_CFG_HOME).
18. If you performed a customized deployment that installed software such as Oracle Tuxedo or Oracle

WebLogic, PS_APP_HOME or PS_CFG_HOME, in non-default locations, remove that software manually, unless you need to retain the installations.

Note. If you want to retain the additional components, do not remove the installation locations. Be sure to use a customized deployment and specify the location of the additional components for any subsequent deployments.

19. Delete any user-defined System environment variables, such as PS_HOME, TUXDIR, PS_CFG_HOME, PS_APP_HOME, ORACLE_HOME, TNS_ADMIN.
20. Completely clean up any DPK install directory that was used for previous DPKs.
If you do not delete these or move them off the machine, they may be picked up by a subsequent DPK setup process and may cause the new DPK to fail.
21. Check the PATH environment variable, and remove the directories or path associated with the previous DPK deployments.
22. Restart the windows machine to release any caches or processes in the memory.

Task 2-7-7: Manually Removing the PeopleSoft Environment on Linux, AIX, or Solaris

This section includes advanced steps to be used only if the cleanup procedures using the DPK setup script or psft_puppet_apply script in this section failed, or if you were not able to use the previous procedures for any reason

If the cleanup process on Linux, AIX, or Solaris was not totally successful, the *BASE_DIR* directories may not be entirely cleared, or you may have trouble when carrying out another deployment. Before carrying out the advanced steps in this section:

1. Run the command `./psft-dpk-setup.sh --cleanup`.
2. If the script displays a FAILED message, run it again.
3. If it succeeds, check the *BASE_DIR* directories to be sure everything has been deleted.
4. If the *BASE_DIR* directories are not clear, or if a subsequent deployment is not successful, try the following steps.

Here are a few things to check for the advanced manual cleanup on Linux, AIX, or Solaris. Depending upon where the cleanup process failed, some of the items mentioned may have already been removed.

1. Check for left-over PeopleSoft processes.
`ps -aux|more`
2. Stop the processes using this command with the process ID:
`kill -9 <PID>`
3. Check for the five PeopleSoft user IDs using these commands

```
id psadm1
id psadm2
id psadm3
id oracle2
id esadm1
```

When you carry out the cleanup using the DPK setup script, it should remove the PeopleSoft users cleanly. However, if the users' home directory was deleted by mistake before running the cleanup, the user definition

may remain. If the commands give an output, it means the user exists.

4. If there are left-over PeopleSoft users, check for running processes associated with the users with this command:

```
ps -ef|grep <user_id>
```

5. Stop any running processes associated with the users, if necessary.
6. Delete the users, with this command:

```
userdel -r <user_id>
```

7. Remove the PeopleSoft base directory (*BASE_DIR*).

Note. If you performed a customized deployment, back up the `psft_customizations.yaml` file and any log files to refer to if necessary. Save them outside of *BASE_DIR*.

8. If you performed a customized deployment that installed software such as Oracle Tuxedo or Oracle WebLogic, `PS_APP_HOME` or `PS_CFG_HOME`, in non-default locations, remove that software manually.

Note. If you want to retain the additional components, do not remove the installation locations. Be sure to use a customized deployment and specify the location of the additional components for any subsequent deployments.

9. Remove any environment variables referring to the *BASE_DIR* that you removed, or to any of the customized locations (for example, `TUXDIR`, `TNS_ADMIN`, `WL_HOME`, `BEA_HOME`, `TNS_ADMIN`, `PS_HOME`, `PS_CFG_HOME`, `PS_APP_HOME`).
10. Check for leftover directories on AIX.

On AIX if *BASE_DIR* is on NFS, you may not be able to use the command `rm` to remove the *BASE_DIR*. If so, check for the presence of a directory beginning with ".nfs" in *BASE_DIR*/pt/bea/oui/lib/aix_ppc64. Remove the *BASE_DIR*/pt/bea/oui/lib/aix_ppc64/.nfsxxx directory manually before deleting *BASE_DIR*.

Chapter 3

Performing a Full-Tier Installation

This chapter discusses:

- Obtaining the PeopleSoft Application Images
- Prerequisites
- Running the DPK Setup Script in Full-tier Mode on Windows
- Running the DPK Setup Script in Full-tier Mode on Linux
- Reviewing the Full-Tier Deployment Results
- Loading Oracle-Provided Translations for a Full-Tier Installation
- Completing Installation Tasks

Task 3-1: Obtaining the PeopleSoft Application Images

If you have not already done so, this section describes how to locate and obtain the PeopleSoft Application Image required for a fresh installation on Microsoft Windows or Linux. The latest PeopleSoft Application Images are available on My Oracle Support. Contact Oracle if you need a user ID and password for My Oracle Support.

To obtain the required PeopleSoft Application Image:

1. Go to the PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2, to find the information on locating and downloading the current image for your PeopleSoft application.

Note. The PUM home page refers to the PeopleSoft Application Images as the PIs.

2. Select the tab PeopleSoft Update Image Home Page, and select the link for your PeopleSoft application.
3. Expand the Update Image Link section, and then select the link for Native OS to find the links to the current PeopleSoft Application Image for Microsoft Windows and Linux.
4. Download all of the zip files for the PeopleSoft Application Image into a single directory, referred to in this documentation as *DPK_INSTALL*.

Be sure that the *DPK_INSTALL* directory has adequate available space for all the zip files. The multiple files are needed due to size limitations. The contents of the DPKs and file name syntax were discussed earlier.

See "Preparing for Installation," Understanding the PeopleSoft Installation.

Task 3-2: Prerequisites

Use this procedure to perform a full-tier PeopleSoft installation. This procedure assumes that:

- You want to install a full PeopleSoft environment, including the PeopleSoft application database, and application server, Process Scheduler, and PIA domains, and supporting software.

See Reviewing the Full-Tier Deployment Results.

- You want to set up a database on Oracle 19c with multitenant architecture.

The full-tier deployment creates a pre-configured Oracle container database (CDB) and pluggable database (PDB).

See *Oracle Database Administrator's Guide*, Introduction to the Multitenant Architecture, in the Oracle Help Center, <https://docs.oracle.com/en/>.

- You have downloaded all of the required DPKs for the PeopleSoft Application Image, and saved them in a location accessible to the Microsoft Windows or Linux host, referred to here as *DPK_INSTALL*.

See Obtaining the PeopleSoft Application Image.

Note. After the DPK setup script extracts the downloaded zip files, it will delete the original zip files in *DPK_INSTALL*. If you want to save the original zip files, make a backup copy in a different folder.

- The user running the script *must have administrative permission* on Microsoft Windows, and *root access* on Linux.

Note. Restarting services for the deployed PeopleSoft environment, such as those for Oracle Tuxedo, must be performed by the same user (with administrative permission) who carried out the installation.

- There is enough space on the host for the PeopleSoft environment.
See "Prerequisites," Reviewing Hardware Requirements on Microsoft Windows.
- The deployment on Linux sets up users who own the PeopleSoft environment: psadm1, psadm2, psadm3, and oracle2. The deployment on Linux requires that a writable directory be available for the users. The default is /home.

Note. If you choose to use other Linux users, you must complete your installation using the customizations.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for Linux Users.

- You have the information for environment setup, including the following:

- Demo or system PeopleSoft application database
- Whether to install multi-language files
- PeopleSoft Connect ID and password
- PeopleSoft database administrator password
- PeopleSoft operator ID (such as PS or VP1) and password
- Database access ID password
- Application Server Domain Connection password (optional)
- PTWEBSEVER web profile user password
- Oracle WebLogic server administrator password
- Integration Gateway administrator user and password
- Integration Gateway keystore password

- Review the information on password restrictions.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

- You are installing a Unicode database.

When performing a full-tier installation using the DPK setup script, you must install a Unicode database. If you want to install a non-Unicode database, you must create the database yourself.

See "Preparing for Installation," Reviewing the Installation Choices.

Task 3-3: Running the DPK Setup Script in Full-tier Mode on Windows

To perform a full-tier deployment for a fresh installation on physical or virtual Microsoft Windows hosts:

1. Extract the first zip file (*FILENAME-1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* directory and other files.

2. Open a command prompt window with Run as Administrator.
3. Change directory to *DPK_INSTALL/setup*.
4. Run the *psft-dpk-setup.bat* script to carry out the full-tier deployment.
 - If you extracted the first zip file into the same directory where you downloaded the zip files, run the script with no options, as follows:

```
psft-dpk-setup.bat
```
 - If you extracted the first zip file into a different directory, use the option *dpk_src_dir* to specify the location of the downloaded zip files, such as *DPK_INSTALL*, as follows:

```
psft-dpk-setup.bat --dpk_src_dir DPK_INSTALL
```

5. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

The script locates the valid PeopleSoft zip files and extracts them. After it completes the extraction, it deletes the original files.

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments           [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

6. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The script creates the directory if it is not present.

Use forward slashes (/) when specifying the directory; for example, C:/psft. Do not use a name for the base directory that begins with a number. Confirm your choice or change it if necessary.

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be

accessible, must have write permission and should have enough free space.

Enter the full path to the PeopleSoft Base Directory: **C:/psft**
Are you happy with your answer? [Y|n|q]:

The script validates if there is enough free space available under the specified base directory for the PeopleSoft environment. The PeopleSoft environment setup is aborted if there is not enough free space.

Note. The full-tier setup requires 150 GB disk space.

See Reviewing the Full-Tier Deployment Results for a list of the sub-directories that the script creates under the user provided base directory.

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hierarchical Backend on this host:                [ OK ]
Checking if PeopleSoft DPKs are Present:                          [ OK ]
Checking if the Base Directory has Enough Free Space:              [ OK ]
```

8. Review the status messages as the script validates the files found in *DPK_INSTALL* and extracts the DPK archives.

The script carries out validations for the full-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

Note. The messages vary and have been truncated for brevity.

```
Validating the PeopleSoft DPKs in the Windows Host:
[...]
Extracting the PeopleSoft DPK Archives in the Windows Host:
[...]
```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host or VM. It then copies the PeopleSoft Puppet modules to the standard location under the base directory (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Windows Host:
Generating eYAML Hierarchical Backend Encryption Keys:            [ OK ]
Updating the Puppet Hierarchical YAML Files in the Windows VM:    [ OK ]
Updating the Role in Puppet Site File for the Windows VM:         [ OK ]
```

10. Specify whether this is a fresh install or for PUM.

Confirm your choice or change it if necessary.

Enter the PeopleSoft installation [PUM or FRESH] type [PUM]:
Are you happy with your answer? [y|n]:

11. Specify whether you want to install a DEMO or SYS database.

Enter the PeopleSoft database [DEMO or SYS] type [SYS]:

12. Specify whether this is a multi-language environment.

Do you want Multi Language support in PeopleSoft database? [y|N]:

13. Enter the database name, or accept the default name, following the requirements given in the prompt.

Enter a new PeopleSoft database name. Ensure that the database name starts with a letter, contains only uppercase letters and numbers and is no more than 8 characters in length [HCM92026]:

14. Enter the database listener port number:

Note. Verify that there is no database listener running on port 1521. If so, do not accept the default value; use another port.

Enter the PeopleSoft database listener port [1521]:

15. Enter the password for the database SYS or SYSTEM user.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database admin users [SYS/SYSTEM] password.
Ensure that the password meets the length and complexity requirements for your database platform:
Re-Enter the database admin users password:

16. Enter the PeopleSoft Connect ID at the following prompt:

The default is people.

Enter a new PeopleSoft database Connect ID. Ensure that the ID contains only alphanumeric characters [people]:

17. Enter a password for the PeopleSoft Connect ID, and enter again on the next line, at the following prompt.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Connect ID [people] password.
Ensure that the password meets the length and complexity requirements for your database platform:
Re-Enter the PeopleSoft Connect ID password:

18. Enter the password for the Access ID for the database:

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords,

My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Access ID [SYSADM] password.
Ensure that the password meets the length and complexity requirements
for your database platform:
Re-Enter the PeopleSoft Access ID password:

19. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

Enter a new PeopleSoft database Operator ID [PS] password.
Ensure that the password is between 1 and 32 characters in length.
You may include these special characters !@#\$\$%^& :
Re-Enter the PeopleSoft Operator ID password:

20. Enter the Application Server Domain Connection password, following the guidelines in the prompt.

The window does not display masking characters as you type. There is no default password.

Note. This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

[Optional] Enter a new Application Server Domain connection password.
Ensure that the password is between 8 and 30 characters in length.
You may include these special characters !@#\$\$%^& :
Re-Enter the Application Server Domain connection password:

21. Enter the Oracle WebLogic Server Admin password, following the guidelines in the prompt.

The default Oracle WebLogic server administrator is system. The window does not display masking characters as you type. There is no default password.

Enter a new WebLogic Server Admin user [system] password.
Ensure that the password is between 8 and 30 characters in length
with at least one lowercase letter and one uppercase letter.
It must also contain one number
or one of these special characters !@#\$\$%^& :
Re-Enter the WebLogic Server Admin user password:

22. Enter the password for the PTWEBSEVER web profile user at the following prompt:

Enter a new PeopleSoft WebProfile user [PTWEBSEVER] password.
Ensure that the password is between 8 and 32 characters in length.
You may include these special characters !@#\$\$%^& :
Re-Enter the PeopleSoft WebProfile user password:

23. Enter the Integration Gateway user ID and password at the following prompt.

The default user ID is administrator.

Enter the PeopleSoft Integration Gateway user [administrator]:
Enter the PeopleSoft Integration Gateway user [administrator] password.
Ensure that the password is between 8 and 30 characters in length.
You may include these special characters !@#\$\$%^& :
Re-Enter the PeopleSoft Integration Gateway user password:

24. Enter the Integration Gateway keystore password.

Enter the SSL Keystore password, which is required for web servers and Integration Broker gateways in SSL-enabled environments. The password you enter is used for the default keystore. If you need to reset the password, use the pskeymanager utility.

See *PeopleTools: System and Server Administration*, "Implementing WebLogic SSL Keys and Certificates."

See *PeopleTools: Integration Broker Administration*, "Configuring Security and General Properties."

Enter the PeopleSoft Integration Gateway Keystore password.

Ensure that the password is between 8 and 30 characters in length.

You may include these special characters !@#\$%^& :

Re-Enter the PeopleSoft Integration Gateway Keystore password:

25. If you want to change any of the answers to the previous questions, enter *n* (no) at the following prompt, or enter *y* (yes) to continue:

Are you happy with your answers? [y|n]: **y**

26. Review the status messages as the script updates the Puppet YAML files with the user input.

Encrypting the Passwords in the User Data: [OK]

Updating the Puppet Hiera YAML Files with User Data: [OK]

27. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

Note. If you select the default initialization process, the PeopleSoft environment is created with one Application Server domain, one Process Scheduler domain, and one PIA domain.

If you want to customize the PeopleSoft environment, answer *n* (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

28. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed.

Note. Line feeds have been added to this example for readability.

Starting the Default Initialization of PeopleSoft Environment:

Deploying Application Components: [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [C:\DPK_INSTALL\setup\psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

Start a cmd window as Administrator and run `C:\psft\psft_puppet_⇒
apply.cmd`

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying Application Components:           [ OK ]
Deploying PeopleTools Components:          [ OK ]
Deploying Oracle Database Server:          [ OK ]
Setting up PeopleSoft OS Users Environment: [ OK ]
Setting up PeopleSoft Database:            [ OK ]
Setting up PeopleSoft Application Server Domain: [ OK ]
Setting up PeopleSoft Process Scheduler Domain: [ OK ]
Setting up PeopleSoft PIA Domain:          [ OK ]
Changing the Passwords for the Environment: [ OK ]
Configuring Pre-Boot PeopleSoft Environment: [ OK ]
Starting PeopleSoft Domains:               [ OK ]
Configuring Post-Boot PeopleSoft Environment: [ OK ]
Setting up Source Details for PeopleTools Client: [ OK ]
```

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file `psft_dpk_setup.log` in the same location as the DPK setup script.

See Also

"Using and Maintaining the PeopleSoft Environment," Using the PeopleSoft Installation.

Task 3-4: Running the DPK Setup Script in Full-tier Mode on Linux

This section discusses:

- Running the DPK Setup Script in Full-tier Mode on Linux as the Root User
- Running the DPK Setup Script in Full-tier Mode on Linux as a Non-Root User

Task 3-4-1: Running the DPK Setup Script in Full-tier Mode on Linux as the Root User

To perform a full-tier deployment for a fresh installation on physical or virtual Linux hosts:

1. Extract the first zip file (*Filename.1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* directory and other files.

2. Open a terminal window and change directory to *DPK_INSTALL/setup*.
3. As a user with root access, run the *psft-dpk-setup.sh* script to carry out the full-tier deployment.
 - If you extracted the first zip file into the same directory where you downloaded the zip files, run the script with no options, as follows:


```
./psft-dpk-setup.sh
```
 - If you extracted the first zip file into a different directory, use the option *dpk_src_dir* to specify the location of the downloaded zip files, such as *DPK_INSTALL*, as follows:


```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments           [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter */ds1/psft/*). Confirm your choice or change it if necessary.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The directory */cs1/psft* is used in this example:

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path to the PeopleSoft Base Directory: /opt/oracle/psft
Are you happy with your answer? [Y|n|q]:
```

The script validates if there is enough free space available under the specified base directory for the PeopleSoft environment. The PeopleSoft environment setup is aborted if there is not enough free space. The script creates the directory, if it is not present.

Note. The full-tier setup requires 150 GB disk space.

See *Reviewing the Full-Tier Deployment Results* for a list of the sub-directories that the script creates under the user provided base directory.

6. Specify a writable directory for the user home directory at the following prompt.

The PeopleSoft environment setup using DPKs creates local users on the host. These users deploy the PeopleSoft components and own the PeopleSoft runtime domains. Enter a new location to be used for creating the home directories for these local users, or specify the default home directory, */home*. Enter the full path, and ensure that the directory is writable.

```
Enter the full path for the User Home directory
that is writable [/home]: /ds1
Are you happy with your answer? [y|n|q]:
```

If the script finds that the location you enter (either a new location or the default) is not writable, it exits with the following message.

```
The User does not have write permission to create the user's home
directory under [<user input>] on the Linux VM.
Exiting the PeopleSoft environment setup process.
```

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hieradata Backend on this host:                [ OK ]
Checking if PeopleSoft DPKs are Present:                        [ OK ]
Checking if the Base Directory has Enough Free Space:           [ OK ]
```

8. Review the status messages as the script validates the files found in the download directory, *DPK_INSTALL* and extract the archives from the DPKs.

The script locates the valid PeopleSoft zip files and extracts them. After it completes the extraction, it deletes the original files.

The script carries out validations for the full-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

Note. The messages vary and have been truncated for brevity.

```
Validating the PeopleSoft DPKs in the Linux Host:
[...]
Extracting the PeopleSoft DPK Archives in the Linux Host:
[...]
```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host or VM. As part of this setup, if the eYAML files are installed, it will generate the encryption keys. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Linux VM:
Generating eYAML Hieradata Backend Encryption Keys:            [ OK ]
Updating the Puppet Hieradata YAML Files in the Linux VM:       [ OK ]
Updating the Role in Puppet Site File for the Linux VM:         [ OK ]
```

10. Specify whether this is a fresh install or for PUM.

Confirm your choice or change it if necessary.

```
Enter the PeopleSoft installation [PUM or FRESH] type [PUM]:
Are you happy with your answer? [y|n]:
```

11. Specify whether you want to install a DEMO or SYS database.

```
Enter the PeopleSoft database [DEMO or SYS] type [SYS]:
```

12. Specify whether this is a multi-language environment.

```
Do you want Multi Language support in PeopleSoft database? [y|N]:
```

13. Enter the database name, or accept the default name, following the requirements given in the prompt.

Enter a new PeopleSoft database name. Ensure that the database name starts with a letter, contains only uppercase letters and numbers and is no more than 8 characters in length [HCM92026]:

14. Enter the database listener port number.

Note. Verify that there is no database listener running on port 1521. If so, do not accept the default value; use another port.

Enter the PeopleSoft database listener port [1521]:

15. Enter the password for the database SYS or SYSTEM user.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database admin users [SYS/SYSTEM] password.
Ensure that the password meets the length and complexity requirements for your database platform:
Re-Enter the database admin users password:

16. Enter the PeopleSoft Connect ID at the following prompt.

The default is people.

Enter a new PeopleSoft database Connect ID. Ensure that the ID contains only alphanumeric characters [people]:

17. Enter a password for the PeopleSoft Connect ID, and enter again on the next line, at the following prompt.

The password is not visible as you type, and the window does not display masking characters.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Connect ID [people] password.
Ensure that the password meets the length and complexity requirements for your database platform:
Re-Enter the PeopleSoft Connect ID password:

18. Enter the password for the Access ID for the database.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Access ID [SYSADM] password.

Ensure that the password meets the length and complexity requirements for your database platform:

Re-Enter the PeopleSoft Access ID password:

19. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

Enter a new PeopleSoft database Operator ID [VP1] password.

Ensure that the password is between 1 and 32 characters in length.

You may include these special characters !@#\$\$%^& :

Re-Enter the PeopleSoft Operator ID password:

20. Enter the Application Server Domain Connection password, following the guidelines in the prompt.

The window does not display masking characters as you type. There is no default password.

Note. This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

[Optional] Enter a new Application Server Domain connection password.

Ensure that the password is between 8 and 30 characters in length.

You may include these special characters !@#\$\$%^& :

Re-Enter the Application Server Domain connection password:

21. Enter the Oracle WebLogic Server Admin password, following the guidelines in the prompt.

The default Oracle WebLogic server administrator is system. The window does not display masking characters as you type. There is no default password.

Enter a new WebLogic Server Admin user [system] password.

Ensure that the password is between 8 and 30 characters in length with at least one lowercase letter and one uppercase letter.

It must also contain one number or

one of these special characters !@#\$\$%^& :

Re-Enter the WebLogic Server Admin user password:

22. Enter the password for the PTWEBSEVER web profile user.

Enter a new PeopleSoft Web Profile user [PTWEBSEVER] password.

Ensure that the password is between 8 and 32 characters in length.

You may include these special characters !@#\$\$%^& :

Re-Enter the PeopleSoft Web Profile user password:

23. Enter the Integration Gateway user ID and password.

The default user ID is administrator.

Enter the PeopleSoft Integration Gateway user [administrator]:

Enter the PeopleSoft Integration Gateway user [administrator] password.

Ensure that the password is between 8 and 30 characters in length.

You may include these special characters !@#\$\$%^& :

Re-Enter the PeopleSoft Integration Gateway user password:

24. Enter the Integration Gateway keystore password.

Enter the SSL Keystore password, which is required for web servers and Integration Broker gateways in SSL-enabled environments. The password you enter is used for the default keystore. If you need to reset the password, use the pskeymanager utility.

See *PeopleTools: System and Server Administration*, "Implementing WebLogic SSL Keys and Certificates."

See *PeopleTools: Integration Broker Administration*, "Configuring Security and General Properties."

Enter the PeopleSoft Integration Gateway Keystore password.
 Ensure that the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$%^& :
 Re-Enter the PeopleSoft Integration Gateway Keystore password:

25. If you want to change any of the answers to the previous questions, enter *n* (no) at the following prompt, or enter *y* (yes) to continue:

Are you happy with your answers? [y|n]: **y**

26. Review the status messages as the script updates the Puppet YAML files with the user input.

```
Encrypting the Passwords in the User Data:          [ OK ]
Updating the Puppet Hiera YAML Files with User Data: [ OK ]
```

27. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

Note. If you select the default initialization process, the PeopleSoft environment is created with one Application Server domain, one Process Scheduler domain, and one PIA domain.

If you want to customize the PeopleSoft environment, answer *n* (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

28. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Default Initialization of PeopleSoft Environment:

```
Setting Up System Settings:                      [FAILED]
```

The initialization of PeopleSoft environment setup failed. Check the log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

From the shell, run /opt/oracle/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Default Initialization of PeopleSoft Environment:

```
Setting Up System Settings:                [ OK ]
Deploying Application Components:           [ OK ]
Deploying PeopleTools Components:          [ OK ]
Deploying Oracle Database Server:          [ OK ]
Setting up PeopleSoft OS Users Environment: [ OK ]
Setting up PeopleSoft Database:            [ OK ]
Setting up PeopleSoft Application Server Domain: [ OK ]
Setting up PeopleSoft Process Scheduler Domain: [ OK ]
Setting up PeopleSoft PIA Domain:          [ OK ]
Changing the Passwords for the Environment: [ OK ]
Configuring Pre-Boot PeopleSoft Environment: [ OK ]
Starting PeopleSoft Domains:               [ OK ]
Configuring Post-Boot PeopleSoft Environment: [ OK ]
Setting up Source Details for PeopleTools Client: [ OK ]
```

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file `psft_dpk_setup.log` in the same location as the DPK setup script.

Task 3-4-2: Running the DPK Setup Script in Full-tier Mode on Linux as a Non-Root User

Before installing the PeopleSoft environment as a non-root user, ensure that you fulfill the prerequisites in the section *Deploying as a Non-Root User on Linux, AIX, or Solaris* in the chapter "Installing the PeopleSoft Homes."

To perform a full-tier deployment for a fresh installation on physical or virtual Linux hosts:

1. Open a terminal window as a non-root user and change directory to `DPK_INSTALL/setup`.
2. Run the `psft-dpk-setup.sh` script to carry out the full-tier deployment.

- If you extracted the first zip file into the same directory where you downloaded the zip files, run the script with no options, as follows:

```
./psft-dpk-setup.sh
```

- If you extracted the first zip file into a different directory, use the option `dpk_src_dir` to specify the location of the downloaded zip files, such as `DPK_INSTALL`, as follows:

```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL
```

3. Answer `y` (yes) at the following prompt.

```
You are running DPK setup without root/administrator access.
This is fine as long as the system administrator has performed
all necessary tasks and all prerequisites have been met.
Please see the documentation to determine the prerequisite tasks
that need to be performed to successfully run DPK set up
without root/administrator privilege.
```

```
Would you like to proceed with the setup as a non-root user? [y/n]: y
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

Validating User Arguments [OK]

Validating PeopleSoft Supported Platform: [OK]

5. At the following prompt enter a location that is accessible to the host to be used as the PeopleSoft base directory.

Enter the full path. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter /ds1/psft/). Confirm your choice or change it if necessary.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The directory /cs1/psft is used in this example:

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

Enter the full path to the PeopleSoft Base Directory: **/opt/oracle/psft**
Are you happy with your answer? [Y|n|q]:

The script validates if there is enough free space available under the specified base directory for the PeopleSoft environment. The PeopleSoft environment setup is aborted if there is not enough free space. The script creates the directory, if it is not present.

Note. The full-tier setup requires 150 GB disk space.

Checking if the Base Directory has Enough Free Space: [OK]

The script creates the following sub-directories under the user provided base directory, *BASE_DIR*:

- *BASE_DIR/db*

The script uses this directory to deploy Oracle RDBMS software and the database files.

- *BASE_DIR/dpk*

The script uses this directory to extract the archives from the PeopleSoft DPKs, and contains the Puppet YAML files for the deployment.

- *BASE_DIR/psft_puppet_agent*

The script uses this directory to install the Puppet software.

- *BASE_DIR/pt*

The script uses this directory to deploy PeopleSoft environment components.

6. Enter the full path to a writable directory with at least 10 GB available space for *PS_CFG_HOME*.

Confirm your choice or change it if necessary.

The default is *USER_HOME*/psft/pt/8.61, where *USER_HOME* is the home directory for the logged-in user. The *PS_CFG_HOME* directory holds the configuration and log files for the PeopleSoft Application Server, Process Scheduler, and PIA domains.

Enter a writable ps_config_home directory for PeopleSoft domains with at least 10.0GB space [/home/psftuser/psft/pt/8.61]:

Are you happy with your answer? [Y|n|q]: **y**

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hiera Backend on this host:                      [ OK ]
Checking if PeopleSoft DPKs are Present:                        [ OK ]
Checking if the Base Directory has Enough Free Space:           [ OK ]
```

8. Review the status messages as the script validates the files found in the download directory, *DPK_INSTALL* and extract the archives from the DPKs.

The script carries out validations for the full-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

Note. The messages have been truncated for brevity.

```
Validating the PeopleSoft DPKs in the Linux Host:
[...]
Extracting the PeopleSoft DPK Archives in the Linux Host:
[...]
```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host or VM. As part of this setup, if the EYAML files are installed, it will generate the encryption keys. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Linux VM:
Generating eYAML Hiera Backend Encryption Keys:                [ OK ]
Updating the Puppet Hiera YAML Files in the Linux VM:          [ OK ]
Updating the Role in Puppet Site File for the Linux VM:         [ OK ]
```

10. Specify whether this is a fresh install or for PUM.

Confirm your choice or change it if necessary.

```
Enter the PeopleSoft installation [PUM or FRESH] type [PUM]:
Are you happy with your answer? [y|n]:
```

11. Specify whether you want to install a DEMO or SYS database.

```
Enter the PeopleSoft database [DEMO or SYS] type [SYS]:
```

12. Specify whether this is a multi-language environment.

```
Do you want Multi Language support in PeopleSoft database? [y|N]:
```

13. Enter the database name, or accept the default name, following the requirements given in the prompt.

```
Enter a new PeopleSoft database name. Ensure that the database
name starts with a letter, contains only uppercase letters and
numbers and is no more than 8 characters in length [HCM92026]:
```

14. Enter the database listener port number.

Note. Verify that there is no database listener running on port 1521. If so, do not accept the default value; use another port.

Enter the PeopleSoft database listener port [1521]:

15. Enter the password for the database SYS or SYSTEM user.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database admin users [SYS/SYSTEM] password.
Ensure that the password meets the length and complexity requirements
for your database platform:

Re-Enter the database admin users password:

16. Enter the PeopleSoft Connect ID.

The default is people.

Enter a new PeopleSoft database Connect ID. Ensure that the ID
contains only alphanumeric characters [people]:

17. Enter a password for the PeopleSoft Connect ID, and enter again on the next line, at the following prompt.

The password is not visible as you type, and the window does not display masking characters.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Connect ID [people] password.
Ensure that the password meets the length and complexity requirements
for your database platform:

Re-Enter the PeopleSoft Connect ID password:

18. Enter the password for the Access ID for the database.

There is no default password. The DPK setup script does not restrict or validate your entry. It will accept whatever you enter. However, there may be restrictions imposed by the database platform or by other processes. In order to avoid problems later in the installation, be sure to check the password requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Access ID [SYSADM] password.
Ensure that the password meets the length and complexity requirements
for your database platform:

Re-Enter the PeopleSoft Access ID password:

19. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

Enter a new PeopleSoft database Operator ID [VP1] password.
Ensure that the password is between 1 and 32 characters in length.
You may include these special characters !@#\$%^& :
Re-Enter the PeopleSoft Operator ID password:

20. Enter the Application Server Domain Connection password, following the guidelines in the prompt.

The window does not display masking characters as you type. There is no default password.

Note. This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

[Optional] Enter a new Application Server Domain connection password.
 Ensure that the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the Application Server Domain connection password:

21. Enter the Oracle WebLogic Server Admin password, following the guidelines in the prompt.

The default Oracle WebLogic server administrator is system. The window does not display masking characters as you type. There is no default password.

Enter a new WebLogic Server Admin user [system] password.
 Ensure that the password is between 8 and 30 characters in length
 with at least one lowercase letter and one uppercase letter.
 It must also contain one number or
 one of these special characters !@#\$\$%^& :
 Re-Enter the WebLogic Server Admin user password:

22. Enter the password for the PTWEBSEVER web profile user at the following prompt:

Enter a new PeopleSoft Web Profile user [PTWEBSEVER] password.
 Ensure that the password is between 8 and 32 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Web Profile user password:

23. Enter the Integration Gateway user ID and password.

The default user ID is administrator.

Enter the PeopleSoft Integration Gateway user [administrator]:
 Enter the PeopleSoft Integration Gateway user [administrator] password.
 Ensure the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway user password:

24. Enter the Integration Gateway keystore password.

Enter the SSL Keystore password, which is required for web servers and Integration Broker gateways in SSL-enabled environments. The password you enter is used for the default keystore. If you need to reset the password, use the pskeymanager utility.

See *PeopleTools: System and Server Administration*, "Implementing WebLogic SSL Keys and Certificates."

See *PeopleTools: Integration Broker Administration*, "Configuring Security and General Properties."

Enter the PeopleSoft Integration Gateway Keystore password.
 Ensure that the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway Keystore password:

25. If you want to change any of the answers to the previous questions, enter *n* (no) at the following prompt, or enter *y* (yes) to continue:

Are you happy with your answers? [y|n]: **y**

26. Review the status messages as the script updates the Puppet YAML files with the user input.

```
Encrypting the Passwords in the User Data:          [ OK ]
Updating the Puppet Hiera YAML Files with User Data: [ OK ]
```

27. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

Note. If you select the default initialization process, the PeopleSoft environment is created with one Application Server domain, one Process Scheduler domain, and one PIA domain.

If you want to customize the PeopleSoft environment, answer *n* (no) to stop the script.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

28. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed.

Note. Line feeds have been added to the example for readability.

Starting the Default Initialization of PeopleSoft Environment:

```
Setting Up System Settings:                                [FAILED]
```

The initialization of PeopleSoft environment setup failed. Check the log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

From the shell, run /opt/oracle/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

Starting the Default Initialization of PeopleSoft Environment:

```
Setting Up System Settings:                                [ OK ]
Deploying Application Components:                          [ OK ]
Deploying PeopleTools Components:                         [ OK ]
```

```

Deploying Oracle Database Server:           [ OK ]
Setting up PeopleSoft OS Users Environment: [ OK ]
Setting up PeopleSoft Database:             [ OK ]
Setting up PeopleSoft Application Server Domain: [ OK ]
Setting up PeopleSoft Process Scheduler Domain: [ OK ]
Setting up PeopleSoft PIA Domain:           [ OK ]
Changing the Passwords for the Environment:  [ OK ]
Configuring Pre-Boot PeopleSoft Environment: [ OK ]
Starting PeopleSoft Domains:                [ OK ]
Configuring Post-Boot PeopleSoft Environment: [ OK ]
Setting up Source Details for PeopleTools Client: [ OK ]

```

The PeopleSoft Environment Setup Process Ended.

The setup.log is written to the file `<USER_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<USER_HOME>` is the home directory for the non-root user running the script, and `<PID>` is a process ID.

Task 3-5: Reviewing the Full-Tier Deployment Results

This section describes some of the files and folders installed by the script running with the full-tier option. These are the standard default locations, those created under the user-specified base directory, *BASE_DIR*, as well as other installations. If you want to change the installation locations, see "Completing the DPK Initialization with Customizations."

- *BASE_DIR*/pt

The script uses this directory to deploy the *PS_HOME* and *PS_APP_HOME* utilities and scripts, including the following:

- *PS_HOME* installed to the default location under the DPK base directory, *BASE_DIR*/pt/ps_home8.61.xx.
- *PS_HOME*/appserv/PSADMIN.exe
- *PS_HOME*/bin/client/winx86/pscfg.exe (Configuration Manager)
- *PS_HOME*/bin/client/winx86/psdmt.exe (Data Mover)
- *PS_HOME*/bin/client/winx86/pside.exe (Application Designer)
- *PS_HOME*/scripts
- *PS_HOME*/setup/PsMpPIAInstall (PeopleSoft Pure Internet Architecture installer)
- *PS_HOME*/setup/PsMpDbInstall (Database installer)
- *PS_HOME*/setup/PsCA (Change Assistant installer)
- *PS_HOME*/setup/PsCIA (Change Impact Analyzer installer)
- *PS_APP_HOME* installed to the default location under the DPK base directory, *BASE_DIR*/pt/<Product>_app_home, where <Product> is the abbreviation for the PeopleSoft application; for example, hcm_app_home for PeopleSoft Human Capital Management.

Note. The DPK setup requires a decoupled *PS_APP_HOME*; that is, the installation location of *PS_APP_HOME* is different from *PS_HOME*.

The *PS_APP_HOME* directory includes files for the specific PeopleSoft application, including files needed for database creation.

If you answered yes when asked whether you wanted multi-language support during the DPK setup script

process, the files required for translations are installed under *BASE_DIR/pt/<Product>_app_home*.

- Oracle Tuxedo software in the standard location, *BASE_DIR/pt/bea/tuxedo*
- Oracle Tuxedo services on Microsoft Windows:
ORACLE ProcMGR V22.1.0.0.0 and Tlisten 22.1.0.0.0
- Oracle WebLogic software in the standard location, *BASE_DIR/pt/bea/wlserver*
- Oracle database client software in the standard location, *BASE_DIR/pt/oracle-client*
- Java software in the standard location, *BASE_DIR/pt/jdk*.
- *BASE_DIR/dpk*
The script uses this directory to extract the archives from the PeopleSoft DPKs, and contains the Puppet YAML files for the deployment. Do not alter the installed Puppet YAML files.
See Completing the DPK Initialization with Customizations for information on creating a YAML file to customize the environment.
- *BASE_DIR/db*
 - *BASE_DIR/db/oracle-server*
This directory includes the Oracle RDBMS database server and client connectivity software, including the SQL*Plus program.
 - *BASE_DIR/db/oradata*
This directory includes the Oracle database files and tables for the PeopleSoft application. The deployment creates a pre-configured Oracle container database (CDB) and pluggable database (PDB).
- *BASE_DIR/psft_puppet_agent*
This directory includes the Puppet software.
- *PS_CFG_HOME*
 - The full-tier deployment creates a single Application Server, Process Scheduler, and PIA domain. The *PS_CFG_HOME* directory includes the Application Server and Process Scheduler server configuration files, as well as the web server (PIA) installation.
 - On Linux, *PS_CFG_HOME* is installed in *<USER_HOME>/psadm2/psft/pt/<peopletools_major_version>* when performing the entire installation as root, or in *<prompted_ps_cfg_home>/psft/pt/<peopletools_major_version>* when performing the deployment as a non-root user.
 - On Microsoft Windows, *PS_CFG_HOME* is installed in *C:\%USERPROFILE%\psft\pt\<peopletools_major_version>*.
- Users
On Linux, when performing the entire installation as the root user, the DPK setup script creates five default users, psadm1, psadm2, psadm3, oracle2, and esadm1.
- Services
On Microsoft Windows, the DPK setup script creates services for starting the PeopleSoft domains, as well as the Oracle Tuxedo services.

See Also

"Completing the Installation," Using the PeopleSoft Installation

Task 3-6: Loading Oracle-Provided Translations for a Full-Tier Installation

This section discusses:

- Preparing to Add Oracle-Provided Translations
- Setting Up the Process Scheduler on Microsoft Windows
- Creating Data Mover Scripts
- Running Data Mover Scripts
- Running the VERSION Application Engine Program
- Cleaning Up Orphaned Language Data
- Running Database Audits

Preparing to Add Oracle-Provided Translations

This section describes how to add Oracle-provided translations to a database created using the full-tier DPK installation. This procedure is appropriate only if you have not performed any application or PeopleTools maintenance (that is, you have not upgraded, applied patches, or applied maintenance packs), your current PeopleTools version matches the PeopleTools version included in your PeopleSoft application, and you have not made any customizations to existing PeopleTools-based objects in your existing database.

Before beginning this procedure:

- Review Understanding Translation Installation in the Global Technology product documentation.
See *PeopleTools: Global Technology*, "Installing Oracle-Provided Translations."
- Back up your database.
- Follow the instructions in the chapter "Setting Up the Install Workstation."

Task 3-6-1: Setting Up the Process Scheduler on Microsoft Windows

If you are running a PeopleSoft Process Scheduler on Microsoft Windows, then you must perform the process to set up a new Process Scheduler, as documented in this installation guide. The full-tier installation created a Process Scheduler server and domain. Because the PeopleSoft application translation files contain translations for your PS/nVision layouts, you must transfer those translations to a new Windows-based PeopleSoft Process Scheduler.

If you run only non-Windows-based PeopleSoft Process Schedulers, you do not need to complete this step. This step also does not need to be performed for Linux Process Schedulers, because the only object that contain translations outside the database is PS/nVision reports, which is supported on Windows-based Process Schedulers.

See "Setting Up Process Scheduler on Windows."

Task 3-6-2: Creating Data Mover Scripts

Follow the steps in the Creating a Database Manually chapter, task "Creating Data Mover Import Scripts" to create a script to load non-English languages into your database. Be sure to select "Add New Language" in the "Database Type" selection box in the second step of the wizard. The generated database setup script appears in the PeopleSoft Data Mover input view. Be sure to enter the same database parameters to match the values from your full-tier install; do not select any language that already exists in your database. De-select US-English as a language since your database already contains that language; only non-English languages should be selected. If you choose a new base language, then the generated script will include the command to swap the base language.

Task 3-6-3: Running Data Mover Scripts

Follow the steps in the "Creating a Database Manually" chapter, task "Running Data Mover Import Scripts" to execute the script generated above in Data Mover bootstrap mode.

Task 3-6-4: Running the VERSION Application Engine Program

Run the VERSION Application Engine program on your database. From the command line utility, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <userid>
-CP <userpswd> -R RESETVERSIONS -AI VERSION
```

Use the values for the database name and user ID that you entered when running the DPK setup script for <dbname>, <userid> and <userpswd>. This synchronizes the PeopleTools version numbers, taking the new translations into account.

Note. Do not change the parameter `-R RESETVERSIONS`. This value is required for the run control ID for this task.

Task 3-6-5: Cleaning Up Orphaned Language Data

The Application Engine program PTIACLNLNGCA removes any orphaned related language objects that do not have a matching base language object.

Run the PTIACLNLNGCA application engine program. From the command line utility, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP=>
<password> -R <run_control> -AI PTIACLNLNGCA -FP <log_path>
```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <oprid> respectively. However, be aware that <password> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <password> that is the password associated with the <oprid>. For <log_path>, specify the path where you want the log file for the application engine program to be generated, such as C:\temp\.

Task 3-6-6: Running Database Audits

Run database audits. Your database should now be complete. To ensure that it is complete, rerun the database audits.

See "Completing the Database Setup," Checking the Database.

Task 3-7: Completing Installation Tasks

After completing the installation process, be sure to go to the chapter "Completing the Installation." This chapter includes information on accessing the PeopleSoft environment, as well as post-installation steps.

It is important that you perform the tasks in the section Completing Post-Installation Steps that apply to your environment.

Chapter 4

Deploying the PeopleSoft Deployment Packages in Silent Mode

This chapter discusses:

- Understanding Silent Mode Installation
- Reviewing the Response File Sample for Full-Tier Installation
- Reviewing the Response File Sample for Mid-tier Installation
- Reviewing the Response File Sample to Deploy an Application Server Domain
- Reviewing the Response File Sample to Deploy a Process Scheduler Domain
- Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain
- Reviewing the Response File Sample to Deploy a PIA Domain
- Reviewing the Response File Sample to Install PS_HOME Only
- Reviewing the Response File Sample to Install PS_APP_HOME Only
- Running the DPK Setup Script in Silent Mode for Default Initialization
- Running the DPK Setup Script in Silent Mode with Customizations

Understanding Silent Mode Installation

Use this section to perform a silent mode installation with the DPK setup script. In silent mode, you record the answers for the script prompts in a text file, called a response file. After you start the script and specify the response file location, no further interaction is required. Use these guidelines:

- Include a customization file if necessary.
You can also run the DPK setup script in silent mode and specify a customizations file in addition to the response file. Use the examples in the chapter "Completing the DPK Initialization with Customizations" to create a customization file. Follow the procedure in the section Running the DPK Setup Script in Silent Mode with Customizations.
- You must use customizations for installations on AIX operating systems.
See Reviewing the Software Requirements on AIX.
See Preparing the Customization File for JDK on AIX.
- Make a note of the required user IDs and passwords.
The DPK setup process does not include any default passwords. You must supply the user IDs and passwords included in the samples.
- Enter passwords in clear text.
Note that some of the response file samples in this section include placeholders for passwords. When creating

the response file for silent mode installation, enter the passwords in clear text. If you are running a customized deployment, enter the passwords in clear text in the `psft_customizations.yaml` file. Do not enter encrypted passwords.

- Fulfill prerequisites if running as a non-root user.

If you want to run as a non-root user on Linux, AIX, or Solaris, fulfill the requirements in the section *Deploying as a Non-Root User on Linux, AIX, or Solaris*. Before you run the silent mode installation as a non-root user, the root user must run the DPK setup prereq step.

See "Installing the PeopleSoft Homes," *Deploying as a Non-Root User on Linux, AIX, or Solaris*.

Create your response file based on the samples in this section. The response file should include the values you would supply when running the DPK setup script interactively, and will vary depending upon the database platform and operating system.

The response files in this section include the following parameters:

- `env_type` — Specify fulltier or midtier as the type of DPK deployment.
- `install_type` — Specify FRESH as the installation type for this task.
See *Reviewing the DPK Setup Script Options* for information on the allowed installation types.
This is required for all full-tier deployments. It is required for mid-tier deployments if the DPK set includes App DPKs.
- `deploy_only` — Specify true for one of the special deployment options, such as to deploy only *PS_HOME*.
- `deploy_type` — Specify the type of deployment, as shown in the response file samples.
- `db_type` — Specify whether you want to install a DEMO or SYS database.
- `db_is_unicode` — Specify false if you want to install a non-Unicode database, or true to install a Unicode environment.

The default setting is true. If you do not include the `db_is_unicode` parameter, the DPK setup script installs a Unicode environment.

- `db_is_ml` — Specify false if you do not want translated files for a multi-language deployment, or true to include the translated files.

This is needed for full-tier deployments with `install_type=FRESH`.

- `psft_base_dir` — Enter an accessible location for the base folder, which is used to extract the PeopleSoft DPKs and for deploying PeopleSoft components.

The script creates the folder if it is not present.

For installation on Microsoft Windows, use forward slashes (/) for the base folder. For example, `C:/psft`. Enter the full path, and enclose the path in double quotes. Do not use a name for the base folder that begins with a number.

For installation on Linux, AIX, or Solaris, use forward slashes (/) for the base directory. For example, `/cs1/psft`. Enter the full path, and enclose the path in double quotes. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter `/ds1/psft/`).

- `user_home_dir` — On Linux, AIX, or Solaris, if you are performing the deployment as the root user, enter a writable directory for the home directory for the script-created users (psadm1, psadm2, psadm3, oracle2, and esadm1).

Enter the full path to a writable directory, and enclose the path in double quotes.

- `user_config_home_dir` — On Linux, AIX, or Solaris, if you are performing the deployment as a non-

root user, enter a writable directory for the *PS_CFG_HOME* directory.

If you do not include *user_config_home_dir* in the response file, it defaults to *USER_HOME/psft*.

Enter the full path to a writable directory, and enclose the path in double quotes.

- **db_platform** — Specify ORACLE as the database platform.
- **db_name** — Enter the PeopleSoft database name.

If the database name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92".

- **db_service_name** — Enter the database service name.

For the service name, enter the full name, including the domain, if the database was installed with the domain. Use forward slashes if necessary. If the service name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92.example.com".

- **db_host** — Enter the name of the host where the database is installed.
- **db_port** — Enter the database port.
- **db_listener_port** — Enter the port for the Oracle Database listener for a full-tier deployment.
- **connect_id** — Enter the PeopleSoft database Connect ID.

The default is people.

- **connect_pwd** — Enter the password for the Connect ID.

Ensure the password meets the length and complexity requirements for your database platform.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

- **admin_pwd** — Enter the password for the PeopleSoft database admin (SYS/SYSTEM) user

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

- **access_id** — Enter the Access ID user.
- **access_password** — Enter the password for the Access ID (SYSADM) for the database.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

- **opr_id** — Enter the PeopleSoft operator ID, such as PS or VP1.
- **opr_pwd** — Enter the password for the operator ID.

Ensure that the password is between 1 and 32 characters in length. You may include these special characters !@#\$%^&.

- **domain_conn_pwd** — Enter the Application Server Domain Connection password.

This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

- **weblogic_admin_pwd** — Enter the Oracle WebLogic Server Admin password.

The default Oracle WebLogic server administrator is system. Ensure that the password is between 8 and 30 characters in length with at least one lowercase letter, one uppercase letter and one number or one special character (!@#\$%^&).

- **webprofile_user_id** — Enter the web profile user name.
- **webprofile_user_pwd** — Enter the password for the PTWEBSERVER web profile user.
Ensure that the password is between 8 and 32 characters in length. You may include these special characters `!@#$$%^&`.
- **pia_psserver_list** — Enter `<application_server_host>:<Jolt port>`.
List the application server domains that are used by the PIA domains, using the format `<application_server_host>:<Jolt port>`. If you enter more than one domain, separate the entries with a comma.
- **prcs_domain_id** — Enter the name of the server with the Process Scheduler domain.
When you run the DPK setup script with default initialization, the name generated for the Process Scheduler Server is `PRCSxxxx`, where `xxx` is a random number. On a host where Process Scheduler has been deployed, you can find the Process Scheduler Server name (`PrcsServerName`) in the Process Scheduler configuration file. Locate it in `<PS_CFG_HOME>/appserv/prcs/<Domain name>/psprcs.cfg`, under General settings for the Process Scheduler. For example:

```
=====
; General settings for the Process Scheduler
;=====
PrcsServerName=PRCS8783
```
- **prcs_server_name** — Enter the name of the server with the Process Scheduler domain, as described for **prcs_domain_id**. When you run the DPK setup script with default initialization, `Process Scheduler/PrcsServerName` is an interpolation function based on **prcs_domain_id**.
- **gw_user_id** — Enter the Integration Gateway user ID.
The default is `administrator`.
- **gw_user_pwd** — Enter the password for the Integration Gateway user.
Ensure that the password is between 8 and 30 characters in length. You may include these special characters `!@#$$%^&`.
- **gw_keystore_pwd** — Enter the Integration Gateway keystore password.
Ensure the password is between 8 and 30 characters in length. You may include these special characters `!@#$$%^&`.

Task 4-1: Reviewing the Response File Sample for Full-Tier Installation

This section discusses:

- Reviewing the Response File Sample for Full-Tier Installation on Microsoft Windows
- Reviewing the Response File Sample for Full-Tier Installation on Linux as the Root User
- Reviewing the Response File Sample for Full-Tier Installation on Linux as a Non-Root User

Task 4-1-1: Reviewing the Response File Sample for Full-Tier Installation on Microsoft Windows

Here is a sample response file for a full-tier installation on a Microsoft Windows operating system.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=fulltier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="c:/psft_silent"
db_platform=ORACLE
db_name=HCM92U30
db_service_name=HCM92U30
db_listener_port=1521
db_host=server.example.com
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
admin_pwd=password
access_id=SYSADM
access_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
```

Task 4-1-2: Reviewing the Response File Sample for Full-Tier Installation on Linux as the Root User

Here is a sample response file for a full-tier installation on Linux as the root user.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=fulltier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft_silent"
user_home_dir="/opt/psftuserhome"
db_platform=ORACLE
db_name=HCM92U30
db_service_name=HCM92U30
db_listener_port=1521
db_host=server.example.com
db_service_name=HCM92U30
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
admin_pwd=password
access_id=SYSADM
```

```
access_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
```

Task 4-1-3: Reviewing the Response File Sample for Full-Tier Installation on Linux as a Non-Root User

Here is a sample response file for a full-tier installation on Linux as a non-root user.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

See Deploying as a Non-Root User on Linux, AIX, or Solaris for prerequisites for the non-root deployment.

```
env_type=fulltier
install_type=FRESH
db_type=SYS
psft_base_dir="/opt/oracle/psft_silent"
user_home_dir="/home/psftuser"
user_config_home_dir="/home/psftuser/pscfg_pt861_silent"
db_service_name=HCM92U30
db_name=HCM92U30
db_is_ml=True
db_listener_port=1521
db_host=server.example.com
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
admin_pwd=password
access_id=SYSADM
access_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
```

Task 4-2: Reviewing the Response File Sample for Mid-tier Installation

This section discusses:

- Reviewing the Response File Sample for Mid-tier Installation on Microsoft Windows

- Reviewing the Response File Sample for Mid-tier Installation as the Root User on Linux, AIX, or Solaris
- Reviewing the Response File Sample for Mid-tier Installation as a Non-Root User on Linux, AIX, or Solaris

Task 4-2-1: Reviewing the Response File Sample for Mid-tier Installation on Microsoft Windows

Here is a sample response file for installing mid-tier components on Microsoft Windows.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="C:/psft"
db_platform=ORACLE
db_name=HCM92U46
db_service_name=HCM92U46
db_host=server.example.com
db_port=1521
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
```

Task 4-2-2: Reviewing the Response File Sample for Mid-tier Installation as the Root User on Linux, AIX, or Solaris

Here is a sample response file for installing mid-tier components on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
db_platform=ORACLE
psft_base_dir="/opt/oracle/psft"
user_home_dir="/opt/home"
db_name=HCM92U46
db_service_name=HCM92U46
db_host=server.example.com
db_port=1521
connect_id=people
```

```
connect_pwd=password
opr_id=PS
opr_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
```

Task 4-2-3: Reviewing the Response File Sample for Mid-tier Installation as a Non-Root User on Linux, AIX, or Solaris

Here is a sample response file for installing mid-tier components on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
db_platform=ORACLE
psft_base_dir="/opt/oracle/psft"
user_config_home_dir="/opt/psftuser/pscfg_pt861_silent"
db_name=HCM92U46
db_service_name=HCM92U46
db_host=server.example.com
db_port=1521
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
```

Task 4-3: Reviewing the Response File Sample to Deploy an Application Server Domain

This section discusses:

- Reviewing the Response File Sample to Deploy an Application Server Domain on Microsoft Windows
- Reviewing the Response File Sample to Deploy an Application Server Domain on Linux, AIX, or Solaris as the Root User

- Reviewing the Response File Sample to Deploy an Application Server Domain on Linux, AIX, or Solaris as a Non-Root User

Task 4-3-1: Reviewing the Response File Sample to Deploy an Application Server Domain on Microsoft Windows

Here is a sample response file for deploying an application server domain on Microsoft Windows.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="C:/psft"
db_platform=ORACLE
domain_type=appserver
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=PS
opr_pwd=password
```

Task 4-3-2: Reviewing the Response File Sample to Deploy an Application Server Domain on Linux, AIX, or Solaris as the Root User

Here is a sample response file for deploying an application server domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_home_dir="/scratch/dpkbase"
db_platform=ORACLE
domain_type=appserver
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=PS
opr_pwd=password
```

Task 4-3-3: Reviewing the Response File Sample to Deploy an Application Server Domain on Linux, AIX, or Solaris as a Non-Root User

Here is a sample response file for deploying an application server domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_config_home_dir="/home/psftuser/pscfg_pt861_silent"
db_platform=ORACLE
domain_type=appserver
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=PS
opr_pwd=password
```

Task 4-4: Reviewing the Response File Sample to Deploy a Process Scheduler Domain

This section discusses:

- Reviewing the Response File Sample to Deploy a Process Scheduler Domain on Microsoft Windows
- Reviewing the Response File Sample to Deploy a Process Scheduler Domain on Linux, AIX, or Solaris as the Root User
- Reviewing the Response File Sample to Deploy a Process Scheduler Domain on Linux, AIX, or Solaris as a Non-Root User

Task 4-4-1: Reviewing the Response File Sample to Deploy a Process Scheduler Domain on Microsoft Windows

Here is a sample response file for deploying a Process Scheduler domain on Microsoft Windows.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="C:/psft"
```

```
db_platform=ORACLE
domain_type=prcs
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=QEDMO
opr_pwd=password
```

Task 4-4-2: Reviewing the Response File Sample to Deploy a Process Scheduler Domain on Linux, AIX, or Solaris as the Root User

Here is a sample response file for deploying a Process Scheduler domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_home_dir="/scratch/dpkbase"
db_platform=ORACLE
domain_type=prcs
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=QEDMO
opr_pwd=password
```

Task 4-4-3: Reviewing the Response File Sample to Deploy a Process Scheduler Domain on Linux, AIX, or Solaris as a Non-Root User

Here is a sample response file for deploying a Process Scheduler domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_config_home_dir="/home/psftuser/pscfg_pt861_silent"
db_platform=ORACLE
```

```
domain_type=prcs
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=QEDMO
opr_pwd=password
```

Task 4-5: Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain

This section discusses:

- Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain on Microsoft Windows
- Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain on Linux, AIX, or Solaris as the Root User
- Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain on Linux, AIX, or Solaris as a Non-Root User

Task 4-5-1: Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain on Microsoft Windows

Here is a sample response file for deploying an application server and a Process Scheduler domain on Microsoft Windows.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="C:/psft"
db_platform=ORACLE
domain_type=appbatch
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=PS
opr_pwd=password
```

Task 4-5-2: Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain on Linux, AIX, or Solaris as the Root User

Here is a sample response file for deploying an application server and a Process Scheduler domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_home_dir="/scratch/dpkbase"
db_platform=ORACLE
domain_type=appbatch
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
domain_conn_pwd=password
opr_id=PS
opr_pwd=password
```

Task 4-5-3: Reviewing the Response File Sample to Deploy an Application Server and a Process Scheduler Domain on Linux, AIX, or Solaris as a Non-Root User

Here is a sample response file for deploying an application server and a Process Scheduler domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_config_home_dir="scratch/dpkbase"
db_platform=ORACLE
domain_type=appbatch
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
```

```
domain_conn_pwd=password  
opr_id=PS  
opr_pwd=password
```

Task 4-6: Reviewing the Response File Sample to Deploy a PIA Domain

This section discusses:

- Reviewing the Response File Sample to Deploy a PIA Domain on Microsoft Windows
- Reviewing the Response File Sample to Deploy a PIA Domain on Linux, AIX, or Solaris as the Root User
- Reviewing the Response File Sample to Deploy a PIA Domain on Linux, AIX, or Solaris as a Non-Root User

Task 4-6-1: Reviewing the Response File Sample to Deploy a PIA Domain on Microsoft Windows

Here is a sample response file for deploying a PIA domain on Microsoft Windows.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier  
install_type=FRESH  
db_is_ml=True  
psft_base_dir="C:/psft"  
db_platform=ORACLE  
domain_type=pia  
db_name=HCM92U46  
db_host=server.example.com  
db_service_name=HCM92U46  
db_port=1521  
connect_id=people  
connect_pwd=password  
opr_id=PS  
opr_pwd=password  
weblogic_admin_pwd=password  
webprofile_user_id=PTWEBSEVER  
webprofile_user_pwd=password  
domain_conn_pwd=password  
gw_user_id=administrator  
gw_user_pwd=password  
gw_keystore_pwd=password  
pia_psserver_list=server2.example.com:9033  
prcs_server_name=PRCS9722  
prcs_domain_id=PRCS9722
```


Task 4-6-2: Reviewing the Response File Sample to Deploy a PIA Domain on Linux, AIX, or Solaris as the Root User

Here is a sample response file for deploying a PIA domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_home_dir="/scratch/dpkbase"
db_platform=ORACLE
domain_type=pia
db_name=HCM92U46
db_host=server.example.com
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
pia_psserver_list=server2.example.com:9033
prcs_server_name=PRCS9152
prcs_domain_id=PRCS9152
```

Task 4-6-3: Reviewing the Response File Sample to Deploy a PIA Domain on Linux, AIX, or Solaris as a Non-Root User

Here is a sample response file for deploying a PIA domain on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
psft_base_dir="/opt/oracle/psft"
user_config_home_dir="/opt/psftuser/pscfg_pt861_silent"
db_platform=ORACLE
domain_type=pia
db_name=HCM92U46
db_host=server.example.com
```

```
db_service_name=HCM92U46
db_port=1521
connect_id=people
connect_pwd=password
opr_id=PS
opr_pwd=password
weblogic_admin_pwd=password
webprofile_user_id=PTWEBSEVER
webprofile_user_pwd=password
domain_conn_pwd=password
gw_user_id=administrator
gw_user_pwd=password
gw_keystore_pwd=password
pia_psserver_list=server2.example.com:9033
prcs_server_name=PRCS9152
prcs_domain_id=PRCS9152
```

Task 4-7: Reviewing the Response File Sample to Install PS_HOME Only

This section discusses:

- Reviewing the Response File Sample to Install PS_HOME Only on Microsoft Windows
- Reviewing the Response File Sample to Install PS_HOME Only as the Root User on Linux, AIX, or Solaris
- Reviewing the Response File Sample to Install PS_HOME Only as a Non-Root User on Linux, AIX, or Solaris

Task 4-7-1: Reviewing the Response File Sample to Install PS_HOME Only on Microsoft Windows

Here is a sample response file for installing only the *PS_HOME* installation directory, which includes the PeopleSoft PeopleTools server utilities.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
deploy_only=True
deploy_type=tools_home
db_platform=ORACLE
psft_base_dir="C:/psft"
db_is_unicode=False
```

Task 4-7-2: Reviewing the Response File Sample to Install PS_HOME Only as the Root User on Linux, AIX, or Solaris

Here is a sample response file for installing only the *PS_HOME* installation directory, which includes the PeopleSoft PeopleTools server utilities.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
deploy_only=True
deploy_type=tools_home
user_home_dir="/opt/home"
db_platform=ORACLE
psft_base_dir="/opt/oracle/psft"
db_is_unicode=False
```

Task 4-7-3: Reviewing the Response File Sample to Install PS_HOME Only as a Non-Root User on Linux, AIX, or Solaris

Here is a sample response file for installing only the *PS_HOME* installation directory, which includes the PeopleSoft PeopleTools server utilities.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=True
deploy_only=True
deploy_type=tools_home
user_config_home_dir="/opt/psftuser/pscfg_pt861_silent"
db_platform=ORACLE
psft_base_dir="/opt/oracle/psft"
db_is_unicode=False
```

Task 4-8: Reviewing the Response File Sample to Install PS_APP_HOME Only

This section discusses:

- Reviewing the Response File Sample to Install PS_APP_HOME Only on Microsoft Windows
- Reviewing the Response File Sample to Install PS_APP_HOME Only as the Root User on Linux, AIX, or Solaris
- Reviewing the Response File Sample to Install PS_APP_HOME Only as a Non-Root User on Linux, AIX, or Solaris

Task 4-8-1: Reviewing the Response File Sample to Install PS_APP_HOME Only on Microsoft Windows

Here is a sample response file for installing only the *PS_APP_HOME* installation directory, which includes the PeopleSoft application files.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=False
deploy_only=True
deploy_type=app_home
db_platform=ORACLE
psft_base_dir="C:/psft"
db_is_unicode=False
```

Task 4-8-2: Reviewing the Response File Sample to Install PS_APP_HOME Only as the Root User on Linux, AIX, or Solaris

Here is a sample response file for installing only the *PS_APP_HOME* installation directory, which includes the PeopleSoft application files.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=False
user_home_dir="/opt/home"
deploy_only=True
deploy_type=app_home
db_platform=ORACLE
psft_base_dir="/opt/oracle/psft"
db_is_unicode=False
```

Task 4-8-3: Reviewing the Response File Sample to Install PS_APP_HOME Only as a Non-Root User on Linux, AIX, or Solaris

Here is a sample response file for installing only the *PS_APP_HOME* installation directory, which includes the PeopleSoft application files.

Note. Review the requirements in Understanding Silent Mode Installation before preparing the response file.

```
env_type=midtier
install_type=FRESH
db_type=DEMO
db_is_ml=False
user_config_home_dir="/opt/psftuser/pscfg_pt861_silent"
```

```

deploy_only=True
deploy_type=app_home
db_platform=ORACLE
psft_base_dir="/opt/oracle/psft"
db_is_unicode=False

```

Task 4-9: Running the DPK Setup Script in Silent Mode for Default Initialization

This procedure assumes you have obtained the required DPK zip files and saved them in *DPK_INSTALL*.

Note. If you want to run as a non-root user on Linux, AIX, or Solaris, fulfill the requirements in the section Deploying as a Non-Root User on Linux, AIX, or Solaris. Before you run the silent mode installation, the root user must run the DPK setup prereq step.

Note. If you are installing on an AIX operating system, go to the next section to install with customizations. See Running the DPK Setup Script in Silent Mode with Customizations.

1. Prepare the response file, using the examples in this section.
2. Extract the first zip file (*FILENAME_1ofn.zip*).

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* folder and other files.

3. Open a command prompt with Run as Administrator.
4. Change directory to *DPK_INSTALL/setup*.
5. Run the script and supply the full path and filename for the response file.

On Microsoft Windows:

```
psft-dpk-setup.bat --silent --response_file=<full_path/filename.txt>
```

On Linux, AIX, or Solaris:

```
./psft-dpk-setup.sh --silent --response_file=<full_path/filename.txt>
```

6. Wait until the installation is complete.

The script displays progress messages. The complete setup log is written to the file *psft_dpk_setup.log* in the same location as the DPK setup script.

Task 4-10: Running the DPK Setup Script in Silent Mode with Customizations

This procedure assumes you have obtained the required DPK zip files and saved them in *DPK_INSTALL*.

Note. If you want to run as a non-root user on Linux, AIX, or Solaris, fulfill the requirements in the section *Deploying as a Non-Root User on Linux, AIX, or Solaris*. Before you run the silent mode installation, the root user must run the DPK setup prereq step.

Note. If you are installing on an AIX operating system, you must use customizations. See *Understanding Silent Mode Installation*.

Note. Remember to enter passwords in clear text in the response file and the `psft_customizations.yaml` file.

1. Prepare the response text file, using the examples in this section.
 2. Prepare the customization YAML file, using the instructions in this documentation.
-

Note. You can name the file whatever you like. For the silent mode installation, it is not necessary to use the name `psft_customizations.yaml`.

See "Completing the DPK Initialization with Customizations."

3. Extract the first zip file (*FILENAME_1ofn.zip*).
-

Note. It is a good idea to extract into the same directory where you downloaded the zip files, *DPK_INSTALL*.

It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

The extraction creates the *DPK_INSTALL/setup* folder and other files.

4. Open a command prompt with Run as Administrator.
5. Change directory to *DPK_INSTALL/setup*.
6. Run the script, supplying the full path and filename for both the response file and the customization file.

On Microsoft Windows:

```
psft-dpk-setup.bat --silent --response_file=<full_path/filename.txt>
--customization_file=<full_path/custfilename.yaml>
```

On Linux, AIX, or Solaris:

```
./psft-dpk-setup.sh --silent --response_file=<full_path/filename.txt>
--customization_file=<full_path/custfilename.yaml>
```

7. Wait until the installation is complete.

The script displays progress messages. The complete setup log is written to the file `psft_dpk_setup.log` in the same location as the DPK setup script.

Chapter 5

Completing the DPK Initialization with Customizations

This chapter discusses:

- Understanding PeopleSoft Environment Customizations
- Preparing Customization Files for Linux, AIX, or Solaris Users and Groups
- Preparing the Customization File for PeopleSoft Domain Definitions
- Preparing the Customization File to Create PeopleSoft Domains Without Configuration
- Preparing the Customization File for JDK on AIX
- Preparing the Customization File for Component Software Locations
- Preparing the Customization File for Unicode
- Preparing the Customization Files for the PeopleSoft Homes
- Preparing the Customization File to Exclude Oracle Database Client Installation
- Preparing the Customization File for Jolt SSL and WSL SSL Ports
- Preparing the Customization File for sysctl and ulimit Parameters on Linux, AIX, or Solaris
- Completing the Customized Deployment

Understanding PeopleSoft Environment Customizations

The PeopleSoft DPK setup script allows setup of a PeopleSoft environment quickly using the default data from the packaged Hiera YAML files. This section gives examples of ways to use the YAML files for customization.

Always use the documented procedures to make changes to your environment. Doing so will allow you to retain your customizations when removing a deployment before deploying a new patch or version.

Note. You can use the customizations in this chapter whether you use the DPK script interactively or in silent mode. This list notes a few places where using the DPK customization is different for interactive or silent mode.

Use these guidelines when customizing your environment:

- (Interactive mode) Do not change any of the original delivered YAML files.

This practice enables you to retain your customizations after deploying a new patch or update.

When you deploy the PeopleSoft DPKs, the YAML files associated with the deployment are installed in the following location. Use these files as the basis for the `psft_customizations.yaml` file.

- `BASE_DIR/dpk/puppet/production/data/defaults.yaml`
- `BASE_DIR/dpk/puppet/production/data/psft_configuration.yaml`
- `BASE_DIR/dpk/puppet/production/data/psft_deployment.yaml`

- `BASE_DIR/dpk/puppet/production/data/psft_unix_system.yaml`

- (Silent mode) Do not change any of the original delivered YAML files.

This practice enables you to retain your customizations after deploying a new patch or update.

Use the YAML files in the following location as the basis for the customizations file used in silent installation:

- `DPK_INSTALL/setup/puppet/production/data/defaults.yaml`
- `DPK_INSTALL/setup/puppet/production/data/psft_configuration.yaml`
- `DPK_INSTALL/setup/puppet/production/data/psft_deployment.yaml`
- `DPK_INSTALL/setup/puppet/production/data/psft_unix_system.yaml`

- (Interactive mode) Start with the DPK setup script and choose not to continue with the default initialization.

Answer *no* at the prompt "Do you want to continue with the default initialization process? [y|n]:" to exit the script and bypass the default initialization process.

To set up a customized PeopleSoft environment, use the DPK setup script for the first portion of the process, that is, to automate the tasks of extracting the DPK zip files, installing Puppet (if not installed), and copying the Puppet modules and Hiera data YAML files from the DPK into the location where Puppet looks for these files during the orchestration process. When you exit the script, it displays instructions on how to proceed to complete the initialization.

- Always use the customizations when installing on an AIX operating system.
- Always create a `psft_customizations.yaml` file to use for modified parameters.
 - Never modify the delivered YAML files. Instead, by copying the parameters that you want to modify into the `psft_customizations.yaml` file you are able to save the customization.
 - Copy only the section of the delivered YAML file that includes the parameters that you need to change, as directed by the samples in this documentation. Depending upon the specific type of customization, you may need to copy a single line, or an entire block of text, so be sure to check this documentation.
 - The DPK setup script processes the `psft_customizations.yaml` file before the generated YAML files, so that the values in `psft_customizations.yaml` override the values in `psft_configuration.yaml`, `psft_deployment.yaml`, and `psft_unix_system.yaml`.
 - (Interactive mode) Note that the file must be named "`psft_customizations.yaml`" for interactive mode deployment. Be sure to use the correct spelling.
 - (Silent mode) You can name the customization YAML file whatever you like for the silent mode installation.
- Verify the content of the delivered YAML files with each release.

The YAML files may have changed since this document was published. It is important that you copy the appropriate section of code from the YAML files you install with each new deployment, and use it as the basis for your `psft_customizations.yaml` file (or the silent mode customization YAML file).

- Do not create new parameters for `psft_customizations.yaml` (or the silent mode customization YAML file).

The deployment recognizes only those parameters in the delivered YAML files or given in the product documentation.

- Use a single `psft_customizations.yaml` file (or silent mode customization YAML file).

You can copy the necessary sections from more than one of the delivered YAML files and include them in a single `psft_customizations.yaml` file. Again, copy only those sections with the parameters you want to change.

- Use the same `psft_customizations.yaml` file (or silent mode customization YAML file) for all deployments on a given base folder.

This applies to a use case in which you carry out more than one deployment on the same `BASE_DIR`. For

example, you first install *PS_HOME* only, and use a *psft_customizations.yaml* file to specify a non-default *PS_HOME* location. Then you later do a second deployment, with the same *BASE_DIR*, to install mid-tier components, and you want to customize the location of Oracle WebLogic. In this case, use the first *psft_customizations.yaml* file, including the non-default *PS_HOME*, append the customization for the Oracle WebLogic location, and use it for the second deployment.

- Include the `remove: false` attribute to retain your customizations through the clean-up process.

To ensure that your customizations are not removed when removing a deployed environment:

- For each segment of customization parameters in the *psft_customizations.yaml* file (or silent mode customization YAML file), include the `remove: false` attribute at the end of the segment.
- If you remove the environment manually (using the *psft_puppet_apply* script), set the `ensure` attribute to *absent* in *default.yaml*.

If you remove the environment using the `--cleanup` option for the PeopleSoft DPK setup script, you do not need to set the attribute first because it is part of the script process.

- Remove the environment using the `--cleanup` option for the PeopleSoft DPK setup script, as described in this documentation.

See "Installing the PeopleSoft Homes," Removing a Deployed PeopleSoft Environment.

- Copy an entire section containing the parameter to be modified, and be sure to retain the indentation from the delivered YAML file.

The hierarchy and alignment of the YAML files are very important to the correct operation. In addition to the brief overview given here, review the information in the appendix "Using the Puppet Hiera YAML Files for Customization."

- The YAML files include scalar type and collection type parameters.

Scalar parameters are of the form `key: value`; for example:

```
db_platform: ORACLE
```

Collection type parameters include a parameter name followed by one or more indented lists of `key: value` pairs. In this case, the value of the collection parameter is defined by the indented list of values; for example:

```
ps_home:
  db_type:      "%{hiera('db_platform')}}"
  unicode_db:  "%{hiera('unicode_db')}}"
  location:    "%{hiera('ps_home_location')}}"
```

- When you locate a parameter that you want to modify, be sure to locate the section heading that begins at the first column of the YAML file. This ensures that the deployment operation modifies the correct parameter.
- Be sure to retain the indentation from the delivered YAML file.

Typically there is an indentation of 2 or 3 spaces for each successive subsection. This is necessary in order for the parameters to be correctly interpreted.

Note. Be sure when copying and pasting that you retain the indentation. Depending upon the authoring or editing tools you use, the desired indentation may be lost when you copy and paste. It is a good idea to double-check the final *psft_customizations.yaml* file (or silent mode customization YAML file), especially for the special cases where you copy a sample from this documentation.

- When copying and modifying collection type parameters, use only spaces, not tabs, to indent the subsections.
- (Interactive mode) Use the encrypted passwords from the generated YAML files.

The DPK setup script encrypts user-supplied passwords and includes them in the generated YAML files. If you copy a section of a YAML file with encrypted passwords, do not replace or remove the encrypted text.

The encrypted passwords are quite long. Be sure to copy the entire string, without adding spaces, tabs, or line feeds.

Note. For the majority of the customizations described in this documentation, you copy the encrypted passwords from the generated YAML files. If that is not possible, see the appendix "Encrypting Passwords for Customization Files."

- (Silent mode) Enter passwords in clear text.

When creating the `psft_customizations.yaml` file for silent mode installation, enter the passwords in clear text. Do not enter encrypted passwords.

- Replace the entire attribute string.

The parameters in the delivered YAML files are written with Hiera interpolation functions that act as variables. To modify each parameter, you must replace the entire string after the colon, and enclose your new value in double quotes. For example, in the `psft_deployment.yaml` file, the location for an Oracle WebLogic installation is given by the following parameters:

```
weblogic_location: "%{hiera('pt_location')}/bea"
weblogic:
  location: "%{hiera('weblogic_location')}"
```

The second Hiera function refers to the first. When `pt_location` is set as `C:/psft`, Oracle WebLogic will be installed in `C:/psft/bea`. To change this, remove both strings of text `"%{hiera('pt_location')}/bea"` and `"%{hiera('weblogic_location')}"`, and replace them with the full path to the new location. Retain the two-space indentation, and use a forward slash (/) for paths on both Microsoft Windows and Linux; for example:

On Microsoft Windows:

```
weblogic_location: "C:/psft/weblogic"
weblogic:
  location: "C:/psft/weblogic"
```

On Linux:

```
weblogic_location: "/opt/bea/weblogic"
weblogic:
  location: "/opt/bea/weblogic"
```

- Do not use the customizations to set up a non-Unicode environment if you are deploying the PeopleSoft Update Image DPKs for use with PeopleSoft Update Manager.

The environments for the PeopleSoft Update Images are required to be Unicode.

- Verify existing installations before beginning deployment.

You have the option to use existing installations, for example for Oracle WebLogic, but you have the responsibility to ensure that the installation is supported, complete, and correct. The deployment script does not verify whether an installation directory includes a valid, working installation.

See [Preparing the Customization File for Component Software Locations](#).

- Set the Puppet environment if necessary.

The process to complete the initialization using the customizations, as described in the section [Completing the Customized Deployment](#), runs the `psft_puppet_apply` script, which sets necessary environment variables and runs the `puppet apply` command. If you choose to use the `puppet apply` command directly rather than the script, you may get a message saying that "puppet" is not recognized. This message may indicate that

the Puppet software is not included in your system's path. In that case, you can use the commands given here to set the Puppet environment. You should also set the Puppet environment if you need to run `puppet apply` after the script execution has ended with an error.

Note. Oracle recommends that you use the delivered `psft_puppet_apply` script, not the `puppet apply` command.

You must also set the Puppet environment before you encrypt passwords to include in the `psft_customizations.yaml` file for a customized deployment on Linux, AIX, or Solaris.

See "Encrypting Passwords for Customization Files."

On Microsoft Windows, to set the Puppet environment, run this command

```
"BASE_DIR\psft_puppet_agent\bin\puppet_shell.bat"
```

To set the environment variables on Linux, AIX, or Solaris, use `pspuppet.sh` along with manual commands. The `pspuppet.sh` script is installed by the DPK setup script in `BASE_DIR/psft_puppet_agent`, and will set the Puppet PATH and LIBRARY environment variables. Source the script by entering the following command:

```
. BASE_DIR/psft_puppet_agent/pspuppet.sh
```

The dot, or period (".") at the beginning of the command is a source operator that ensures that the script commands persist in the shell environment that you are deploying from. After sourcing the script, continue with the deployment by running the `puppet apply` command.

On Linux, AIX, or Solaris, first specify the following environment variables:

```
export PUPPET_DIR=BASE_DIR/psft_puppet_agent
export PUPPET_BIN=${PUPPET_DIR}/bin
export PUPPET_LIB=${PUPPET_DIR}/lib
```

Next, source `pspuppet.sh` to set the Puppet PATH and LIBRARY environment variables:

```
. BASE_DIR/psft_puppet_agent/pspuppet.sh
```

- Use only the predefined web profiles.

PeopleSoft PeopleTools includes four predefined web profiles — DEV, KIOSK, PROD, and TEST. In the delivered YAML file `psft_configuration.yaml`, the web profile is specified by the scalar parameter `pia_webprofile_name: PROD`. If you want to specify a different value using `psft_customizations.yaml`, be sure to use one of the four predefined values.

See *PeopleTools: Portal Technology*, "Configuring Web Profiles."

- When using the customizations for a PeopleSoft web server domain, do not use the names PIA, PIA1, PIA2, or weblogic for the domain name.

The name of the WebLogic domain and the server and cluster names within it must be unique. The names PIA, PIA1, and PIA2 are reserved for use by the PeopleSoft system. The name weblogic is reserved for use by the Oracle WebLogic software. These restrictions apply to single server and multi-server domain creation.

See *Preparing the Customization File for PeopleSoft Domain Definitions*.

See *PeopleTools: System and Server Administration*, "WebLogic Domain Types."

- To specify a non-default location for the Process Scheduler Report Repository, you must create the Report Repository directory before you begin the DPK installation.

The Report Repository is the designated server for reports that are generated from the PeopleSoft Process Scheduler Server. In the delivered YAML file `psft_configuration.yaml`, the Report Repository location is defined as a subdirectory of `PS_CFG_HOME`, as specified by this scalar parameter:

```
report_repository_dir: "%{hiera('ps_config_home')}/psreports"
```

To define a different location, create the directory first. Use the `report_repository_dir` parameter with the customized location in the `psft_customizations.yaml` file.

See *PeopleTools: Process Scheduler*, "PeopleSoft Process Scheduler Architecture."

See the task Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository in the PeopleSoft 9.2 Application Installation guide for your database platform.

See Oracle's PeopleSoft PeopleTools 8.61 Home Page, Installation and Upgrade, My Oracle Support, Doc ID 2978466.2.

Task 5-1: Preparing Customization Files for Linux, AIX, or Solaris Users and Groups

This section discusses:

- Requirements for Users and Groups Customizations
- Preparing the Customization File for a New Single User and Single Group (New or Existing)
- Preparing the Customization File for an Existing Single User and Single Group (New or Existing)
- Preparing the Customization File for a New Single User, New Primary Group, and New Secondary Group
- Preparing the Customization File for a New Single User, New Primary Group, and Existing Secondary Group
- Preparing the Customization File for Existing Users and Groups

Requirements for Users and Groups Customizations

Ensure that you fulfill these requirements.

- *Root user deployment*

The customizations for Linux, AIX, or Solaris users and group are supported only when the root user performs the entire deployment. The root user can prepare the environment for a non-root user with the customizations in this section.

It is not necessary for the root user to run the DPK setup script with the `--prereq` option. Run the DPK setup script with the `--postcfg` option to complete the Oracle Database Client setup.

- *Oinstall group*

Customizations for a single group require that the user belong to the oinstall group, and it must be included in the `psft_customizations.yaml` file. This applies for both new and existing oinstall groups. If the oinstall group exists, the DPK setup script will skip it. If it does not exist, the DPK setup script will create it.

Customizations for more than one group require that the oinstall group be either the primary or secondary group.

- *Access to Oracle central inventory location*

The DPK setup script creates an Oracle central inventory location for a root deployment. The root user must manually add access to the central inventory location for the single user specified in these customizations, and the user should have oinstall as the primary group.

See "Preparing for the Installation," Reviewing the Central Inventory File Location and Permissions on Linux or AIX

- *Encrypted passwords*

To use an encrypted password with one of the customization files in this section, note that the successful use of the encrypted password depends on the presence of the public and private keys in the *BASE_DIR*/dpk/puppet directory referred to in the eyaml encrypt command. You cannot save an encrypted password and use it with an installation with a different *BASE_DIR*.

Note. Encrypted passwords are needed only for interactive mode deployments, and only for new users.

- *LDAP users*

If you want to set up your environment to use existing LDAP or existing users and groups on Linux, AIX, or Solaris, you must meet these requirements: 1) The user home directory should have read/write/execute permission for the root user. 2) The user default shell should be Bash.

Task 5-1-1: Preparing the Customization File for a New Single User and Single Group (New or Existing)

This user customization applies to Linux, AIX, or Solaris OS platforms only. If you choose the default initialization when running the DPK setup script, the Puppet framework creates default local users and default groups, which are listed in the generated psft_unix_system.yaml file. Use the sample customization file in this section if you do not want to use the default users and groups, and instead want to set up your environment with different single user and single group for the whole PeopleSoft environment. This customization will create a new single user that belongs to the oinstall group.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations and Requirements for Users and Groups Customizations before preparing the customization file.

Note. After completing the initialization, the system will prompt you to provide a new password for the new single user the first time you log in.

This customization will create a single user that belongs to the oinstall group. You must specify values for two parameters that are not included in the generated psft_unix_system.yaml file, psft_user and psft_group.

- **groups/psft_group**
 - Use the groups/psft_group collection parameter for a new or existing group. The DPK process will create the group. If there is an existing group with the same name, the script will skip it.
 - Specify the same value, for groups/psft_group/name and for users/psft_user/gid.
Use a group name (string), not a GID (number), for both the name in the group collection parameter, and the gid in the users collection parameter.
 - You must specify oinstall as the group name and gid.
This requirement applies whether the oinstall group exists, or you want to create a new group. In both cases, the name must be oinstall.
 - Note that you must use the parameters exactly as given in this documentation. If you try to create a different parameter name or alter the parameter, the DPK process will not recognize it.
- **users/psft_user**
 - Use the users/psft_user collection parameter to create a new user and add that user to the group specified by groups/psft_group.
 - This group is the primary group for the new user.
 - Specify the same value for users/psft_user/name and for the scalar parameter psft_runtime_user_name.
 - The single user has all the roles and permissions that the default users would have.

See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.

- For interactive mode, supply an encrypted password for the new user.
- For silent mode, supply a clear-text password for the new user.
- `users/psft_user/home_dir`

When you run the DPK setup script, it includes a prompt for the users' home directory. That value is included in the generated `psft_unix_system.yaml` file. You can accept that same value in this customization file for `users/psft_user/home_dir`, or you can change it here. If you change it, the DPK process will create the new home directory. Enter the full path to a writable directory.

To prepare the customization file:

1. Create a `psft_customizations.yaml` using a standard editing tool, such as `vi` on Linux, and save it in the same location as the `psft_unix_system.yaml` file.

By default, the DPK setup script installs the YAML files in `BASE_DIR/dpk/puppet/production/data`.

2. Use the sample below in creating the `psft_customizations.yaml` file, and modify the values as needed.

Note. Be sure that your final `psft_customizations.yaml` file includes the indentation shown here. The indentation may be lost if you copy from this documentation and paste into the file.

In this example, the new single user `newuser1` will be created and assigned to the primary group `oinstall`.

```
---
groups:
  psft_group:
    name: oinstall
    remove: false

psft_runtime_user_name: newuser1

users:
  psft_user:
    name: newuser1
    gid: oinstall
    home_dir: /dpk_base/home/userhome
    password: ENC[PKCS7,MIIBeQYJKoZIhvcNA.....]
    remove: false
```

Important! Verify that you fulfill the following requirements:

- Ensure that the file begins with three dashes (- - -).
 - (Interactive mode) For a new user, replace the password sample above with an encrypted password.
Enter the encrypted password on a single line. Do not include spaces or line feeds. See the instructions later in this documentation to generate the encrypted password.
See "Encrypting Passwords for Customization Files."
 - (Silent mode) For a new user, replace the password sample above with a clear text password.
3. Save the file.
 4. Continue with the steps in Completing the Customized Deployment.

Task 5-1-2: Preparing the Customization File for an Existing Single User and Single Group (New or Existing)

This user customization applies to Linux, AIX, or Solaris OS platforms only. If you choose the default initialization when running the DPK setup script, the Puppet framework creates default local users and default groups, which are listed in the generated `psft_unix_system.yaml` file. Use the sample customization file in this section if you do not want to use the default users and groups, and instead want to set up your environment with a different single user and single group for the whole PeopleSoft environment.

This customization uses an existing single user that belongs to the `oinstall` group.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations and Requirements for Users and Groups Customizations before preparing the customization file.

Note. After completing the initialization, the system will prompt you to provide a new password the first time you log in.

To use the customization for an existing single user, do not enter a password in the `psft_customizations.yaml` file.

This customization is for an existing single user that belongs to the `oinstall` group. You must specify values for two parameters that are not included in the generated `psft_unix_system.yaml` file, `psft_user` and `psft_group`.

- `groups/psft_group`
 - Use the `groups/psft_group` collection parameter for a new or existing group. The DPK process will create the group. If there is an existing group with the same name, the script will skip it.
 - Specify the same value, for `groups/psft_group/name` and for `users/psft_user/gid`.
Use a group name (string), not a GID (number), for both the name in the group collection parameter, and the gid in the users collection parameter.
 - You must specify `oinstall` as the group name and gid.
This requirement applies whether the `oinstall` group exists, or you want to create a new group. In both cases, the name must be `oinstall`.
 - Note that you must use the parameters exactly as given in this documentation. If you try to create a different parameter name or alter the parameter, the DPK process will not recognize it.
- `users/psft_user`
 - Use the `users/psft_user` collection parameter to supply the existing user name and add that user to the group specified by `groups/psft_group`.
 - This group is the primary group for the new user.
 - Specify the same value for `users/psft_user/name` and for the scalar parameter `psft_runtime_user_name`.
 - The single user has all the roles and permissions that the default users would have.
See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.
 - Do not supply the password for an existing single user in the `psft_customizations.yaml` file.
- `users/psft_user/home_dir`

When you run the DPK setup script, it includes a prompt for the users' home directory. That value is included in the generated `psft_unix_system.yaml` file. You can accept that same value in this customization file for `users/psft_user/home_dir`, or you can change it here. If you change it, the DPK process will create the new home directory. Enter the full path to a writable directory.

To prepare the customization file:

1. Create a `psft_customizations.yaml` using a standard editing tool, such as `vi` on Linux, and save it in the same location as the `psft_unix_system.yaml` file.
By default, the DPK setup script installs the YAML files in `BASE_DIR/dpk/puppet/production/data`.
2. Use the sample below in creating the `psft_customizations.yaml` file, and modify the values as needed.

Note. Be sure that your final `psft_customizations.yaml` file includes the indentation shown here. The indentation may be lost if you copy from this documentation and paste into the file.

In this example, the existing single user `user2` will be created and assigned to the primary group `oinstall`.

```
---
groups:
  psft_group:
    name: oinstall
    remove: false

psft_runtime_user_name: user2

users:
  psft_user:
    name: user2
    gid: oinstall
    home_dir: /dpk_base/home/userhome
    remove: false
```

Important! Verify that you fulfill the following requirements:

- Ensure that the file begins with three dashes (- - -).
 - Do not enter a password for the existing user.
 - The group name must be `oinstall`.
3. Save the file.
 4. Continue with the steps in Completing the Customized Deployment.

Task 5-1-3: Preparing the Customization File for a New Single User, New Primary Group, and New Secondary Group

This user customization applies to Linux, AIX, and Solaris OS platforms only. If you choose the default initialization when running the DPK setup script, the Puppet framework creates local users and default groups, which are contained in the generated `psft_unix_system.yaml` file. Use the sample customization file in this section if you do not want to use the default users and groups, and instead want to set up your environment with a new single user assigned to two groups.

See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.

Note. After completing the initialization, the system will prompt you to provide a new password for the new user, the first time you log in.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations and Requirements for Users and Groups Customizations before preparing the customization file.

This customization will create a new single user and a new group, the primary group. The new user is also assigned to a new secondary group. Either the primary group or the secondary group must be named `oinstall`.

You must specify values for two parameters that are not included in the generated `psft_unix_system.yaml` file, `psft_user` and `psft_group`.

- `groups/psft_group`
 - Use the `groups/psft_group` collection parameter only if you want to create a new group for a single user. The DPK process will create the group. If there is an existing group with the same name, the script will skip it.
 - Specify the same value for `groups/psft_group/name` and for `users/psft_user/gid`.
Use a group name (string), not a GID (number), for both the name in the group collection parameter, and the gid in the users collection parameter.
 - Note that you must use the parameters exactly as given in this documentation. If you try to create a different parameter name or alter the parameter, the DPK process will not recognize it.
- `users/psft_user`
 - Use the `users/psft_user` collection parameter to create a new user and add that user to the new group specified by `groups/psft_group/name`.
 - Specify the same value for `users/psft_user/name` and for the scalar parameter `psft_runtime_user_name`.
 - The new group specified by `users/psft_user/gid` and `groups/psft_group/name` is the primary group for the new user.
 - The new group specified by `users/psft_user/groups` is the secondary group for the new user.
 - Either the primary group or the secondary group must be named `oinstall`.
 - The single user has all the roles and permissions that the default users would have.
See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.
- `users/psft_user/home_dir`
When you run the DPK setup script, it includes a prompt for the users' home directory. That value is included in the generated `psft_unix_system.yaml` file. You can accept that same value in this customization file for `users/psft_user/home_dir`, or you can change it here. If you change it, the DPK process will create the new home directory. Enter the full path to a writable directory.

To prepare the customization file:

1. Create a `psft_customizations.yaml` using a standard editing tool, such as `vi` on Linux, and save it in the same location as the `psft_unix_system.yaml` file.
By default, the DPK setup script installs the YAML files in `BASE_DIR/dpk/puppet/production/data`.
2. Use the sample below in creating the `psft_customizations.yaml` file, and modify the values as needed.

Note. Be sure that your final `psft_customizations.yaml` file includes the indentation shown here. The indentation may be lost if you copy from this documentation and paste into the file.

In this example, the new single user `newuser3` will be created and assigned to the newly created primary group `primgrp` and the new secondary group `oinstall`.

```
---
groups:
  psft_group:
    name: primgrp
    remove: false
```

```

psft_runtime_user_name: newuser3

users:
  psft_user:
    name: newuser3
    gid: primgrp
    groups: oinstall
    home_dir: /dpk_base/home/userhome
    password: ENC[PKCS7,MIIBeQYJKoZIhvcNA.....]
    remove: false

```

In this example, the new single user *newuser4* will be created and assigned to the newly created primary group *oinstall* and the new secondary group *secgrp*.

```

---
groups:
  psft_group:
    name: oinstall
    remove: false

psft_runtime_user_name: newuser4

users:
  psft_user:
    name: newuser4
    gid: oinstall
    groups: secgrp
    home_dir: /dpk_base/home/userhome
    password: ENC[PKCS7,MIIBeQYJKoZIhvcNA.....]
    remove: false

```

Important! Verify that you fulfill the following requirements:

- Ensure that the file begins with three dashes (- - -).
- (Interactive mode) Replace the password sample above with an encrypted password.
Enter the encrypted password on a single line. Do not include spaces or line feeds. See the instructions later in this documentation to generate the encrypted password.
See "Encrypting Passwords for Customization Files."
- (Silent mode) Replace the password sample above with a clear text password.

3. Save the file.
4. Continue with the steps in Completing the Customized Deployment.

Task 5-1-4: Preparing the Customization File for a New Single User, New Primary Group, and Existing Secondary Group

This user customization applies to Linux, AIX, and Solaris OS platforms only. If you choose the default initialization when running the DPK setup script, the Puppet framework creates local users and default groups, which are contained in the generated `psft_unix_system.yaml` file. Use the sample customization file in this section if you do not want to use the default users and groups, and instead want to set up your environment with a new single user assigned to two groups.

See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.

Note. After completing the initialization, the system will prompt you to provide a new password for the new user, the first time you log in.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations and Requirements for Users and Groups Customizations before preparing the customization file.

This customization will create a new single user and a new group, the primary group. The new user is also assigned to an existing, secondary group. Either the primary group or the secondary group must be named oinstall.

You must specify values for two parameters that are not included in the generated `psft_unix_system.yaml` file, `psft_user` and `psft_group`.

- `groups/psft_group`
 - Use the `groups/psft_group` collection parameter only if you want to create a new group for a single user. The DPK process will create the group. If there is an existing group with the same name, the script will skip it.
 - Specify the same value for `groups/psft_group/name` and for `users/psft_user/gid`.
Use a group name (string), not a GID (number), for both the name in the group collection parameter, and the gid in the users collection parameter.
 - Note that you must use the parameters exactly as given in this documentation. If you try to create a different parameter name or alter the parameter, the DPK process will not recognize it.
- `users/psft_user`
 - Use the `users/psft_user` collection parameter to create a new user and add that user to the new group specified by `groups/psft_group/name`.
 - Specify the same value for `users/psft_user/name` and for the scalar parameter `psft_runtime_user_name`.
 - The new group specified by `users/psft_user/gid` and `groups/psft_group/name` is the primary group for the new user.
 - The existing group specified by `users/psft_user/groups` is the secondary group for the new user.
 - Either the primary group or the secondary group must be named oinstall.
 - The single user has all the roles and permissions that the default users would have.
See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.
- `users/psft_user/home_dir`

When you run the DPK setup script, it includes a prompt for the users' home directory. That value is included in the generated `psft_unix_system.yaml` file. You can accept that same value in this customization file for `users/psft_user/home_dir`, or you can change it here. If you change it, the DPK process will create the new home directory. Enter the full path to a writable directory.

To prepare the customization file:

1. Create a `psft_customizations.yaml` using a standard editing tool, such as vi on Linux, and save it in the same location as the `psft_unix_system.yaml` file.
By default, the DPK setup script installs the YAML files in `BASE_DIR/dpk/puppet/production/data`.
2. Use the sample below in creating the `psft_customizations.yaml` file, and modify the values as needed.

Note. Be sure that your final `psft_customizations.yaml` file includes the indentation shown here. The indentation may be lost if you copy from this documentation and paste into the file.

In this example, the new single user *newuser5* will be created and assigned to the newly created primary group *primgrp* and the existing secondary group *oinstall*.

```
---
groups:
  psft_group:
    name: primgrp
    remove: false

psft_runtime_user_name: newuser5

users:
  psft_user:
    name: newuser5
    gid: primgrp
    groups: oinstall
    home_dir: /dpk_base/home/userhome
    password: ENC[PKCS7,MIIBeQYJKoZIhvcNA.....]
    remove: false
```

In this example, the new single user *newuser6* will be created and assigned to the newly created primary group *oinstall* and the existing secondary group *secgrp*.

```
---
groups:
  psft_group:
    name: oinstall
    remove: false

psft_runtime_user_name: newuser6

users:
  psft_user:
    name: newuser6
    gid: oinstall
    groups: secgrp
    home_dir: /dpk_base/home/userhome
    password: ENC[PKCS7,MIIBeQYJKoZIhvcNA.....]
    remove: false
```

Important! Verify that you fulfill the following requirements:

- Ensure that the file begins with three dashes (- - -).
- (Interactive mode) Replace the password sample above with an encrypted password.
Enter the encrypted password on a single line. Do not include spaces or line feeds. See the instructions later in this documentation to generate the encrypted password.
See "Encrypting Passwords for Customization Files."
- (Silent mode) Replace the password sample above with a clear text password.

3. Save the file.
4. Continue with the steps in Completing the Customized Deployment.

Task 5-1-5: Preparing the Customization File for Existing Users and Groups

This user customization applies to Linux, AIX, and Solaris OS platforms only. If you choose the default initialization, the Puppet framework creates default local users and groups. However, your security policies may prohibit creating these OS users. In such a scenario, you can override these default users using the customizations file. The customizations file can refer to one or more existing users or existing groups and Puppet will use them instead of the default users.

See "Completing the Installation," Using the PeopleSoft Installation, for a list of the default users and permissions.

Note. After completing the initialization, the system will prompt you to provide a new password for the existing user, the first time you log in.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

Ensure you fulfill these requirements:

- The users, groups, and GIDs that you specify in the `psft_customizations.yaml` file are present before you begin the installation.
- The user who installs the Oracle Database software must belong to the `oinstall` group (primary or secondary).
- Do not include a password in `psft_customizations.yaml`.

The customizations file does not specify new passwords, because it is assumed that the passwords associated with the existing users will be used.

- When you run the DPK setup script, you must specify a user home directory in which the existing user resides.
1. Locate the `psft_unix_system.yaml` file, which includes default users and groups.

By default, the DPK setup script installs the YAML files in `BASE_DIR/dpk/puppet/production/data`.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as `vi` on Linux, and save it in the same location as the `psft_unix_system.yaml` file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line. Do not indent the dashes.

3. Copy the entire section for the users and groups from the `psft_unix_system.yaml` file into the `psft_customizations.yaml` file and modify the values as needed.

Note. Be sure that your final `psft_customizations.yaml` file includes the indentation from the generated YAML file. The indentation may be lost when you copy and paste.

Note. In this example, the user `oraclex3` belongs to the primary group `orainstgrp` and the secondary group `oinstall`.

For example:

```
---
psft_install_user_name:      psadm5
psft_runtime_user_name:     psadm6
psft_app_install_user_name: psadm7
oracle_user_name:           oraclex3

psft_runtime_group_name:     psftrungrp
psft_app_install_group_name: psftappgrp
oracle_install_group_name:   orainstgrp
oracle_runtime_group_name:   orarungrp

user_home_dir:  /data1/home
users:
  tools_install_user:
    name:      "%{hiera('psft_install_user_name')}}"
    gid:       orainstgrp
    groups:    "%{hiera('psft_runtime_group_name')}}"
    home_dir:  "%{hiera('user_home_dir')}/%{hiera('psft_install_user_⇒
name')}"

  psft_runtime_user:
    name:      "%{hiera('psft_runtime_user_name')}}"
    gid:       orainstgrp
    home_dir:  "%{hiera('user_home_dir')}/%{hiera('psft_runtime_user_⇒
name')}"

  app_install_user:
    name:      "%{hiera('psft_app_install_user_name')}}"
    gid:       psftappgrp
    home_dir:  "%{hiera('user_home_dir')}/%{hiera('psft_app_install_user_⇒
name')}"

  oracle_user:
    name:      "%{hiera('oracle_user_name')}}"
    gid:       orainstgrp
    groups:    oinstall
    home_dir:  "%{hiera('user_home_dir')}/%{hiera('oracle_user_name')}}"

  es_user:
    name:      esuserx3
    gid:       users
```

```
home_dir: /data1/home/esuserx3
```

The following table describes the parameters in the sample `psft_customizations.yaml` and the default values in `psft_unix_system.yaml`:

Attribute and Sample Value in <code>psft_customizations.yaml</code>	Default Value in <code>psft_unix_system.yaml</code>	Description
<code>psft_install_user ⇒ name: psadm5</code>	Replaces the default user <code>psadm1</code> .	This is the PeopleSoft PeopleTools installation administrator, who owns <i>PS_HOME</i> , but cannot write into <i>PS_CFG_HOME</i> .
<code>psft_runtime_user ⇒ name: psadm6</code>	Replaces the default user <code>psadm2</code> .	This is the PeopleSoft PeopleTools domain user who creates and configures the Application Server domain, Process Scheduler (batch server) domain, and the web server domain. This user cannot write to <i>PS_HOME</i> , but has read/execute access.
<code>psft_app_install_user ⇒ name: psadm7</code>	Replaces the default user <code>psadm3</code> .	This is the PeopleSoft application installation administrator who owns <i>PS_APP_HOME</i> .
<code>oracle_user_name: ⇒ oraclex3</code>	Replaces the default user <code>oracle2</code> .	This is the Oracle Database Server owner, who owns <i>ORACLE_HOME</i> .
<code>psft_runtime_group ⇒ name: psftrungrp</code>	Replaces the default group <code>psft</code> .	Note. Do not use the same name for the four group name parameters. Ensure that the names that you specify for these parameters in <code>psft_customizations.yaml</code> are different.
<code>psft_app_install ⇒ group_name: psftapp ⇒ grp</code>	Replaces the default group <code>appinst</code> .	This group is the primary group for the <code>app_install_user</code> . Note. Do not use the same name for the four group name parameters. Ensure that the names that you specify for these parameters in <code>psft_customizations.yaml</code> are different.

Attribute and Sample Value in psft_customizations.yaml	Default Value in psft_unix_system.yaml	Description
<pre>oracle_install_group ⇒ name: orainstgrp</pre>	Replaces the default group name oinstall.	This group is the primary group for the oracle_user, psft_runtime_user, and tools_install_user. Note. Do not use the same name for the four group name parameters. Ensure that the names that you specify for these parameters in psft_customizations.yaml are different.
<pre>oracle_runtime_group ⇒ name: orarungrp</pre>	Replaces the default group name dba.	Note. Do not use the same name for the four group name parameters. Ensure that the names that you specify for these parameters in psft_customizations.yaml are different.
<pre>users: tools_install_user: name: "%⇒ {hiera('psft_install_⇒ user_name')}%" gid: orainst⇒ grp groups: "%⇒ {hiera('psft_runtime_⇒ group_name')}%" home_dir: "%⇒ {hiera('user_home_⇒ dir')}"/%{hiera('psft_⇒ install_user_name')}%"</pre>	NA	- The name for the tools_install_user is the same as the psft_install_user_name, as specified by an interpolation function. - The orainstgrp is the primary group for the tools_install_user. - The tools_install_user must belong to the psft runtime group as a secondary group. To satisfy this requirement, the value for users/tools_install_user/groups is set to the interpolation function "%{hiera('psft_runtime_group_name')}".

- Save the file.
- Continue with the steps in Completing the Customized Deployment.

Task 5-2: Preparing the Customization File for PeopleSoft Domain Definitions

This section discusses:

- Preparing the psft_customizations.yaml File
- Reviewing the Domain Definitions in psft_configuration.yaml
- Reviewing the Customization File for a Single Application Server Domain

- Reviewing the Customization File for a Single Process Scheduler Domain
- Reviewing the Customization File for a Single PIA Domain
- Reviewing the Customization File for a PIA Domain on a Separate Host
- Reviewing the Customization File for Multiple Web Sites in a Single Web Domain
- Reviewing the Customization File for Multiple Domains

Task 5-2-1: Preparing the `psft_customizations.yaml` File

Use this information if you want to customize the PeopleSoft domains — the application server, Process Scheduler, and PIA domains. For example, you may want to create multiple Application Server domains rather than a single domain.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

Note. As mentioned, do not use the names PIA, PIA1, PIA2, or weblogic to create a PIA (web server) domain.

1. Locate the `psft_configuration.yaml` file, which was installed by the deployment, in `BASE_DIR/dpk/puppet/production/data`.
-

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or vi on Linux, AIX, or Solaris, and save it in the same location as the `psft_configuration.yaml` file.
If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Copy the sections that you want to customize from the `psft_configuration.yaml` file into the `psft_customizations.yaml` file and modify the values as needed.

Be sure to retain the indentation as given in the delivered YAML file.

The following sections in this task include sample `psft_customizations.yaml` files.

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-2-2: Reviewing the Domain Definitions in `psft_configuration.yaml`

To customize the PeopleSoft domains, you begin with the `psft_configuration.yaml` file, which lists the attributes pertinent to the PeopleSoft domains. Be sure to retain the indentation as given in the delivered YAML file when you copy the sections into the `psft_customizations.yaml` file.

Note. The `psft_configuration.yaml` file includes definitions for Automated Configuration Manager (ACM) plug-ins, which configure components such as Integration Broker and Report Distribution. Depending upon the PeopleSoft domain being set up, certain ACM configurations will run as part of the deployment.

This sample shows a portion of a `psft_configuration.yaml` file, with annotations added (marked by `###`) for the purposes of this explanation. The default application server name, APPDOM, is defined in the first portion of the file for the parameter `appserver_domain_name`, which is then referenced with an interpolation token `"#{hier('appserver_domain_name')}"` in the `appserver_domain_list` section.

The DPK setup script encrypts user-supplied passwords and includes them in the generated YAML files. The encrypted text will be a long single line of letters and numbers. Be sure to copy the text in one unbroken line, with no spaces or line feeds. This sample includes short strings of text beginning with "ENC" to represent encrypted passwords.

Note. Use clear text passwords for silent mode installation.

```

---
db_name:          FSDEMO
db_user:          VP1

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####
db_user_pwd:      ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]
db_connect_id:    people

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####
db_connect_pwd:   ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

domain_user:      "%{hiera('psft_runtime_user_name')}}"
ps_config_home:   "C:/Users/%{::env_username}/psft/pt/8.61"
appserver_template: small
appserver_domain_name: APPDOM
prcs_domain_name: PRCSDOM
prcs_domain_id:   "PRCS%{::rand}"
report_node_name: "%{hiera('prcs_domain_id')}}"
pia_domain_name:  peoplesoft
pia_site_name:    ps
pia_http_port:    8000
pia_https_port:   8443
jolt_port:        9033
wsl_port:         7000
db_port:          1521
gateway_node_name: QE_LOCAL
pia_gateway_user: administrator

#####
# Replace these password samples with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####
pia_gateway_user_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]
pia_gateway_keystore_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]
webserver_type:       weblogic
pia_webprofile_name:  PROD
pia_psserver_list:    "%{::fqdn}:%{hiera('jolt_port')}}"
report_repository_dir: "%{hiera('ps_config_home')}/psreports"

#####

```

```

# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file. #
#####
domain_conn_pwd:      ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

help_uri:              pt861pbh1
tns_dir:               "%{hiera('db_location')}}"
tns_admin_list:
  "%{hiera('db_name')}}" :
    db_host:            "%{::fqdn}"
    db_port:            "%{hiera('db_port')}}"
    db_protocol:        TCP
    db_service_name:    "%{hiera('db_name')}}"

mssql_server_list:
  "%{hiera('db_name')}}" :
    mss_server_name:    "%{::fqdn}"
    mss_odbc_name:      "ODBC Driver 17 for SQL Server"

db2_client:
  sqllib_location:    <SQLLIB_LOCATION>

run_preboot_config_setup: true
run_postboot_config_setup: true

#####
# Copy the entire section beginning here for #
# application server customization. #
#####

appserver_domain_list:
  "%{hiera('appserver_domain_name')}}" :
    os_user:            "%{hiera('domain_user')}}"
    ps_cfg_home_dir:    "%{hiera('ps_config_home')}}"
    template_type:      "%{hiera('appserver_template')}}"

db_settings:
  db_name:              "%{hiera('db_name')}}"
  db_type:              "%{hiera('db_platform')}}"
  db_opr_id:            "%{hiera('db_user')}}"
  db_opr_pwd:           "%{hiera('db_user_pwd')}}"
  db_connect_id:        "%{hiera('db_connect_id')}}"
  db_connect_pwd:       "%{hiera('db_connect_pwd')}}"

config_settings:
  Domain Settings/Domain ID:    "%{hiera('appserver_domain_name')}}"
  PSAPPSRV/Min Instances:       2
  PSAPPSRV/Max Instances:       2
  PSAPPSRV/Max Fetch Size:      15000
  Security/DomainConnectionPwd: "%{hiera('domain_conn_pwd')}}"
  JOLT Listener/Port:           "%{hiera('jolt_port')}}"
  JOLT Listener/Address:        0.0.0.0
  Workstation Listener/Port:    "%{hiera('wsl_port')}}"

```

```

feature_settings:
    PUBSUB:      "Yes"
    QUICKSRV:    "No"
    QUERYSRV:    "No"
    JOLT:        "Yes"
    JRAD:        "No"
    WSL:         "Yes"
    DBGSRV:      "No"
    RENSrv:      "No"
    MCF:         "No"
    PPM:         "Yes"
    PSPMSRV:     "Yes"
    ANALYTICSRV: "No"
    SERVER_EVENTS: "Yes"
    DOMAIN_GW:   "No"
#####
# End application server section.                                #
#####

#####
# Copy the entire section beginning here for                    #
# Process Scheduler customization.                                #
#####

prcs_domain_list:
    "%{hiera('prcs_domain_name')}":
        os_user:      "%{hiera('domain_user')}}"
        ps_cfg_home_dir: "%{hiera('ps_config_home')}}"

        db_settings:
            db_name:      "%{hiera('db_name')}}"
            db_type:      "%{hiera('db_platform')}}"
            db_opr_id:    "%{hiera('db_user')}}"
            db_opr_pwd:   "%{hiera('db_user_pwd')}}"
            db_connect_id: "%{hiera('db_connect_id')}}"
            db_connect_pwd: "%{hiera('db_connect_pwd')}}"

        config_settings:
            Process Scheduler/PrsServerName: "%{hiera('prcs_domain_id')}}"
            Security/DomainConnectionPwd:    "%{hiera('domain_conn_pwd')}}"

        feature_settings:
            MSTRSRV:      "Yes"
            APPENG:       "Yes"
#####
# End Process Scheduler section.                                #
#####

#####
# Copy the entire section beginning here for PIA customization.  #
#####

pia_domain_list:
    "%{hiera('pia_domain_name')}":

```

```

os_user:                "%{hiera('domain_user')}}"
ps_cfg_home_dir:        "%{hiera('ps_config_home')}}"
gateway_user:           "%{hiera('pia_gateway_user')}}"
gateway_user_pwd:       "%{hiera('pia_gateway_user_pwd')}}"
auth_token_domain:      "%{::domain}"
webserver_install_type: "%{hiera('webserver_install_type')}}"

webserver_settings:
  webserver_type:        "%{hiera('webserver_type')}}"
  webserver_home:        "%{hiera('weblogic_location')}}"
  webserver_admin_user:  system
  webserver_admin_user_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####

  webserver_admin_port:  "%{hiera('pia_http_port')}}"
  webserver_http_port:   "%{hiera('pia_http_port')}}"
  webserver_https_port:  "%{hiera('pia_https_port')}}"

site_list:
  "%{hiera('pia_site_name'))":
    appserver_connections: "%{hiera('pia_psserver_list')}}"
    domain_conn_pwd:       "%{hiera('domain_conn_pwd')}}"

  webprofile_settings:
    profile_name:          "%{hiera('pia_webprofile_name')}}"
    profile_user:          PTWEBSERVER
    profile_user_pwd:      ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####

    report_repository_dir: "%{hiera('report_repository_dir')}}"
#####
# End PIA section.                                          #
#####

#####
# Remaining text removed for brevity.                      #
#####

```

Task 5-2-3: Reviewing the Customization File for a Single Application Server Domain

This sample shows a `psft_customizations.yaml` file for a single application server domain with the domain name APPDOM1. Be sure to retain the indentation as given in the delivered `psft_configuration.yaml` file when you copy the sections into the `psft_customizations.yaml` file. This sample includes annotations (marked by `###`) for the purposes of this explanation.

If you want to create PeopleSoft domains in a non-default `PS_CFG_HOME` location, you must specify the desired value for the scalar parameter `ps_config_home` outside the `appserver_domain_list` section.

Note. Specify the same value for `ps_config_home` and for the `ps_cfg_home_dir` parameter in the `appserver_domain_list` section. They both must reference the same location.

See Preparing the Customization File for the PS_CFG_HOME Location.

This sample starts with scalar parameters for `appserver_domain_name` and `jolt_port`. Interpolation functions that reference these scalar parameters will also use the non-default values. This applies to the interpolation function in `psft_customizations.yaml` as well as those used by the ACM plug-ins in `psft_configuration.yaml`.

The `appserver_domain_name` scalar parameter replaces the default value, APPDOM, with APPDOM111. This sets the value for the domain name in the `appserver_domain_list` collection parameter to the non-default APPDOM111.

The `jolt_port` scalar parameter replaces the default port 9033 with 9077. This sets the value for Jolt Listener/Port to the non-default 9077.

```
---
### Custom port number and application server domain name ###
### in scalar parameters ###
appserver_domain_name: APPDOM111
jolt_port:              9077

appserver_domain_list:

### Application server domain name refers to scalar parameter ###
"%{hiera('appserver_domain_name')}":
  os_user:      "%{hiera('domain_user')}"
  template_type: "%{hiera('appserver_template')}"

### Do not change the ps_cfg_home_dir parameter. ###
ps_cfg_home_dir: "%{hiera('ps_config_home')}"

db_settings:
  db_name:      "%{hiera('db_name')}"
  db_type:      "%{hiera('db_platform')}"
  db_opr_id:    "%{hiera('db_user')}"
  db_opr_pwd:   "%{hiera('db_user_pwd')}"
  db_connect_id: "%{hiera('db_connect_id')}"
  db_connect_pwd: "%{hiera('db_connect_pwd')}"

config_settings:
```

```

Domain Settings/Domain ID:      IBUPG0
PSAPPSRV/Min Instances:        3
PSAPPSRV/Max Instances:        5
JOLT Listener/Port:            "%{hiera('jolt_port')}}"    ### Custom⇒
###
Workstation Listener/Port:      "%{hiera('wsl_port')}}"

feature_settings:
  PUBSUB:                      "Yes"
  QUICKSRV:                    "No"
  QUERYSRV:                    "No"
  JOLT:                        "Yes"
  JRAD:                        "No"
  WSL:                         "Yes"
  DBGSRV:                      "No"
  RENSrv:                      "No"
  MCF:                         "No"
  PPM:                         "Yes"
  PSPPMsRV:                    "Yes"
  ANALYTICSrv:                 "No"
  SERVER_EVENTS:               "Yes"
  DOMAIN_GW:                   "No"

```

Task 5-2-4: Reviewing the Customization File for a Single Process Scheduler Domain

This sample shows a `psft_customizations.yaml` file for a single Process Scheduler domain with the domain name `PRCSDOM1`. Be sure to retain the indentation as given in the delivered `psft_configuration.yaml` file when you copy the sections into the `psft_customizations.yaml` file. This sample includes annotations (marked by `###`) for the purposes of this explanation.

If you want to create PeopleSoft domains in a non-default `PS_CFG_HOME` location, you must specify the desired value for the scalar parameter `ps_config_home` outside the `prcs_domain_list` section.

Note. Specify the same value for `ps_config_home` and for the `ps_cfg_home_dir` parameter in the `appserver_domain_list` section. They both must reference the same location.

See [Preparing the Customization File for the PS_CFG_HOME Location](#).

This sample starts with a scalar parameter for `prcs_domain_name`. Interpolation functions that reference this scalar parameter will also use the non-default value. This applies to the interpolation functions in `psft_customizations.yaml` as well as those used by the ACM plug-ins in `psft_configuration.yaml`.

The `prcs_domain_name` scalar parameter replaces the default value, `PRCSDOM`, with `PRCSDOM1`. This sets the value for the domain name in the `prcs_domain_list` collection parameter to the non-default `PRCSDOM1`.

```

---
### Custom Process Scheduler domain name in scalar parameter ###
prcs_domain_name:      PRCSDOM1

prcs_domain_list:

  ### Process Scheduler domain name refers to scalar parameter ###
  "%{hiera('prcs_domain_name')}":

```

```

os_user:           "%{hiera('domain_user')}}"

### Do not change the ps_cfg_home_dir parameter. ###
ps_cfg_home_dir: "%{hiera('ps_config_home')}}"

db_settings:
  db_name:         "%{hiera('db_name')}}"
  db_type:         "%{hiera('db_platform')}}"
  db_opr_id:       "%{hiera('db_user')}}"
  db_opr_pwd:      "%{hiera('db_user_pwd')}}"
  db_connect_id:   "%{hiera('db_connect_id')}}"
  db_connect_pwd:  "%{hiera('db_connect_pwd')}}"

config_settings:
  Process Scheduler/PrcsServerName: "%{hiera('prcs_domain_id')}}"
  Security/DomainConnectionPwd:      "%{hiera('domain_conn_pwd')}}"

feature_settings:
  MSTRSRV:         "Yes"
  APPENG:          "Yes"

```

Task 5-2-5: Reviewing the Customization File for a Single PIA Domain

This sample shows a `psft_customizations.yaml` file for a single PIA domain with the domain name `PIAHR1`. Be sure to retain the indentation as given in the delivered `psft_configuration.yaml` file when you copy the sections into the `psft_customizations.yaml` file. This sample includes annotations (marked by `###`) for the purposes of this explanation.

Note. Do not use the reserved names `PIA`, `PIA1`, `PIA2`, or `weblogic` for the PIA (web server) domain.

If you want to create PeopleSoft domains in a non-default `PS_CFG_HOME` location, you must specify the desired value for the scalar parameter `ps_config_home` outside the `pia_domain_list` section.

Note. Specify the same value for `ps_config_home` and for the `ps_cfg_home_dir` parameter in the `appserver_domain_list` section. They both must reference the same location.

See [Preparing the Customization File for the PS_CFG_HOME Location](#).

This sample starts with scalar parameters for `pia_domain_name`, `pia_http_port`, and `pia_https_port`. Interpolation functions that reference these scalar parameters will also use the non-default values. This applies to the interpolation function in `psft_customizations.yaml` as well as those used by the ACM plug-ins in `psft_configuration.yaml`.

The `pia_domain_name` scalar parameter replaces the default value, `peoplesoft`, with `PIAHR1`. This sets the value for the domain name in the `pia_domain_list` collection parameter to the non-default `PIAHR1`.

The `pia_http_port` and `pia_https_port` scalar parameters replace the default port 8000 and 8443 with 8050 and 8943, respectively. This sets the values for `webserver_admin_port`, `webserver_http_port`, and `webserver_https_port` to the non-default values.

```

---
### Custom port numbers and PIA domain name in scalar parameters ###
pia_http_port: 8050
pia_https_port: 8943
pia_domain_name: PIAHR1

```



```

pia_domain_list:

## PIA domain name refers to scalar parameter ###
"%{hiera('pia_domain_name')}}":
  os_user:                "%{hiera('domain_user')}"

  ### Do not change the ps_cfg_home_dir parameter. ###
  ps_cfg_home_dir:        "%{hiera('ps_config_home')}"
  gateway_user:           "%{hiera('pia_gateway_user')}"
  gateway_user_pwd:       "%{hiera('pia_gateway_user_pwd')}"
  auth_token_domain:      ".%{::domain}"
  webserver_install_type: "%{hiera('webserver_install_type')}"

webserver_settings:
  webserver_type:          "%{hiera('webserver_type')}"
  webserver_home:          "%{hiera('weblogic_location')}"
  webserver_admin_user:    system
  webserver_admin_user_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]
  webserver_admin_port:    "%{hiera('pia_http_port')}"    ###Custom###
  webserver_http_port:     "%{hiera('pia_http_port')}"    ###Custom###
  webserver_https_port:    "%{hiera('pia_https_port')}"    ###Custom###

site_list:
  "%{hiera('pia_site_name')}}":
    appserver_connections: "%{hiera('pia_psserver_list')}"
    domain_conn_pwd:       "%{hiera('domain_conn_pwd')}"

    webprofile_settings:
      profile_name:        "%{hiera('pia_webprofile_name')}"
      profile_user:         PTWEBSEVER
      profile_user_pwd:     ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

    report_repository_dir: "%{hiera('report_repository_dir')}"

```

Task 5-2-6: Reviewing the Customization File for a PIA Domain on a Separate Host

If you want to set up an environment in which the PIA domain and web server are not on the same machine as the application server domain, you must use customizations to specify the machine where the application server is installed. This customization is required for the Integration Broker configuration. The sample includes annotations (marked by ###) for the purposes of this explanation.

1. Copy the entire `component_postboot_setup_list` collection type parameter section (comprised of several lines) from `psft_configuration.yaml` and paste it into `psft_customizations.yaml`.

Be sure to retain the indentation as given in the delivered YAML file when you copy the sections into the `psft_customizations.yaml` file, and when you modify them.

2. Locate the `env.ib_appserver_host` parameter.

This parameter sets the host for Integration Broker to the PIA host. The default value in the delivered `psft_configuration.yaml` file is the machine where the DPK setup script is run:

```
env.ib_appserver_host: "%{hiera('pia_host_name')}"
```

3. Change the value for `env.ib_appserver_host` to point to the host where the application server is set up, for example `ps_app_server1`.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Running the DPK Setup Script to Deploy a PIA Domain.

4. In the section `PTIBConfigureGatewayProperties`, change the value for `env.app_pia_same_host` to "N" to specify that the application server and web server are on different hosts.

5. Add the scalar parameters for `pia_http_port` and `pia_https_port` at the top of the file.

Interpolation functions that reference these scalar parameters will also use the non-default values. This applies to the interpolation function in `psft_customizations.yaml` as well as those used by the ACM plug-ins in `psft_customizations.yaml` and `psft_configuration.yaml`.

The `pia_http_port` and `pia_https_port` scalar parameters replace the default port 8000 and 8443 with 8050 and 8943, respectively. This sets the value for `env.gateway_port` and `env.gateway_ssl_port` to the non-default port values.

Note. Do not use the reserved names PIA, PIA1, PIA2, or weblogic for the PIA (web server) domain.

This sample shows a sample `psft_customizations.yaml` file, with annotations added (marked by `###`) for the purposes of this explanation.

```
---
### Custom port numbers in scalar parameters ###
pia_http_port: 8050
pia_https_port: 8943

component_postboot_setup_list:
  integration_broker:
    run_control_id:          intbroker
    os_user:                 "%{hiera('domain_user')}}"

    db_settings:
      db_name:               "%{hiera('db_name')}}"
      db_type:               "%{hiera('db_platform')}}"
      db_opr_id:             "%{hiera('db_user')}}"
      db_opr_pwd:            "%{hiera('db_user_pwd')}}"
      db_connect_id:         "%{hiera('db_connect_id')}}"
      db_connect_pwd:        "%{hiera('db_connect_pwd')}}"

  acm_plugin_list:
    PTIBActivateDomain:
      domain.activate_retry_count: 10
      domain.activate_wait_time:   10

### Ports refer to scalar parameters ###
PTIBConfigureGatewayNodes:
  env.gateway_host:          "%{hiera('pia_host_name')}}"
  env.gateway_port:          "%{hiera('pia_http_port')}}"
  env.gateway_ssl_port:      "%{hiera('pia_https_port')}}"
  env.use_ssl_gateway:       false
  env.default_local_node:    "%{hiera('gateway_node_name')}}"
  env.gateway_user:          "%{hiera('pia_gateway_user')}}"
  env.gateway_password:      "%{hiera('pia_gateway_user_⇒
pwd')}}"
```

```

    ### Custom application server name ###
env.ib_appserver_host: ps_app_server1
env.ib_jolt_port:      "%{hiera('jolt_port')}}"
env.ib_node_proxy_userid: "%{hiera('db_user')}}"
env.ib_node_proxy_password: "%{hiera('db_user_pwd')}}"
env.tools_release:      "%ToolsRelease"
env.ib_appserver_domain_password: "%{hiera('domain_conn_pwd')}}"
env.ib_set_as_default_node: true

PTIBConfigureGatewayProperties:
xxx] env.gateway_keystore_password: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx⇒

env.webserver_domain: "%{hiera('pia_domain_name')}}"

### Application server and web server on different hosts ###
env.app_pia_same_host: "N"

PTWebServerConfigUpdate:
env.domainname: "%{hiera('pia_domain_name')}}"
env.sitename:   "%{hiera('pia_site_name')}}"
env.piahome:    "%{hiera('ps_config_home')}}"
env.psserver:   ""
env.KeyStorePwd: ""

acm_plugin_order:
- PTIBActivateDomain
- PTIBConfigureGatewayNodes
- PTIBConfigureGatewayProperties
- PTWebServerConfigUpdate
```

Task 5-2-7: Reviewing the Customization File for Multiple Web Sites in a Single Web Domain

Use these guidelines to create the `psft_customizations.yaml` file for a single PIA (web server) domain with two or more web sites. Be sure to also fulfill the guidelines in the section [Preparing the psft_customizations.yaml File](#).

Be sure to retain the indentation as given in the delivered YAML file when you copy the sections into the `psft_customizations.yaml` file.

This sample shows the `psft_customizations.yaml` file for a single PIA domain, called `PIAHR2`, with two web sites, `hr92dev` and `hr92site`.

- Copy the scalar parameter `pia_site_name` from `psft_configuration.yaml` and change the value to the name for the first web site, `hr92dev` in this example.

This web site will be used for configuring the report node and Integration Broker.

- Copy the entire `pia_domain_list` collection type parameter (comprised of several lines) from `psft_configuration.yaml` and change the value `"%{hiera('pia_domain_name')}}"` to the desired name for the PIA domain, `PIAHR2` in this example.

Note. Do not use the reserved names PIA, PIA1, PIA2, or weblogic for the PIA (web server) domain.

- In the `pia_domain_list` collection type parameter, to add a second web site, copy the portion defining the web site, and paste it below the first, default, web site definition.

Copy and paste the web site portion for as many web sites as you need, and specify different names for the each site. The web site names in this example are hr92dev and hr92site. The name of the first web site that you use here is the same as the name you enter for `pia_site_name`.

- Replace the password sample here with encrypted text from the generated `psft_configuration.yaml` file.

Note. Use clear text passwords for silent mode installation.

- The parameters `webserver_admin_port`, `webserver_http_port`, and `webserver_https_port` are interpolation functions. To specify non-default port numbers for these parameters, include the scalar parameters that the interpolation functions are based on at the top of the file. This sample replaces the default values 8000 and 8443 for `pia_http_port` and `pia_https_port` with 50000. This ensures that interpolation functions that are based on `pia_http_port` and `pia_https_port` use the custom values.

Here is a sample `psft_customizations.yaml` file, with annotations added (marked by `###`) for the purposes of this explanation.

```
---
### Custom port numbers for first domain in scalar parameters ###
pia_http_port: 50000
pia_https_port: 50000

### First domain with custom name in scalar parameter ###
pia_domain_name: PIAHR2

### First site with custom name in scalar parameter ###
pia_site_name:          hr92dev

### First PIA domain refers to scalar parameter ###
pia_domain_list:
  "%{hiera('pia_domain_name')}":
    os_user:          "%{hiera('domain_user')}"
    ps_cfg_home_dir:  "%{hiera('ps_config_home')}"
    gateway_user:     "%{hiera('pia_gateway_user')}"
    gateway_user_pwd: "%{hiera('pia_gateway_user_pwd')}"
    auth_token_domain: "%{::domain}"
    webserver_install_type: "%{hiera('webserver_install_type')}"

    webserver_settings:
      webserver_type:          "%{hiera('webserver_type')}"
      webserver_home:          "%{hiera('weblogic_location')}"
      webserver_admin_user:     system
      webserver_admin_user_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]
      webserver_admin_port:     "%{hiera('pia_http_port')}"
      webserver_http_port:      "%{hiera('pia_http_port')}"
      webserver_https_port:     "%{hiera('pia_https_port')}"

    site_list:
      ### First web site with custom name ###
      "hr92dev":
        appserver_connections: "%{hiera('pia_psserver_list')}"
        domain_conn_pwd:       "%{hiera('domain_conn_pwd')}"

        webprofile_settings:
          profile_name:         "%{hiera('pia_webprofile_name')}"
```

```

    profile_user:          PTWEBSERVER
    profile_user_pwd:      ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxx]

    report_repository_dir: "%{hiera('report_repository_dir')}}"

### Second web site with custom name ###
"hr92site":
  appserver_connections: "%{hiera('pia_psserver_list')}}"
  domain_conn_pwd:       "%{hiera('domain_conn_pwd')}}"

  webprofile_settings:
    profile_name:         "%{hiera('pia_webprofile_name')}}"
    profile_user:         PTWEBSERVER
    profile_user_pwd:     ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxx]

    report_repository_dir: "%{hiera('report_repository_dir')}}"

```

Task 5-2-8: Reviewing the Customization File for Multiple Domains

For multiple domains, duplicate the entire domain section, again maintaining the indentation from the original `psft_configuration.yaml` file. This sample shows a `psft_customizations.yaml` file for two application server domains, two PIA domains, and two Process Scheduler domains, with annotations added for the purposes of this explanation. The annotations are labelled with letters referring to the text discussion, and by `###` characters, such as `###(A)###`.

Follow these guidelines in creating a `psft_customizations.yaml` file for customized PeopleSoft domains. The letters correspond to those in the code sample.

- (A) For more than one application server, include the `pia_psserver_list` entry at the top of the `psft_customizations.yaml` definitions. List the application server domains that are used by the PIA domains, using the format `<application_server_host>:<Jolt port>`. Separate the entries with a comma.
- (B) Include the scalar parameters for each domain at the top.

You can retain the default names for each domain, or change them.

This sample starts with several scalar parameters. Interpolation functions that reference these scalar parameters will also use the non-default values. This applies to the interpolation function in `psft_customizations.yaml` as well as those used by the ACM plug-ins in `psft_configuration.yaml`.

- (C) Copy the entire section for the domains that you want to customize.

Be sure to retain the indentation as given in the delivered YAML file when you copy the sections into the `psft_customizations.yaml` file.

In the delivered `psft_configuration.yaml` file, each section begins with a domain name that is defined as an interpolation token based on the scalar parameter. For example, under `appserver_domain_list`, the domain name is defined as `"%{hiera('appserver_domain_name')}}"`, which uses the scalar parameter `appserver_domain_name`. After you copy the sections into the `psft_customizations.yaml` file, in the first section, either duplicate the value of the scalar parameter, or retain the interpolation token to refer to it.

- (D) Specify unique names for each domain.
- (E) Specify unique, unused ports for each domain.

This sample starts with several scalar parameters for ports. Interpolation functions for the first application server domain, `APPD0M111`, which reference these scalar parameters, will use the same values. This applies to the interpolation functions in `psft_customizations.yaml` as well as those used by the ACM plug-ins in

psft_configuration.yaml.

For the second application server domain, APPDOM222, enter non-default port values for Jolt Listener/Port and Workstation Listener/Port directly.

To set Jolt Listener/Port and Workstation Listener/Port for the second domain, you must take into account the range of ports that will be used by the first domain. Derive the allowed ports using the Workstation and Jolt Max Handler values. The default Max Handler values are based on the application server template type. The default DPK deployment uses the small template. Refer to the PeopleTools documentation for the values.

See *PeopleTools: System and Server Administration*, "Setting Application Server Domain Parameters," Jolt Listener Options.

See *PeopleTools: System and Server Administration*, "Setting Application Server Domain Parameters," Workstation Listener Options.

For example, if the Workstation Listener/Port is set to 7001 for the first domain, APPDOM111, and the Workstation Max Handler is 3, set the Workstation Listener/Port for the second domain, APPDOM222, to 7004 (skip 3 numbers).

- (E) If specifying more than one PIA domain, ensure that the ports are not in use, and use different ports for HTTP and HTTPS for each domain.
- (F) If specifying more than one Process Scheduler domain, you must specify unique Process Scheduler server names.

In this sample, the first Process Scheduler server uses the default value, which is defined as an interpolation token. The first Process Scheduler server name is specified with a scalar parameter at the top, prcs_domain_name.

The second Process Scheduler server has a different name, PRCS222.

- (G) The Master Scheduler Server should be enabled for the first Process Scheduler domain (MSTRSRV: "Yes"), and disabled for subsequent Process Scheduler domains (MSTRSRV: "No").

See *PeopleTools: Process Scheduler*, "Understanding PeopleSoft Master Scheduler Server."

- (H) If specifying more than one PIA domain, you must specify different site names for each.

In this sample, the first PIA site name uses the default value, which is defined as an interpolation token. The second PIA site name has a different name, ps222.

```
---
pia_psserver_list:    "hostname.example.com:9033,hostname.example.com:9043"
### (A) ###

### (B) , (E) ###
appserver_domain_name: APPDOM111
prcs_domain_name:     PRCSDOM111                ### (F) ###
pia_domain_name:      PIA111
pia_site_name:        ps
pia_http_port: 8000
pia_https_port: 8443
jolt_port: 9033
wsl_port: 7000

appserver_domain_list:
  "%{hiera('appserver_domain_name')}":          ### (C) , (D) ###
    os_user: "%{hiera('domain_user')}"
    template_type: "%{hiera('appserver_template')}"
    ps_cfg_home_dir: "%{hiera('ps_config_home')}"
```

```

db_settings:
  db_name:          "%{hiera('db_name')}}"
  db_type:          "%{hiera('db_platform')}}"
  db_opr_id:        "%{hiera('db_user')}}"
  db_opr_pwd:       "%{hiera('db_user_pwd')}}"
  db_connect_id:    "%{hiera('db_connect_id')}}"
  db_connect_pwd:   "%{hiera('db_connect_pwd')}}"

config_settings:
  Domain Settings/Domain ID:    IBUPG0
  PSAPPSRV/Min Instances:       3
  PSAPPSRV/Max Instances:       5
  JOLT Listener/Port:           "%{hiera('jolt_port')}}"      ### (E) ###
  Workstation Listener/Port:    "%{hiera('wsl_port')}}"        ### (E) ###

feature_settings:
  PUBSUB:                "Yes"
  QUICKSRV:              "No"
  QUERYSRV:              "No"
  JOLT:                   "Yes"
  JRAD:                   "No"
  WSL:                    "Yes"
  DBGSRV:                "No"
  RENSrv:                 "No"
  MCF:                    "No"
  PPM:                    "Yes"
  PSPPMsRV:              "Yes"
  ANALYTICSrv:           "No"
  SERVER_EVENTS:         "Yes"
  DOMAIN_GW:             "No"

"APPD0M222":
  os_user:                "%{hiera('domain_user')}}"          ### (C), (D) ###
  template_type:          "%{hiera('appserver_template')}}"
  ps_cfg_home_dir:        "%{hiera('ps_config_home')}}"

db_settings:
  db_name:                "%{hiera('db_name')}}"
  db_type:                "%{hiera('db_platform')}}"
  db_opr_id:              "%{hiera('db_user')}}"
  db_opr_pwd:             "%{hiera('db_user_pwd')}}"
  db_connect_id:          "%{hiera('db_connect_id')}}"
  db_connect_pwd:         "%{hiera('db_connect_pwd')}}"

config_settings:
  Domain Settings/Domain ID:    IBUPG0
  PSAPPSRV/Min Instances:       3
  PSAPPSRV/Max Instances:       5
  JOLT Listener/Port:           9041                          ### (E) ###
  Workstation Listener/Port:    7004                          ### (E) ###

feature_settings:

```

```

PUBSUB:          "Yes"
QUICKSRV:        "No"
QUERYSRV:        "No"
JOLT:            "Yes"
JRAD:            "No"
WSL:             "Yes"
DBGSRV:          "No"
RENSRV:          "No"
MCF:             "No"
PPM:             "Yes"
PSPPSRV:         "Yes"
ANALYTICSRV:     "No"
SERVER_EVENTS:   "Yes"
DOMAIN_GW:       "No"

```

```

pia_domain_list:
  "%{hiera('pia_domain_name')}":          ### (C), (D) ###
  os_user:                                "%{hiera('domain_user')}}"
  ps_cfg_home_dir:                        "%{hiera('ps_config_home')}}"
  gateway_user:                           "%{hiera('pia_gateway_user')}}"
  gateway_user_pwd:                       "%{hiera('pia_gateway_user_pwd')}}"
  auth_token_domain:                      "%{::domain}"

  webserver_settings:
    webserver_type:                       "%{hiera('webserver_type')}}"
    webserver_home:                       "%{hiera('weblogic_location')}}"
    webserver_admin_user:                 system
    webserver_admin_user_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####

  webserver_admin_port:                   8000          ### (E) ###
  webserver_http_port:                    8000          ### (E) ###
  webserver_https_port:                   8443          ### (E) ###

site_list:
  "%{hiera('pia_site_name')}":          ### (H) ###
  appserver_connections: "%{hiera('pia_psserver_list')}}"
  domain_conn_pwd:       "%{hiera('domain_conn_pwd')}}"

  webprofile_settings:
    profile_name:         "%{hiera('pia_webprofile_name')}}"
    profile_user:          PTWEBSERVER
    profile_user_pwd:      ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####

```



```

report_repository_dir: "${hiera('report_repository_dir')}}"

"PIADOM222":                                     ### (C), (D) ###
  os_user:                                       "${hiera('domain_user')}}"
  ps_cfg_home_dir:                             "${hiera('ps_config_home')}}"
  gateway_user:                               "${hiera('pia_gateway_user')}}"
  gateway_user_pwd:                           "${hiera('pia_gateway_user_pwd')}}"
  auth_token_domain:                           ".%{::domain}"

  webserver_settings:
    webserver_type:                           "${hiera('webserver_type')}}"
    webserver_home:                           "${hiera('weblogic_location')}}"
    webserver_admin_user:                     system
    webserver_admin_user_pwd: ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####

    webserver_admin_port:                      8002                                     ### (E) ###
    webserver_http_port:                      8002                                     ### (E) ###
    webserver_https_port:                    8445                                     ### (E) ###

  site_list:
    "ps222":                                   ### (H) ###
      appserver_connections: "${hiera('pia_psserver_list')}}"
      domain_conn_pwd:       "${hiera('domain_conn_pwd')}}"

      webprofile_settings:
        profile_name:        "${hiera('pia_webprofile_name')}}"
        profile_user:        PTWEBSERVER
        profile_user_pwd:    ENC[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]

#####
# Replace this password sample with encrypted text from the #
# generated psft_configuration.yaml file.                  #
#####

    report_repository_dir: "${hiera('report_repository_dir')}}"

prcs_domain_list:
  "${hiera('prcs_domain_name')}":
    os_user:           "${hiera('domain_user')}}"
    ps_cfg_home_dir:   "${hiera('ps_config_home')}}"

  db_settings:
    db_name:           "${hiera('db_name')}}"
    db_type:           "${hiera('db_platform')}}"
    db_opr_id:         "${hiera('db_user')}}"
    db_opr_pwd:        "${hiera('db_user_pwd')}}"
    db_connect_id:     "${hiera('db_connect_id')}}"

```

```

    db_connect_pwd: "%{hiera('db_connect_pwd')}}"

config_settings:
  Process Scheduler/PrcsServerName: "%{hiera('prcs_domain_id')}}" ### (F) =>
###
  Security/DomainConnectionPwd:      "%{hiera('domain_conn_pwd')}}"

feature_settings:
  MSTRSRV:      "Yes"                      ### (G) ###
  APPENG:      "Yes"

"PRCSDOM222":
  os_user:      "%{hiera('domain_user')}}"
  ps_cfg_home_dir: "%{hiera('ps_config_home')}}"

db_settings:
  db_name:      "%{hiera('db_name')}}"
  db_type:      "%{hiera('db_platform')}}"
  db_opr_id:    "%{hiera('db_user')}}"
  db_opr_pwd:   "%{hiera('db_user_pwd')}}"
  db_connect_id: "%{hiera('db_connect_id')}}"
  db_connect_pwd: "%{hiera('db_connect_pwd')}}"

config_settings:
  Process Scheduler/PrcsServerName: PRC222          ### (F) ###
  Security/DomainConnectionPwd:      "%{hiera('domain_conn_pwd')}}"

feature_settings:
  MSTRSRV:      "No"                      ### (G) ###
  APPENG:      "Yes"

```

Task 5-3: Preparing the Customization File to Create PeopleSoft Domains Without Configuration

The default DPK initialization includes pre-boot and post-boot processes that use Automated Configuration Manager (ACM) plug-ins to configure and start the PeopleSoft domains. The ACM configuration, for example, sets up Integration Broker and the report repository for the Process Scheduler.

Use this customization if you want to install the necessary software for the PeopleSoft Application Server, PIA, and Process Scheduler servers without running the pre-boot and post-boot ACM processes. After you complete the DPK deployment with this customization, you can complete the configuration as needed.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

To prepare the customization file:

1. Locate the `psft_configuration.yaml` file, which was installed by the deployment, in `BASE_DIR/dpk/puppet/production/data`.
2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the generated `psft_configuration.yaml` file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Copy the parameters below from the `psft_configuration.yaml` file and paste them into the `psft_customizations.yaml` file.

Retain the indentation as given in the delivered YAML file.

```
run_preboot_config_setup: true
run_postboot_config_setup: true
```

4. To specify that the deployment does not run the pre-boot and post-boot ACM processes, change the values to "false"; for example:

```
run_preboot_config_setup: false
run_postboot_config_setup: false
```

5. Add the parameter `prcs_domain_id` and provide a name for the Process Scheduler domain server. For example, you might choose a name to indicate the operating system, such as PSNT for Microsoft Windows or PSUNIX for Linux or UNIX.

```
---
run_preboot_config_setup: false
run_postboot_config_setup: false

prcs_domain_id: PSNT
```

6. Save the file.
7. Continue with the steps in Completing the Customized Deployment.

Task 5-4: Preparing the Customization File for JDK on AIX

As mentioned in the section Reviewing Software Requirements for AIX, you must use customizations to specify the installation location of the manually installed JDK 11 for the AIX DPK.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the `psft_deployment.yaml` file in `BASE_DIR/dpk/puppet/production/data`.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

The installation location for JDK is defined in the `psft_deployment.yaml` file that is installed with the deployment.

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool such as vi, and save it in the same location as the `psft_deployment.yaml` file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Copy the `jdk_location` scalar parameter, and the entire `jdk` collection-type section (two lines) from the `psft_deployment.yaml` file into the `psft_customizations.yaml` file.

Be sure to set the locations to the same value. Retain the indentation as given in the delivered YAML file.

```
---
```

```
jdk_location:    /home/java/ibm-java-ppc64-80
jdk:
  location:      /home/java/ibm-java-ppc64-80
  remove:        false
```

As previously mentioned, setting the optional attribute `remove: false` means that the parameters in this section will not be deleted when the deployed environment is removed.

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-5: Preparing the Customization File for Component Software Locations

Use the information in this section if you want to customize an installation location, for example to use an existing installation of Oracle Tuxedo or Oracle WebLogic.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

Use this information to customize the installation location for the Oracle database client. For example, if you carried out a full-tier DPK deployment, the DPK setup script installed the Oracle database server software. You can specify that location instead of using the separate Oracle database client. Also, if you installed the Oracle database software separate from the DPK deployment, you can specify that installation location.

1. Locate the `psft_deployment.yaml` file in `BASE_DIR/dpk/puppet/production/data`.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

The installation locations for Oracle Tuxedo, Oracle WebLogic, JDK, and Oracle database client are defined in the `psft_deployment.yaml` file that is installed with the deployment.

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the `psft_deployment.yaml` file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Select one or more of the sections corresponding to the components that you want to customize, and copy them to the `psft_customizations.yaml` file.

As previously mentioned, setting the optional attribute `remove: false` means that the parameters in this section will not be deleted when the deployed environment is removed.

Note. This applies only for *customized location for new installation* of component software: Before you run the `psft_puppet_apply.<ext>` command, ensure the customized location given in the `psft_customizations.yaml` file does not contain any files or directories.

- For JDK, copy the `jdk_location` scalar parameter, and the entire `jdk` collection-type section (comprised of two lines) from the `psft_deployment.yaml` file into the `psft_customizations.yaml` file. Be sure to set the locations to the same value. Retain the indentation as given in the delivered YAML file.

```
---
jdk_location:    C:/jdk
```

```
jdk:
  location:  C:/jdk
  remove:    false
```

- For Oracle Tuxedo, copy both the `tuxedo_location` scalar parameter and the entire `tuxedo` collection-type section (comprised of two lines) from the `psft_deployment.yaml` file into the `psft_customizations.yaml` file. Be sure to set the locations to the same value. Retain the indentation as given in the delivered YAML file.

```
---
tuxedo_location:  C:/psft/tuxedo
tuxedo:
  location:        C:/psft/tuxedo
  remove:          false
```

- For Oracle WebLogic, copy both the `weblogic_location` scalar parameter and the entire `weblogic` collection-type section (comprised of two lines) from the `psft_deployment.yaml` file into the `psft_customizations.yaml` file. Be sure to set the locations to the same value. Retain the indentation as given in the delivered YAML file.

```
---
weblogic_location:  C:/psft/weblogic
weblogic:
  location:          C:/psft/weblogic
  remove:            false
```

- For Oracle Client, copy both the `oracle_client_location` scalar parameter and the entire `oracle_client` collection-type section (comprised of two lines) from the `psft_deployment.yaml` file into the `psft_customizations.yaml` file. Be sure to set the locations to the same value. Retain the indentation as given in the delivered YAML file.

```
---
oracle_client_location: <Oracle_Home>
oracle_client:
  location: <Oracle_Home>
```

For example, to specify the location of pre-existing Oracle database client software:

```
---
oracle_client_location:  C:/oracle/product/19.3.0.0/dbhome_1
oracle_client:
  location:  C:/oracle/product/19.3.0.0/dbhome_1
```

- If you want to customize JDK, Oracle Tuxedo, and Oracle WebLogic, add all three entries to `psft_customizations.yaml`; for example:

```
---
jdk_location:  C:/jdk
jdk:
  location:    C:/jdk
  remove:      false

tuxedo_location:  C:/psft/tuxedo
tuxedo:
  location:        C:/psft/tuxedo
  remove:          false
```

```
weblogic_location: C:/psft/weblogic
weblogic:
  location: C:/psft/weblogic
  remove: false
```

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-6: Preparing the Customization File for Unicode

Use these instructions if you want to change the Unicode designation for your database.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the `psft_deployment.yaml` file.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

By default, the DPK setup script installs the YAML files in `BASE_DIR/dpk/puppet/production/data`.

The `unicode_db` parameter is part of the `ps_home` section.

```
ps_home:
  db_type:      "%{hiera('db_platform')}}"
  unicode_db:   "%{hiera('unicode_db')}}"
  location:     "%{hiera('ps_home_location')}}"
```

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the `psft_deployment.yaml` file.
If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.
3. Copy the entire `ps_home` section from `psft_deployment.yaml`, maintaining the indentation, into the `psft_customizations.yaml` file.

For a Unicode database, set the value for `unicode_db` to `true`:

```
---
ps_home:
  db_type:      "%{hiera('db_platform')}}"
  unicode_db:   true
  location:     "%{hiera('ps_home_location')}}"
```

For a non-Unicode database, set the value for `unicode_db` to `false`:

```
---
ps_home:
  db_type:      "%{hiera('db_platform')}}"
  unicode_db:   false
  location:     "%{hiera('ps_home_location')}}"
```

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-7: Preparing the Customization Files for the PeopleSoft Homes

This section discusses:

- Preparing the Customization File for the PS_HOME Location
- Preparing the Customization File for the PS_APP_HOME Location
- Preparing the Customization File for the PS_CFG_HOME Location
- Preparing the Customization File for the PS_CUST_HOME Location

Task 5-7-1: Preparing the Customization File for the PS_HOME Location

By default, the DPK setup script creates the *PS_HOME* directory in *BASE_DIR/pt/ps_home<release>*, where *<release>* is the PeopleSoft PeopleTools patch release, such as 8.61.12. Use these steps to specify a different *PS_HOME* location.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the *psft_deployment.yaml* file in *BASE_DIR/dpk/puppet/production/data*.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your *psft_customizations.yaml* file.

The *PS_HOME* installation location is specified by the *ps_home* section (comprised of four lines).

```
ps_home:
  db_type:      "%{hiera('db_platform')}}"
  unicode_db:   "%{hiera('unicode_db')}}"
  location:     "%{hiera('ps_home_location')}}"
```

2. If necessary, create a *psft_customizations.yaml* using a standard editing tool, such as Notepad on Microsoft Windows or vi on Linux, AIX, or Solaris, and save it in the same location as the *psft_deployment.yaml* file.
If this is the first entry in the *psft_customizations.yaml* file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.
3. Copy the entire section from the *psft_deployment.yaml* file into the *psft_customizations.yaml* file and modify the location value as needed.

Retain the indentation as given in the delivered YAML file.

Note. This applies only for *customized location for new installation* of PeopleSoft homes: Before you run the *psft_puppet_apply.<ext>* command, ensure the customized location given in the *psft_customizations.yaml* file does not contain any files or directories.

For example, on Linux, AIX, or Solaris:

```
---
ps_home:
  db_type:      "%{hiera('db_platform')}}"
  unicode_db:   "%{hiera('unicode_db')}}"
```

```
location:    "/home/psft8.61.12"
```

For example, on Microsoft Windows:

```
---
ps_home:
  db_type:    "%{hiera('db_platform')}}"
  unicode_db: "%{hiera('unicode_db')}}"
  location:   "C:/psft8.61.12"
```

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-7-2: Preparing the Customization File for the PS_APP_HOME Location

By default, the DPK setup script creates the *PS_APP_HOME* directory in *BASE_DIR/pt/<Product>_app_home*, where *<Product>* is the abbreviation for the PeopleSoft application, such as *fscm* for PeopleSoft Financials and Supply Chain Management.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

Here are two scenarios where you might use this customization:

- If you are performing a new installation using the PeopleSoft DPKs, and you do not want to use the default *PS_APP_HOME* location created by the DPK setup script, use this customization to specify and create the desired *PS_APP_HOME* directory.
 - If you are performing a mid-tier deployment to connect to an existing environment, use this customization to specify the existing *PS_APP_HOME*.
-

Note. This applies only for *customized location for new installation* of PeopleSoft homes: Before you run the `psft_puppet_apply.<ext>` command, ensure the customized location given in the `psft_customizations.yaml` file does not contain any files or directories.

Use these steps to specify the *PS_APP_HOME* location.

1. Locate the `psft_deployment.yaml` file in *BASE_DIR/dpk/puppet/production/data*.
-

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

The *PS_APP_HOME* installation location is specified by the `ps_app_home` section.

```
ps_apphome_location:  "%{hiera('pt_location')}/hcm_app_home"
ps_app_home:
  db_type:  "%{hiera('db_platform')}}"
  include_ml_files: false
  location: "%{hiera('ps_apphome_location')}}"
```

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the `psft_deployment.yaml` file.
If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.
3. To override the location, copy the entire section from the `psft_deployment.yaml` file into the

psft_customizations.yaml file and modify the location value as needed.

Retain the indentation as given in the delivered YAML file.

For example, on Linux, AIX, or Solaris:

```
---
ps_apphome_location:  "/home/hcm92_home"
ps_app_home:
  db_type: "%{hiera('db_platform')}}"
  include_ml_files: false
  location: "/home/hcm92_home"
```

For example, on Microsoft Windows:

```
---
ps_apphome_location:  "C:/hcm92_home"
ps_app_home:
  db_type: "%{hiera('db_platform')}}"
  include_ml_files: false
  location: "C:/hcm92_home"
```

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-7-3: Preparing the Customization File for the PS_CFG_HOME Location

By default, the DPK setup script creates the *PS_CFG_HOME* directory in *<user_profile>/psft/pt/8.61*, such as *C:/users/username/psft/pt/8.61* on Microsoft Windows, and */home/psadm2/psft/pt/8.61* on Linux, AIX, or Solaris. Note that you cannot specify different *PS_CFG_HOME* locations for different PeopleSoft domains. The DPK installation requires the same *PS_CFG_HOME* be used for all domains. Use these steps to specify the *PS_CFG_HOME* location.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the psft_configuration.yaml file in *BASE_DIR/dpk/puppet/production/data*.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your psft_customizations.yaml file.

The *PS_CFG_HOME* installation location is specified by the ps_config_home parameter.

```
ps_config_home:      "%{hiera('user_home_dir')}/%{hiera('domain_⇒
user')}/psft/pt/8.61"
```

2. If necessary, create a psft_customizations.yaml using a standard editing tool, such as Notepad on Microsoft Windows or vi on Linux, AIX, or Solaris, and save it in the same location as the psft_configuration.yaml file.
If this is the first entry in the psft_customizations.yaml file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.
3. Copy the entire section from the psft_configuration.yaml file into the psft_customizations.yaml file and modify the location value as needed.

Note. This applies only for *customized location for new installation* of PeopleSoft homes: Before you run the `psft_puppet_apply.<ext>` command, ensure the customized location given in the `psft_customizations.yaml` file does not contain any files or directories.

Retain the indentation as given in the delivered YAML file.

For example, on Linux, AIX, or Solaris:

```
---
ps_config_home:          "/home/pt861_config"
```

For example, on Microsoft Windows:

```
---
ps_config_home:          "C:/pt861_config"
```

4. Save the file.
5. Continue with the steps in Completing the Customized Deployment.

Task 5-7-4: Preparing the Customization File for the PS_CUST_HOME Location

Use the `PS_CUST_HOME` location for files such as COBOL and SQR that originate with your organization. The delivered YAML files do not include a `PS_CUST_HOME` location. The DPK setup script creates the `PS_CUST_HOME` if it does not exist.

Note. Setting a `PS_CUST_HOME` environment variable, which was used for non-DPK deployments, does not work.

1. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the `psft_configuration.yaml` file.
If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.
2. Add the following parameters in the `psft_customizations.yaml` file and modify the location value as needed.

Note. This applies only for *customized location for new installation* of PeopleSoft homes: Before you run the `psft_puppet_apply.<ext>` command, ensure the customized location given in the `psft_customizations.yaml` file does not contain any files or directories.

Retain the indentation as given in the delivered YAML file.

For example, on Linux, AIX, or Solaris:

```
---
ps_cust_home_location:   "/home/pscusthome"
ps_cust_home:
  location:              "/home/pscusthome"
```

For example, on Microsoft Windows:

```
---
ps_cust_home_location:   "C:/pscusthome"
ps_cust_home:
  location:              "C:/pscusthome"
```

3. Save the file.
4. Continue with the steps in Completing the Customized Deployment.

Task 5-8: Preparing the Customization File to Exclude Oracle Database Client Installation

The DPK setup script command to deploy all software (`psft-dpk-setup.<ext> --env_type midtier --deploy_only --deploy_type all`) includes the installation of Oracle database client. Use the customization in this section to exclude that installation.

See "Installing the PeopleSoft Homes," Running the DPK Setup Script to Install All Software.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the installed YAML files.
If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (`---`) on the first line of the file. Do not indent the dashes.
2. Add the content below to the `psft_customizations.yaml` file.

Note. The line with "ensure" is indented.

```
---
oracle_client:
  ensure: absent
```

3. Save the file.
4. Continue with the steps in Completing the Customized Deployment.

Task 5-9: Preparing the Customization File for Jolt SSL and WSL SSL Ports

You have the option to use the Secure Socket Layers/Transport Layer Security (SSL/TSL) protocol for Workstation Listener and Jolt Listener ports for the application server configuration. To use this protocol you must set up an Oracle wallet for the digital certificates.

See *PeopleTools: Security Administration*, "Installing Web Server-Based Digital Certificates."

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the `psft_configuration.yaml` file in `BASE_DIR/dpk/puppet/production/data`.

Note. The code examples in this topic are for illustrative purposes only. Remember to use the text from the YAML files you install with each new deployment as the basis for your `psft_customizations.yaml` file.

2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as Notepad on Microsoft Windows or `vi` on Linux, AIX, or Solaris, and save it in the same location as the `psft_configuration.yaml` file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Copy the entire `appserver_domain_list` section from `psft_configuration.yaml` to `psft_customizations.yaml`.

When you copy, retain the indentation as given in the delivered YAML file.

4. Add the following parameters to the `psft_customizations.yaml` file:

Note. These parameters are not included in the delivered `psft_configuration.yaml` file.

- Specify the SSL/TSL port for the Jolt listener; for example 9012.
JOLT Listener/SSL Port: 9012
- Specify the SSL/TSL port for the Workstation listener, for example 7012:
Workstation Listener/SSL Port: 7012
- Specify the location of the wallet containing the certificates:
Oracle Wallet/SEC_PRINCIPAL_LOCATION: test/security
- Specify the wallet name, for example psft:
Oracle Wallet/SEC_PRINCIPAL_NAME: psft
- Specify the wallet password:
Oracle Wallet/SEC_PRINCIPAL_PASSWORD:

5. Modify the `psft_customizations.yaml` file, including the added parameters from the previous step, with values for your environment.

Note. Be sure to retain the indentation shown in this example.

This sample `psft_customizations.yaml` file shows the parameters added from step 4 in bold font:

```
appserver_domain_list:
  "%{hiera('appserver_domain_name')}":
    os_user:      "%{hiera('domain_user')}"
    ps_cfg_home_dir: "%{hiera('ps_config_home')}"
    template_type: "%{hiera('appserver_template')}"

    db_settings:
      db_name:      "%{hiera('db_name')}"
      db_type:      "%{hiera('db_platform')}"
      db_opr_id:    "%{hiera('db_user')}"
      db_opr_pwd:   "%{hiera('db_user_pwd')}"
      db_connect_id: "%{hiera('db_connect_id')}"
      db_connect_pwd: "%{hiera('db_connect_pwd')}"

    config_settings:
      Domain Settings/Allow Dynamic Changes:  Y
      Domain Settings/Domain ID:              "%{hiera('appserver_domain_⇒
name')}"
```

```

PSAPPSRV/Min Instances:                2
PSAPPSRV/Max Instances:                2
PSAPPSRV/Max Fetch Size:              15000
Security/DomainConnectionPwd:         "%{hiera('domain_conn_⇒
pwd')} }"
JOLT Listener/Port:                   "%{hiera('jolt_port')} }"
JOLT Listener/Address:                 0.0.0.0
JOLT Listener/SSL Port:               9012
Workstation Listener/Port:            "%{hiera('wsl_port')} }"
Workstation Listener/SSL Port:        7012

Oracle Wallet/SEC_PRINCIPAL_LOCATION: test/security

Oracle Wallet/SEC_PRINCIPAL_NAME:     psft

Oracle Wallet/SEC_PRINCIPAL_PASSWORD:

feature_settings:
  PUBSUB:          "Yes"
  QUICKSRV:        "No"
  QUERYSRV:        "No"
  JOLT:            "Yes"
  JRAD:            "No"
  WSL:             "Yes"
  DBGSRV:          "No"
  RENSrv:          "No"
  MCF:             "No"
  PPM:             "Yes"
  PSPPMSRV:        "Yes"
  ANALYTICSRV:     "No"
  SERVER_EVENTS:   "Yes"
  DOMAIN_GW:       "No"

```

6. Save the file.
7. Continue with the steps in Completing the Customized Deployment.

Task 5-10: Preparing the Customization File for sysctl and ulimit Parameters on Linux, AIX, or Solaris

This section discusses:

- Preparing the Customization File to Change the setup_sysctl Parameter
- Preparing the Customization File to Overwrite the sysctl Parameters
- Preparing the Customization File to Overwrite the ulimit Parameters

Task 5-10-1: Preparing the Customization File to Change the setup_sysctl Parameter

Use these instructions for a deployment in this situation:

- The existing sysctl parameters on your system meet the DPK requirements.
The values must be equal to or greater than the values for the parameters in the generated psft_unix_system.yaml file.
- You do not want the DPK setup script to overwrite the sysctl parameters

See "Prerequisites," Reviewing the System Parameters on Linux, AIX, or Solaris.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the psft_unix_system.yaml file, which was installed by the deployment, in *BASE_DIR/dpk/puppet/production/data*.
2. If necessary, create a psft_customizations.yaml using a standard editing tool, such as vi on Linux, AIX, or Solaris, and save it in the same location as the generated psft_unix_system.yaml file.
If this is the first entry in the psft_customizations.yaml file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.
3. Copy the parameter below from the psft_unix_system.yaml file and paste it into the psft_customizations.yaml file.
Retain the indentation as given in the delivered YAML file.

```
setup_sysctl: true
```
4. To specify that the deployment does not overwrite the sysctl parameters, change the value to "false"; for example:

```
---  
setup_sysctl: false
```
5. Save the file.
6. Continue with the steps in Completing the Customized Deployment.

Task 5-10-2: Preparing the Customization File to Overwrite the sysctl Parameters

Use these instructions in this situation:

- You want to allow the DPK setup script to change the sysctl settings on your system.
- You want to specify sysctl values that are equal to or greater than the values for the parameters in the generated psft_unix_system.yaml file.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the psft_unix_system.yaml file, which was installed by the deployment, in *BASE_DIR/dpk/puppet/production/data*.
2. If necessary, create a psft_customizations.yaml using a standard editing tool, such as vi on Linux, AIX, or Solaris, and save it in the same location as the generated psft_unix_system.yaml file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Copy the `setup_sysctl: true` scalar parameter from the `psft_unix_system.yaml` file and paste it into the `psft_customizations.yaml` file.

Do not change the parameter; it must be set to "true". Retain the indentation as given in the delivered YAML file.

4. Copy the entire `sysctl`: collection type parameter (comprised of several lines) from the `psft_unix_system.yaml` file and paste it into the `psft_customizations.yaml` file.

Retain the indentation as given in the delivered YAML file.

```
---
setup_sysctl: true
sysctl:
  kernel.msgmnb:      65538
  kernel.msgmni:      1024
  kernel.msgmax:      65536
  kernel.shmmax:      68719476736
  kernel.shmall:      4294967296
  kernel.core_uses_pid: 1
  net.ipv4.tcp_keepalive_time: 90
  net.ipv4.tcp_timestamps: 1
  net.ipv4.tcp_window_scaling: 1
  net.ipv4.ip_local_port_range: '10000 65500'
```

5. Change the values of the `sysctl` parameters in `psft_customizations.yaml` as needed, but the values must be equal to or greater than those in the generated `psft_unix_system.yaml` file.
6. Save the file.
7. Continue with the steps in Completing the Customized Deployment.

Task 5-10-3: Preparing the Customization File to Overwrite the ulimit Parameters

Use these instructions if you want to specify ulimit values that are equal to or greater than the values for the parameters in the generated `psft_unix_system.yaml` file.

There is no parameter that you can use to specify whether the DPK setup script sets the ulimit parameters. You can change the values, but there is no parameter to prevent the DPK setup script from changing the ulimit parameters.

Note. Review the requirements in Understanding PeopleSoft Environment Customizations before preparing the customization file.

1. Locate the `psft_unix_system.yaml` file, which was installed by the deployment, in `BASE_DIR/dpk/puppet/production/data`.
2. If necessary, create a `psft_customizations.yaml` using a standard editing tool, such as `vi` on Linux, AIX, or Solaris, and save it in the same location as the generated `psft_unix_system.yaml` file.

If this is the first entry in the `psft_customizations.yaml` file, ensure that there are three dashes (- - -) on the first line of the file. Do not indent the dashes.

3. Copy the entire `ulimit`: collection type parameter (comprised of several lines) from the `psft_unix_system.yaml` file and paste it into the `psft_customizations.yaml` file.

Retain the indentation as given in the delivered YAML file.

```
---
ulimit:
  group:
    hard.nofile: 65536
    soft.nofile: 65536
    hard.nproc: 65536
    soft.nproc: 65536
    hard.core: unlimited
    soft.core: unlimited
    hard.memlock: 500000
    soft.memlock: 500000
    hard.stack: 102400
    soft.stack: 102400

  user:
    hard.nofile: 131072
    soft.nofile: 131072
    hard.nproc: 131072
    soft.nproc: 131072
    hard.core: unlimited
    soft.core: unlimited
    hard.memlock: 500000
    soft.memlock: 500000
```

4. Change the values of the `ulimit` parameters in `psft_customizations.yaml` as needed, but the values must be equal to or greater than those in the generated `psft_unix_system.yaml` file.
5. Save the file.
6. Continue with the steps in Completing the Customized Deployment.

Task 5-11: Completing the Customized Deployment

Use these steps to complete the customized deployment of the PeopleSoft environment:

1. Run the DPK setup script as previously described.

See "Deploying the PeopleSoft PeopleTools Deployment Packages."

2. Answer *n* (no) to the following prompt:

```
Do you want to continue with the default initialization process? [y|n]: ⇒
n
```

The script stops, and displays instructions for completing the initialization. Leave the command window or terminal window open to refer to the instructions provided.

3. Prepare the `psft_customizations.yaml` file as previously described and save it in `BASE_DIR/dpk/puppet/production/data`.
4. As directed by the message displayed when the DPK setup script exited, enter the full path and script name, and wait until the deployment is complete.

Note. You must run the script as instructed by the script message. Do not copy the `psft_puppet_apply` script into a different `BASE_DIR` to run.

Since the script redirects the output to a log file, you cannot follow the progress on the command window or terminal window. The process is complete when the prompt returns.

On Microsoft Windows:

```
BASE_DIR\psft_puppet_apply.cmd
```

On Linux, AIX, or Solaris:

```
BASE_DIR/psft_puppet_apply.sh
```

The `psft_puppet_apply.<ext>` script performs these actions:

- Sets the required PATH, library path, and PYTHON path.
- Runs the `puppet apply` command to set up the PeopleSoft environment using the values in `psft_customizations.yaml` and the generated YAML files.

As mentioned, the values in `psft_customizations.yaml` override those in the generated YAML files.

- Saves the log file as `BASE_DIR/psft_dpk_setup_apply.log`.
5. If you want to include the Puppet debug messages in the log file, run the script with the `--debug` option.

This option is useful for troubleshooting. Keep in mind that running with the `--debug` option increases the log file size.

Note. You must run the script as instructed by the script message. Do not copy the `psft_puppet_apply` script into a different `BASE_DIR` to run.

Note that you can run the `puppet apply` command directly, but Oracle recommends that you use the script provided, which sets the required environment variables to specify the locations for the Puppet software and the YAML files. Oracle also recommends that you do not run `puppet apply -debug`.

Chapter 6

Setting Up the Install Workstation

This chapter discusses:

- Understanding the Install Workstation
- Prerequisites
- Starting Configuration Manager
- Setting Startup Options
- Editing the Default Profile
- Running Client Setup

Understanding the Install Workstation

This chapter describes how to set up a PeopleSoft Windows-based client for connecting to the database server in two-tier mode, specifically for the purpose of performing install-related tasks from the workstation. You must configure at least one two-tier Windows-based client for running the Data Mover and SQR processes required for setting up the batch server and for creating the PeopleSoft database. For some installations you may wish to set up multiple install workstations, so that you can perform asynchronous tasks at the same time; for example, you could create and populate multiple databases simultaneously. You can quickly configure multiple workstations by exporting a configuration file from one workstation and importing it to another workstation.

See Also

PeopleTools: System and Server Administration

Prerequisites

The following tasks are prerequisites for setting up the install workstation:

- The workstation must have database connectivity software installed.
- You must have planned your database creation strategy. You should know the precise names of the databases that you intend to create.
- Make sure that you have created your connect strategy. You must use a Connect ID. You should know both the Connect ID and Connect password.

For information on PeopleSoft Connect ID and Connect password, consult the *PeopleTools: System and Server Administration* product documentation for information on setting Application Server domain parameters.

- The workstation must have a logical drive mapped to *PS_HOME* on the file server (or, if the file server and

install workstation are one and the same, *PS_HOME* can be installed on a local drive).

- The person performing the installation must have read access to the *PS_HOME* directory.

If this is the same workstation on which the PeopleSoft PeopleTools installation was performed, it should have a PeopleTools 8.5 installation program group, which was created when you loaded the PeopleTools software. This isn't a requirement, but it does make it more convenient to run the PeopleTools install applications.

See Also

"Preparing for Installation"

Task 6-1: Starting Configuration Manager

Configuration Manager is a utility for configuring workstations being used as the PeopleTools Development Environment. These are its principal functions:

- Sets up and make changes to PeopleSoft configuration settings.
- Creates a program group containing Microsoft Windows shortcuts to PeopleSoft applications.
- Installs local DLLs.

The first time you run Configuration Manager on the client, it will populate certain fields with default values specified in a configuration file stored on the file server, specifically: *PS_HOME\setup\pstools.cfg*. This configuration file was set up when you ran the installation. Once you set up and run Configuration Manager, it will populate fields using values that are stored in the Windows system registry.

To start Configuration Manager, do one of the following:

- Locate PeopleTools 8.61, Configuration Manager in the list of programs, for example from the Start menu or the Apps screen.

Note. See the documentation for your operating system for information on accessing the Apps screen. The PeopleTools program group will be available if you installed PeopleSoft PeopleTools on this workstation.

- If the *PeopleTools 8.61* program group was not installed on this workstation, run *pscfig.exe* directly from the *PS_HOME\bin\client\winx86* directory on the file server.

Task 6-2: Setting Startup Options

The Startup tab of Configuration Manager sets the default options for the PeopleSoft sign-on screen that is used for connecting to a PeopleSoft database. It also contains a setting that specifies the local directory for storing cached PeopleSoft data.

To set Startup options:

1. Confirm that you are viewing the Configuration Manager Startup tab (this tab is what you see if you started Configuration Manager as described in the previous task).
2. Set the following options:
 - *Database type* — Verify the type of RDBMS. This should already be set to Oracle.
 - *Application Server Name* — This option appears if you select a database type of Application Server. It is where you enter your application server name if you are setting up a three-tier connection.

- *Database name* — The name of the default database to connect to. Enter the name of one of the databases that you intend to create.
- *User ID* — The name of the default user that will appear in the sign-on screen. This can be any valid user name, although for installation setup it normally matches the name of one of the built-in PeopleSoft users (typically PS or VP1) that will be installed in the database.
- *Connect ID and Connect Password* — Type your connect ID and password into these fields.

Task 6-3: Editing the Default Profile

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

For more information on using Configuration Manager, see the *PeopleTools: System and Server Administration* product documentation for configuring user profiles.

To edit the default profile:

1. Select the Profile tab in Configuration Manager.

Only one profile, the Default Profile, has been defined.

2. Select Edit to display the Edit Profile dialog box, and then select the Process Scheduler tab.

3. In the Process Scheduler tab verify the options listed below the example. These should have been set correctly by the PeopleSoft installation program.

Edit Profile - 'Default'

Database/Application Server | **Process Scheduler** | nVision | Common

General

PeopleSoft Home Directory (PS_HOME): C:\psft\pt\ps_home8.61

PeopleSoft App Home Directory (PS_APP_HOME): C:\psft\pt\pscm_app_home

PeopleSoft Customizations Home Directory (PS_CUST_HOME):

Temp Directory (TEMP): C:\temp

Output Directory (OUTPUT): C:\temp\

Log Directory (LOG): C:\temp

Database Drivers (DBBIN): C:\psft\db\oracle-client\19.3.0.0\BIN

Word Executables Directory (WINWORD):

☐ Redirect Output

Application Engine

☐ Debug

☐ Disable Restart

SQR

SQR Executables (SQRBIN): C:\psft\pt\ps_home8.61\bin\sqr\ORA\binw

PSSQR Path: C:\psft\pt\ps_home8.61\sqr

SQR Flags (PSSQRFLAGS): ZIFC:\psft\pt\ps_home8.61\sqr\pssqr.ini

COBOL

COBOL Executables (CBLBIN): C:\psft\pt\ps_home8.61\cblbin

OK Cancel Apply

Edit Profile dialog box: Process Scheduler tab

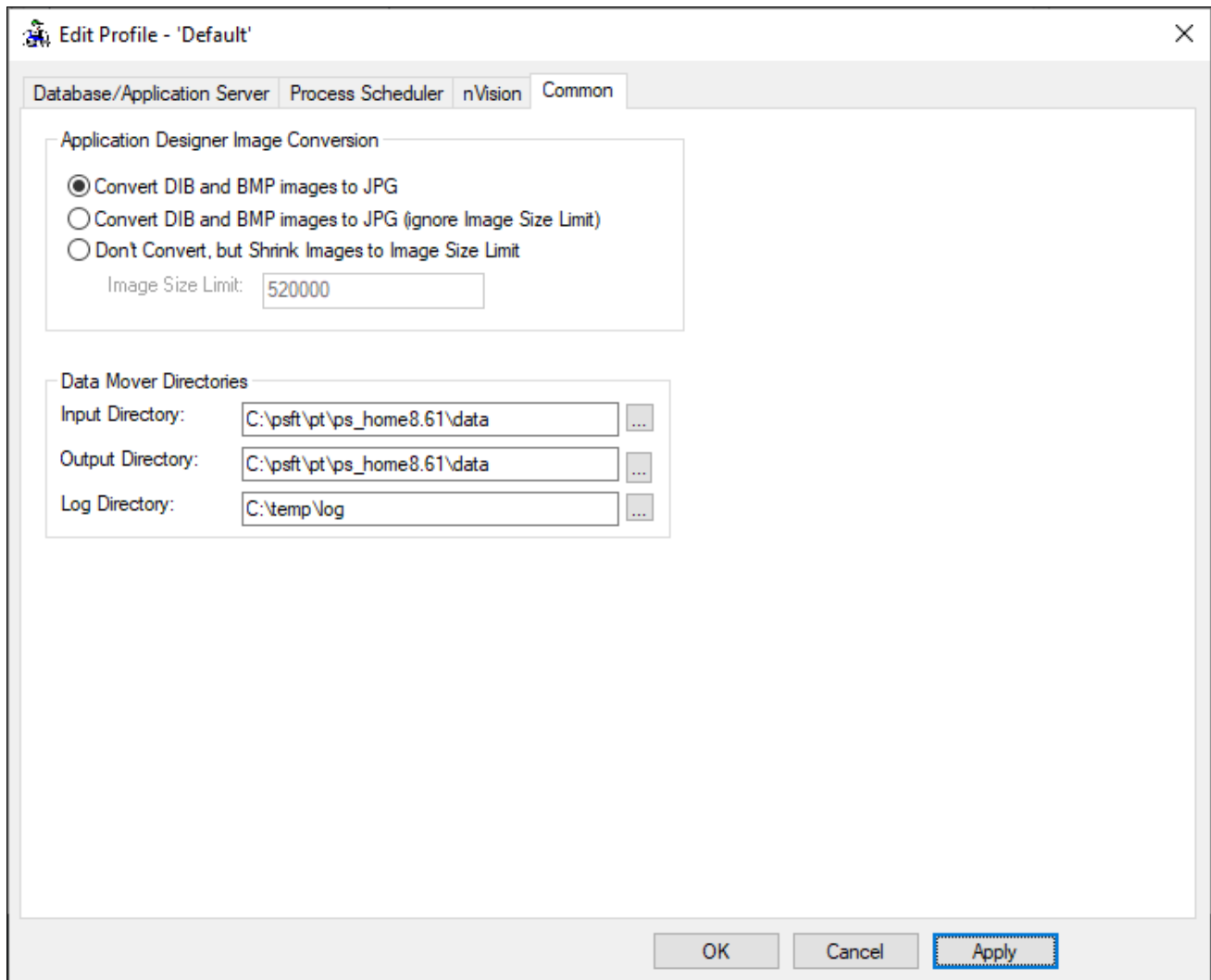
- Verify that the PeopleSoft Home Directory (PS_HOME) field is set to the path to *PS_HOME* on the file server.
- Verify that the PeopleSoft Apps Home Directory (PS_APP_HOME) field is set to the path to *PS_APP_HOME* on the file server, C:\psft\pt\pscm_app_home in this example.

Note. The installation using PeopleSoft DPKs requires that *PS_APP_HOME* and *PS_HOME* be different.

- On Microsoft Windows operating systems, set the Database Drivers (DBBIN) field to the path for the 64-bit database connectivity files, if necessary.
The example shows the default for Oracle, C:\psft\db\oracle-server\19.3.0.0\BIN.
- Set the SQR Executables (SQRBIN) field to the file server directory where SQR for Windows was installed when you ran the installation.
- Set the SQR Flags (PSSQRFLAGS) field to -ZIF<PS_HOME>\sqr\pssqr.ini.
- Set the SQR Report Search 1 (PSSQR1) field to *PS_HOME\sqr*. The remaining SQR Report Search fields

can be left blank, because no additional SQR report directories have been created yet.

4. Select the Common tab of the Edit Profile dialog box, shown in this example:



Edit Profile dialog box: Common tab

The following fields on the Common tab are used to set Data Mover default input, output, and log directories.

- Verify that the Input Directory and Output Directory fields are set to *PS_HOME*\data. This directory will store the Data Mover scripts and .DAT files required to populate the PeopleSoft database.
- Set the Log Directory to a local workstation directory to store the Data Mover log files. The default is C:\TEMP.

Data Mover will not create a new directory under *PS_APP_HOME* or *PS_HOME* for log files. If you want Data Mover to write log files into *PS_APP_HOME*, you must create a new directory named log under *PS_APP_HOME*.

5. Select OK to close the Edit Profile dialog box.

Task 6-4: Running Client Setup

The Client Setup tab does the following:

- Installs a PeopleSoft program group on the workstation.
- Installs system DLLs on the workstation.

These Client Setup functions are performed when you click OK or Apply from Configuration Manager only if the Install Workstation option on the Client Setup tab is selected.

Note. Any files installed by Client Setup on the workstation from the file server use the paths specified in the default profile.

To run Client Setup:

1. Select the Client Setup tab in Configuration Manager.
2. In the Group Title text box enter the name of the program group for the icons you want on the client workstation. (A program group name cannot contain any of the following characters: \ / : * ? " < > |)
You can call the program group anything you want, but this documentation uses *PeopleTools 8.61*.
3. If you do not have a PeopleTools 8.61 program group set up on the workstation, be sure to check the following two options for installing shortcuts to applications essential for installation.

Note. When you run Client Setup, it will uninstall any existing shortcuts in the PeopleTools 8.61 program group, and install shortcuts for the applications you have selected. If you subsequently want to install or uninstall shortcuts, you can always re-run Client Setup.

- *Data Mover*
 - *Configuration Manager*
4. Select the option Install Workstation.
This check box determines whether Client Setup runs when you click Apply or OK in Configuration Manager. If this option is not selected, Client Setup will create or update settings in the registry, but it will not set up the PeopleTools 8.61 program group or install local DLLs.
 5. Click OK to run Client Setup and close Configuration Manager.

Chapter 7A

Creating a Database Manually on Windows

This chapter discusses:

- Understanding Database Creation
- Preparing for the PeopleSoft Database Installation
- Creating the Windows Service for the Database Instance
- Using SQL Tools
- Editing Database Scripts (non-Multitenant)
- Creating an Oracle Instance (non-Multitenant)
- Creating Catalog Views and Utility Tablespaces (non-Multitenant)
- Creating PS.PSDBOWNER Table (non-Multitenant)
- Creating Application-Specific Dbspaces and Tablespaces (non-Multitenant)
- Creating PeopleSoft Database Roles (non-Multitenant)
- Creating the PeopleSoft Database Owner ID (non-Multitenant)
- Setting Up Connect ID (non-Multitenant)
- Editing Database Scripts (Multitenant Architecture)
- Creating an Oracle Instance (Multitenant Architecture)
- Creating Catalog Views and Utility Tablespaces (Multitenant Architecture)
- Creating PS.PSDBOWNER Table (Multitenant Architecture)
- Creating Application-Specific Dbspaces and Tablespaces (Multitenant Architecture)
- Creating PeopleSoft Database Roles (Multitenant Architecture)
- Creating the PeopleSoft Database Owner ID (Multitenant Architecture)
- Setting Up Connect ID (Multitenant Architecture)
- Updating Connection Information
- Creating Data Mover Import Scripts
- Running Data Mover Import Scripts
- Cleaning Up Orphaned Language Data
- Checking the Log Files and Troubleshooting
- Changing the Base Language

Understanding Database Creation

This section describes the tasks required to create a PeopleSoft product database. During a standard PeopleSoft installation you will execute these tasks to create two distinct types of databases.

- *System*: The System (SYS) database has no company specific data, and can be used to load your data and begin development of your production database.
- *Demo*: The Demo (DMO) database contains data for a sample company, and can be used immediately for demonstration, for testing, and as a development reference.

Note. The PeopleTools System Database (PTSYS) is not available with the current release. As an alternative, install the latest PeopleSoft Interaction Hub database.

The requirements for these databases vary, so not all of this section's tasks apply to each database. The instructions will note any distinctions between creating a Demo and a System database.

- You must have installed the Database component of your PeopleSoft application installation software to your database server.
- You must have the PeopleTools Development Environment set up to create your database.

This section includes tasks to create pluggable databases and non-pluggable databases, as well as tasks that apply to both types. The pluggable database tasks create an Oracle Container Database (CDB) and a Pluggable Database (PDB), and are labelled "(Multitenant Architecture)." The tasks specific to non-pluggable databases are labelled "(non-Multitenant)." Choose the appropriate tasks for your environment.

Important! Do not forget that application-specific installation steps are provided in a separate document specific to the application. For instance, if you are performing PeopleSoft CRM installation, you need both this documentation for the basic installation of PeopleSoft PeopleTools and the PeopleSoft application, and any additional instructions provided by CRM. Search in My Oracle Support for the installation documentation specific to your application.

Important! If you are installing the PeopleSoft software on an Oracle RAC database, there are additional configuration procedures that you must follow.

See *PeopleTools: Data Management*, "Setting Up the PeopleSoft Installation with Oracle RAC."

Note. The Database Configuration Wizard cannot be used on a Microsoft Windows operating system. You must use the manual method of creating a database for this configuration.

After you complete the tasks in this chapter, read the chapter "Completing the Database Setup." Depending upon your environment, you may not need to carry out every task in that chapter. However it is important that you evaluate the requirements and perform the necessary tasks.

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

See Also

"Preparing for Installation," Planning Database Creation

"Setting Up the Install Workstation"

Task 7A-1: Preparing for the PeopleSoft Database Installation

This section discusses:

- Installing the PeopleSoft Database Server Components on the Database Server
- Installing the Oracle RDBMS Software
- Identifying the Oracle RDBMS Trace and Alert File Locations
- Obtaining Windows Administrator Authority
- Creating an INIT<SID>.ORA File
- Creating an INIT<SID>.ORA File (Multitenant Architecture)
- Creating Target Directory Paths
- Creating Target Directory Paths (Multitenant Architecture)
- Setting the ORACLE_SID Environment Variable

Task 7A-1-1: Installing the PeopleSoft Database Server Components on the Database Server

To create a PeopleSoft Database you *must have installed* the PeopleSoft application software (*PS_APP_HOME*) on your database server. When running the DPK setup script, you must have specified the FRESH install type, in order to install the files required for the database setup in *PS_APP_HOME*.

See "Installing the PeopleSoft Homes," Preparing to Run the DPK Setup Script.

Note. Remember, you need to have the PeopleTools Development Environment set up to create your database.

See the information on using PeopleSoft Configuration Manager in the *PeopleTools: System and Server Administration* product documentation.

Task 7A-1-2: Installing the Oracle RDBMS Software

The rest of this chapter assumes that the Oracle RDBMS software is installed on your database server. If you have not already done so, install the Oracle RDBMS software now. During the database creation process, we refer to an existing Oracle RDBMS installation. Specifically:

ORACLE_HOME and *ORACLE_HOME\bin*

Task 7A-1-3: Identifying the Oracle RDBMS Trace and Alert File Locations

All diagnostic data, including the alert log, are stored in the Automatic Diagnostic Repository (ADR), whose location is set by the DIAGNOSTIC_DEST initialization parameter. Due to this change, the initialization parameter settings for background dump (BACKGROUND_DUMP_DEST), core dump (CORE_DUMP_DEST), and user dump (USER_DUMP_DEST) are replaced by the diagnostic destination parameter DIAGNOSTIC_DEST. For information on the DIAGNOSTIC_DEST parameter and the default location for the ADR, see the Oracle RDBMS documentation.

See the information on managing diagnostic data in the Oracle Database Administrator's Guide.

Task 7A-1-4: Obtaining Windows Administrator Authority

To create a database instance on Microsoft Windows, you must be a Windows administrator of the target server. This is necessary because creating an instance on Microsoft Windows requires creating a SERVICE using the Oracle ORADIM command. On UNIX, an Oracle SID is comprised of many different processes. On Microsoft Windows, an Oracle SID is run as a single Windows service and you need to be an administrator to create that service.

Note. You must also be part of the ORA_DBA group.

Task 7A-1-5: Creating an INIT<SID>.ORA File

You must create an init.ora with the naming convention of init<SID>.ora in the *ORACLE_HOME*\database directory of the Oracle installation. The init<SID>.ora file is referenced in the following places during the database creation process:

- Using the ORADIM command to create the Windows Service
- Executing the CREATEDB18.SQL script

Note. If you are creating pluggable databases, see the following section Creating an INIT<SID>.ORA File (Multitenant Architecture) after completing this section.

Add or modify the following parameters in the init<SID>.ora file:

- DB_NAME = <SID>
- DB_FILES
Specify the maximum allowed for your operating system, typically 1021.
- OPEN_CURSORS = 1000
This is a minimum value. You may choose to set this higher.
- DB_BLOCK_SIZE = 8192

Review the following init<SID>.ora parameters and if necessary modify them for your environment:

DB_BLOCK_SIZE

The default DB_BLOCK_SIZE in the init.ora file is 8192 or 8K. For PeopleSoft ANSI databases this is more than adequate. For PeopleSoft Unicode databases (for example, CHARACTER_SET AL32UTF8), a DB_BLOCK_SIZE value of 8K is required.

NLS_LENGTH_SEMANTICS

Use these guidelines to set the NLS_LENGTH_SEMANTICS init<SID>.ora parameter:

- Set NLS_LENGTH_SEMANTICS=CHAR if you are installing a Unicode database with PeopleSoft application 9.2 on the current PeopleTools release.
- Set NLS_LENGTH_SEMANTICS=BYTE if you are installing any non-Unicode database (such as a Western European or Shift-JIS database).

If necessary, verify the PeopleSoft PeopleTools release for your PeopleSoft application using this SQL query:

```
select TOOLSREL from PSSTATUS
```

Unicode databases on PeopleSoft PeopleTools 8.48 and later, with PeopleSoft application 9.0 or later, use character length semantics. When character length semantics is used, a field of VARCHAR2(10) will store 10 characters. Prior to PeopleSoft PeopleTools 8.48 and PeopleSoft applications 9.0, byte length semantics was used, meaning a VARCHAR2(10) stored 10 bytes. If you are upgrading from a release before PeopleSoft PeopleTools 8.48 and PeopleSoft application 9.0 to one after 8.48 and 9.0, a database conversion is necessary for utilizing CHARACTER LENGTH SEMANTICS. This conversion process is covered in all PeopleSoft application 9.0 or higher upgrade paths.

It is very important that you set this parameter at the correct point during database creation. Database creation consists of running several scripts before loading the database with Data Mover, as follows:

- CREATEDB18.SQL
- UTLSPACE.SQL
- XXDDL.SQL
- DBOWNER.SQL
- PSROLES.SQL
- PSADMIN.SQL
- CONNECT.SQL

Set the parameter NLS_LENGTH_SEMANTICS at the beginning of database creation or right before the Data Mover load.

To do this, modify the init<SID>.ora to add the NLS_LENGTH_SEMANTICS parameter, and then shut down and restart the database instance.

Oracle Password

If you choose to use an Oracle Password file, create one using the ORAPWD utility, as illustrated in this example:

```
set ORACLE_SID=FDMO
orapwd file=$ORACLE_HOME\dbs\pwdtemp2.ora password=password entries=5
```

If you choose not to use an Oracle Password file, you must make one of the following changes to the init<SID>.ora file before running the CREATEDB18.SQL script:

- Remove the line beginning with remote_login_passwordfile, or add a comment character to the beginning as shown in this example:

```
#remote_login_passwordfile=EXCLUSIVE
```

- Set the parameter to *NONE*, as shown in this example:

```
remote_login_passwordfile=NONE
```

For more parameters that may be required for the init<SID>.ora file, consult My Oracle Support.

See Operating System, RDBMS & Additional Component Patches Required for Installation PeopleTools, My Oracle Support (search for the title and select your release).

Task 7A-1-6: Creating an INIT<SID>.ORA File (Multitenant Architecture)

If you are creating pluggable databases, set <SID> to the database name for the CDB (root database). This documentation uses *PDB_SERVICE_NAME* to refer to the PDB.

Create an init<SID>.ora file as described in Creating an INIT<SID>.ORA File, and append the following line in the init<SID>.ora:

```
enable_pluggable_database=true
```

Note. It is strongly advisable to set the value of the parameter `MEMORY_TARGET`, otherwise you may get the error "ORA-04031: unable to allocate *string* bytes of shared memory" (where *string* represents memory size) while creating the database. For information on the `MEMORY_TARGET` environment variable, see the Oracle Database documentation.

This recommendation applies to on-premises Oracle Databases.

Task 7A-1-7: Creating Target Directory Paths

You must create the directory path structure for the target directories referenced in the scripts that are executed by the database creation process. The referenced directories are not created on the fly, so they need to exist when referenced.

Note. If you want to use something other than the delivered directory paths, you need to modify the `CREATEDB18.SQL`, `UTLSPACE.SQL`, and `XXDDL.SQL` scripts in the `PS_HOME\scripts` directory, replacing the delivered paths with paths that are appropriate for your site installation prior to creating the database.

Here are some examples of directory path structure references.

- The delivered `CREATEDB18.SQL` script makes the following directory path structure references, where `<drive>` refers to the Microsoft Windows drive letter:

```
startup nomount pfile=%ORACLE_HOME%\database\init<SID>.ora
```

```
DATAFILE          '<drive>:\oradata\<SID>\system01.dbf'      SIZE  400M
LOGFILE           '<drive>:\oradata\<SID>\log01.dbf'          SIZE   70M,
                  '<drive>:\oradata\<SID>\log02.dbf'          SIZE   70M;
```

Note. Portions of the script have been omitted for clarity.

- The `init<SID>.ora` parameter file that is referenced in the `CREATEDB18.SQL` script makes the following directory path structure references.

Note. Portions of the `init<SID>.ora` parameter file have been omitted for clarity. These paths are inserted manually by the user creating the `init<SID>.ora` parameter file.

Control file references:

```
control_files = ("c:\apps\db\Oracle19c\oradata\ORC1\control01.ctl", "c:⇒
\apps\db⇒
\Oracle19c\oradata\ORC1\control02.ctl", "c:\apps\db\Oracle19c\oradata⇒
\ORC1⇒
\control03.ctl")
```

- The delivered `UTLSPACE.SQL` script makes the following directory path structure references:

Note. Portions of the script have been omitted for clarity.

```
CREATE TEMPORARY TABLESPACE          PSTEMP
TEMPFILE                              '<drive>:\oradata\<SID>\pstemp01.dbf'
SIZE 300M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 128K;
```

```
CREATE TABLESPACE          PSDEFAULT
DATAFILE                    '<drive>:\oradata\<SID>\psdefault.dbf'
SIZE 10M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE;
```

- The delivered XXDDL.SQL scripts make the following directory path structure references:

Note. This is a sample of the first several Create Tablespace SQL statements in the XXDDL.SQL script. The rest of the script has been omitted here for clarity.

```
CREATE TABLESPACE PSIMAGE DATAFILE '<drive>:\oradata\<SID>\psimage.dbf'
SIZE 8M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
/
CREATE TABLESPACE PSINDEX DATAFILE '<drive>:\oradata\<SID>\psindex.dbf'
SIZE 64M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
/
CREATE TABLESPACE PTAPP DATAFILE '<drive>:\oradata\<SID>\ptapp.dbf'
SIZE 4M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
/
```

Task 7A-1-8: Creating Target Directory Paths (Multitenant Architecture)

In addition to the directory structure discussed in the previous section, if you are creating a PDB, you must add the following target directories, where *<SID>* refers to the ORACLE_SID for the CDB, and *<PDB_SERVICE_NAME>* refers to the PDB database name.

- *<drive>:\oradata\<SID>\pdbseed*
- *<drive>:\oradata\<SID>\logs*
- *<drive>:\oradata\<SID>\<PDB_SERVICE_NAME>*

Task 7A-1-9: Setting the ORACLE_SID Environment Variable

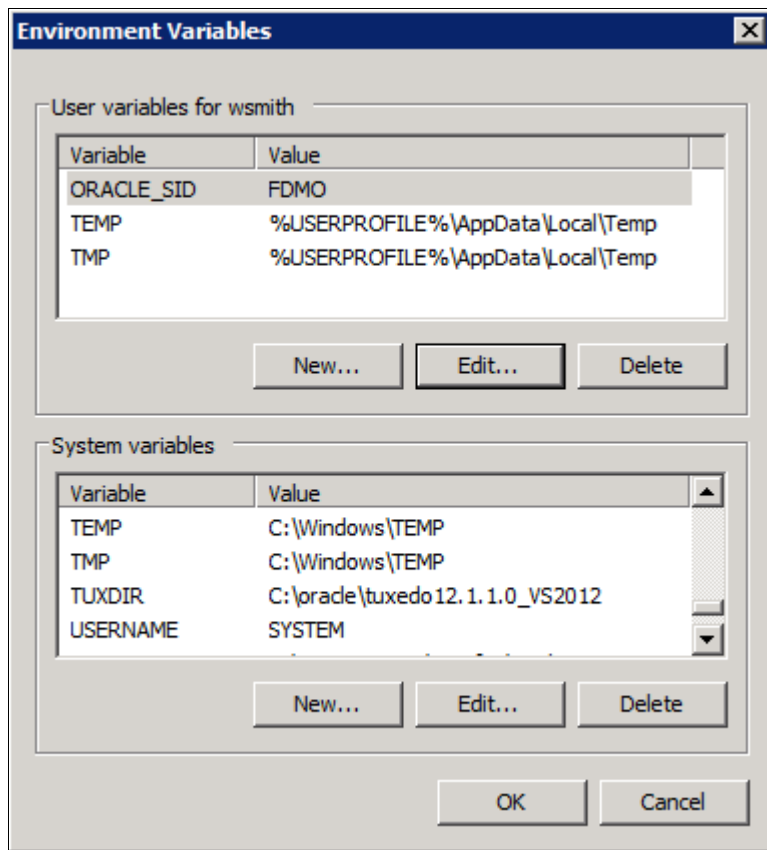
Make sure that you have the ORACLE_SID parameter set in your user or system environment variables.

Note. If you are creating pluggable databases, set ORACLE_SID to *<SID>* for the CDB (root database).

For example (the navigation may vary depending upon the operating system):

1. Open the Control Panel, then select System and Security, and System.
There are various methods of opening the Control Panel. For example, select the Start menu, Windows System, Control Panel.
2. Select Advanced system settings.
3. On the System Properties dialog box, select the Advanced tab.
4. Click Environment Variables.
Verify that the ORACLE_SID variable is set correctly.

This example shows the Environment Variables dialog box with the variable ORACLE_SID and value FDMO.



Setting the ORACLE_SID environment variable

Task 7A-2: Creating the Windows Service for the Database Instance

Before running the CREATEDB18.SQL script and all other scripts needed to create a database, you must first create a Microsoft Windows service. This is necessary because creating an instance on Windows requires creating a SERVICE using the Oracle ORADIM command. On UNIX, an Oracle SID is comprised of many different processes. On Microsoft Windows operating systems, an Oracle SID is run as a single Windows service and you need to be an administrator to create that service. You must also be part of the ORA_DBA group.

To create a Windows service:

1. Log on to your database server using an ID that is both a Server Administrator and part of the ORA_DBA administrative group.
2. To create the Windows service, open up a command prompt window.
3. Set the ORACLE_SID value to the Oracle database SID you are going to create, <SID> in this example:
Set ORACLE_SID=<SID>
4. If you choose to use an Oracle Password file, you need to create one using the ORAPWD utility, as illustrated in this example:

Set ORACLE_SID=<SID>


```
orapwd file=%ORACLE_HOME%\database\pwdtemp2.ora password=password⇒  
entries=5
```

Note. If you choose not to use an Oracle Password file, don't forget to comment out or remove the following parameter in the init.ora file:

```
remote_login_passwordfile=EXCLUSIVE
```

5. Use the ORADIM utility as directed in the following example to create the Windows Oracle Service associated with the SID you are creating:

```
oradim -new -sid <SID> -intpwd password -startmode  
auto -pfile %ORACLE_HOME%\database\init<SID>.ora
```

Task 7A-3: Using SQL Tools

When you execute PeopleSoft SQL scripts, use the appropriate tool included with your version of the RDBMS. You should use SQL*Plus, which is available with each version of the Oracle RDBMS that is supported by Oracle for PeopleSoft installations.

There are various ways to connect to the database with SQL*Plus. For information on using SQL*Plus, see the Oracle database documentation.

Task 7A-4: Editing Database Scripts (non-Multitenant)

This section discusses:

- Understanding Database Scripts
- Modifying Database Scripts

Understanding Database Scripts

The scripts required for creating the database scripts reside in the *PS_HOME*\scripts\nt directory on the file server. You need to edit a few of these scripts for your environment before you execute them and go on with the following procedures.

Typically, you need to modify the file system locations and the Oracle SID name.

Note. If you are creating a PDB, follow the instructions for modifying the database scripts in the section Editing Database Scripts (Multitenant Architecture) later in this chapter.

Task 7A-4-1: Modifying Database Scripts

To edit required database scripts:

Edit the scripts listed in this section to conform to your environment before you execute them, and then continue with the procedure to create a database. To edit the required database scripts, go to the *PS_HOME*\scripts\nt directory on the database or file server.

- CREATEDB18.SQL

Edit CREATEDB18.SQL to remove the REMARK from the following line:

```
REMARK startup nomount pfile=%ORACLE_HOME%\dbs\init<SID>.ora
```

Note. When editing CREATEDB18.SQL, if you are creating a Unicode database, you need to choose an Oracle character set supported by the PeopleSoft software. Ensure that the CHARACTER SET parameter in the CREATE DATABASE statement is set to either AL32UTF8 or UTF8.

- CONNECT.SQL.

Edit CONNECT.SQL only if you do not wish to use the default CONNECT_ID.

- UTLSPACE.SQL.

- `XXDDL.SQL`, where `XX` is a two-letter code for your product line or PeopleSoft PeopleTools, as listed in the table below:

Code	Description
CS	PeopleSoft Campus Solutions
CR	PeopleSoft Customer Relationship Management
LM	PeopleSoft Enterprise Learning Management
PF	PeopleSoft Enterprise Performance Management
EP	PeopleSoft Financials / Supply Chain Management
EA	PeopleSoft Financials / Supply Chain Management Argentina
EB	PeopleSoft Financials / Supply Chain Management Brazil
HC	PeopleSoft Human Capital Management
PA	PeopleSoft Portal Solutions
PT	PeopleSoft PeopleTools

Note. This is a complete list of available product lines for the current PeopleSoft PeopleTools release. Note that not all products go out on all PeopleSoft PeopleTools releases, so you may not see a script corresponding to every product line. In addition, some bolt-on products reference their own scripts within their application installation documentation. Search My Oracle Support to confirm that the product is supported for a specific release and database platform.

See My Oracle Support, Certifications.

Note. Compare the sizes of the PeopleTools tablespaces in `XXDDL.SQL` with the tablespaces in `PTDDL.SQL`. If the tablespace sizes in `PTDDL.SQL` are larger, increase the PeopleTools tablespace sizes in `XXDDL.SQL` to be at least as large as those in `PTDDL.SQL`.

Note. For multilanguage installs, you need to increase the size of the `PTTBL`, `PSIMAGE`, and `PSINDEX` tablespaces. Refer to the comments in the DDL scripts for further details regarding the incremental increase for each additional language.

Task 7A-5: Creating an Oracle Instance (non-Multitenant)

Run the `CREATEDB18.SQL` script from `SQL*Plus` to create an Oracle database.

To create an Oracle database:

1. Invoke `SQL*Plus` (`sqlplus`), connecting as `sysdba`.

```
sqlplus / as sysdba
```

2. Run the CREATEDB18.SQL script, using the following example as a guide:

```
sqlplus>@<PS_HOME>\scripts\nt\createdb18.sql
```

3. Supply the value for the SYS and SYSTEM Oracle user password when prompted.

Note. When editing CREATEDB18.SQL, if you are creating a Unicode database, you need to choose an Oracle character set that is supported by Oracle. Ensure that the CHARACTER SET parameter in the CREATE DATABASE statement is set to AL32UTF8 or UTF8.

Task 7A-6: Creating Catalog Views and Utility Tablespaces (non-Multitenant)

Run the UTLSPACE.SQL script from SQL*Plus to create catalog views and utility tablespaces, as follows:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.
2. Run the UTLSPACE.SQL script:

```
sqlplus>@<PS_HOME>\scripts\nt\utlspace.sql
```

Task 7A-7: Creating PS.PSDBOWNER Table (non-Multitenant)

Run the DBOWNER.SQL script from SQL*Plus to create the PS.PSDBOWNER table, as follows:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.
2. Run the DBOWNER.SQL script, using the following example as a guide:

```
sqlplus>@<PS_HOME>\scripts\nt\dbowner.sql
```

3. Supply the values for the DBOWNER user and password when prompted.

Task 7A-8: Creating Application-Specific Dbspaces and Tablespaces (non-Multitenant)

To create tablespaces for the product you are installing, run the appropriate XXDDL.SQL scripts, logged on as the system user, where XX stands for your product line or PeopleSoft PeopleTools, as listed in the table in the section Editing Database Scripts.

To create application-specific tablespaces:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.
2. Run the appropriate DDL scripts.

For example:

```
sqlplus>@<PS_APP_HOME>\scripts\nt\epddl.sql
```

Task 7A-9: Creating PeopleSoft Database Roles (non-Multitenant)

Run the PSROLES.SQL script from SQL*Plus to create the PeopleSoft database roles, as follows:

1. Log on to SQL*Plus, connecting as sysdba.

```
sqlplus / as sysdba
```

2. Run the PSROLES.SQL script:

```
sqlplus>@<PS_HOME>\scripts\nt\psroles.sql
```

Task 7A-10: Creating the PeopleSoft Database Owner ID (non-Multitenant)

This task creates the PeopleSoft database owner ID that will be referenced in future tasks. It grants the roles, created in the previous step, to this owner ID.

Note. You must run the PSADMIN.SQL script for each PeopleSoft database that you are going to create. When prompted for a default tablespace name, select PSDEFAULT if you are using PeopleSoft naming conventions, or your site equivalent if you are not using PeopleSoft naming conventions.

To create the PeopleSoft database owner ID:

1. Log on to SQL*Plus, connecting as the System user.

```
sqlplus system/password
```

2. Run the PSADMIN.SQL script.

```
SQLPLUS>@<PS_HOME>\scripts\nt\psadmin.sql
```

3. Supply values for Access ID, Access ID password, SYS/SYSTEM user password, and the default tablespace name when prompted.

See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for Access ID password requirements.

Task 7A-11: Setting Up Connect ID (non-Multitenant)

This section discusses:

- Understanding Connect ID
- Understanding Connect ID and the Login Process
- Creating the Connect ID

Understanding Connect ID

With the current PeopleSoft PeopleTools release, you establish connections to a database simply by using the connect ID, which allows you to associate multiple PeopleSoft operators to the same connect ID. The connect ID has the minimum privileges required to connect to the database—that is, it has only SELECT privileges on specific PeopleTools tables. After connection, PeopleSoft Security uses the operator ID to control access to objects in the database. The PeopleSoft sign-on process validates the connect ID on the server, rather than the operator ID. Connect ID simplifies database security maintenance. You don't have to maintain access for all PeopleSoft users, just for the connect ID.

The connect ID is granted access using the *Connect.sql* script. This script creates the connect ID and grants CREATE SESSION privilege to the connect ID. Access to the PeopleSoft database is then granted to the connect ID explicitly via the initial Data Mover load script generated by DBSETUP to include the following grants.

```
grant select on PSSTATUS to <CONNECT_ID>;
grant select on PSOPRDEFN to <CONNECT_ID>;
grant select on PSACCESSPROFILE to <CONNECT_ID>;
```

In order to work, the connect ID and connect password must be specified at the client Configuration Manager or the configuration file of any two-tier client accessing the application.

Understanding Connect ID and the Login Process

When logging into a PeopleSoft database in two-tier mode, the user enters a Database Name, User ID, and Password in the PeopleSoft Signon dialog box. This table lists the steps and related database SQL operations associated with logging in.

Log-in Processing Steps	Related Database SQL Operations
The access to the PeopleSoft Database is established with the Connect ID not the User ID.	Connect=PT84/<ConnectID>/<ConnectIDPassword>
Check PSSTATUS	SELECT OWNERID, TOOLSREL, LASTREFRESHDTM, LASTCHANGEDTTM FROM PSSTATUS
Validate the User ID and Password	SELECT VERSION, OPERPSWD, ENCRYPTED, SYMBOLICID, ACCTLOCK FROM PSOPRDEFN WHERE OPRID =:1
Get the Access ID and Password	SELECT ACCESSID, ACCESSPSWD, ENCRYPTED FROM PSACCESSPROFILE WHERE SYMBOLICID =:1
Disconnect Connect ID	Disconnect
Login using the Access ID	Connect=PT84/ACCESSID/ACCESSPWD

At this point, access is governed by PeopleSoft security, which determines what applications a specific user ID has access to.

Task 7A-11-1: Creating the Connect ID

To create connect ID:

1. Log on to SQL*Plus as the System user.
2. Run the connect.sql script.

```
sqlplus>@<PS_HOME>\scripts\nt\connect.sql
```
3. Supply values for the connect ID and connect ID password when prompted.
 The connect ID password must be between 6 and 30 characters with no forward-slash characters (/).
4. The script will then create the connect ID and grant it CREATE Session privileges only.

Task 7A-12: Editing Database Scripts (Multitenant Architecture)

Edit the scripts listed in this section for your environment before you execute them and continue with the procedure to create a database. You can locate the *XXDDL.SQL* scripts in the *PS_HOME\scripts\nt* directory on the file server. The remainder of the scripts listed here reside in the *PS_HOME\scripts\nt\pdb* directory on the file server.

- CONNECT.SQL
No changes are required.
 - CREATEDB18CDB.SQL
 - Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
 - Replace the <drive> variable with the Microsoft Windows drive letter, for example C or D.
-

Note. When editing CREATEDB18CDB.SQL, if you are creating a Unicode database, you need to choose an Oracle character set supported by the PeopleSoft software. Ensure that the CHARACTER SET parameter in the CREATE DATABASE statement is set to AL32UTF8.

- CREATEPDB.SQL
 - Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
 - Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
 - Replace the <drive> variable with the Microsoft Windows drive letter, for example C or D.
- DBOWNER.SQL
 - Replace the <MANAGERPWD> variable with the System user password.
 - Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
- PSADMIN.SQL
 - Replace the <MANAGERPWD> variable with the System user password.
 - Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
- PSROLES.SQL
 - Add this command after the `spool psroles.log` line.

```
ALTER SESSION SET CONTAINER = <PDB_SERVICE_NAME>;
```
 - Replace the <PDB_SERVICE_NAME> variable in the command with the PDB database name.

- PSROLES2.SQL

Replace the <PDB_SERVICE_NAME> variable with the PDB database name.

- PTDDL.SQL

- Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
- Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
- Replace the <drive> variable with the Microsoft Windows drive letter, for example C or D.
- Remove the REMARK from the line for Autoextend.

- UTLSPACE.SQL

- Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
- Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
- Replace the <drive> variable with the Microsoft Windows drive letter, for example C or D.

- XXDDL.SQL, where XX is a two-letter code for your PeopleSoft Application product line.

See the section Editing Database Scripts for a table listing the codes with the PeopleSoft product lines.

- Replace <SID> with the combined name <SID>/<PDB_SERVICE_NAME>.

In this combined name, specify ORACLE_SID, that is, the CDB database name, for <SID>, and the PDB database name for <PDB_SERVICE_NAME>.

- Replace the <drive> variable with the Microsoft Windows drive letter, for example C or D.
- Remove the REMARK from all the lines for Autoextend.

After you edit the scripts, continue with the steps in this chapter to run these scripts and to run the Data Mover import.

Task 7A-13: Creating an Oracle Instance (Multitenant Architecture)

This section discusses:

- Creating a Root Container Database
- Creating a PDB

Task 7A-13-1: Creating a Root Container Database

To create a (root container database) CDB for pluggable databases:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba:

```
sqlplus / as sysdba
```

2. Run the createdb18cdb.sql script, using the following example as a guide:

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\createdb18cdb.sql
```

3. Exit from SQL*Plus.
4. Open the script ptperlcat.bat for editing, and make the following changes for PDBs:
 - Replace the <SID> variable with ORACLE_SID
 - Replace the <drive> variable with the Microsoft Windows drive letter.

5. Run the script `ptperlcat.bat`.

This script runs the scripts `catalog.sql` and `catproc.sql`.

6. To verify that the database was created successfully, log in to SQL*Plus again and run the following command

```
select name,cdb from v$database;
```

If the value of CDB is "YES" in the response, it means that the database with ID <SID> (FSDMO in this example) can be used as a pluggable database:

NAME	CDB
-----	---
FSDMO	YES

Task 7A-13-2: Creating a PDB

To create a PDB:

1. Invoke SQL*Plus (`sqlplus`), connecting as `sysdba`:

```
sqlplus / as sysdba
```

2. Run the `createpdb.sql` script, using the following example as a guide:

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\createpdb.sql
```

You should see a message "Pluggable database created".

3. Execute the following command:

```
sqlplus>select name, open_mode from v$pdb;
```

The following response indicates that the PDB is open and is ready to use:

NAME	OPEN_MODE
-----	-----
PDB\$SEED	READ ONLY
PDB_SERVICE_NAME	READ WRITE

The `PDB_SERVICE_NAME` is created by the Oracle server for a new PDB.

4. To verify the service name for the PDB, execute the following command:

```
lsnrctl status;
Service "PDB_SERVICE_NAME" has 1 instance(s).
Instance "PDB_SERVICE_NAME", status READY, has 1 handler(s) for this
service.
```

5. Add an entry for the PDB service name to the `tnsnames.ora` file.

This example shows a portion of the `tnsnames.ora` file. Replace <`PDB_SERVICE_NAME`> with the PDB database name:

```
<PDB_SERVICE_NAME> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = servername.com) (PORT = 1521))
    )
    (CONNECT_DATA =
```

```

        (SERVICE_NAME = <PDB_SERVICE_NAME>)
    )
)

```

6. Log in to the PDB in SQL*Plus with the following command:

```

sqlplus / as sysdba
SQL> ALTER SESSION SET CONTAINER = <PDB_SERVICE_NAME>

```

Task 7A-14: Creating Catalog Views and Utility Tablespaces (Multitenant Architecture)

To create catalog views and utility tablespaces:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.

```
sqlplus / as sysdba
```

2. Run the UTLSPACE.SQL script:

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\utlspace.sql
```

Task 7A-15: Creating PS.PSDBOWNER Table (Multitenant Architecture)

Run the DBOWNER.SQL script from SQL*Plus to create the PS.PSDBOWNER table, as follows:

1. Log on to SQL*Plus (sqlplus), connecting as the System user to the PDB.

The PDB name in this example is <PDB_SERVICE_NAME>:

```
sqlplus system/password@<PDB_SERVICE_NAME>
```

2. Run the DBOWNER.SQL script, using the following example as a guide:

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\dbowner.sql
```

3. Supply the values for the DBOWNER user and password when prompted.

Task 7A-16: Creating Application-Specific Dbspaces and Tablespaces (Multitenant Architecture)

To create tablespaces for the product you are installing, run the appropriate XXDDL.SQL scripts, logged on as the system user, where XX stands for your product line or PeopleSoft PeopleTools, as listed in the table in the section Editing Database Scripts (Multitenant Architecture).

To create application-specific tablespaces:

1. Log on to SQL*Plus (sqlplus), connecting as the System user to the PDB.

The PDB name in this example is <PDB_SERVICE_NAME>:

```
sqlplus system/password@<PDB_SERVICE_NAME>
```

2. Run the appropriate DDL scripts.

For example, for PeopleSoft Financials/Supply Chain Management:

```
sqlplus>@<PS_APP_HOME>\scripts\nt\epddl.sql
```

Task 7A-17: Creating PeopleSoft Database Roles (Multitenant Architecture)

To create the roles for your PeopleSoft database:

1. Log on to SQL*Plus, connecting as sysdba.

```
sqlplus / as sysdba
```

2. Run the PSROLES.SQL script:

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\psroles.sql
```

3. Run the PSROLES2.SQL script:

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\psroles2.sql
```

Task 7A-18: Creating the PeopleSoft Database Owner ID (Multitenant Architecture)

This task creates the PeopleSoft database owner ID that will be referenced in future tasks. It grants the roles, created in the previous step, to this owner ID.

Note. You must run the PSADMIN.SQL script for each pluggable database that you are going to create. When prompted for a default tablespace name, select PSDEFAULT if you are using PeopleSoft naming conventions, or your site equivalent if you are not using PeopleSoft naming conventions.

To create the PeopleSoft database owner ID:

1. Log on to SQL*Plus, connecting as the System user to the PDB.

The PDB name in this example is <PDB_SERVICE_NAME>.

```
sqlplus system/manager@<PDB_SERVICE_NAME>
```

2. Run the PSADMIN.SQL script.

```
sqlplus>@<PS_HOME>\scripts\nt\pdb\psadmin.sql
```

3. Supply values for Access ID, Access ID password, SYS/SYSTEM user, and the default tablespace name when prompted.

See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for Access ID password requirements.

Task 7A-19: Setting Up Connect ID (Multitenant Architecture)

This section discusses:

- Understanding Connect ID
- Understanding Connect ID and the Login Process
- Creating the Connect ID

Understanding Connect ID

With the current release of PeopleSoft PeopleTools, you establish connections to a database simply by using the connect ID, which allows you to associate multiple PeopleSoft operators to the same connect ID. The connect ID has the minimum privileges required to connect to the database—that is, it has only SELECT privileges on specific PeopleTools tables. After connection, PeopleSoft Security uses the operator ID to control access to objects in the database. The PeopleSoft sign-on process validates the connect ID on the server, rather than the operator ID. Connect ID simplifies database security maintenance. You do not have to maintain access for all PeopleSoft users, just for the connect ID.

The connect ID is granted access using the *Connect.sql* script. This script creates the connect ID and grants CREATE SESSION privilege to the connect ID. Access to the PeopleSoft database is then granted to the connect ID explicitly through the initial Data Mover load script generated by DBSETUP to include the following grants.

```
grant select on PSSTATUS to <CONNECT_ID>;
grant select on PSOPRDEFN to <CONNECT_ID>;
grant select on PSACCESSPROFILE to <CONNECT_ID>;
```

In order to work, the connect ID and connect password must be specified at the client Configuration Manager or the configuration file of any two-tier client accessing the application.

Understanding Connect ID and the Login Process

When logging into a PeopleSoft database in two-tier mode, the user enters a Database Name, User ID, and Password in the PeopleSoft Signon dialog box. This table lists the steps and related database SQL operations associated with logging in.

Log-in Processing Steps	Related Database SQL Operations
The access to the PeopleSoft Database is established with the Connect ID not the User ID.	Connect=PT84/<ConnectID>/<ConnectIDPassword>
Check PSSTATUS	SELECT OWNERID, TOOLSREL, LASTREFRESHDTM, LASTCHANGEDTTM FROM PSSTATUS
Validate the User ID and Password	SELECT VERSION, OPERPSWD, ENCRYPTED, SYMBOLICID, ACCTLOCK FROM PSOPRDEFN WHERE OPRID =:1
Get the Access ID and Password	SELECT ACCESSID, ACCESSPSWD, ENCRYPTED FROM PSACCESSPROFILE WHERE SYMBOLICID =:1
Disconnect Connect ID	Disconnect
Login using the Access ID	Connect=PT84/ACCESSID/ACCESSPWD

At this point, access is governed by PeopleSoft security, which determines what applications a specific user ID has access to.

Task 7A-19-1: Creating the Connect ID

To create connect ID:

1. Log on to SQL*Plus as the System user to the PDB.
The PDB name in this example is `<PDB_SERVICE_NAME>`.
`sqlplus system/manager@<PDB_SERVICE_NAME>`
2. Run the connect.sql script.
`sqlplus>@<PS_HOME>\scripts\nt\pdb\connect.sql`
3. Supply values for the connect ID and connect ID password when prompted.
The connect ID password must be between 6 and 30 characters with no forward-slash characters (/).
4. The script will then create the connect ID and grant it CREATE Session privileges only.

Task 7A-20: Updating Connection Information

You must update connection information on the client. To do this, update the connection information in TNSNAMES.ORA on your client to reflect your Database Name, Oracle SID, and Server Name.

Note. If you are creating pluggable databases, create an entry for the CDB, using the SID. Create another entry for the PDB, using the PDB_SERVICE_NAME.

Task 7A-21: Creating Data Mover Import Scripts

This section discusses:

- Understanding Data Mover Import Scripts
- Working with Multilingual Databases
- Running Database Setup to Create Data Mover Import Scripts

Understanding Data Mover Import Scripts

The Data Mover Import scripts are used to populate the PeopleSoft database with data. You use the Database Setup feature of the PeopleSoft Data Mover utility to create the Data Mover import scripts.

Note. This task and the next one (Running Data Mover Import Scripts) should be executed from a Microsoft Windows client machine. Before you can load PeopleSoft data from a Microsoft Windows client machine, you need to install PeopleSoft PeopleTools and your PeopleSoft Application to the Microsoft Windows client machine and be sure to select File Server and Database Server.

To complete the database creation procedure you must supply information on various authorization IDs and passwords, including Access ID, Connect ID, Symbolic ID, and User IDs. Before beginning this procedure, review the information in the section Planning Database Creation and make a note of the authorization information for your environment. For PeopleSoft PeopleTools 8.53 and later releases, the user profiles in PeopleTools demo databases are delivered disabled. During the procedure to create Data Mover import scripts you will choose whether to enable the delivered user profiles, and how to assign passwords for the profiles. In addition, you will supply several passwords that were previously provided as defaults. Be sure to note the passwords that you supply, as they will be needed for subsequent installation procedures.

See the information on administering user profiles in the *PeopleTools: Security Administration* product documentation.

See "Preparing for Installation," Planning Database Creation.

Task 7A-21-1: Working with Multilingual Databases

All PeopleSoft releases are shipped with English as the database's base language. Therefore when selecting components for the Data Mover Import script, you must select the English components in addition to any other languages you are installing. After the installation is complete, you can change the database's base language to the language that you plan to use most frequently, or leave the base language as English.

Read the section Planning Multilingual Strategy for information on installing multiple languages and changing your base language.

See "Preparing for Installation," Planning Multilingual Strategy.

If you are creating a database and want to load Oracle-provided translations for non-English languages, you must load English (ENG) in addition to the foreign language components.

If you are creating a non-Unicode database, you must ensure that the languages you select are all supported by the character set you used to create your database.

Note. During the database setup process, you have the option to select the database's base language. Select the language that you plan to use most frequently. If the database's base language is different than that set in this database setup process, generate the `SWAP_BASE_LANGUAGE` command in the Data Mover Import script to swap the language.

See *PeopleTools: Global Technology*.

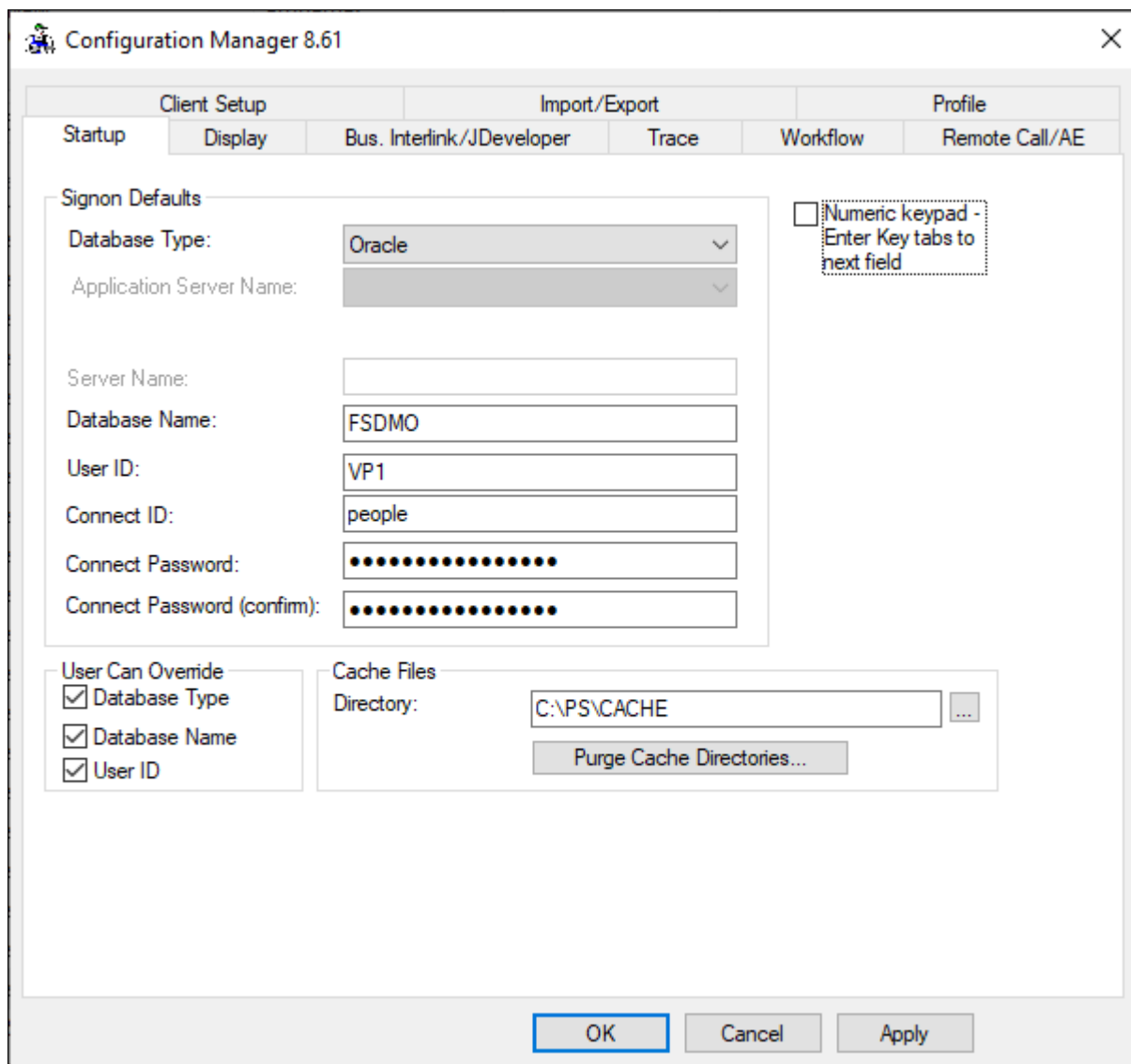
Task 7A-21-2: Running Database Setup to Create Data Mover Import Scripts

To create the import scripts using Data Mover:

See *PeopleTools: Data Management*.

1. Run Configuration Manager by using one of the following methods:
 - On Microsoft Windows, access the Apps screen and navigate to PeopleTools 8.61, Configuration Manager.
 - Run `PS_HOME\bin\client\winx86\pscfg.exe`.

2. Verify in the Signon Defaults on the Startup page that the Database Type of Oracle is selected, as shown in the example.



Startup tab on the Configuration Manager dialog box

3. Verify that the connect ID is correct.
If you accepted all defaults, the connect ID is people. Enter and confirm a value for the connect ID password.
4. If the *PS_APP_HOME* location is not the same as *PS_HOME*, make sure it is set in Configuration Manager, as follows:
 - a. In Configuration Manager, select Profile.
 - b. Highlight the Default Profile and select Edit.
 - c. On the Edit Profile dialog box, select the Process Scheduler tab.
 - d. Verify that the *PS_APP_HOME* value is correct.
See "Setting Up the Install Workstation," Editing the Default Profile.
5. Run Data Mover by using one of these methods:

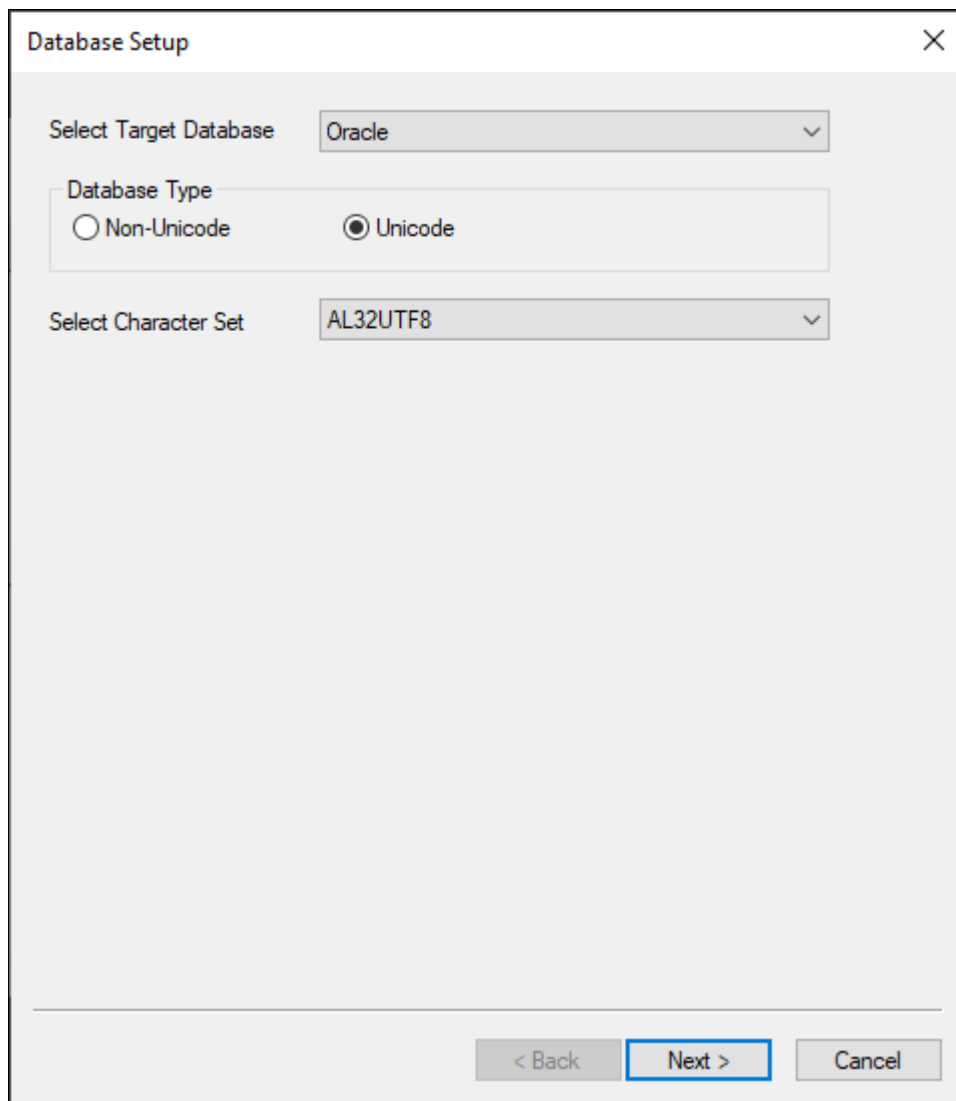
- On Microsoft Windows systems, access the Apps screen or Start menu, and navigate to PeopleTools 8.61, Data Mover.
 - Run `PS_HOME\bin\client\winx86\psdmt.exe`.
6. Log on using the access ID as the user id to start Data Mover in bootstrap mode; this should be the user that creates the database.

See Checking the Log Files and Troubleshooting, Running Data Mover.

Note. You must limit the access ID to eight characters or less. See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for access ID password requirements.

7. Select File, Database Setup.

The Database Setup dialog box appears, as shown in this example:



Selecting target database and character set on the Database Setup dialog box

8. Select your database platform from the Select Target Database drop-down list.
9. Select your database type, Unicode or non-Unicode, and character set.

Choose the Database Type—Unicode or Non-Unicode—that you selected in the section on multilingual

strategy. If you choose Non-Unicode, select the character set that you decided upon in that section from the drop-down list.

Note. When you select a non-Unicode character set, only the characters within that character set can be stored in your database. Oracle recommends that you create your database using Unicode.

See "Preparing for Installation," Planning Multilingual Strategy.

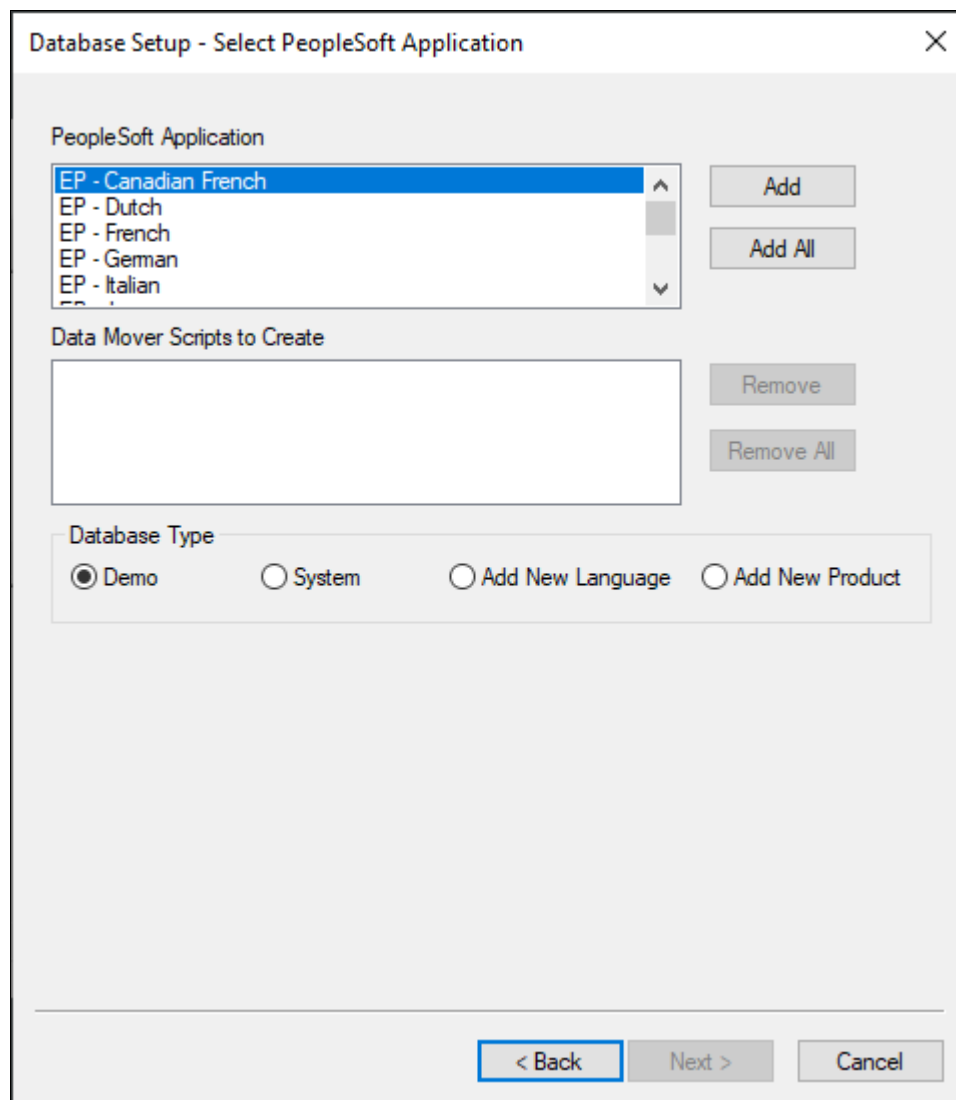
The character set you select here must match the character set you used to create your database in the task Creating an Oracle Database. If you choose to create a Unicode database, you must have created your instance using the AL32UTF8 or UTF8 character set in the step Creating an Oracle Instance.

Note. The database setup does not actually modify the character set of your database. That is done by the DBA during database creation. The database setup process only creates customized scripts based on your selection.

10. Select the Demo or System radio button, depending on which type of PeopleSoft database you are installing.

11. Select the products for which you want to create a Data Mover script from the PeopleSoft Application list box, and move the items you have selected into the Data Mover Scripts to Create list box by clicking on the Add or Add All button.

The dialog box lists the available languages for your installation.



Selecting languages on the Database Setup dialog box

If you installed the multilanguage software, each application will be listed several times, once for each language. For example, if there are both PeopleSoft PeopleTools and PeopleSoft application translated database objects under *PS_HOME/data* and *PS_APP_HOME/data*, the list will include both.

If you are installing languages other than English, make sure to select the appropriate language data files for each application you select in English. This will load the translated database objects.

See "Preparing for Installation," Planning Multilingual Strategy.

If you are installing an application in any language other than English, you must also select the English component of the application. For example, if you select PeopleSoft Fin/SCM - French, you must also select PeopleSoft Fin/SCM Database - US English. This ensures that you install the necessary base-language components.

12. Set the database parameters described below and then click Finish.

Database Setup - Database Parameters

Database Parameters

Database Name: FSDMO

Symbolic ID: SYSADM1

Access ID: SYSADM

Access Password: •••••

Connect ID: PEOPLE

Application Server ID: VP1

Application Server Password: •••

Web Server ID: PTWEBSERVER

Web Server Password: ••••••••

☒ Enable All Profiles ☒ Set Global Password

Global Password: ••••••••

< Back Next > Cancel

Specifying Database Parameters on the Database Setup dialog box

- **Database Name:** Specify the database name that users will enter on the PeopleSoft signon screen. This corresponds to the owner ID. It can be up to eight characters long and must be entered in uppercase.
- **Symbolic ID:** This is used as the key to retrieve ACCESSID and ACCESSPSWD from PSACCESSPROFILE.
For initial installation set it equal to the Database Name. The symbolic ID cannot be longer than eight characters.
- **Access ID:** Specify the user you used to create the database. Limit this to eight characters or less.
This value is case sensitive. You will use the access ID every time you want to sign on to Data Mover in bootstrap mode. Limit this to eight characters or less.
- **Access Password:** This is the PeopleSoft access ID password. See "Preparing for Installation " for access ID password requirements.
- **Connect ID:** For Oracle, this is the connect ID that is used for the initial connection to Oracle. This ID is used for connecting to the database. Limit this to eight characters or less.

- *Application Server ID*: The Application Server ID has privileges to start or shut down the Application Server domain. It is also used during the Application Server configuration. Enter one of the delivered PeopleSoft user IDs.
- *Application Server Password*: Specify a password for the Application Server ID.
- *Web Server Password*: Specify a password for the Web Server ID.

The default Web Server ID, as displayed in the example, is PTWEBSERVER. The Web Server ID, also referred to in this documentation as Web Profile User ID, is used to access the web profile information from the database through the Application Server Jolt service.

- *Enable All Profiles*: Select this option to leave the User profiles (other than the Application Server profile and the Web Server User profiles) unchanged.

If you do not select this option, all of the User profiles in the database, with the exception of the Application Server profile and Web Server User profiles, remain disabled as delivered.

- *Set Global Password*: If you enabled all profiles, you can choose to set the same password for all of the profiles.

Note. This option is enabled when the Enable All Profiles option is selected, as shown in the example.

- *Global Password*: Enter the password to be used for all user profiles.

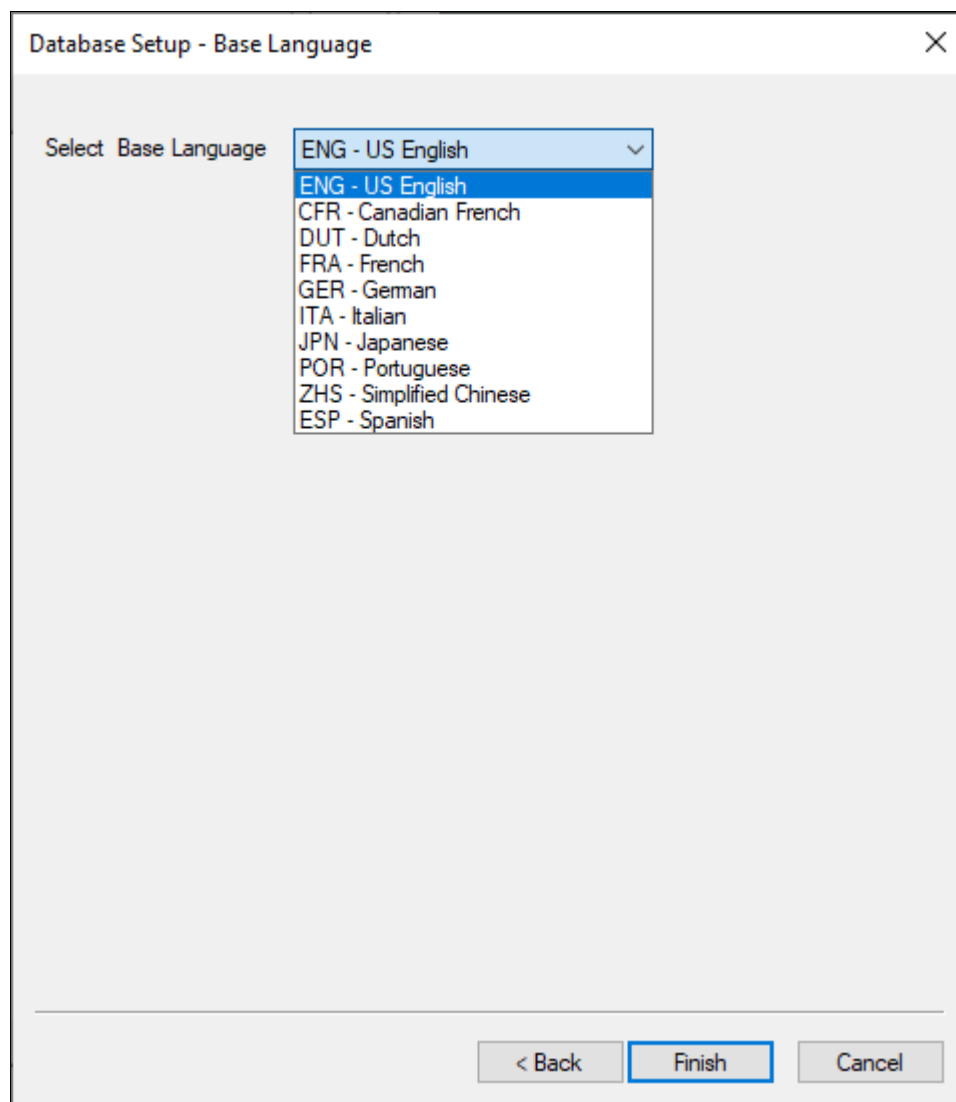
Note. This option is enabled when the Set Global Password option is selected, as shown in the example.

13. Select your database's base language.

Note. This window appears only if you selected one or more languages other than English in the previous window. If you see this window it is critical to select the correct base language. When you select a base language other than ENG, DBSETUP generates the Data Mover import script with the `SWAP_BASE_LANGUAGE` command to swap the base language.

See "Preparing for Installation," Planning Multilingual Strategy.

See Working with Multilingual Databases.



Selecting a base language in the Database Setup dialog box

Use the following information in making your selection:

- If you have not already done so, read the earlier section on multilingual strategy before determining whether to install multiple languages and whether to change your base language.
- If you are creating a database and want to load Oracle-provided translations for non-English languages, you must load English (ENG) in addition to the foreign language components.
- All PeopleSoft releases are shipped with English as the database's base language. Therefore when

selecting components for the Data Mover Import script, you must select the English components in addition to any other languages you are installing. During the Database Setup wizard, you need to select the database's base language that you plan to use most frequently. If your database's base language is different than the Database Setup wizard generate the `SWAP_BASE_LANGUAGE` command in the Data Mover Import script to swap the language.

14. Click Finish.

Note. If the Database Setup - Base Language window does not appear, click Finish after supplying the parameters on the Database Setup - Database Parameters window.

At this point you are in Data Mover, with the DMS script you just created ready to run.

See Also

PeopleTools: Data Management

PeopleTools: Security Administration, "PeopleSoft Authorization IDs"

Task 7A-22: Running Data Mover Import Scripts

This section discusses:

- Understanding Data Mover Import Scripts
- Populating Tables in the PeopleSoft Database

Understanding Data Mover Import Scripts

Now you will run the Data Mover scripts (DMS) that you created in the preceding task to import the data for your PeopleSoft database. The Data Mover script creates either a system (SYS) or a demo (DMO) database.

When you initially logged onto Data Mover to create the DMS scripts, you logged in with the Access ID and password, using bootstrap mode. You need to use bootstrap mode to run the Data Mover import script, because there are not yet any PeopleSoft security tables in the database.

When you start Data Mover in bootstrap mode, the word "BootStrap" appears in the Data Mover status bar.

See *PeopleTools: Data Management*.

See Also

Checking the Log Files and Troubleshooting, Running Data Mover

Task 7A-22-1: Populating Tables in the PeopleSoft Database

To populate tables in the PeopleSoft database:

1. The DMS import script for your application will contain hard-coded file names for log files and data files.
Modify the DMS script if you have moved any files from the delivered directories or want to write log files to another location than that specified in the script.
2. Select File, Run to execute the script.

When you run the script, Data Mover typically performs the following actions:

- **IMPORT ***
Create all the PeopleTools and application tables with their indexes.
- **ENCRYPT_PASSWORD ***
Encrypt security information for the database.
- **CREATE_TRIGGER ***
Create application required triggers.
- **REPLACE_VIEW ***
Create PeopleSoft views.
- **CREATE_TEMP_TABLE ***
Create PeopleSoft temporary tables.

Task 7A-23: Cleaning Up Orphaned Language Data

Perform this task if you are a Multilingual customer and are installing non-English languages. This task assumes that you have loaded the necessary language files. If you have not yet loaded the language files, follow the instructions in the Global Technology product documentation.

See *PeopleTools: Global Technology*, "Adding Oracle-Provided Translations."

The Application Engine program PTIACLNLNGCA removes any orphaned related language objects that do not have a matching base language object.

Run the PTIACLNLNGCA application engine program. From the command line utility, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP=>  
<password> -R <run_control> -AI PTIACLNLNGCA -FP <log_path>
```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <oprid> respectively. However, be aware that <password> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <password> that is the password associated with the <oprid>. For <log_path>, specify the path where you want the log file for the application engine program to be generated, such as C:\temp\.

Task 7A-24: Checking the Log Files and Troubleshooting

This section discusses:

- Checking the Log Files
- Running Data Mover
- Troubleshooting
- Improving Performance

Task 7A-24-1: Checking the Log Files

After running each Data Mover script, examine the .LOG files to make sure that all the commands were executed successfully. The log files are located in the directory you specified in the Data Mover script.

See "Setting Up the Install Workstation," Editing the Default Profile.

Task 7A-24-2: Running Data Mover

Use one of these methods to run Data Mover.

Microsoft Windows

- Depending upon your Microsoft Windows operating system, select PeopleTools 8.61, Data Mover from the Start, Programs list or the Apps screen to run a graphical user interface (GUI mode).
- Run `PS_HOME\bin\client\winx86\psdmt.exe` from the command line.

If you use the access ID that you specified during the database configuration to log on, you log on in "bootstrap mode." When you start Data Mover in bootstrap mode, the word "BootStrap" appears in the Data Mover status bar.

If you use a valid PeopleSoft Operator ID, such as PS for Human Capital Management or VP1 for Financials/Supply Chain Management, you log on in "user mode." In this mode, no designation appears in the Data Mover status bar.

See Also

PeopleTools: Data Management

Task 7A-24-3: Troubleshooting

If the DMS script has stopped midway (this can happen for a number of reasons) you need to edit the script and start again.

To edit and restart the DMS script:

1. Determine the record that was being imported (that is, which IMPORT command was running) when the script stopped, and use the following guidelines to edit and rerun the DMS scripts.

When building a DMO database or a multilingual database, adding the SET START statement can be tricky because the Data Mover script used to load the database will include more than one IMPORT statement. The key is to view the log files and determine which IMPORT section of the script Data Mover failed on.

- If the failure occurred during the first IMPORT statement, add the SET START statement before the first IMPORT *; statement.
- If the failure occurred during a subsequent IMPORT statement, comment out all statements preceding the IMPORT *; statement where the failure occurred and add the SET START statement before the IMPORT *; statement of the section in which the failure occurred.
- *This is very important:* If you see any "unique index constraint" error messages in the "Building required indexes" section, your IMPORT script failed during a subsequent IMPORT but the SET START statement was added to the first IMPORT. In this situation, you can run the Data Mover script in its originally generated form, with only one modification. In the first IMPORT section, change the statement "IMPORT *;" to "REPLACE_DATA *;". This will delete all the data in the tables, and re-import it. This process will take some time to run, and you will need to separately create each of the indexes that failed.

2. Run Data Mover as previously described.

See Running Data Mover.

The PeopleSoft Logon dialog box appears.

3. Log on using the Access ID to start Data Mover in *bootstrap mode*.

Use the Access ID you specified when you created the Data Mover scripts with the Database Setup utility.

The input window should display the DMS import script for the database. The script has the format <dbname>ora.dms.

4. If necessary, select File, Open, and browse to the *PS_APP_HOME*/scripts directory to find the appropriate DMS script.
5. Add the following line before the offending IMPORT command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;
```

<RECORD NAME> is the name of the record that failed. Make sure to review the Data Mover log file to see where the script failed and locate the last record that imported successfully. The SET START command will begin the Data Mover import at the specified record name.

Note. It is a good idea to change the name of the log file in the script before each attempt at running it. This ensures that you have a separate log file for each attempt, if you run the import more than once.

For example, if the script stops and the table is partially inserted with a message similar to this one:

```
Importing PSPNLFIELD
Rows inserted into PSPNLFIELD

3000
```

First drop the partially inserted table (for example, record) by using the DROP TABLE command, and then restart Data Mover at the record that failed using the SET START command and continue the Data Mover import. This can be done in a single pass.

Add the following lines before the offending IMPORT *; command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;
DROP TABLE <RECORD NAME>;
```

For <RECORD NAME>, specify the name of the record that failed. The SET START statement will begin the Data Mover import at the specified <RECORD NAME>.

Example of the original script:

```
REM - PeopleSoft Database - US English
/
SET LOG epengs.log;
SET INPUT epengs.db;
SET COMMIT 30000;
SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE ON;
IMPORT *;
```

Example of script after modification, with changes in bold font:

```
REM - PeopleSoft Database - US English
/
SET LOG epengs2.log;
SET INPUT epengs.db;
SET COMMIT 30000;
```

```
SET NO VIEW;  
SET NO SPACE;  
SET NO TRACE;  
SET UNICODE ON;  
SET START PSPNLFIELD;  
DROP TABLE PSPNLFIELD;  
IMPORT *;
```

For the DROP statement, for records with a recname without a leading PS, add PS_ to the beginning of the recname; otherwise the table will not be found. For example, PS_<RECNAME>.

6. Restart the script (File, Run Script).

Task 7A-24-4: Improving Performance

The following tips can help you save time when running the Data Mover scripts:

- Run Data Mover from the fastest workstation available.
- Run Data Mover on the database server.
- Run only a single instance of Data Mover, and do not have any other applications running during the import.
- In the PeopleSoft Configuration Manager, turn off all trace options.

Tracing during a DMS load will add considerable time to the process.

- Copy the database file over to the workstation so that Data Mover can access it locally instead of over the network.
- Run Data Mover on the database server with the .db or .dat file located locally.

If you are comfortable changing the options available for an Oracle instance, you might consider "tuning" the instance used for the import. Some of these options are appropriate only during the import, so you may not want to keep them in effect after the import is complete.

For best performance during a Data Mover import, set these options as follows:

- Increase the number of database blocks.
- Use an 8K Oracle block size.
- Use very large rollback segments.
- Increase the size of the UNDO tablespace or the number of UNDO Segments.
- Use asynchronous read and write.
- Use multiple db_writers.

Task 7A-25: Changing the Base Language

The information in the earlier task Planning Multilingual Strategy will help you determine whether you should change your base language, and lists the currently supported languages.

See "Preparing for Installation," Planning Multilingual Strategy.

See PeopleTools Certifications — Supported Languages, My Oracle Support (search for article name).

This task applies only if your users will be operating PeopleSoft applications *primarily* in one particular language other than English. It gives a performance boost to the language you designate as the base language, but requires more administrative overhead than leaving English as the base language. The details are spelled out in the *PeopleTools: Global Technology* product documentation.

Chapter 7B

Creating a Database on UNIX

This chapter discusses:

- Understanding the Database Configuration Wizard
- Fulfilling PeopleSoft Database Configuration Wizard Prerequisites
- Using the Database Configuration Wizard in Silent Mode
- Cleaning Up Orphaned Language Data
- Checking the Log Files and Troubleshooting

Understanding the Database Configuration Wizard

The Database Configuration Wizard is a tool designed to simplify your PeopleSoft database installation. When you run the Database Configuration Wizard, Data Mover is also running silently.

See *PeopleTools: Data Management*.

Important! Do not forget that application-specific installation steps are provided in a separate document specific to the application. For instance, if you are performing PeopleSoft CRM installation, you need both this PeopleSoft PeopleTools installation guide and you also need any additional instructions provided by CRM. My Oracle Support provides installation guides that are specific to your application.

See My Oracle Support, (search for "installation," the application name, and release).

This section includes information on creating an Oracle Container Database (CDB) and Pluggable Databases (PDBs). The sections specific to creation of CDBs and PDBs are labelled "(Multitenant Architecture)."

You also have the option of using a manual process for creating a PeopleSoft database, instead of using the Database Configuration Wizard. The manual process is mandatory for some configurations.

Important! The Database Configuration Wizard cannot be used with Oracle RAC. To create a database with this database platform, you must use the manual method of creating a database.

See the information on setting up the PeopleSoft installation with Oracle RAC in the *PeopleTools: Data Management* product documentation.

See Creating a Database Manually on UNIX.

After you complete the tasks in this chapter, read the chapter "Completing the Database Setup." Depending upon your environment, you may not need to carry out every task in that chapter. However it is important that you evaluate the requirements and perform the necessary tasks.

Task 7B-1: Fulfilling PeopleSoft Database Configuration Wizard Prerequisites

This section discusses:

- Installing the PeopleSoft Database Server Components on the Database Server
- Changing the Ownership for the PS_APP_HOME Directory
- Installing the Oracle RDBMS Software
- Identifying the Trace and Alert File Locations
- Creating an INIT<SID>.ORA File
- Creating an INIT<SID>.ORA File (Multitenant Architecture)
- Creating Target Directory Paths
- Creating Target Directory Paths (Multitenant Architecture)
- Setting Up Target Database Connectivity
- Running the Shell Script psconfig.sh

Task 7B-1-1: Installing the PeopleSoft Database Server Components on the Database Server

To run the PeopleSoft Database Configuration Wizard, your setup *must* fulfill these requirements:

- You must have installed the PeopleSoft PeopleTools (*PS_HOME*) and the PeopleSoft application software (*PS_APP_HOME*) on your database server.
- You must have specified the FRESH installation type when running the DPK setup script, in order to install the required files in *PS_APP_HOME*.
- You must have the PeopleTools Development Environment set up to create your database.
- You must have the Oracle Tuxedo software installed before you run the Database Configuration Wizard.

The Database Configuration Wizard invokes the PeopleSoft Data Mover utility. Data Mover on the UNIX platform has a dependency on the Oracle Tuxedo software. Install Oracle Tuxedo and verify that the TUXDIR environment variable is set.

See Installing Oracle Tuxedo.

- You must run the Database Configuration Wizard at the database server.

Be sure the UNIX login ID executing the Database Configuration Wizard has sufficient read and write permissions on this server. Ideally the UNIX login ID executing the Database Configuration Wizard is part of the same UNIX group that the Oracle RDBMS owner is part of, usually the DBA group.

See the information on PeopleSoft Configuration Manager in the *PeopleTools: System and Server Administration* product documentation.

See Also

"Setting Up the Install Workstation"

Task 7B-1-2: Changing the Ownership for the PS_APP_HOME Directory

Before running the Database Configuration Wizard, change the ownership of the *PS_APP_HOME* directory. The user who runs the Database Configuration Wizard must have write permission to the *PS_APP_HOME* directory to access logs and scripts. After completing the database setup, you can revoke the permission.

Task 7B-1-3: Installing the Oracle RDBMS Software

The Oracle RDBMS software must be installed before you run the Database Configuration Wizard. The following discussion assumes that you are familiar with Oracle administration tasks. During the execution of the Wizard, references are made to an existing Oracle RDBMS installation:

`$ORACLE_HOME` and `$ORACLE_HOME/bin`

Task 7B-1-4: Identifying the Trace and Alert File Locations

All diagnostic data, including the alert log, are stored in the Automatic Diagnostic Repository (ADR), whose location is set by the `DIAGNOSTIC_DEST` initialization parameter. Due to this change, the initialization parameter settings for background dump (`BACKGROUND_DUMP_DEST`), core dump (`CORE_DUMP_DEST`), and user dump (`USER_DUMP_DEST`) are replaced by the diagnostic destination parameter `DIAGNOSTIC_DEST`. For information on the `DIAGNOSTIC_DEST` parameter and the default location for the ADR, see the Oracle RDBMS documentation.

See the information on managing diagnostic data in the Oracle Database Administrator's Guide.

Task 7B-1-5: Creating an INIT<SID>.ORA File

You must create an `init.ora` with the naming convention of `init<SID>.ora` in the *ORACLE_HOME*/dbs directory of your Oracle installation.

Add or modify the following `init.ora` parameters:

- `DB_NAME = <SID>`
- `DB_FILES`
Specify the maximum allowed for your operating system, typically 1021.
- `CONTROL_FILES`
Specify the control files for your database, such as
`/filesystem1/cntrl1<SID>, /filesystem2/cntrl2<SID>.`
- `OPEN_CURSORS = 1000`
This is a minimum value. You may choose to set this higher.
- `DB_BLOCK_SIZE = 8192`

The PeopleSoft scripts are delivered to work across all versions of the Oracle RDBMS that Oracle supports for this release of PeopleSoft PeopleTools.

The Database Configuration Wizard will prompt you for a SID name. This `init<SID>.ora` will be referenced in the `CREATEDB18.SQL` script, which is executed by the Database Configuration Wizard.

Review the following information and make any necessary edits to these parameters for your environment:

DB_BLOCK_SIZE

For UNIX the default DB_BLOCK_SIZE in the init<SID>.ora file is operating system dependent. On most operating systems the default is 8192 or 8K. For PeopleSoft ANSI databases this is more than adequate. For PeopleSoft Unicode databases (for example, CHARACTER_SET AL32UTF8), a DB_BLOCK_SIZE value of 8K is required.

NLS_LENGTH_SEMANTICS

Use these guidelines to set the NLS_LENGTH_SEMANTICS init<SID>.ora parameter:

- Set NLS_LENGTH_SEMANTICS=CHAR if you are installing a Unicode database with PeopleSoft application 9.0 or higher releases on PeopleTools 8.48 or higher.
- Set NLS_LENGTH_SEMANTICS=BYTE if you are installing any non-Unicode database (such as a Western European or Shift-JIS database).
- Set NLS_LENGTH_SEMANTICS=BYTE if you are installing a Unicode database with PeopleSoft application prior to release 9.0 on PeopleSoft PeopleTools prior to release 8.48.

If necessary, verify the PeopleTools release for your PeopleSoft application using this SQL query:

```
select TOOLSREL from PSSTATUS
```

Unicode databases on PeopleSoft PeopleTools 8.48 and later, with PeopleSoft application 9.0 or later use character length semantics. When character length semantics is used, a field of VARCHAR2(10) will store 10 characters. Prior to PeopleSoft PeopleTools 8.48 and PeopleSoft applications 9.0, byte length semantics was used, meaning a VARCHAR2(10) stored 10 bytes. If you are upgrading from a release before PeopleSoft PeopleTools 8.48 and PeopleSoft application 9.0 to one after 8.48 and 9.0, a database conversion is necessary for utilizing CHARACTER LENGTH SEMANTICS. This conversion process is covered in all PeopleSoft application 9.0 or higher upgrade paths.

It is very important that you set this parameter at the correct point during database creation. Database creation consists of running several scripts before loading the database with Data Mover, as follows:

- CREATEDB18.SQL
- UTLSPACE.SQL
- XXDDL.SQL
- DBOWNER.SQL
- PSROLES.SQL
- PSADMIN.SQL
- CONNECT.SQL

Set the parameter NLS_LENGTH_SEMANTICS at the beginning of database creation or right before the Data Mover load.

To do this, modify the init<SID>.ora to add the NLS_LENGTH_SEMANTICS parameter, and then shut down and restart the database instance.

Oracle password

If you choose to use an Oracle Password file, you must create one using the ORAPWD utility, as illustrated in this example:

```
export ORACLE_SID=FSDMO
orapwd file=$ORACLE_HOME/dbs/pwdtemp2.ora password=manager entries=5
```

If you choose not to use an Oracle Password file, make one of the following changes to the init<SID>.ora file. This must be done *before* running the CREATEDB18.SQL script.

- Remove the line beginning with remote_login_passwordfile, or add a comment character at the beginning as shown in this example:


```
#remote_login_passwordfile=EXCLUSIVE
```

- Set the parameter to *NONE*, as in this example:

```
remote_login_passwordfile=NONE
```

Note. The init<SID>.ora file will reference "target" directories to write control files, log files, and system files, as well as target locations for Oracle Logs, User Trace Files, and so on. These target directory paths must exist or the Database Configuration Wizard will fail. See the following section, Creating Target Directory Paths, for details.

For more parameters that may be required for the init<SID>.ora file, consult My Oracle Support.

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

Task 7B-1-6: Creating an INIT<SID>.ORA File (Multitenant Architecture)

If you are creating pluggable databases, set ORACLE_SID to the SID for the root container database (CDB); for example:

```
export ORACLE_SID=<SID>
```

Add the following line to the init<SID>.ora file:

```
enable_pluggable_database=true
```

Task 7B-1-7: Creating Target Directory Paths

As mentioned, you must create the directory path structure for the target directories referenced in the scripts executed by the Database Configuration Wizard. The Database Configuration Wizard will not create directories on the fly; it expects the directories to exist.

The <SID> variable for which the Database Configuration Wizard prompts you is automatically added to the beginning of the directory path structure referenced in the various database creation scripts executed by the Database Configuration Wizard.

Note. If you want to use something other than the delivered directory paths, you need to modify the CREATEDB18.SQL, UTLSPACE.SQL, and XXDDL.SQL scripts in the scripts directory under *PS_HOME*, replacing the delivered paths with paths appropriate for your site installation prior to running the Database Configuration Wizard.

Note. Compare the content in XXDDL.SQL with PTDDL.SQL, and if PTDDL.SQL has bigger tablespace sizes than XXDDL.SQL, increase the size of the tablespaces to at least as much in PTDDL.SQL.

You are also asked for several mount points. On UNIX you just specify the File System mount point. An example is *data1*. (Note that no preceding slash is required.)

Here are some examples of directory path structure references:

- The delivered CREATEDB18.SQL script makes the following directory path structure references:

Note. Portions of the script have been omitted for clarity.

```
startup nomount pfile=$ORACLE_HOME/dbs/init<SID>.ora
datafile
    '/u01/oradata/<SID>/system01.dbf'          size 400M
```

```
logfile
  '/u01/oradata/<SID>/log01.dbf'          size 70M,
  '/u01/oradata/<SID>/log02.dbf'          size 70M,
  '/u01/oradata/<SID>/log03.dbf'          size 70M;
```

- The init<SID>.ora parameter file that is referenced in the CREATEDB18.SQL script makes the following directory path structure references:

Note. Portions of the init<SID>.ora parameter file have been omitted for clarity. These paths are explicitly included by the user creating the init<SID>.ora parameter file. The Data Configuration Wizard will not make any substitutions for mount point, target directory path, or <SID> in the init<SID>.ora file.

Control file references:

```
control_files = ('/u01/oradata/test92/control01.ctl', '/u01/oradata⇒
/test92⇒
/control02.ctl', '/u01/oradata/test92/control03.ctl')
```

- The delivered UTLSPACE.SQL script makes the following directory path structure references:

Note. Portions of the script have been omitted for clarity.

```
CREATE TEMPORARY TABLESPACE          PSTEMP
TEMPFILE                              'u03/oradata/<SID>/pstemp01.dbf'      SIZE 300M
EXTENT MANAGEMENT LOCAL UNIFORM SIZE 128K;

CREATE TABLESPACE                    PSDEFAULT
DATAFILE                              'u03/oradata/<SID>/psdefault.dbf'      SIZE 10M

EXTENT MANAGEMENT LOCAL AUTOALLOCATE;
      INITIAL          100K
      NEXT              100K
      PCTINCREASE      0  );
```

- The delivered XXDDL.SQL scripts make the following directory path structure references:

Note. This is a sample of the first several Create Tablespace SQL statements in the XXDDL.SQL script. The rest of the script has been omitted here for clarity.

```
CREATE TABLESPACE PSIMAGE DATAFILE '/u01/oradata/<SID>/psimage.dbf'⇒
SIZE 8M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
/
CREATE TABLESPACE PSINDEX DATAFILE '/u01/oradata/<SID>/psindex.dbf' SIZE⇒
64M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
/
CREATE TABLESPACE PTAPP DATAFILE '/u01/oradata/<SID>/ptapp.dbf' SIZE 4M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
/
```

Task 7B-1-8: Creating Target Directory Paths (Multitenant Architecture)

If you are creating a PDB, you must add the following target directories, replacing `<SID>` with `ORACLE_SID` for the CDB, and `<PDB_SERVICE_NAME>` with the PDB database name.

- `/mount/oradata/<SID>/pdbseed`
- `/mount/oradata/<SID>/logs`

Note. The PeopleSoft UNIX user ID executing the Database Configuration Wizard should have read and write permissions for the `/mount/oradata/<SID>/logs` directory.

- `/mount/oradata/<SID>/<PDB_SERVICE_NAME>`

Task 7B-1-9: Setting Up Target Database Connectivity

You must add a TNS entry to `$ORACLE_HOME/network/admin/tnsnames.ora`, because during the Data Mover Load phase, the Database Configuration Wizard will try to connect to the newly created SID by means of a remote connection string—for example:

```
ACCESSID/ACCESSPWD@TNS_ALIAS
```

Update the connection information in `TNSNAMES.ORA` on your server to reflect your Database Name, Oracle SID, and Server Name.

Note. Make sure that you stop and start (or reload) the Oracle Net listener.

If you are creating a PDB, add an entry in `tnsnames.ora` to the PDB database (for example, `<PDB_SERVICE_NAME>`), not to the root (CDB) database.

Task 7B-1-10: Running the Shell Script `psconfig.sh`

The shell script `psconfig.sh` sets up the environment for Data Mover to run. The PeopleSoft Data Mover utility is used to load the database.

To run `psconfig.sh`:

1. Change the directory to `PS_HOME`.
2. Run `psconfig.sh` (`./psconfig.sh`)

Note. The PeopleSoft UNIX user ID executing the Database Configuration Wizard has to be part of the Oracle DBA group or the PeopleSoft UNIX user ID must grant the UNIX Oracle Administration ID write permission to the following directories in `PS_HOME`: `log`, `modifiedscripts`, and `scripts`.

Task 7B-2: Using the Database Configuration Wizard in Silent Mode

This section discusses:

- Understanding the Database Configuration Wizard
- Preparing the Response File (non-Multitenant)

- Preparing the Response File (Multitenant Architecture)
- Running the Silent Mode Database Creation

Understanding the Database Configuration Wizard

When you run the Database Configuration Wizard, Data Mover typically performs the following actions:

1. **IMPORT *** Create all the PeopleTools and application tables with their indexes.
2. **ENCRYPT_PASSWORD *** Encrypt security information for the database.
3. **CREATE_TRIGGER *** Create application-required triggers.
4. **REPLACE_VIEW *** Create PeopleSoft views.
5. **CREATE_TEMP_TABLE *** Create PeopleSoft temporary tables.

If Data Mover fails at any of the above steps, it will complete the rest of the steps but will not start the next step—instead the Database Configuration Wizard aborts and tells the user what file to review for the detailed error message. If Data Mover fails at step 1 or 2, it is fatal. If Data Mover fails at step 3 or 4, it is not necessarily fatal. You may continue the next step(s) manually.

To complete the database creation procedure you must supply information on various authorization IDs and passwords, including Access ID, Connect ID, Symbolic ID, and User IDs. Before beginning this procedure, review the information in the section Planning Database Creation and make a note of the authorization information for your environment. For the current release, the user profiles in PeopleTools demo databases are delivered disabled. During the database configuration procedure you will choose whether to enable the delivered user profiles, and how to assign passwords for the profiles. In addition, you will supply several passwords that were previously provided as defaults. Be sure to note the passwords that you supply, as they will be needed for subsequent installation procedures. See the information on user profiles in the *PeopleTools: Security Administration* product documentation.

Note. The Database Configuration Wizard is not supported on Microsoft Windows.

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

Task 7B-2-1: Preparing the Response File (non-Multitenant)

In the current release, the Database Configuration Wizard is run in silent mode. In silent mode, you provide the required information in a response text file and run the script without further interaction. After installation, you can find a sample response file, `ora_resp_file.txt`, in `PS_HOME/setup/PsMpDbInstall`.

This section describes how to prepare a response file to create an Oracle database (non-multitenant). To create a Container Database and Pluggable database, skip this section and go to the next section.

The response file is organized with basic and RDBMS-specific sections, with explanations for many entries. Copy the file and modify the values for your environment. Save the file in a location referred to in this section as `<path_to_response_file>`. To exclude a line of text in the file, enter a pound sign (#) at the beginning of the line.

1. Specify the location for the PeopleSoft application software, `PS_APP_HOME`.

Note that the DPK installation requires that the `PS_APP_HOME` location, where the PeopleSoft application is installed, is different than the `PS_HOME` location where the PeopleSoft PeopleTools software is installed. The `PS_HOME` location cannot be changed in the Database Configuration Wizard response file.

```
#####
```

BASIC Inputs

```
#####
```

```
#The following inputs are required in the response file for
#silent installation.
#PS_HOME=Installation location.
#Do not change anything. It will be determined automatically
#by the installer.
PS_APP_HOME=/home/fscm_app_home
```

2. The DB_SERVER_TYPE=ORA is required for Oracle.

```
DB_SERVER_TYPE=ORA
```

3. Specify whether you want to create a Demo or System database for DB_TYPE.

```
# DB_TYPE=DMO/SYS
# This specifies the type of database you want to create.
# Specify DMO for Demo Database or SYS for System Database.
#
CREATE_DB_TYPE=DMO
```

4. To create a Unicode database, specify 1 (one) for the UNICODE parameter, or 0 (zero) for non-Unicode.

Oracle recommends Unicode, but also supports non-Unicode (legacy) code sets, in PeopleSoft databases. Use the values listed previously to specify the character set for DB_CHARSET_CODE and description for DB_CHAR_DES.

See "Preparing for Installation," Planning Multilingual Strategy for information on allowed character sets.

For example, for a Unicode database:

```
#UNICODE=0
# This value is determined in unicode.cfg.
# Specify the value here to override that setting.
#
UNICODE=1
DB_CHARSET_CODE=AL32UTF8
DB_CHAR_DES=Unicode Character Set
```

For non-Unicode:

```
#UNICODE=0
# This value is determined in unicode.cfg.
# Specify the value here to override that setting.
#
UNICODE=0
DB_CHARSET_CODE=WE8ISO8859P1
DB_CHAR_DES=Western European ISO 8859-1
```

5. Specify the base language.

The base language selection (BASE_LANGUAGE) is used to determine what primary base language you want to run the PeopleSoft application on.

If you choose a language other than English, the base language will be swapped during the database creation script. See "Preparing for Installation," Planning Multilingual Strategy. This step applies only if your users

will be operating PeopleSoft applications primarily in one particular language other than English. This step gives a performance boost to the language you designate as the base language, but would require more administrative overhead than leaving English as the base language does. See *PeopleTools: Global Technology*.

```
BASE_LANGUAGE=ENG
#APP_LANGUAGE = UKE
```

6. Specify a name for the database.

```
DB_DB_NAME=FSDMO
```

7. Specify the user name for the Connect ID, and the Connect ID password.

Ensure that the Connect ID contains only alphanumeric characters and is eight characters or less. Ensure that the password for the Connect ID meets the length and complexity requirements for your database platform.

```
PS_CONNECT_ID=people
PS_CONN_PWD=password
PS_CONN_PWD_RETYPE=password
```

8. Specify the PeopleSoft user ID (operator ID) and password.

Ensure that the password is between 1 and 32 characters in length.

```
PS_APP_USER=PS
PS_APP_PWD=password
PS_APP_PWD_RETYPE=password
```

9. Specify the user ID and password for the PTWEBSEVER profile.

The default Web server user is PTWEBSEVER. The Web Server user ID, also referred to in this documentation as Web Profile User ID, is used to access the web profile information from the database through the Application Server Jolt service.

Ensure that the password is between 8 and 32 characters in length.

```
PS_WEB_USER=PTWEBSEVER
PS_WEB_PWD=password
PS_WEB_PWD_RETYPE=password
```

10. Set the parameter ENABLE_USERPROFILE to 1 (one) to leave the User profiles (other than the Application Server User Profile and Web server User profiles) unchanged. Set this option to 0 (zero) to disable all the User profiles in the database except the Application Server User Profile and Web server User profiles.

```
ENABLE_USERPROFILE=1
```

11. Specify how to set the user passwords.

- Set the parameter SET_GLOBAL_PWD to 0 (zero) to specify a password that is the same as the User ID (for example, VP1/VP1). For example:

```
SET_GLOBAL_PWD=0
#PS_GLOBAL_PWD=
```

- Set the parameter SET_GLOBAL_PWD to 1 (one) to set a common global password for all the User profiles in the database.

If you set the SET_GLOBAL_PWD option to 1, remove the comment (#) character in front of the parameter PS_GLOBAL_PWD, and specify the password to be used for all user profiles. For example:

```
SET_GLOBAL_PWD=1
PS_GLOBAL_PWD=password
```

12. Enter *NO* for the CDB value, to indicate that you want to create a non-container database.

```
#####
```

ORACLE Inputs

```
#####
```

```
# Specify Yes for container database.
```

```
CDB=NO
```

```
#CDB=YES
```

13. Specify the major version of your Oracle Database server software.

Enter a number, such as 19 for 19c or 21 for 21c.

```
DB_SERVER_VERSION=19
```

14. Specify the password for the Oracle Database SYS user.

Ensure that the password meets the length and complexity requirements for your database platform.

```
SYSPWD=password
```

```
SYSPWD_RETYPE=password
```

15. Specify the password for the Oracle Database SYSTEM user.

Ensure that the password meets the length and complexity requirements for your database platform.

```
SYSTEMPWD=password
```

```
SYSTEMPWD_RETYPE=password
```

16. Enter the database configuration type.

```
DBCONFIGTYPE=
```

17. Specify the installation location for the Oracle software, ORACLE_HOME and the location for the SQL*Plus executable (SQLPLUS_PATH), usually *ORACLE_HOME/bin*

```
ORACLE_HOME=/ds1/psft/db/oracle-server/19.3.0.0
```

```
SQLPLUS_PATH=/ds1/psft/db/oracle-server/19.3.0.0/BIN
```

18. Choose to either create an Oracle SID and load a PeopleSoft database, or use an existing Oracle SID to load the PeopleSoft database. For a new installation you must create a new Oracle SID.

```
NEW_SID=YES
```

```
#NEW_SID=NO
```

19. Specify Oracle Server and SID information.

```
DB_ORCL_SID=FSDMO
```

```
#forward slash before path/after path to oradata should not be given
```

```
#Mount Point 1( for SYSTEM and REDO LOGS file
```

```
#in createdb.sql, ex: NT 'C' , UNIX 'u01') [c]: data1/psft/db
```

```
#
```

```
DB_ORCL_MP1=ds1/psft/db
```

```
#Mount Point 2 ( for PSTEMP and PSDEFAULT file
```

```
#in utlspace.sql, ex: NT 'C' , UNIX 'u01') [c]: data1/psft/db
```

```
#
```

```
DB_ORCL_MP2=ds1/psft/db
```

```
#Mount Point 3 ( for all files in xxddl.sql,
#ex: NT 'C' , UNIX 'u01') [c]: data1/psft/db
#
DB_ORCL_MP3=ds1/psft/db
AUTOEXTEND=YES
#AUTOEXTEND=NO
```

20. Specify the database owner ID (access ID) and password.

You must limit the owner ID (access ID) to eight characters or less.

Ensure that the password meets the length and complexity requirements for your database platform.

See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for access ID password requirements.

```
DB_OWNER_ID=SYSADM
DB_OWNER_PWD=password
DB_OWNER_PWD_RETYPE=password
```

21. Specify the PeopleSoft default tablespace.

The PSADMIN.SQL script is run by the Database Configuration Wizard for every PeopleSoft database that you are going to create. When prompted for a default tablespace name, select PSDEFAULT if you are using PeopleSoft naming conventions, or your site equivalent if you are not using PeopleSoft naming conventions.

```
PS_DEF_TBL_SPCE=PSDEFAULT
```

22. Specify the full path to the init.ora file.

The path in the preceding prompt for init<SID>.ora (initFSDMO.ora in the example code) must match the path of the init<SID>.ora file you created under the task "Fulfilling PeopleSoft Database Configuration Wizard Prerequisites" earlier in this chapter.

```
#complete path of init.ora file
P_FILE_PATH=/ds1/psft/db/oracle-server/19.3.0.0/dbs/initFSDMO.ora
```

Task 7B-2-2: Preparing the Response File (Multitenant Architecture)

In the current release, the Database Configuration Wizard is run in silent mode. In silent mode, you provide the required information in a response text file and run the script without further interaction. After installation, you can find a sample response file, ora_resp_file.txt, in *PS_HOME/setup/PsMpDbInstall*.

This section describes how to prepare a response file to create an Oracle Container Database (CDB) and Pluggable Database (PDB).

The response file is organized with basic and RDBMS-specific sections, with explanations for many entries. Copy the file and modify the values for your environment. Save the file in a location referred to in this section as *<path_to_response_file>*. To exclude a line of text in the file, enter a pound sign (#) at the beginning of the line.

1. Specify the location for the PeopleSoft application software, *PS_APP_HOME*.

Note that the DPK installation requires that the *PS_APP_HOME* location, where the PeopleSoft application is installed, is different than the *PS_HOME* location where the PeopleSoft PeopleTools software is installed. The *PS_HOME* location cannot be changed in the Database Configuration Wizard response file.

```
#####
```

BASIC Inputs


```
#####
```

```
#The following inputs are required in the response file for
#silent installation.
#PS_HOME=Installation location.
#Do not change anything. It will be determined automatically
#by the installer.
PS_APP_HOME=/home/fscm_app_home
```

2. The DB_SERVER_TYPE=ORA is required for Oracle.

```
DB_SERVER_TYPE=ORA
```

3. Specify whether you want to create a Demo or System database for DB_TYPE.

```
# DB_TYPE=DMO/SYS
# This specifies the type of database you want to create.
# Specify DMO for Demo Database or SYS for System Database.
#
CREATE_DB_TYPE=DMO
```

4. To create a Unicode database, specify 1 (one) for the UNICODE parameter, or 0 (zero) for non-Unicode.

Oracle recommends Unicode, but also supports non-Unicode (legacy) code sets, in PeopleSoft databases. Use the values listed previously to specify the character set for DB_CHARSET_CODE and description for DB_CHAR_DES.

See "Preparing for Installation," Planning Multilingual Strategy for information on allowed character sets.

For example, for a Unicode database:

```
#UNICODE=0
# This value is determined in unicode.cfg.
# Specify the value here to override that setting.
#
UNICODE=1
DB_CHARSET_CODE=AL32UTF8
DB_CHAR_DES=Unicode Character Set
```

For non-Unicode:

```
#UNICODE=0
# This value is determined in unicode.cfg.
# Specify the value here to override that setting.
#
UNICODE=0
DB_CHARSET_CODE=WE8ISO8859P1
DB_CHAR_DES=Western European ISO 8859-1
```

5. Specify the base language.

The base language selection (BASE_LANGUAGE) is used to determine what primary base language you want to run the PeopleSoft application on.

If you choose a language other than English, the base language will be swapped during the database creation script. See "Preparing for Installation," Planning Multilingual Strategy. This step applies only if your users will be operating PeopleSoft applications primarily in one particular language other than English. This step gives a performance boost to the language you designate as the base language, but would require more administrative overhead than leaving English as the base language does. See *PeopleTools: Global Technology*.

```
BASE_LANGUAGE=ENG
#APP_LANGUAGE = UKE
```

6. Specify a name for the PDB, or the PDB service name.

```
DB_DB_NAME=FSDMO
```

7. Specify the user name for the Connect ID, and the Connect ID password.

Ensure that the Connect ID contains only alphanumeric characters and is eight characters or less. Ensure that the password for the Connect ID meets the length and complexity requirements for your database platform.

```
PS_CONNECT_ID=people
PS_CONN_PWD=password
PS_CONN_PWD_RETYPE=password
```

8. Specify the PeopleSoft user ID (operator ID) and password.

Ensure that the password is between 1 and 32 characters in length.

```
PS_APP_USER=PS
PS_APP_PWD=password
PS_APP_PWD_RETYPE=password
```

9. Specify the user ID and password for the PTWEBSEVER profile.

The default Web server user is PTWEBSEVER. The Web Server user ID, also referred to in this documentation as Web Profile User ID, is used to access the web profile information from the database through the Application Server Jolt service.

Ensure that the password is between 8 and 32 characters in length.

```
PS_WEB_USER=PTWEBSEVER
PS_WEB_PWD=password
PS_WEB_PWD_RETYPE=password
```

10. Set the parameter ENABLE_USERPROFILE to 1 (one) to leave the User profiles (other than the Application Server User Profile and Web server User profiles) unchanged. Set this option to 0 (zero) to disable all the User profiles in the database except the Application Server User Profile and Web server User profiles.

```
ENABLE_USERPROFILE=1
```

11. Specify how to set the user passwords.

- Set the parameter SET_GLOBAL_PWD to 0 (zero) to specify a password that is the same as the User ID (for example, VP1/VP1). For example:

```
SET_GLOBAL_PWD=0
#PS_GLOBAL_PWD=
```

- Set the parameter SET_GLOBAL_PWD to 1 (one) to set a common global password for all the User profiles in the database.

If you set the SET_GLOBAL_PWD option to 1, remove the comment (#) character in front of the parameter PS_GLOBAL_PWD, and specify the password to be used for all user profiles. For example:

```
SET_GLOBAL_PWD=1
PS_GLOBAL_PWD=password
```

12. Set the CDB parameter to YES to indicate you want to create a container database (CDB).

```
#####
```

ORACLE Inputs

```
#####
# Specify Yes for container database.
#CDB=NO
CDB=YES
```

13. Specify the major version of your Oracle Database server software.

Enter a number, such as 19 for 19c or 21 for 21c.

```
DB_SERVER_VERSION=19
```

14. Specify the password for the Oracle Database SYS user.

Ensure that the password meets the length and complexity requirements for your database platform.

```
SYSPWD=password
SYSPWD_RETYPE=password
```

15. Specify the password for the Oracle Database SYSTEM user.

Ensure that the password meets the length and complexity requirements for your database platform.

```
SYSTEMPWD=password
SYSTEMPWD_RETYPE=password
```

16. Enter the database configuration type.

```
DBCONFIGTYPE=
```

17. Specify the installation location for the Oracle software, ORACLE_HOME and the location for the SQL*Plus executable (SQLPLUS_PATH), usually *ORACLE_HOME/bin*

```
ORACLE_HOME=/ds1/psft/db/oracle-server/19.3.0.0
SQLPLUS_PATH=/ds1/psft/db/oracle-server/19.3.0.0/BIN
```

18. Set the NEW_SID parameter to YES if you want to create a new CDB and a new PDB.

Set the NEW_SID parameter to NO if you want to create a new PDB for an existing CDB.

You must create a new SID for a new installation.

```
NEW_SID=YES
#NEW_SID=NO
```

19. Specify Oracle Server and SID information.

```
DB_ORCL_SID=FSDMO
#forward slash before path/after path to oradata should not be given
#Mount Point 1( for SYSTEM and REDO LOGS file
#in createdb.sql, ex: NT 'C' , UNIX 'u01') [c]: data1/psft/db
#
DB_ORCL_MP1=ds1/psft/db

#Mount Point 2 ( for PSTEMP and PSDEFAULT file
#in utlspace.sql, ex: NT 'C' , UNIX 'u01') [c]: data1/psft/db
#
DB_ORCL_MP2=ds1/psft/db

#Mount Point 3 ( for all files in xxddl.sql,
```

```
#ex: NT 'C' , UNIX 'u01') [c]: data1/psft/db
#
DB_ORCL_MP3=ds1/psft/db
AUTOEXTEND=YES
#AUTOEXTEND=NO
```

20. Specify the database owner ID (access ID) and password.

You must limit the owner ID (access ID) to eight characters or less.

Ensure that the password meets the length and complexity requirements for your database platform.

See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for access ID password requirements.

```
DB_OWNER_ID=SYSADM
DB_OWNER_PWD=password
DB_OWNER_PWD_RETYPE=password
```

21. Specify the PeopleSoft default tablespace.

The PSADMIN.SQL script is run by the Database Configuration Wizard for every PeopleSoft database that you are going to create. When prompted for a default tablespace name, select PSDEFAULT if you are using PeopleSoft naming conventions, or your site equivalent if you are not using PeopleSoft naming conventions.

```
PS_DEF_TBL_SPCE=PSDEFAULT
```

22. Specify the full path to the init.ora file.

The path in the preceding prompt for init<SID>.ora (initFSDMO.ora in the example code) must match the path of the init<SID>.ora file you created under the task "Fulfilling PeopleSoft Database Configuration Wizard Prerequisites" earlier in this chapter.

```
#complete path of init.ora file
P_FILE_PATH=/ds1/psft/db/oracle-server/19.3.0.0/dbs/initFSDMO.ora
```

Task 7B-2-3: Running the Silent Mode Database Creation

Use the response file that you modified for your configuration. Substitute the location where you saved the response file for <path_to_response_file> in the following procedure.

UNIX:

1. In a command prompt, go to *PS_HOME/setup/PsMpDbInstall*.
2. Run the following command, using forward slashes (/) to specify the path:

```
setup.sh -f <path_to_response_file>
```

For example:

```
setup.sh -f /home/psftinstall/ora_resp_file.txt
```

Task 7B-3: Cleaning Up Orphaned Language Data

Perform this task if you are a Multilingual customer and are installing non-English languages. This task assumes that you have loaded the necessary language files. If you have not yet loaded the language files, follow the instructions in the Global Technology product documentation.

See *PeopleTools: Global Technology*, "Adding Oracle-Provided Translations."

The Application Engine program PTIACLNLNGCA removes any orphaned related language objects that do not have a matching base language object.

Run the PTIACLNLNGCA application engine program. From the command line utility, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP=<password> -R <run_control> -AI PTIACLNLNGCA -FP <log_path>
```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <oprid> respectively. However, be aware that <password> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <password> that is the password associated with the <oprid>. For <log_path>, specify the path where you want the log file for the application engine program to be generated, such as C:\temp\.

Task 7B-4: Checking the Log Files and Troubleshooting

This section discusses:

- Checking the Log Files
- Running Data Mover
- Troubleshooting
- Improving Performance

Task 7B-4-1: Checking the Log Files

After the Database Configuration Wizard finishes its execution, look for all log output in the *PS_HOME/log* directory. Open all the log files. There is a log file for each of the steps that the Database Configuration Wizard carries out—importing, encrypting passwords, creating triggers, replacing views, and creating temp tables. *None should contain error messages.*

Task 7B-4-2: Running Data Mover

If the Database Configuration Wizard does not complete successfully, you must run Data Mover manually, using one of the following methods.

On UNIX, run *PS_HOME/bin/psdmtx* from the command line.

If you use the access ID that you specified during the database configuration to log on, you log on in "bootstrap mode." When you start Data Mover in bootstrap mode, the word "BootStrap" appears in the Data Mover status bar.

If you use a valid PeopleSoft Operator ID, such as PS for Human Capital Management or VP1 for Financials/Supply Chain Management, you log on in "user mode." In this mode, no designation appears in the Data Mover status bar.

To run Data Mover on the command line:

Note. You can run *psdmtx* by supplying arguments on the command line, or by passing the arguments from a text file. This section describes the text file method.

1. Go to *PS_HOME/bin*.

```
cd $PS_HOME/bin
```

2. Use the following command to view the help for `psdmtx`:

```
$ psdmtx /help
Usage:  psdmtx  [-CT DB2|DB2ODBC|MICROSFT|ORACLE]
              [-CS server name]
              [-CD database name]
              [-CO user id]
              [-CP user pswd]
              [-CI connect id]
              [-CW connect id pswd]
              [-I process instance]
              [-FP filename]

      or
psdmtx  [parmfile]
```

To capture the output in a file, use a greater-than symbol ("pipe", >) followed by a filename. For example:

```
psdmtx [arguments] > filename.txt
```

Use the following list of commands and descriptions for the `psdmtx` arguments:

Command Argument	Description
-CT <DB type>	The type of database to connect to: ORACLE.
-CD <DBNAME>	Your selected Database Name.
-CO <ACCESSID>	Use the <DBNAME> Access ID to run Data Mover in bootstrap mode.
-CP <ACCESSPWD>	The password for <DBNAME> Access ID.
-CI <CONN ID>	The ID used to connect to the database server.
-CW <CONN PSWD>	The password for the specified connection ID.
-FP <filename>	The filename for the Data Mover import script (DMS) to run.

3. To set up Data Mover to rerun the Data Mover import script in bootstrap mode, do the following:
- Change directory to `PS_HOME/setup`.
 - Copy `parmfile` to `parm<DBNAME>`. For example, `parmPT858`.
 - Edit `parm<DBNAME>`.

Use the information in the table above to edit the file for your configuration.

Use ORACLE for <DB type>.

For example:

Before

```
-CT <DB type> -CD <DBNAME> -CO <ACCESSID> -CP <ACCESSPWD> -CI <CONN⇒
```

```
ID> -CW⇒
<CONN PSWD> -FP <filename>
```

After

```
-CT ORACLE -CD HRDMO -CO HRDMO -CP HRDMO -CI people -CW people -FP⇒
$PS_HOME⇒
/scripts/pt858ora.dms
```

4. To launch Data Mover in bootstrap mode, do the following:

- Change directory (cd) to *PS_HOME/bin*
- Run the psdmtx command with the edited parm<DBNAME> file.

```
pt-sun20:$ psdmtx ../setup/parmPT858
```

You see Data Mover log messages tracking the progress.

See Also

PeopleTools: Data Management

Task 7B-4-3: Troubleshooting

If the Database Configuration Wizard did not complete successfully, read this troubleshooting information. If your script has stopped midway (this can happen for a number of reasons) you need to edit the Data Mover script generated automatically by the Database Configuration Wizard and restart Data Mover manually. The Data Mover script files have the extension .dms and are sometimes referred to as "DMS scripts."

The generated Data Mover import script is saved in the *PS_APP_HOME/scripts* directory. The script conforms to the following naming convention:

```
<dbname>ora.dms
```

If the Database Configuration Wizard fails while creating views, clear the cache folder, for example, *USER_HOME/PS_CACHE*, and restart from the create views step.

See the information on startup settings in PeopleSoft Configuration Manager in the *PeopleTools: System and Server Administration* product documentation.

To edit and restart the DMS script:

1. Determine the record that was being imported (that is, which IMPORT command was running) when the script stopped, and use the following guidelines to edit and rerun the DMS scripts.

When building a DMO database or a multilingual database, adding the SET START statement can be tricky because the Data Mover script used to load the database will include more than one IMPORT statement. The key is to view the log files and determine which IMPORT section of the script Data Mover failed on.

- If the failure occurred during the first IMPORT statement, add the SET START statement before the first IMPORT *; statement.
- If the failure occurred during a subsequent IMPORT statement, comment out all statements preceding the IMPORT *; statement where the failure occurred and add the SET START statement before the IMPORT *; statement of the section in which the failure occurred.
- *This is very important:* If you see any "unique index constraint" error messages in the "Building required indexes" section, your IMPORT script failed during a subsequent IMPORT but the SET START statement was added to the first IMPORT. In this situation, you can run the Data Mover script in its originally

generated form, with only one modification. In the first IMPORT section, change the statement "IMPORT *;" to "REPLACE_DATA *;". This will delete all the data in the tables, and re-import it. This process will take some time to run, and you will need to separately create each of the indexes that failed.

2. Go to the *PS_APP_HOME/scripts* directory to find the generated DMS script.
3. Open the script for editing with a standard editing tool such as vi.
4. Add the following line before the offending IMPORT command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;
```

<RECORD NAME> is the name of the record that failed. Make sure to review the Data Mover log file to see where the script failed and locate the last record that imported successfully. The SET START command will begin the Data Mover import at the specified record name.

Note. It is a good idea to change the name of the log file in the script before each attempt at running it. This ensures that you have a separate log file for each attempt, if you run the import more than once.

For example, if the script stops and the table is partially inserted with a message similar to this one:

```
Importing PSPNLFIELD
Rows inserted into PSPNLFIELD

3000
```

First drop the partially inserted table (for example, record) by using the DROP TABLE command, and then restart Data Mover at the record that failed using the SET START command and continue the Data Mover import. This can be done in a single pass.

Add the following lines before the offending IMPORT *; command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;
DROP TABLE <RECORD NAME>;
```

For <RECORD NAME>, specify the name of the record that failed. The SET START statement will begin the Data Mover import at the specified <RECORD NAME>.

Example of the original script:

```
REM - PeopleSoft Database - US English
/
SET LOG epengs.log;
SET INPUT epengs.db;
SET COMMIT 30000;
SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE ON;
IMPORT *;
```

Example of script after modification, with changes in bold font:

```
REM - PeopleSoft Database - US English
/
SET LOG epengs2.log;
SET INPUT epengs.db;
SET COMMIT 30000;
```



```

SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE ON;
SET START PSPNLFIELD;
DROP TABLE PSPNLFIELD;
IMPORT *;

```

For the DROP statement, for records with a recname without a leading PS, add PS_ to the beginning of the recname; otherwise the table will not be found. For example, PS_<RECNAME>.

5. To restart the script, use the `psdmtx` command to execute Data Mover on the command line.
See Running Data Mover.

Task 7B-4-4: Improving Performance

The following tips can help you save time when running the Data Mover scripts:

- Run Data Mover from the fastest workstation available.
- Run Data Mover on the database server.
- Run only a single instance of Data Mover, and do not have any other applications running during the import.
- In the PeopleSoft Configuration Manager, turn off all trace options.
Tracing during a DMS load will add considerable time to the process.
- Copy the database file over to the workstation so that Data Mover can access it locally instead of over the network.
- Run Data Mover on the database server with the .db or .dat file located locally.

If you are comfortable changing the options available for an Oracle instance, you might consider "tuning" the instance used for the import. Some of these options are appropriate only during the import, so you may not want to keep them in effect after the import is complete.

For best performance during a Data Mover import, set these options as follows:

- Increase the number of database blocks.
- Use an 8K Oracle block size.
- Use very large rollback segments.
- Increase the size of the UNDO tablespace or the number of UNDO Segments.
- Use asynchronous read and write.
- Use multiple db_writers.

Chapter 7C

Creating a Database Manually on UNIX

This chapter discusses:

- Understanding Database Creation
- Preparing for the PeopleSoft Database Installation
- Using SQL Tools
- Editing Database Scripts (non-Multitenant)
- Creating an Oracle Instance (non-Multitenant)
- Creating Catalog Views and Utility Tablespaces (non-Multitenant)
- Creating PS.PSDBOWNER Table (non-Multitenant)
- Creating Application-Specific Dbspaces and Tablespaces (non-Multitenant)
- Creating PeopleSoft Database Roles (non-Multitenant)
- Creating the PeopleSoft Database Owner ID (non-Multitenant)
- Setting Up Connect ID (non-Multitenant)
- Editing Database Scripts (Multitenant Architecture)
- Creating an Oracle Instance (Multitenant Architecture)
- Creating Catalog Views and Utility Tablespaces (Multitenant Architecture)
- Creating PS.PSDBOWNER Table (Multitenant Architecture)
- Creating Application-Specific Dbspaces and Tablespaces (Multitenant Architecture)
- Creating PeopleSoft Database Roles (Multitenant Architecture)
- Creating the PeopleSoft Database Owner ID (Multitenant Architecture)
- Setting Up Connect ID (Multitenant Architecture)
- Updating Connection Information
- Creating Data Mover Import Scripts
- Running Data Mover Import Scripts
- Cleaning Up Orphaned Language Data
- Checking the Log Files and Troubleshooting
- Changing the Base Language

Understanding Database Creation

This section describes the tasks required to create a PeopleSoft product database. During a standard PeopleSoft installation you will execute these tasks to create two distinct types of databases.

- *System*: The System (SYS) database has no company specific data, and can be used to load your data and begin development of your production database.
- *Demo*: The Demo (DMO) database contains data for a sample company, and can be used immediately for demonstration, for testing, and as a development reference.

Note. The PeopleTools System Database (PTSYS) is not available with the current release. As an alternative, install the latest PeopleSoft Interaction Hub database.

The requirements for these databases vary, so not all of this section's tasks apply to each database. The instructions will note any distinctions between creating a Demo and a System database.

- You must have installed the Database component of your PeopleSoft application installation software to your database server.
- You must have the PeopleTools Development Environment set up to create your database.
- You must have the Oracle Tuxedo software installed before you use Data Mover to create the database.

Data Mover on the UNIX platform has a dependency on the Oracle Tuxedo software. Install Oracle Tuxedo and verify that the TUXDIR environment variable is set.

This section includes tasks to create pluggable databases and non-pluggable databases, as well as tasks that apply to both types. The pluggable database tasks create an Oracle Container Database (CDB) and a Pluggable Database (PDB), and are labelled "(Multitenant Architecture)." The tasks specific to non-pluggable databases are labelled "(non-Multitenant)." Choose the appropriate tasks for your environment.

Important! Do not forget that application-specific installation steps are provided in a separate document specific to the application. For instance, if you are performing PeopleSoft CRM installation, you need both this documentation for the basic installation of PeopleSoft PeopleTools and the PeopleSoft application, and any additional instructions provided by CRM. Search in My Oracle Support for the installation documentation specific to your application.

Important! If you are installing the PeopleSoft software on an Oracle RAC database, there are additional configuration procedures that you must follow.

See *PeopleTools: Data Management*, "Setting Up the PeopleSoft Installation with Oracle RAC."

After you complete the tasks in this chapter, read the chapter "Completing the Database Setup." Depending upon your environment, you may not need to carry out every task in that chapter. However it is important that you evaluate the requirements and perform the necessary tasks.

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

See Also

"Preparing for Installation," Planning Database Creation

"Setting Up the Install Workstation"

Task 7C-1: Preparing for the PeopleSoft Database Installation

This section discusses:

- Installing the PeopleSoft Database Sever Components on the Database Server
- Installing the Oracle RDBMS Software
- Identifying the Trace and Alert File Locations
- Setting Environment Variables for the PeopleSoft Database
- Creating an INIT<SID>.ORA File
- Creating an INIT<SID>.ORA File (Multitenant Architecture)

Task 7C-1-1: Installing the PeopleSoft Database Sever Components on the Database Server

To create a PeopleSoft Database you *must have installed* the PeopleSoft application software (*PS_APP_HOME*) on your database server. When running the DPK setup script, you must have specified the FRESH install type, in order to install the files required for the database setup in *PS_APP_HOME*.

See "Installing the PeopleSoft Homes," Preparing to Run the DPK Setup Script.

Note. Remember, you need to have the PeopleTools Development Environment set up to create your database.

See the information on using PeopleSoft Configuration Manager in the *PeopleTools: System and Server Administration* product documentation.

Task 7C-1-2: Installing the Oracle RDBMS Software

The rest of this chapter assumes that the Oracle RDBMS software is installed on your database server. If you have not already done so, install the Oracle RDBMS software now. During the database creation process, we refer to an existing Oracle RDBMS installation. Specifically:

ORACLE_HOME and *ORACLE_HOME/bin*

Task 7C-1-3: Identifying the Trace and Alert File Locations

All diagnostic data, including the alert log, are stored in the Automatic Diagnostic Repository (ADR), whose location is set by the *DIAGNOSTIC_DEST* initialization parameter. Due to this change, the initialization parameter settings for background dump (*BACKGROUND_DUMP_DEST*), core dump (*CORE_DUMP_DEST*), and user dump (*USER_DUMP_DEST*) are replaced by the diagnostic destination parameter *DIAGNOSTIC_DEST*. For information on the *DIAGNOSTIC_DEST* parameter and the default location for the ADR, see the Oracle RDBMS documentation.

See the information on managing diagnostic data in the Oracle Database Administrator's Guide.

Task 7C-1-4: Setting Environment Variables for the PeopleSoft Database

Log on to the server as the Oracle owner, and set these environment variables:

- Set the *ORACLE_SID* value to point to the database you are going to set up, and then export the value.

From the Bourne or Korn shell, enter the following:

```
$ ORACLE_SID=hdmo; export ORACLE_SID
```

- Set the NLS_LANG environment variable to indicate the Oracle language and character set.

The PeopleSoft Application Server and reporting tools run in Unicode regardless of the database character set or the NLS_LANG character set component. However, the NLS_LANG character set component does affect the transmission of data in non-PeopleTools connections, such as SQLPlus and direct COBOL. NLS_LANG has three components, a language, a territory and a character set in the form LANGUAGE_TERRITORY.CHARACTERSET. For example, for American English, the correct NLS_LANG setting for PeopleSoft would be AMERICAN_AMERICA.AL32UTF8. See the Oracle National Language Support guide for full details. These parameters need to be set each time you access your PeopleSoft system from the UNIX shell. Therefore, we suggest you edit your psconfig.sh file to make these changes take effect each time you configure your environment.

From the Bourne or Korn shell, enter the following, substituting <language> and <territory> for the language and territory values you prefer to use. If unsure, use AMERICAN_AMERICA.AL32UTF8:

```
$ NLS_LANG=<language>_<territory>.AL32UTF8; export NLS_LANG
```

Alternatively, from the C shell, enter the following:

```
$ setenv NLS_LANG <language>_<territory>
```

Task 7C-1-5: Creating an INIT<SID>.ORA File

Create an initialization file by copying and editing the init.ora file that is delivered with the Oracle database software and typically resides in \$ORACLE_HOME/dbs.

```
cd $ORACLE_HOME
cd dbs
cp init.ora init<SID>.ora
```

Add or modify the following parameters in the init<SID>.ora:

- DB_NAME = <SID>
- DB_FILES
Specify the maximum allowed for your operating system, typically 1021.
- CONTROL_FILES
Specify the control files for your database, such as
/filesystem1/cntrl1<SID>, /filesystem2/cntrl2<SID>.
- OPEN_CURSORS = 1000
This is a minimum value; you may choose to set it higher.
- DB_BLOCK_SIZE = 8192

Review the following parameters and make any necessary edits for your environment:

DB_BLOCK_SIZE

For UNIX the default DB_BLOCK_SIZE in the init<SID>.ora file is operating system dependent. On most operating systems the default is 8192 or 8K. For PeopleSoft ANSI databases this is more than adequate. For PeopleSoft Unicode databases, (that is, CHARACTER_SET AL32UTF8), a DB_BLOCK_SIZE value of 8K is required.

NLS_LENGTH_SEMANTICS

Use these guidelines to set the NLS_LENGTH_SEMANTICS init<SID>.ora parameter:

- Set NLS_LENGTH_SEMANTICS=CHAR if you are installing a Unicode database with PeopleSoft application 9.2 or higher releases on the current PeopleTools release.
- Set NLS_LENGTH_SEMANTICS=BYTE if you are installing any non-Unicode database (such as a Western European or Shift-JIS database).

If necessary, verify the PeopleTools release for your PeopleSoft application using this SQL query:

```
select TOOLSREL from PSSTATUS
```

Unicode databases on PeopleSoft PeopleTools 8.48 and later, with PeopleSoft application 9.0 or later, use character length semantics. When character length semantics is used, a field of VARCHAR2(10) will store 10 characters. Prior to PeopleSoft PeopleTools 8.48 and PeopleSoft applications 9.0, byte length semantics was used, meaning a VARCHAR2(10) stored 10 bytes. If you are upgrading from a release before PeopleSoft PeopleTools 8.48 and PeopleSoft Application 9.0 to one after 8.48 and 9.0, a database conversion is necessary for utilizing CHARACTER LENGTH SEMANTICS. This conversion process is covered in all PeopleSoft application 9.0 or higher upgrade paths.

It is very important that you set this parameter at the correct point during database creation. Database creation consists of running several scripts before loading the database with Data Mover, as follows:

- CREATEDB18.SQL
- UTLSPACE.SQL
- XXDDL.SQL
- DBOWNER.SQL
- PSROLES.SQL
- PSADMIN.SQL
- CONNECT.SQL

Set the parameter NLS_LENGTH_SEMANTICS at the beginning of database creation or right before the Data Mover load.

To do this, modify the init<SID>.ora to add the NLS_LENGTH_SEMANTICS parameter, and then shut down and restart the database instance.

Oracle Password

If you choose to use an Oracle Password file, create one using the ORAPWD utility, as illustrated in this example:

```
export ORACLE_SID=FDMO
orapwd file=$ORACLE_HOME/dbs/pwdtemp2.ora password=password entries=5
```

If you choose not to use an Oracle Password file, you must make one of the following changes to the init<SID>.ora file before running the CREATEDB18.SQL script:

- Remove the line beginning with remote_login_passwordfile, or add a comment character at the beginning, as shown in this example:
#remote_login_passwordfile=EXCLUSIVE
- Set the parameter to *NONE*, as shown in this example:
remote_login_passwordfile=NONE

For more parameters that may be required for the init<SID>.ora file, consult My Oracle Support.

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

Task 7C-1-6: Creating an INIT<SID>.ORA File (Multitenant Architecture)

If you are creating pluggable databases, set <SID> to the database name for the CDB (root database). This documentation uses PDB_SERVICE_NAME to refer to the PDB.

Create an init<SID>.ora file as described in Creating an INIT<SID>.ORA File, and append the following line in the init<SID>.ora:

```
enable_pluggable_database=true
```

Note. It is strongly advisable to set the value of the parameter MEMORY_TARGET, otherwise you may get the error "ORA-04031: unable to allocate *string* bytes of shared memory" (where string represents the memory size) while creating the database. For information on MEMORY_TARGET, see the Oracle Database documentation.

This recommendation applies to on-premises Oracle Databases.

Task 7C-2: Using SQL Tools

When you execute PeopleSoft SQL scripts, use the appropriate tool included with your version of the RDBMS. You should use SQL*Plus, which is available with each version of the Oracle RDBMS that is supported by Oracle for PeopleSoft installations.

There are various ways to connect to the database with SQL*Plus. For information on using SQL*Plus, see the Oracle database documentation.

Task 7C-3: Editing Database Scripts (non-Multitenant)

This section discusses:

- Understanding Database Scripts
- Modifying Database Scripts

Understanding Database Scripts

The scripts required for creating the database reside in the *PS_HOME/scripts/unix* directory on the UNIX database server. You need to edit a few of these scripts for your environment before you execute them and go on with the following procedures.

Typically, you need to modify the file system locations and the Oracle SID name.

Task 7C-3-1: Modifying Database Scripts

To edit required database scripts:

Edit the scripts listed in this section to conform to your environment before you execute them, and then continue with the procedure to create a database. To edit the required database scripts, go to the *PS_HOME/scripts/unix* directory on the database server.

- CREATEDB18.SQL

Edit CREATEDB18.SQL to remove the REMARK from the following line:


```
REMARK startup nomount pfile=%ORACLE_HOME%\dbs\init<SID>.ora
```

Note. When editing CREATEDB18.SQL, if you are creating a Unicode database, you need to choose an Oracle character set supported by the PeopleSoft software. Ensure that the CHARACTER SET parameter in the CREATE DATABASE statement is set to either AL32UTF8 or UTF8.

- CONNECT.SQL.
Edit CONNECT.SQL only if you do not wish to use the default CONNECT_ID.
- UTLSPACE.SQL.

- `XXDDL.SQL`, where `XX` is a two-letter code for your product line or PeopleSoft PeopleTools, as listed in the table below:

Code	Description
CS	PeopleSoft Campus Solutions
CR	PeopleSoft Customer Relationship Management
LM	PeopleSoft Enterprise Learning Management
PF	PeopleSoft Enterprise Performance Management
EP	PeopleSoft Financials / Supply Chain Management
EA	PeopleSoft Financials / Supply Chain Management Argentina
EB	PeopleSoft Financials / Supply Chain Management Brazil
HC	PeopleSoft Human Capital Management
PA	PeopleSoft Portal Solutions
PT	PeopleSoft PeopleTools

Note. This is a complete list of available product lines for the current PeopleSoft PeopleTools release. Note that not all products go out on all PeopleSoft PeopleTools releases, so you may not see a script corresponding to every product line. In addition, some bolt-on products reference their own scripts within their application installation documentation. Search My Oracle Support to confirm that the product is supported for a specific release and database platform.

See My Oracle Support, Certifications.

Note. Compare the sizes of the PeopleTools tablespaces in `XXDDL.SQL` with the tablespaces in `PTDDL.SQL`. If the tablespace sizes in `PTDDL.SQL` are larger, increase the PeopleTools tablespace sizes in `XXDDL.SQL` to be at least as large as those in `PTDDL.SQL`.

Note. For multilanguage installs, you need to increase the size of the `PTTBL`, `PSIMAGE`, and `PSINDEX` tablespaces. Refer to the comments in the DDL scripts for further details regarding the incremental increase for each additional language.

Task 7C-4: Creating an Oracle Instance (non-Multitenant)

Run the `CREATEDB18.SQL` script from `SQL*Plus` to create an Oracle database, as follows:

1. Invoke `SQL*Plus` (`sqlplus`), connecting as `sysdba`.

```
$sqlplus '/as sysdba'
```

2. Run the CREATEDB18.SQL script using the following example as a guide:

```
sqlplus>@<PS_HOME>/scripts/unix/createdb18.sql
```

3. Supply the value for the SYS and SYSTEM Oracle user password when prompted.

Note. When editing CREATEDB18.SQL, if you are creating a Unicode database, you need to choose an Oracle character set supported by Oracle. Ensure that the CHARACTER SET parameter in the CREATE DATABASE statement is set to either AL32UTF8 or UTF8.

Task 7C-5: Creating Catalog Views and Utility Tablespaces (non-Multitenant)

Run the UTLSPACE.SQL script from SQL*Plus to create catalog views and utility tablespaces, as follows:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.
2. Run the UTLSPACE.SQL script:

```
sqlplus>@<PS_HOME>/scripts/unix/utlspace.sql
```

Task 7C-6: Creating PS.PSDBOWNER Table (non-Multitenant)

Run the DBOWNER.SQL script from SQL*Plus to create the PS.PSDBOWNER table, as follows:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.
2. Run the DBOWNER.SQL script, using the following example as a guide:

```
sqlplus>@<PS_HOME>/scripts/unix/dbowner.sql
```

3. Supply the values for the DBOWNER user and password when prompted.

Task 7C-7: Creating Application-Specific Dbspaces and Tablespaces (non-Multitenant)

To create tablespaces for the product you are installing, run the appropriate XXDDL.SQL scripts, logged on as the system user, where XX stands for your product line or PeopleSoft PeopleTools, as listed in the table in the section Editing Database Scripts.

To create application-specific tablespaces:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.
2. Run the appropriate DDL scripts.

For example:

```
sqlplus>@<PS_APP_HOME>/scripts/unix/epddl.sql
```

Task 7C-8: Creating PeopleSoft Database Roles (non-Multitenant)

Run the PSROLES.SQL script from SQL*Plus to create the PeopleSoft database roles, as follows:

1. Log on to SQL*Plus, connecting as sysdba.

```
sqlplus / as sysdba
```

2. Run the PSROLES.SQL script:

```
sqlplus>@<PS_HOME>/scripts/unix/psroles.sql
```

Task 7C-9: Creating the PeopleSoft Database Owner ID (non-Multitenant)

This task creates the PeopleSoft database owner ID that will be referenced in future tasks. It grants the roles, created in the previous step, to this owner ID.

Note. You must run the PSADMIN.SQL script for each PeopleSoft database that you are going to create. When prompted for a default tablespace name, select PSDEFAULT if you are using PeopleSoft naming conventions, or your site equivalent if you are not using PeopleSoft naming conventions.

To create the PeopleSoft database owner ID:

1. Log on to SQL*Plus, connecting as the System user.

```
sqlplus system/password
```

2. Run the PSADMIN.SQL script.

```
SQLPLUS>@<PS_HOME>/scripts/unix/psadmin.sql
```

3. Supply values for Access ID, Access ID password, SYS/SYSTEM user password, and the default tablespace name when prompted.

See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for Access ID password requirements.

Task 7C-10: Setting Up Connect ID (non-Multitenant)

This section discusses:

- Understanding Connect ID
- Understanding Connect ID and the Login Process
- Creating the Connect ID

Understanding Connect ID

With the current PeopleSoft PeopleTools release, you establish connections to a database simply by using the connect ID, which allows you to associate multiple PeopleSoft operators to the same connect ID. The connect ID has the minimum privileges required to connect to the database—that is, it has only SELECT privileges on specific PeopleTools tables. After connection, PeopleSoft Security uses the operator ID to control access to objects in the database. The PeopleSoft sign-on process validates the connect ID on the server, rather than the operator ID. Connect ID simplifies database security maintenance. You don't have to maintain access for all PeopleSoft users, just for the connect ID.

The connect ID is granted access using the *Connect.sql* script. This script creates the connect ID and grants CREATE SESSION privilege to the connect ID. Access to the PeopleSoft database is then granted to the connect ID explicitly via the initial Data Mover load script generated by DBSETUP to include the following grants.

```
grant select on PSSTATUS to <CONNECT_ID>;
grant select on PSOPRDEFN to <CONNECT_ID>;
grant select on PSACCESSPROFILE to <CONNECT_ID>;
```

In order to work, the connect ID and connect password must be specified at the client Configuration Manager or the configuration file of any two-tier client accessing the application.

Understanding Connect ID and the Login Process

When logging into a PeopleSoft database in two-tier mode, the user enters a Database Name, User ID, and Password in the PeopleSoft Signon dialog box. This table lists the steps and related database SQL operations associated with logging in.

Log-in Processing Steps	Related Database SQL Operations
The access to the PeopleSoft Database is established with the Connect ID not the User ID.	Connect=PT84/<ConnectID>/<ConnectIDPassword>
Check PSSTATUS	SELECT OWNERID, TOOLSREL, LASTREFRESHDTM, LASTCHANGEDTTM FROM PSSTATUS
Validate the User ID and Password	SELECT VERSION, OPERPSWD, ENCRYPTED, SYMBOLICID, ACCTLOCK FROM PSOPRDEFN WHERE OPRID =:1
Get the Access ID and Password	SELECT ACCESSID, ACCESSPSWD, ENCRYPTED FROM PSACCESSPROFILE WHERE SYMBOLICID =:1
Disconnect Connect ID	Disconnect
Login using the Access ID	Connect=PT84/ACCESSID/ACCESSPWD

At this point, access is governed by PeopleSoft security, which determines what applications a specific user ID has access to.

Task 7C-10-1: Creating the Connect ID

To create connect ID:

1. Log on to SQL*Plus as the System user.

2. Run the connect.sql script.

```
sqlplus>@<PS_HOME>/scripts/unix/connect.sql
```

3. Supply values for the connect ID and connect ID password when prompted.

The connect ID password must be between 6 and 30 characters with no percent characters (%).

4. The script will then create the connect ID and grant it CREATE Session privileges only.

Task 7C-11: Editing Database Scripts (Multitenant Architecture)

Edit the scripts listed in this section for your environment before you execute them and continue with the procedure to create a database. You can locate the *XXDDL.SQL* scripts in the *PS_HOME/scripts/unix* directory on the file server. The remainder of the scripts listed here reside in the *PS_HOME/scripts/unix/pdb* directory on the file server.

- CONNECT.SQL

No changes are required.

- CREATEDB18CDB.SQL

- Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
- Replace the <mount> variable with the UNIX mount point; for example, ds1.

Note. When editing CREATEDB18CDB.SQL, if you are creating a Unicode database, you need to choose an Oracle character set supported by the PeopleSoft software. Ensure that the CHARACTER SET parameter in the CREATE DATABASE statement is set to AL32UTF8.

- CREATEPDB.SQL

- Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
- Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
- Replace the <mount> variable with the UNIX mount point; for example, ds1.

- DBOWNER.SQL

- Replace the <MANAGERPWD> variable with the System user password.
- Replace the <PDB_SERVICE_NAME> variable with the PDB database name.

- PSADMIN.SQL

- Replace the <MANAGERPWD> variable with the System user password.
- Replace the <PDB_SERVICE_NAME> variable with the PDB database name.

- PSROLES.SQL

- Add this command after the `spool psroles.log` line.

```
ALTER SESSION SET CONTAINER = <PDB_SERVICE_NAME>;
```

- Replace the <PDB_SERVICE_NAME> variable in the command with the PDB database name.

- PSROLES2.SQL
Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
- PTDDL.SQL
 - Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
 - Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
 - Replace the <mount> variable with the UNIX mount point; for example, ds1.
 - Remove the REMARK from the line for Autoextend.
- UTLSPACE.SQL
 - Replace the <SID> variable with ORACLE_SID, that is, the CDB database name.
 - Replace the <PDB_SERVICE_NAME> variable with the PDB database name.
 - Replace the <mount> variable with the UNIX mount point; for example, ds1.
- XXDDL.SQL, where XX is a two-letter code for your PeopleSoft Application product line.
See the section Editing Database Scripts for a table listing the codes with the PeopleSoft product lines.
 - Replace <SID> with the combined name <SID>/<PDB_SERVICE_NAME>.
In this combined name, specify ORACLE_SID, that is, the CDB database name, for <SID>, and the PDB database name for <PDB_SERVICE_NAME>.
 - Replace the <mount> variable with the UNIX mount point; for example, ds1.
 - Remove the REMARK from all the lines for Autoextend.

After you edit the scripts, continue with the steps in this chapter to run these scripts and to run the Data Mover import.

Task 7C-12: Creating an Oracle Instance (Multitenant Architecture)

This section discusses:

- Creating a Root Container Database
- Creating a PDB

Task 7C-12-1: Creating a Root Container Database

To create a (root container database) CDB for pluggable databases:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba:
`sqlplus / as sysdba`
2. Run the createdb18cdb.sql script, using the following example as a guide:
`sqlplus>@<PS_HOME>/scripts/unix/pdb/createdb18cdb.sql`
3. Exit from SQL*Plus.
4. Open the script ptperlcat.sh for editing, and make the following changes for PDBs:
 - Replace the <SID> variable with ORACLE_SID
 - Replace the <mount> variable with the UNIX mount point.

5. Run the script `ptpercat.sh`.

This script runs the scripts `catalog.sql` and `catproc.sql`.

6. To verify that the database was created successfully, log in to SQL*Plus again and run the following command

```
select name,cdb from v$database;
```

If the value of CDB is "YES" in the response, it means that the database with ID <SID> (FSDMO in this example) can be used as a pluggable database:

NAME	CDB
-----	---
FSDMO	YES

Task 7C-12-2: Creating a PDB

To create a PDB:

1. Invoke SQL*Plus (`sqlplus`), connecting as `sysdba`:

```
sqlplus / as sysdba
```

2. Run the `createpdb.sql` script, using the following example as a guide:

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/createpdb.sql
```

You should see a message "Pluggable database created".

3. Execute the following command:

```
sqlplus>select name, open_mode from v$pdbs;
```

The following response indicates that the PDB is open and is ready to use:

NAME	OPEN_MODE
-----	-----
PDB\$SEED	READ ONLY
PDB_SERVICE_NAME	READ WRITE

The `PDB_SERVICE_NAME` is created by the Oracle server for a new PDB.

4. To verify the service name for the PDB, execute the following command:

```
lsnrctl status;
Service "PDB_SERVICE_NAME" has 1 instance(s).
Instance "PDB_SERVICE_NAME", status READY, has 1 handler(s) for this
service.
```

5. Add an entry for the PDB service name to the `tnsnames.ora` file.

This example shows a portion of the `tnsnames.ora` file. Replace <`PDB_SERVICE_NAME`> with the PDB database name:

```
<PDB_SERVICE_NAME> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = servername.com) (PORT = 1521))
    )
    (CONNECT_DATA =
```



```

        (SERVICE_NAME = <PDB_SERVICE_NAME>)
    )
)

```

6. Log in to the PDB in SQL*Plus with the following command:

```

sqlplus / as sysdba
SQL> ALTER SESSION SET CONTAINER = <PDB_SERVICE_NAME>

```

Task 7C-13: Creating Catalog Views and Utility Tablespaces (Multitenant Architecture)

To create catalog views and utility tablespaces:

1. Invoke SQL*Plus (sqlplus), connecting as sysdba.

```
sqlplus / as sysdba
```

2. Run the UTLSPACE.SQL script:

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/utlspace.sql
```

Task 7C-14: Creating PS.PSDBOWNER Table (Multitenant Architecture)

Run the DBOWNER.SQL script from SQL*Plus to create the PS.PSDBOWNER table, as follows:

1. Log on to SQL*Plus (sqlplus), connecting as the System user to the PDB.

The PDB name in this example is <PDB_SERVICE_NAME>:

```
sqlplus system/password@<PDB_SERVICE_NAME>
```

2. Run the DBOWNER.SQL script, using the following example as a guide:

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/dbowner.sql
```

3. Supply the values for the DBOWNER user and password when prompted.

Task 7C-15: Creating Application-Specific Dbspaces and Tablespaces (Multitenant Architecture)

To create tablespaces for the product you are installing, run the appropriate XXDDL.SQL scripts, logged on as the system user, where XX stands for your product line or PeopleSoft PeopleTools, as listed in the table in the section Editing Database Scripts (Multitenant Architecture).

To create application-specific tablespaces:

1. Log on to SQL*Plus (sqlplus), connecting as the System user to the PDB.

The PDB name in this example is <PDB_SERVICE_NAME>:

```
sqlplus system/password@<PDB_SERVICE_NAME>
```

2. Run the appropriate DDL scripts.

For example, for PeopleSoft Financials/Supply Chain Management:

```
sqlplus>@<PS_APP_HOME>/scripts/unix/epddl.sql
```

Task 7C-16: Creating PeopleSoft Database Roles (Multitenant Architecture)

To create the roles for your PeopleSoft database:

1. Log on to SQL*Plus, connecting as sysdba.

```
sqlplus / as sysdba
```

2. Run the PSROLES.SQL script:

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/psroles.sql
```

3. Run the PSROLES2.SQL script:

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/psroles2.sql
```

Task 7C-17: Creating the PeopleSoft Database Owner ID (Multitenant Architecture)

This task creates the PeopleSoft database owner ID that will be referenced in future tasks. It grants the roles, created in the previous step, to this owner ID.

Note. You must run the PSADMIN.SQL script for each pluggable database that you are going to create. When prompted for a default tablespace name, select PSDEFAULT if you are using PeopleSoft naming conventions, or your site equivalent if you are not using PeopleSoft naming conventions.

To create the PeopleSoft database owner ID:

1. Log on to SQL*Plus, connecting as the System user to the PDB.

The PDB name in this example is <PDB_SERVICE_NAME>.

```
sqlplus system/manager@<PDB_SERVICE_NAME>
```

2. Run the PSADMIN.SQL script.

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/psadmin.sql
```

3. Supply values for Access ID, Access ID password, SYS/SYSTEM user, and the default tablespace name when prompted.

See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for Access ID password requirements.

Task 7C-18: Setting Up Connect ID (Multitenant Architecture)

This section discusses:

- Understanding Connect ID
- Understanding Connect ID and the Login Process
- Creating the Connect ID

Understanding Connect ID

With the current release of PeopleSoft PeopleTools, you establish connections to a database simply by using the connect ID, which allows you to associate multiple PeopleSoft operators to the same connect ID. The connect ID has the minimum privileges required to connect to the database—that is, it has only SELECT privileges on specific PeopleTools tables. After connection, PeopleSoft Security uses the operator ID to control access to objects in the database. The PeopleSoft sign-on process validates the connect ID on the server, rather than the operator ID. Connect ID simplifies database security maintenance. You do not have to maintain access for all PeopleSoft users, just for the connect ID.

The connect ID is granted access using the *Connect.sql* script. This script creates the connect ID and grants CREATE SESSION privilege to the connect ID. Access to the PeopleSoft database is then granted to the connect ID explicitly through the initial Data Mover load script generated by DBSETUP to include the following grants.

```
grant select on PSSTATUS to <CONNECT_ID>;
grant select on PSOPRDEFN to <CONNECT_ID>;
grant select on PSACCESSPROFILE to <CONNECT_ID>;
```

In order to work, the connect ID and connect password must be specified at the client Configuration Manager or the configuration file of any two-tier client accessing the application.

Understanding Connect ID and the Login Process

When logging into a PeopleSoft database in two-tier mode, the user enters a Database Name, User ID, and Password in the PeopleSoft Signon dialog box. This table lists the steps and related database SQL operations associated with logging in.

Log-in Processing Steps	Related Database SQL Operations
The access to the PeopleSoft Database is established with the Connect ID not the User ID.	Connect=PT84/<ConnectID>/<ConnectIDPassword>
Check PSSTATUS	SELECT OWNERID, TOOLSREL, LASTREFRESHDTM, LASTCHANGEDTTM FROM PSSTATUS
Validate the User ID and Password	SELECT VERSION, OPERPSWD, ENCRYPTED, SYMBOLICID, ACCTLOCK FROM PSOPRDEFN WHERE OPRID =:1
Get the Access ID and Password	SELECT ACCESSID, ACCESSPSWD, ENCRYPTED FROM PSACCESSPROFILE WHERE SYMBOLICID =:1
Disconnect Connect ID	Disconnect
Login using the Access ID	Connect=PT84/ACCESSID/ACCESSPWD

At this point, access is governed by PeopleSoft security, which determines what applications a specific user ID has access to.

Task 7C-18-1: Creating the Connect ID

To create connect ID:

1. Log on to SQL*Plus as the System user to the PDB.

The PDB name in this example is `<PDB_SERVICE_NAME>`.

```
sqlplus system/manager@<PDB_SERVICE_NAME>
```

2. Run the connect.sql script.

```
sqlplus>@<PS_HOME>/scripts/unix/pdb/connect.sql
```

3. Supply values for the connect ID and connect ID password when prompted.

The connect ID password must be between 6 and 30 characters with no percent characters (%).

4. The script will then create the connect ID and grant it CREATE Session privileges only.

Task 7C-19: Updating Connection Information

You must update connection information on the client. To do this, update the connection information in TNSNAMES.ORA on your client to reflect your Database Name, Oracle SID, and Server Name.

Note. If you are creating pluggable databases, create an entry for the CDB, using the SID. Create another entry for the PDB, using the PDB_SERVICE_NAME.

Task 7C-20: Creating Data Mover Import Scripts

This section discusses:

- Understanding Data Mover Import Scripts
- Working with Multilingual Databases
- Running Database Setup to Create Data Mover Import Scripts

Understanding Data Mover Import Scripts

The Data Mover Import scripts are used to populate the PeopleSoft database with data. You use the Database Setup feature of the PeopleSoft Data Mover utility to create the Data Mover import scripts.

Note. This task and the next one (Running Data Mover Import Scripts) should be executed from a Microsoft Windows client machine. Before you can load PeopleSoft data from a Microsoft Windows client machine, you need to install PeopleSoft PeopleTools and your PeopleSoft Application to the Microsoft Windows client machine and be sure to select File Server and Database Server.

To complete the database creation procedure you must supply information on various authorization IDs and passwords, including Access ID, Connect ID, Symbolic ID, and User IDs. Before beginning this procedure, review the information in the section Planning Database Creation and make a note of the authorization information for your environment. For PeopleSoft PeopleTools 8.53 and later releases, the user profiles in PeopleTools demo databases are delivered disabled. During the procedure to create Data Mover import scripts you will choose whether to enable the delivered user profiles, and how to assign passwords for the profiles. In addition, you will supply several passwords that were previously provided as defaults. Be sure to note the passwords that you supply, as they will be needed for subsequent installation procedures.

See the information on administering user profiles in the *PeopleTools: Security Administration* product documentation.

See "Preparing for Installation," Planning Database Creation.

Task 7C-20-1: Working with Multilingual Databases

All PeopleSoft releases are shipped with English as the database's base language. Therefore when selecting components for the Data Mover Import script, you must select the English components in addition to any other languages you are installing. After the installation is complete, you can change the database's base language to the language that you plan to use most frequently, or leave the base language as English.

Read the section Planning Multilingual Strategy for information on installing multiple languages and changing your base language.

See "Preparing for Installation," Planning Multilingual Strategy.

If you are creating a database and want to load Oracle-provided translations for non-English languages, you must load English (ENG) in addition to the foreign language components.

If you are creating a non-Unicode database, you must ensure that the languages you select are all supported by the character set you used to create your database.

Note. During the database setup process, you have the option to select the database's base language. Select the language that you plan to use most frequently. If the database's base language is different than that set in this database setup process, generate the `SWAP_BASE_LANGUAGE` command in the Data Mover Import script to swap the language.

See *PeopleTools: Global Technology*.

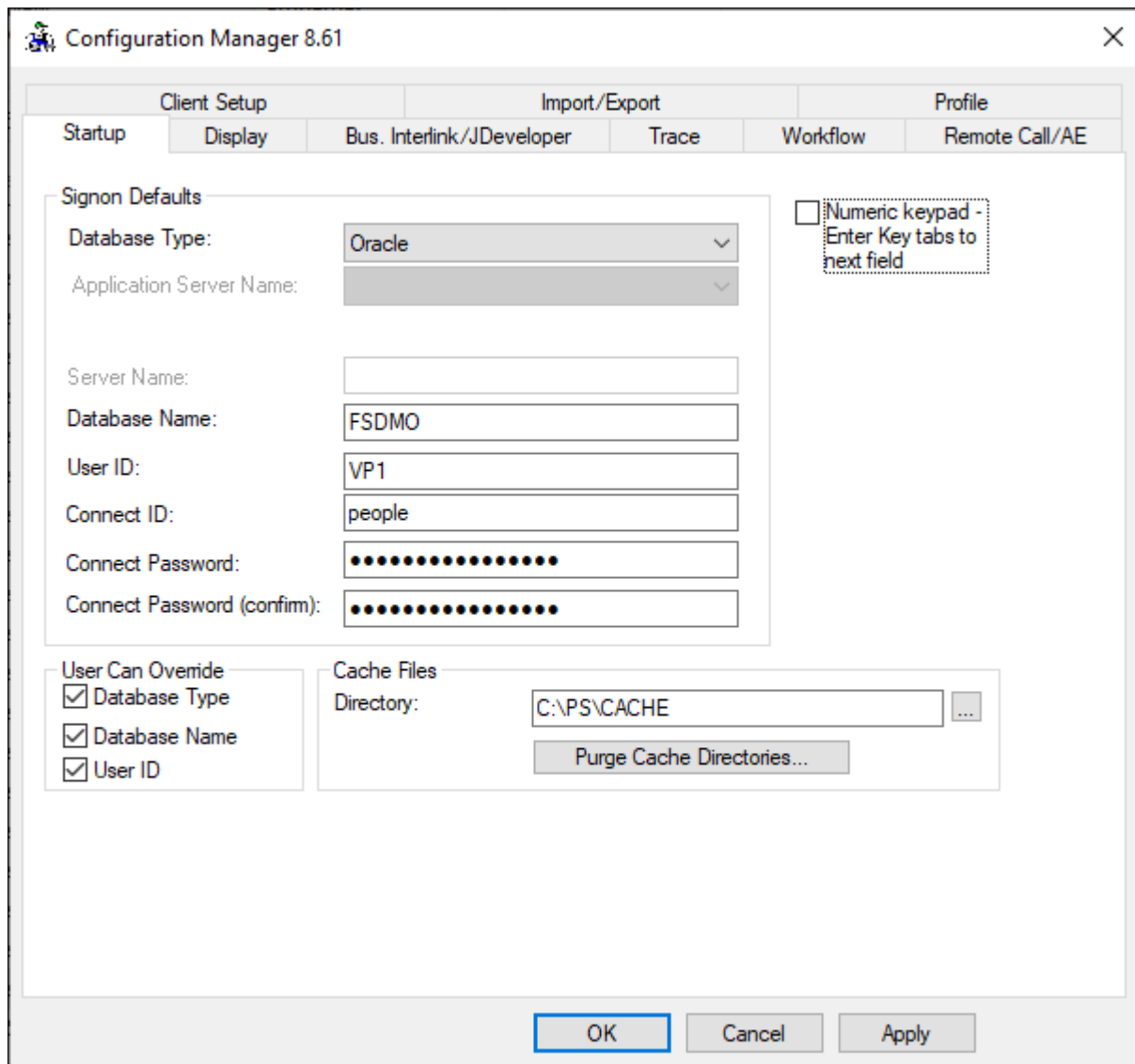
Task 7C-20-2: Running Database Setup to Create Data Mover Import Scripts

To create the import scripts using Data Mover:

See *PeopleTools: Data Management*.

1. Run Configuration Manager by using one of the following methods:
 - On Microsoft Windows, access the Apps screen and navigate to PeopleTools 8.61, Configuration Manager.
 - Run `PS_HOME\bin\client\winx86\pscfg.exe`.

- Verify in the Signon Defaults on the Startup page that the Database Type of Oracle is selected, as shown in the example.



Startup tab on the Configuration Manager dialog box

- Verify that the connect ID is correct.
If you accepted all defaults, the connect ID is people. Enter and confirm a value for the connect ID password.
- If the *PS_APP_HOME* location is not the same as *PS_HOME*, make sure it is set in Configuration Manager, as follows:
 - In Configuration Manager, select Profile.
 - Highlight the Default Profile and select Edit.
 - On the Edit Profile dialog box, select the Process Scheduler tab.
 - Verify that the *PS_APP_HOME* value is correct.
See "Setting Up the Install Workstation," Editing the Default Profile.
- Run Data Mover by using one of these methods:

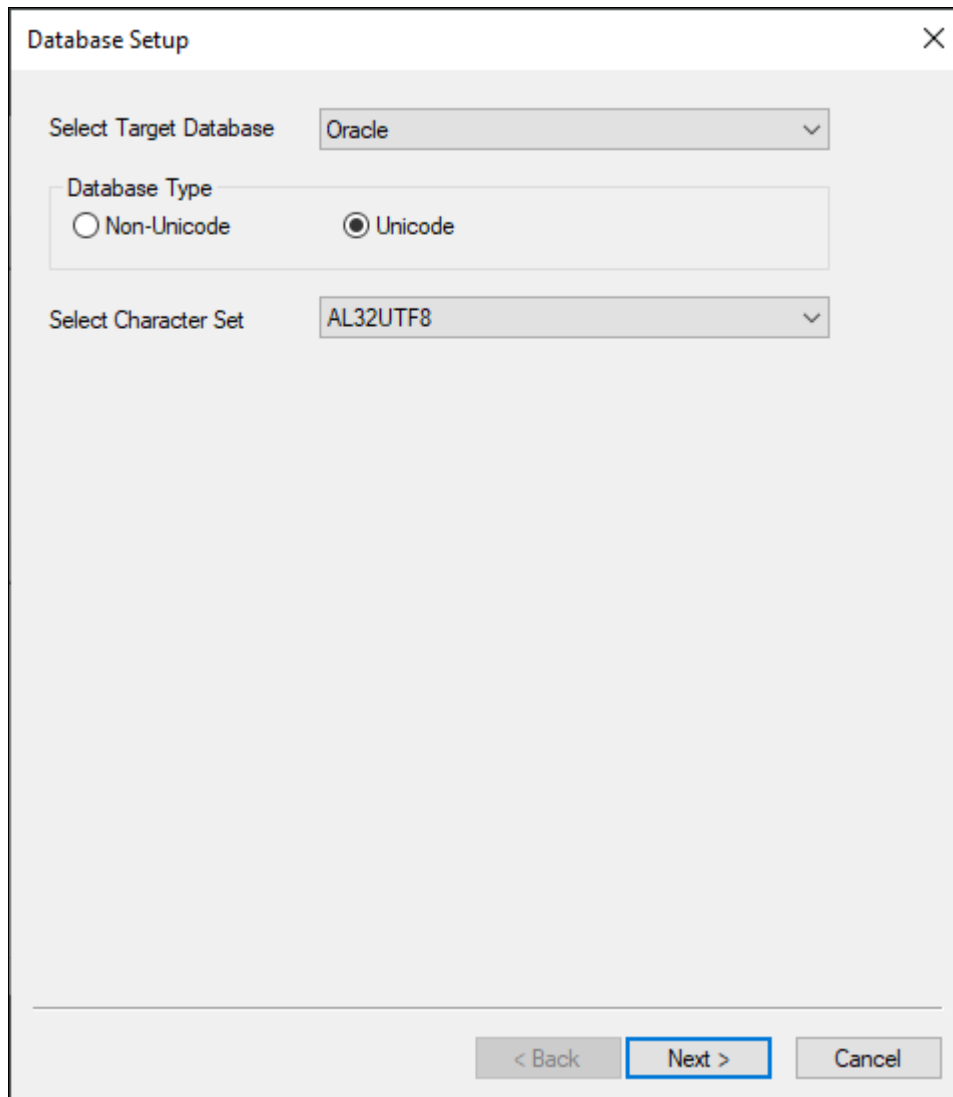
- On Microsoft Windows systems, access the Apps screen or Start menu, and navigate to PeopleTools 8.61, Data Mover.
 - Run `PS_HOME\bin\client\winx86\psdmt.exe`.
6. Log on using the access ID as the user id to start Data Mover in bootstrap mode; this should be the user that creates the database.

See Checking the Log Files and Troubleshooting, Running Data Mover.

Note. You must limit the access ID to eight characters or less. See "Preparing for Installation," Defining Oracle and PeopleSoft Databases, for access ID password requirements.

7. Select File, Database Setup.

The Database Setup dialog box appears, as shown in this example:



Selecting target database and character set on the Database Setup dialog box

8. Select your database platform from the Select Target Database drop-down list.
9. Select your database type, Unicode or non-Unicode, and character set.

Choose the Database Type—Unicode or Non-Unicode—that you selected in the section on multilingual

strategy. If you choose Non-Unicode, select the character set that you decided upon in that section from the drop-down list.

Note. When you select a non-Unicode character set, only the characters within that character set can be stored in your database. Oracle recommends that you create your database using Unicode.

See "Preparing for Installation," Planning Multilingual Strategy.

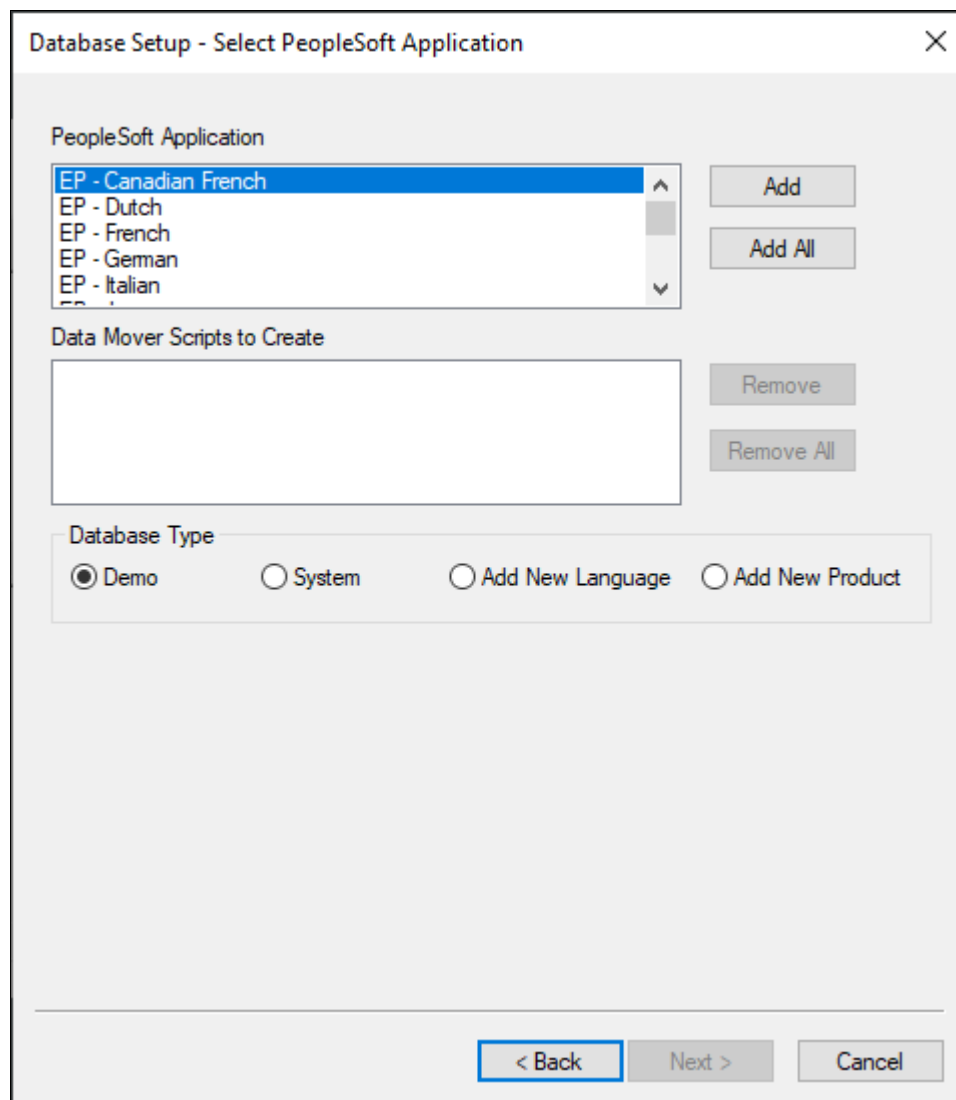
The character set you select here must match the character set you used to create your database in the task Creating an Oracle Database. If you choose to create a Unicode database, you must have created your instance using the AL32UTF8 or UTF8 character set in the step Creating an Oracle Instance.

Note. The database setup does not actually modify the character set of your database. That is done by the DBA during database creation. The database setup process only creates customized scripts based on your selection.

10. Select the Demo or System radio button, depending on which type of PeopleSoft database you are installing.

11. Select the products for which you want to create a Data Mover script from the PeopleSoft Application list box, and move the items you have selected into the Data Mover Scripts to Create list box by clicking on the Add or Add All button.

The dialog box lists the available languages for your installation.



Selecting languages on the Database Setup dialog box

If you installed the multilanguage software, each application will be listed several times, once for each language. For example, if there are both PeopleSoft PeopleTools and PeopleSoft application translated database objects under *PS_HOME/data* and *PS_APP_HOME/data*, the list will include both.

If you are installing languages other than English, make sure to select the appropriate language data files for each application you select in English. This will load the translated database objects.

See "Preparing for Installation," Planning Multilingual Strategy.

If you are installing an application in any language other than English, you must also select the English component of the application. For example, if you select PeopleSoft Fin/SCM - French, you must also select PeopleSoft Fin/SCM Database - US English. This ensures that you install the necessary base-language components.

12. Set the database parameters described below and then click Finish.

Database Setup - Database Parameters

Database Parameters

Database Name: FSDMO

Symbolic ID: SYSADM1

Access ID: SYSADM

Access Password: •••••

Connect ID: PEOPLE

Application Server ID: VP1

Application Server Password: •••

Web Server ID: PTWEBSERVER

Web Server Password: ••••••••

☒ Enable All Profiles ☒ Set Global Password

Global Password: ••••••••

< Back Next > Cancel

Specifying Database Parameters on the Database Setup dialog box

- **Database Name:** Specify the database name that users will enter on the PeopleSoft signon screen. This corresponds to the owner ID. It can be up to eight characters long and must be entered in uppercase.
- **Symbolic ID:** This is used as the key to retrieve ACCESSID and ACCESSPSWD from PSACCESSPROFILE.
For initial installation set it equal to the Database Name. The symbolic ID cannot be longer than eight characters.
- **Access ID:** Specify the user you used to create the database. Limit this to eight characters or less.
This value is case sensitive. You will use the access ID every time you want to sign on to Data Mover in bootstrap mode. Limit this to eight characters or less.
- **Access Password:** This is the PeopleSoft access ID password. See "Preparing for Installation " for access ID password requirements.
- **Connect ID:** For Oracle, this is the connect ID that is used for the initial connection to Oracle. This ID is used for connecting to the database. Limit this to eight characters or less.

- *Application Server ID*: The Application Server ID has privileges to start or shut down the Application Server domain. It is also used during the Application Server configuration. Enter one of the delivered PeopleSoft user IDs.
- *Application Server Password*: Specify a password for the Application Server ID.
- *Web Server Password*: Specify a password for the Web Server ID.

The default Web Server ID, as displayed in the example, is PTWEBSERVER. The Web Server ID, also referred to in this documentation as Web Profile User ID, is used to access the web profile information from the database through the Application Server Jolt service.

- *Enable All Profiles*: Select this option to leave the User profiles (other than the Application Server profile and the Web Server User profiles) unchanged.

If you do not select this option, all of the User profiles in the database, with the exception of the Application Server profile and Web Server User profiles, remain disabled as delivered.

- *Set Global Password*: If you enabled all profiles, you can choose to set the same password for all of the profiles.

Note. This option is enabled when the Enable All Profiles option is selected, as shown in the example.

- *Global Password*: Enter the password to be used for all user profiles.

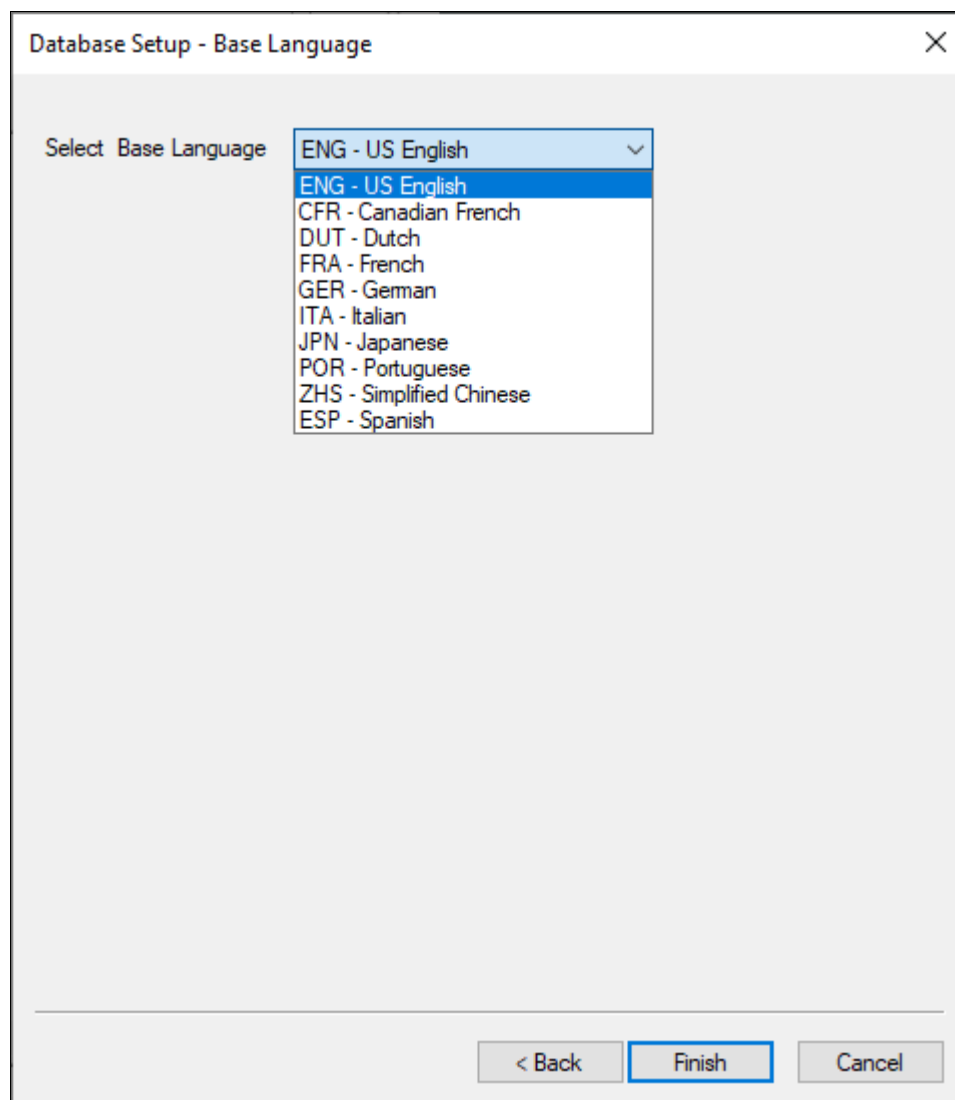
Note. This option is enabled when the Set Global Password option is selected, as shown in the example.

13. Select your database's base language.

Note. This window appears only if you selected one or more languages other than English in the previous window. If you see this window it is critical to select the correct base language. When you select a base language other than ENG, DBSETUP generates the Data Mover import script with the `SWAP_BASE_LANGUAGE` command to swap the base language.

See "Preparing for Installation," Planning Multilingual Strategy.

See Working with Multilingual Databases.



Selecting a base language in the Database Setup dialog box

Use the following information in making your selection:

- If you have not already done so, read the earlier section on multilingual strategy before determining whether to install multiple languages and whether to change your base language.
- If you are creating a database and want to load Oracle-provided translations for non-English languages, you must load English (ENG) in addition to the foreign language components.
- All PeopleSoft releases are shipped with English as the database's base language. Therefore when

selecting components for the Data Mover Import script, you must select the English components in addition to any other languages you are installing. During the Database Setup wizard, you need to select the database's base language that you plan to use most frequently. If your database's base language is different than the Database Setup wizard generate the `SWAP_BASE_LANGUAGE` command in the Data Mover Import script to swap the language.

14. Click Finish.

Note. If the Database Setup - Base Language window does not appear, click Finish after supplying the parameters on the Database Setup - Database Parameters window.

At this point you are in Data Mover, with the DMS script you just created ready to run.

See Also

PeopleTools: Data Management

PeopleTools: Security Administration, "PeopleSoft Authorization IDs"

Task 7C-21: Running Data Mover Import Scripts

This section discusses:

- Understanding Data Mover Import Scripts
- Populating Tables in the PeopleSoft Database

Understanding Data Mover Import Scripts

Now you will run the Data Mover scripts (DMS) that you created in the preceding task to import the data for your PeopleSoft database. The Data Mover script creates either a system (SYS) or a demo (DMO) database.

When you initially logged onto Data Mover to create the DMS scripts, you logged in with the Access ID and password, using bootstrap mode. You need to use bootstrap mode to run the Data Mover import script, because there are not yet any PeopleSoft security tables in the database.

When you start Data Mover in bootstrap mode, the word "BootStrap" appears in the Data Mover status bar.

See *PeopleTools: Data Management*.

See Also

Checking the Log Files and Troubleshooting, Running Data Mover

Task 7C-21-1: Populating Tables in the PeopleSoft Database

To populate tables in the PeopleSoft database:

1. The DMS import script for your application will contain hard-coded file names for log files and data files.
Modify the DMS script if you have moved any files from the delivered directories or want to write log files to another location than that specified in the script.
2. Select File, Run to execute the script.

When you run the script, Data Mover typically performs the following actions:

- **IMPORT ***
Create all the PeopleTools and application tables with their indexes.
- **ENCRYPT_PASSWORD ***
Encrypt security information for the database.
- **CREATE_TRIGGER ***
Create application required triggers.
- **REPLACE_VIEW ***
Create PeopleSoft views.
- **CREATE_TEMP_TABLE ***
Create PeopleSoft temporary tables.

Task 7C-22: Cleaning Up Orphaned Language Data

Perform this task if you are a Multilingual customer and are installing non-English languages. This task assumes that you have loaded the necessary language files. If you have not yet loaded the language files, follow the instructions in the Global Technology product documentation.

See *PeopleTools: Global Technology*, "Adding Oracle-Provided Translations."

The Application Engine program PTIACLNLNGCA removes any orphaned related language objects that do not have a matching base language object.

Run the PTIACLNLNGCA application engine program. From the command line utility, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP=>  
<password> -R <run_control> -AI PTIACLNLNGCA -FP <log_path>
```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <oprid> respectively. However, be aware that <password> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <password> that is the password associated with the <oprid>. For <log_path>, specify the path where you want the log file for the application engine program to be generated, such as C:\temp\.

Task 7C-23: Checking the Log Files and Troubleshooting

This section discusses:

- Checking the Log Files
- Running Data Mover
- Troubleshooting
- Improving Performance

Task 7C-23-1: Checking the Log Files

After running each Data Mover script, examine the .LOG files to make sure that all the commands were executed successfully. The log files are located in the directory you specified in the Data Mover script.

See "Setting Up the Install Workstation," Editing the Default Profile.

Task 7C-23-2: Running Data Mover

Use one of these methods to run Data Mover.

On UNIX, run `PS_HOME/bin/psdmtx` from the command line.

If you use the access ID that you specified during the database configuration to log on, you log on in "bootstrap mode." When you start Data Mover in bootstrap mode, the word "BootStrap" appears in the Data Mover status bar.

If you use a valid PeopleSoft Operator ID, such as PS for Human Capital Management or VP1 for Financials/Supply Chain Management, you log on in "user mode." In this mode, no designation appears in the Data Mover status bar.

To run Data Mover on the command line:

Note. You can run `psdmtx` by supplying arguments on the command line, or by passing the arguments from a text file. This section describes the text file method.

1. Go to `PS_HOME/bin`.
`cd $PS_HOME/bin`

2. Use the following command to view the help for `psdmtx`:

```
$ psdmtx /help
Usage:  psdmtx  [-CT DB2|DB2ODBC|MICROSFT|ORACLE]
              [-CS server name]
              [-CD database name]
              [-CO user id]
              [-CP user pswd]
              [-CI connect id]
              [-CW connect id pswd]
              [-I process instance]
              [-FP filename]

      or
psdmtx  [parmfile]
```

To capture the output in a file, use a greater-than symbol ("pipe", >) followed by a filename. For example:

```
psdmtx [arguments] > filename.txt
```

Use the following list of commands and descriptions for the `psdmtx` arguments:

Command Argument	Description
-CT <DB type>	The type of database to connect to: ORACLE.
-CD <DBNAME>	Your selected Database Name.
-CO <ACCESSID>	Use the <DBNAME> Access ID to run Data Mover in bootstrap mode.
-CP <ACCESSPWD>	The password for <DBNAME> Access ID.
-CI <CONN ID>	The ID used to connect to the database server.
-CW <CONN PSWD>	The password for the specified connection ID.
-FP <filename>	The filename for the Data Mover import script (DMS) to run.

3. To set up Data Mover to rerun the Data Mover import script in bootstrap mode, do the following:
- Change directory to `PS_HOME/setup`.
 - Copy `parmfile` to `parm<DBNAME>`. For example, `parmPT858`.
 - Edit `parm<DBNAME>`.

Use the information in the table above to edit the file for your configuration.

Use ORACLE for <DB type>.

For example:

Before

```
-CT <DB type> -CD <DBNAME> -CO <ACCESSID> -CP <ACCESSPWD> -CI <CONN=>
ID> -CW=>
<CONN PSWD> -FP <filename>
```


After

```
-CT ORACLE -CD HRDMO -CO HRDMO -CP HRDMO -CI people -CW people -FP⇒
$PS_HOME⇒
/scripts/pt858ora.dms
```

4. To launch Data Mover in bootstrap mode, do the following:

- Change directory (cd) to *PS_HOME/bin*
- Run the *psdmtx* command with the edited *parm<DBNAME>* file.

```
pt-sun20:$ psdmtx ../setup/parmPT858
```

You see Data Mover log messages tracking the progress.

See Also

PeopleTools: Data Management

Task 7C-23-3: Troubleshooting

If the DMS script has stopped midway (this can happen for a number of reasons) you need to edit the script and start again.

To edit and restart the DMS script:

1. Determine the record that was being imported (that is, which *IMPORT* command was running) when the script stopped, and use the following guidelines to edit and rerun the DMS scripts.

When building a DMO database or a multilingual database, adding the *SET START* statement can be tricky because the Data Mover script used to load the database will include more than one *IMPORT* statement. The key is to view the log files and determine which *IMPORT* section of the script Data Mover failed on.

- If the failure occurred during the first *IMPORT* statement, add the *SET START* statement before the first *IMPORT *; statement*.
- If the failure occurred during a subsequent *IMPORT* statement, comment out all statements preceding the *IMPORT *; statement* where the failure occurred and add the *SET START* statement before the *IMPORT *; statement* of the section in which the failure occurred.
- *This is very important:* If you see any "unique index constraint" error messages in the "Building required indexes" section, your *IMPORT* script failed during a subsequent *IMPORT* but the *SET START* statement was added to the first *IMPORT*. In this situation, you can run the Data Mover script in its originally generated form, with only one modification. In the first *IMPORT* section, change the statement "*IMPORT *;*" to "*REPLACE_DATA *;*". This will delete all the data in the tables, and re-import it. This process will take some time to run, and you will need to separately create each of the indexes that failed.

2. Go to the *PS_APP_HOME/scripts* directory to find the generated DMS script.
3. Open the script for editing with a standard editing tool such as *vi*.
4. Add the following line before the offending *IMPORT* command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;
```

<RECORD NAME> is the name of the record that failed. Make sure to review the Data Mover log file to see where the script failed and locate the last record that imported successfully. The *SET START* command will begin the Data Mover import at the specified record name.

Note. It is a good idea to change the name of the log file in the script before each attempt at running it. This ensures that you have a separate log file for each attempt, if you run the import more than once.

For example, if the script stops and the table is partially inserted with a message similar to this one:

```
Importing  PSPNLFIELD
Rows inserted into PSPNLFIELD

3000
```

First drop the partially inserted table (for example, record) by using the DROP TABLE command, and then restart Data Mover at the record that failed using the SET START command and continue the Data Mover import. This can be done in a single pass.

Add the following lines before the offending IMPORT *; command (the one being executed when the failure occurred):

```
SET START <RECORD NAME>;
DROP TABLE <RECORD NAME>;
```

For <RECORD NAME>, specify the name of the record that failed. The SET START statement will begin the Data Mover import at the specified <RECORD NAME>.

Example of the original script:

```
REM - PeopleSoft Database - US English
/
SET LOG epengs.log;
SET INPUT epengs.db;
SET COMMIT 30000;
SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE ON;
IMPORT *;
```

Example of script after modification, with changes in bold font:

```
REM - PeopleSoft Database - US English
/
SET LOG epengs2.log;
SET INPUT epengs.db;
SET COMMIT 30000;
SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE ON;
SET START PSPNLFIELD;
DROP TABLE PSPNLFIELD;
IMPORT *;
```

For the DROP statement, for records with a recname without a leading PS, add PS_ to the beginning of the recname; otherwise the table will not be found. For example, PS_<RECNAME>.

5. To restart the script, use the psdmtx command to execute Data Mover on the command line.

Task 7C-23-4: Improving Performance

The following tips can help you save time when running the Data Mover scripts:

- Run Data Mover from the fastest workstation available.
- Run Data Mover on the database server.
- Run only a single instance of Data Mover, and do not have any other applications running during the import.
- In the PeopleSoft Configuration Manager, turn off all trace options.

Tracing during a DMS load will add considerable time to the process.

- Copy the database file over to the workstation so that Data Mover can access it locally instead of over the network.
- Run Data Mover on the database server with the .db or .dat file located locally.

If you are comfortable changing the options available for an Oracle instance, you might consider "tuning" the instance used for the import. Some of these options are appropriate only during the import, so you may not want to keep them in effect after the import is complete.

For best performance during a Data Mover import, set these options as follows:

- Increase the number of database blocks.
- Use an 8K Oracle block size.
- Use very large rollback segments.
- Increase the size of the UNDO tablespace or the number of UNDO Segments.
- Use asynchronous read and write.
- Use multiple db_writers.

Task 7C-24: Changing the Base Language

The information in the earlier task Planning Multilingual Strategy will help you determine whether you should change your base language, and lists the currently supported languages.

See "Preparing for Installation," Planning Multilingual Strategy.

See PeopleTools Certifications — Supported Languages, My Oracle Support (search for article name).

This task applies only if your users will be operating PeopleSoft applications *primarily* in one particular language other than English. It gives a performance boost to the language you designate as the base language, but requires more administrative overhead than leaving English as the base language. The details are spelled out in the *PeopleTools: Global Technology* product documentation.

Chapter 8

Completing the Database Setup

This chapter discusses:

- Selecting the Necessary Tasks to Complete the Database Setup
- Running Additional Data Mover Scripts
- Running SQR Reports
- Checking the Database
- Running SETSPACE.SQR

Selecting the Necessary Tasks to Complete the Database Setup

Review each of the tasks in this chapter to determine which are required for your database setup. Depending upon the details of your installation you may not need to complete every task. However, it is important to evaluate the tasks with respect to your specific situation.

Task 8-1: Running Additional Data Mover Scripts

To import additional data for your specific PeopleSoft database, or to make other required changes, you may need to run additional Data Mover scripts. These script files have the extension .dms and are sometimes referred to as "DMS scripts." They are located in the *PS_HOME*\scripts or *PS_APP_HOME*\scripts directory of your file server, and need to be run from the file server by means of Data Mover.

For the details on which additional application-specific Data Mover scripts to run, consult your application-specific installation instructions.

Task 8-2: Running SQR Reports

This section discusses:

- Understanding Running SQR Reports
- Running SQRs on the Client Workstation
- Creating a Shortcut to Run SQRs

Understanding Running SQR Reports

The instructions in this section describe how to run SQR reports from the client workstation. On the Microsoft Windows client, you may prefer to create a shortcut to allow you to run the reports repeatedly. You can use these instructions to run SQRs required in the upcoming task Checking the Database.

You can also choose to run SQR reports from the command line in console mode. Before running SQR from the command line on Microsoft Windows operating systems, set PS_HOME from the prompt. For example:

```
set PS_HOME=C:\psft\pt\ps_home8.61
```

See Also

PeopleTools: SQR for PeopleSoft Developers

PeopleTools: SQR Language Reference for PeopleSoft

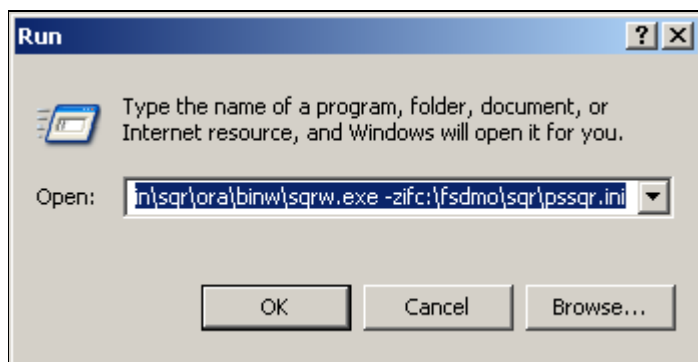
Task 8-2-1: Running SQRs on the Client Workstation

To run an SQR on the client workstation:

1. Select Start, Run, click Browse, and navigate to *PS_HOME*\bin\sqr\ORA\binw.
Select sqrw.exe and click Open.

2. Add any needed flags at the end of the command line.

Refer to the table that follows. For those flags that require attributes, append the attributes to the flags with no intervening spaces (for example, `-fE:\fsdmo\bin\sqr\pssqr.ini`).



Microsoft Windows Run dialog box launching SQRW

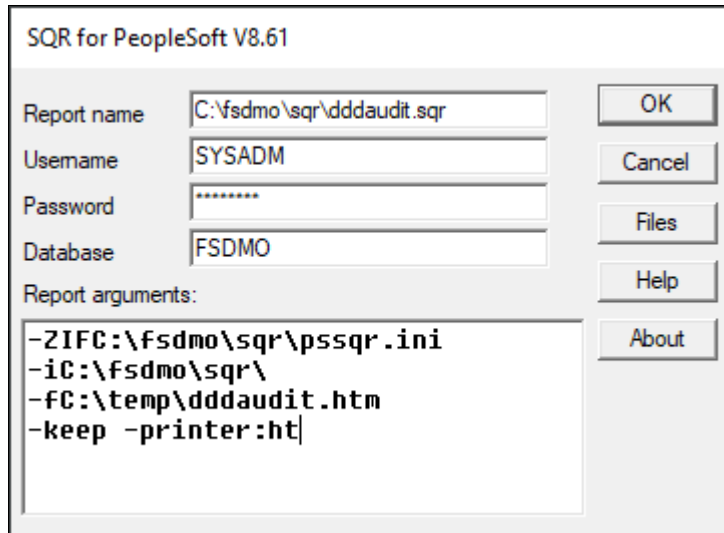
The following table summarizes the SQR report arguments used by PeopleSoft software. (For a full listing of report arguments, press the Help button to view the SQR help topic for this dialog box.)

Flag	Description
-I	Specifies the directories that SQR will search for the #INCLUDE files. (A trailing slash is required.)
-f	Specifies the directory where the report output will be sent. If you use the <code>-keep</code> flag, you must specify the directory with a trailing slash. If you use the <code>-printer</code> flag, specify a full path name with a filename for the HTML file.
-ZIF	Sets the full path and name of the SQR initialization file. The <code>-ZIF</code> flag should point to your <code>PS_HOME\sqr\pssqr.ini</code> file.
-keep	Keeps the .SPF file after the program runs. This enables you to view the report with the SQR viewer.
-printer:ht	Generates the output file in HTML format. Specify the filename, with path location, with the <code>-f</code> flag.

3. Click OK.

The SQR for PeopleSoft V8.61 dialog box appears, displaying the attributes that you entered in the Run dialog box. The fields on this dialog box are described in the next step:

Note. The report arguments in this example have been arranged for readability.



SQR for PeopleSoft dialog box with DDDAUDIT.SQR

4. Enter the following values:

- Enter the report name.
You must specify the full path.
- Enter the access ID in the Username field.
- Enter the access password in the Password field.
- Enter the database name.

5. Click OK to run the SQR report.

Note. In the Properties dialog box for your SQR icon, make sure that the Start in path points to your Oracle connectivity on the Shortcut tab. If you take the default, you may see a misleading error message about TNS packet writer failure.

Task 8-2-2: Creating a Shortcut to Run SQRs

If you think you may need to run the SQR reports more than once, you may want to create a shortcut on the Windows client workstation. To save the report arguments:

1. Open Windows Explorer on the machine on which you want to run SQR.
2. Navigate to `PS_HOME\bin\sqr\ORA\binw`.
3. Right-click `sqrw.exe` and click Create Shortcut.
4. Right-click the shortcut that you just created and select Properties.
5. On the Shortcut tab, add the same `sqr` flags that you used in the previous task after `sqrw.exe` in the Target entry box.

6. Click OK.
7. To run the report, double-click the shortcut and specify the following information in the dialog box:
 - Report Name: Enter the full path and the name.
 - Database name
 - Username: Enter the access ID.
 - Password: Enter the access password.
 - Report arguments: Make any necessary modifications to the saved arguments.
8. Click OK.

Task 8-3: Checking the Database

Run and examine the SQR reports to verify that your database is complete.

See Running SQR Reports.

To verify that the database is complete, run the following SQR reports from the *PS_HOME\sqr* directory:

- dddaudit.sqr
- sysaudit.sqr
- swpaudit.sqr, if you plan to swap your base language

For further information about these reports, consult PeopleSoft product documentation. This documentation includes specific information on how to interpret the reports and how to fix any errors found there.

It is good practice to run and read the audit reports, which include sysaudit, dddaudit, swpaudit, and alter audit, after making changes such as applying patches, bundles, and upgrades to the database, to make sure that the tables are internally and externally in synch. It is also a good idea to schedule regular maintenance, for example weekly, in which you run and review the reports. You can find information on these audit reports in the *PeopleTools: Data Management* product documentation.

See *PeopleTools: Global Technology*, "Running the Swap Audit Report."

You can greatly improve the performance and run time of the sysaudit.sqr run by making the following configuration changes to the Oracle init.ora for your SID:

```
db_file_multiblock_read_count = 16
db_block_buffers = 2000 or greater
log_checkpoint_interval = 9999999
log_buffer = 102400
```

If you are using rollback segments, you may also want to increase the size of the RBSBIG rollback segment to 500 MB.

See Also

PeopleTools: Data Management

PeopleTools: System and Server Administration

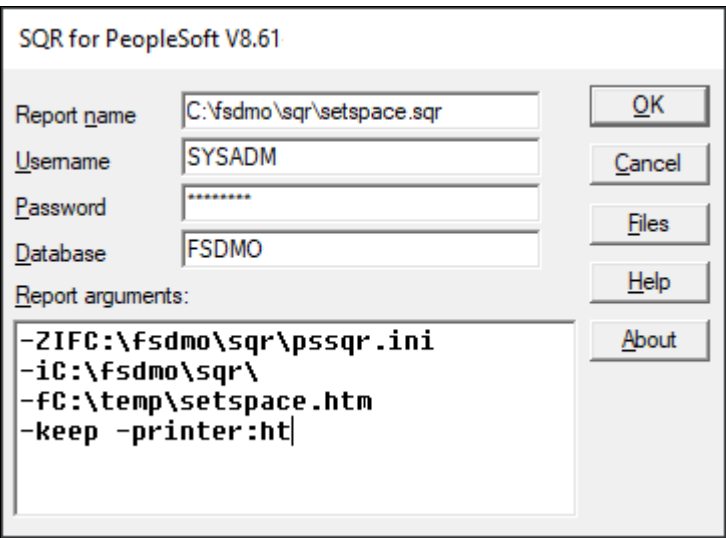
Task 8-4: Running SETSPACE.SQR

Run the SETSPACE.SQR script to populate or synchronize Tablespace information with the system catalog. To run SETSPACE.SQR:

- 1. Using the instructions provided earlier, run SETSPACE.SQR from the *PS_HOME\SQR* directory.

See Running SQR Reports.

Note. Your results will vary depending on the application you are loading. The dialog box example shown here is typical. The report arguments in this example have been arranged for readability.



SQR for PeopleSoft dialog box with setspace.sqr

- 2. Click OK.
- 3. As SETSPACE.SQR runs you see a progress indicator similar to the following.

Set Table Space Name in PSRECTBLSPC

Table PSRECTBLSPC column DDLSPACENAME have been updated with the tablespace found in the system catalog table. The total number of records updated appears at the bottom of this⇒ report.

Recname	New DDLSpaceName	Old DDLSpaceName

This phase of SETSPACE will sync up the PSRECTBLSPC and PSTBLSPCCAT tables		

PSRECTBLSPC Records Updated: 0

PSTBLSPCCAT Records Inserted: 0

Ending SQR.

Chapter 9

Deploying Mid-Tier Components

This chapter discusses:

- Understanding the Mid-Tier Deployment
- Running the DPK Setup Script for Mid-Tier Deployment
- Completing Installation Tasks

Understanding the Mid-Tier Deployment

After you complete the database creation, run the PeopleTools DPK setup script again to deploy the mid-tier components for the PeopleSoft environment. Specify the same *BASE_DIR* that you specified when you used the DPK setup script to install the software.

The default mid-tier deployment performs the following:

- Sets up a single application server domain, Process Scheduler domain, and PIA domain.
- On Microsoft Windows, sets up services for the PeopleSoft domains.

Note. On Windows, when running the setup script to deploy mid-tier components for previously-created domains, first stop and delete services for configured domains to avoid errors.

- Installs Oracle Tuxedo and Oracle WebLogic software, unless the DPK setup script installed them in previous deployment to the same *BASE_DIR*/pt location.

Task 9-1: Running the DPK Setup Script for Mid-Tier Deployment

This section discusses:

- Understanding the Mid-Tier Deployment
- Prerequisites
- Running with the Mid-Tier Option on Microsoft Windows
- Running with the Mid-Tier Option on Linux, AIX, or Solaris as the Root User
- Running with the Mid-Tier Option on Linux, AIX, or Solaris as a Non-Root User

Understanding the Mid-Tier Deployment

Use this procedure to install the PeopleSoft mid-tier components. The deployment includes the following:

- *PS_HOME* installed to the default location under the DPK base directory

- Oracle Tuxedo installed to the default location under the DPK base directory
- Oracle WebLogic installed to the default location under the DPK base directory
- Oracle Database Client installed to the default location under the DPK base directory

Note. This is an Oracle 19c Database Client. The client can be used with the Oracle Database releases that are supported for the current PeopleSoft PeopleTools release. See the Certifications for PeopleSoft PeopleTools on My Oracle Support.

- Deployed and set up PeopleSoft domains. There is a single Application Server domain, single Process Scheduler domain, and single PIA domain.
- The Microsoft Windows DPKs include Microsoft Visual C++ Redistributable Packages for Visual Studio, which include required Microsoft C++ runtime libraries

Prerequisites

Before performing the mid-tier deployment, be sure that you have fulfilled the following requirements:

- You have downloaded all of the required PeopleSoft PeopleTools DPKs, and saved them in a location accessible to the Microsoft Windows, Linux, AIX, or Solaris host, referred to here as *DPK_INSTALL*. See "Installing the PeopleSoft Homes," Obtaining the PeopleSoft Application and PeopleTools DPKs

Note. After the DPK setup script extracts the downloaded zip files, it will delete the original zip files in *DPK_INSTALL*. If you want to save the original zip files, make a backup copy in a different directory.

Note. It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

Note. If you want to have a PeopleSoft application-specific local node, for Integration Broker or Report Node, configured during the mid-tier creation, you must also download the first application DPK (normally zip file 9ofn.zip). If the application DPK is not present, the mid-tier deployment will create a PeopleTools-specific default local node.

- Remove any previous installations of the same version of Oracle Tuxedo.
- You extracted the first zip file. The extraction gives a setup directory and other files. See "Deploying the PeopleSoft Homes."
- The user running the script *must have administrative permission* on Microsoft Windows.

Note. Restarting services for the deployed PeopleSoft environment, such as those for Oracle Tuxedo, must be performed by the same user (with administrative permission) who carried out the installation.

- You must have *root access* to deploy the PeopleSoft DPKs on Linux, AIX, or Solaris. For information on non-root deployment, see the section Deploying as a Non-Root User on Linux, AIX, or Solaris.
- For deployment on Linux, AIX, or Solaris, there is a writable directory available for the home for the users that own the PeopleSoft environment.

If you install as a non-root user, the DPK setup script uses the home directory of the logged-in user as the default home directory for the user, and for the deployment log files. The non-root deployment includes a

prompt for *PS_CFG_HOME*. When prompted, enter the full path for a writable directory.

If you do the entire installation as root, the DPK setup script creates default users, and includes a prompt for the home directory for these generated default users. When prompted, enter the full path for a writable directory. The default is /home. In this case, *PS_CFG_HOME* is installed as a subdirectory of the *psadm2* default user's home directory.

See "Completing the Installation," Using the PeopleSoft Installation.

- There is enough space on the host for the PeopleSoft environment.
See "Prerequisites," Reviewing Hardware Requirements on Microsoft Windows.
- For deployment with the AIX DPK, you have installed JDK required for the operating system.
See Reviewing Software Requirements.
- You have installed database connectivity software for the database that you want to access on the machine on which you deploy the mid-tier components.

The mid-tier deployment includes Oracle database client installation, so a separate installation of Oracle database connectivity software is not required. For alternative installations of the Oracle database client, you must use the customizations to specify the installation location. If you want to use a previous installation, specify the installation location as mentioned in the task Preparing the Customization File for Component Software Locations.

See "Completing the DPK Initialization with Customizations."

- The mid-tier deployment constructs a *tnsnames.ora* entry for use by the PeopleSoft mid-tier components (that is, application server and Process Scheduler) to connect to a database using *SERVICE_NAME*. Ensure that your database can be accessed using *SERVICE_NAME* in the *tnsnames.ora* entry.
- You have the information for the database to connect to, including:
 - RDBMS platform
 - Database name, service name, host, and listening port
 - Unicode or non-Unicode database
- You have the information for the user IDs and passwords needed for the deployment, including the following:

The DPK setup process does not include any default passwords. There are default users in some cases, which are included in the prompts. You must provide user IDs and passwords, as determined by the type of deployment. Type carefully, because the window does not display masking characters as you type.

- PeopleSoft Connect ID and password
- PeopleSoft operator ID (such as PS or VP1) and password
- Application Server Domain Connection password (optional)
- PTWEBSEVER web profile user password
- Oracle WebLogic server administrator password
- Integration Gateway administrator and password
- Integration Gateway keystore password
- Review the information for password restrictions. When you run the DPK setup script, the prompts for some of the passwords do not explicitly specify the restrictions as they did in previous releases.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Task 9-1-1: Running with the Mid-Tier Option on Microsoft Windows

To deploy mid-tier components on physical or virtual Microsoft Windows hosts:

1. Open a command prompt window with Run as Administrator.
2. Change directory to the location where you extracted the first zip file, *DPK_INSTALL/setup*.
3. Run the script with the mid-tier option to set up the Application Server, PIA, and web server mid-tier components.

Note. If you see an error message similar to "The application has failed to start because its side-by-side configuration is incorrect," it indicates that your machine does not include the necessary Microsoft C++ runtime libraries. Go to the Microsoft Web site, locate the Microsoft Visual C++ redistributable package for your system, and install as directed.

- If you extracted the first zip file into the same directory where you downloaded the zip files, use this command:

```
psft-dpk-setup.bat --env_type midtier
```
 - If you extracted the first zip file into a different directory, include the option `dpk_src_dir` to specify the location of the downloaded zip files, such as *DPK_INSTALL*.

```
psft-dpk-setup.bat --dpk_src_dir DPK_INSTALL --env_type midtier
```
-

Note. Running the DPK setup script with the `--env_type midtier` option deploys all servers. If you want to deploy one of the servers (application server, Process Scheduler server, PIA, or application server and Process Scheduler server) see the command options in "Installing the PeopleSoft Homes," Reviewing the DPK Setup Script Options.

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:           [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The script creates the directory if it is not present.

Note. When entering the path for the base directory, use forward slashes (/). For example, *C:/psft*. Enclose any names with special characters in double quotes. Do not use a name for the base directory that begins with a number. Confirm your choice or change it if necessary.

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

Enter the full path for the PeopleSoft Base Directory: **C:/psft**

Are you happy with your answer? [Y|n|q]:

The script validates if there is enough free space available under the specified base directory for the PeopleSoft environment. The PeopleSoft environment setup is aborted if there is not enough free space.

Note. A mid-tier setup of a PeopleSoft environment requires about 25 GB of disk space.

The script creates the following sub-directories under the user-provided base directory, *BASE_DIR*:

- *BASE_DIR*\db
This directory is not used for a mid-tier deployment.
- *BASE_DIR*\dpk
The script uses this directory to extract the archives from the PeopleSoft DPKs, and contains the Puppet YAML files for the deployment.
- *BASE_DIR*\psft_puppet_agent
This script uses this directory to install Puppet software.
- *BASE_DIR*\pt
The script uses this directory to deploy PeopleSoft components.

6. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
```

```
[ OK ]
```

```
Installing eYAML Hierarchical Backend on this host: [ OK ]
```

```
Checking if PeopleSoft DPKs are Present: [ OK ]
```

```
Checking if the Base Directory has Enough Free Space: [ OK ]
```

7. Review the status messages as the script validates the files found in *DPK_INSTALL* and extracts the DPK archives.

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

After the script completes the extraction, it deletes the original files. Make a backup copy if you want to keep them.

See "Preparing for Installation," Understanding the PeopleSoft Installation Using Deployment Packages, for the filename syntax of the DPK zip files.

Note. The messages have been truncated for brevity.

```
Validating the PeopleSoft DPKs in the Windows Host:
```

```
[...]
```

```
Extracting the PeopleSoft DPK Archives in the Windows Host:
```

```
[...]
```

8. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host or VM. It then copies the PeopleSoft Puppet modules to the standard location under the base directory (*BASE_DIR*\dpk) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Windows Host:
```

```

Generating eYAML Hiera Backend Encryption Keys:      [ OK ]
Updating the Puppet Hiera YAML Files in the Windows Host: [ OK ]
Updating the Role in Puppet Site File for the Windows Host: [ OK ]

```

9. Specify the installation type.

Confirm your choice or change it if necessary.

```

Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
Are you happy with your answer? [y|n]:

```

Note. You see this prompt only when PeopleSoft application DPKs that were built on the same PeopleTools release, are present in *DPK_INSTALL*.

10. Specify the information for the database that you want to connect to.

a. For the database platform, enter ORACLE.

```

Enter the PeopleSoft database platform [ORACLE]: ORACLE

```

b. Enter y (yes) if the database you are connecting to is a Unicode database, or n (no) for a non-Unicode database.

```

Is the PeopleSoft database unicode? [Y|n]:

```

c. Enter y (yes) if you want to install the files needed for multi-language support.

Note. You see this prompt only when PeopleSoft application DPKs that were built on the same PeopleTools release, are present in *DPK_INSTALL*.

```

Do you want Multi Language support in PeopleSoft database? [y|N]:

```

d. Enter the database name.

If the database name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92".

```

Enter a new PeopleSoft database name. Ensure that the database
name start with a letter and contains only uppercase letters and
numbers and is no more than 8 characters in length [HCM92]:

```

e. Enter the database service name.

For the service name, enter the full name, including the domain, if the database was installed with the domain. Use forward slashes if necessary. If the service name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92.example.com". Do not enter an IP address.

```

Enter the PeopleSoft database service name [HCM92]:

```

f. Enter the name of the host where the database is installed, and the port number:

Use forward slashes if necessary. If the host name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "host.example.com". Do not enter an IP address.

```

Enter the PeopleSoft database host name:
Enter the PeopleSoft database port [1521]:

```

11. Enter the PeopleSoft Connect ID at the following prompt:

The default is people.

Enter the PeopleSoft database Connect ID [people]:

12. Enter a password for the PeopleSoft Connect ID, and enter again on the next line, at the following prompt.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter the PeopleSoft database Connect ID [people] password.
Ensure that the password meets the length and complexity requirements for your database platform:
Re-Enter the PeopleSoft Connect ID password:

13. Enter the PeopleSoft Operator ID (user ID) at the next prompt:

Enter the PeopleSoft database Operator ID [PS]:

14. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

Enter a new PeopleSoft database Operator ID [PS] password.
Ensure that the password is between 1 and 32 characters in length.
You may include these special characters !@#\$\$%^& :
Re-Enter the PeopleSoft Operator ID password:

15. Enter the Application Server Domain Connection password, following the guidelines in the prompt.

Note. This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

[Optional] Enter a new Application Server Domain connection password.
Ensure that the password is between 8 and 30 characters in length:
You may include these special characters !@#\$\$%^& :
Re-Enter the Application Server Domain connection password:

16. Enter the password for the PTWEBSEVER web profile user.

Enter a new PeopleSoft Web Profile user [PTWEBSEVER] password.
Ensure that the password is between 8 and 32 characters in length.
You may include these special characters !@#\$\$%^& :
Re-Enter the PeopleSoft Web Profile user password:

17. Enter the Oracle WebLogic Server Admin password, following the guidelines in the prompt.

The default Oracle WebLogic server administrator is system. The window does not display masking characters as you type. There is no default password.

Enter a new WebLogic Server Admin user [system] password.
Ensure that the password is between 8 and 30 characters in length with at least one lowercase letter and one uppercase letter.
It must also contain one number or one of these special characters !@#\$\$%^& :

Re-Enter the WebLogic Server Admin user password:

Enter the Integration Gateway user ID and password at the following prompt.

The default user ID is administrator.

Enter the PeopleSoft Integration Gateway user [administrator]:
Enter the PeopleSoft Integration Gateway user [administrator] password.
Ensure the password is between 8 and 30 characters in length:

You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway user password:

18. Enter the Integration Gateway keystore password.

This is the SSL Keystore password, which is required for web servers and Integration Broker gateways in SSL-enabled environments. The password you enter is used for the default keystore. If you need to reset the password, use the pskeymanager utility.

See *PeopleTools: System and Server Administration*, "Implementing WebLogic SSL Keys and Certificates."

See *PeopleTools: Integration Broker Administration*, "Configuring Security and General Properties."

Enter the PeopleSoft Integration Gateway Keystore password. Ensure the password is between 8 and 30 characters in length.

You may include these special characters !@#\$\$%^& :

Re-Enter the PeopleSoft Integration Gateway Keystore password:

19. If you want to change any of the answers to the previous questions, enter *n* (no) at the following prompt, or enter *y* (yes) to continue:

Are you happy with your answers? [y|n]:

20. Review the status messages as the script updates the Puppet YAML files with the user input.

```
Encrypting the Passwords in the User Data:           [ OK ]
Updating the Puppet Hiera YAML Files with User Data: [ OK ]
```

21. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

Note. If you select the default initialization process, the PeopleSoft environment is created with one Application Server domain, one Process Scheduler domain, and one PIA domain.

If you want to customize the PeopleSoft environment, answer *n* (no) to stop the script. You must use customizations to complete the mid-tier deployment.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

22. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying PeopleTools Components:                    [FAILED]
```

The initialization of PeopleSoft environment setup failed. Check the log file [C:\DPK_INSTALL\setup\psft_dpk_setup.log] for the errors. After correcting the errors, run the following commands to continue with the setup of PeopleSoft environment.

Start a cmd window as Administrator and run C:\psft\psft_puppet_⇒ apply.cmd

Exiting the PeopleSoft environment setup process.

Upon successful completion, the DPK setup script displays the following message:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying PeopleTools Components:           [ OK ]
Setting up PeopleSoft OS Users Environment:  [ OK ]
Setting up PeopleSoft Application Server Domain: [ OK ]
Setting up PeopleSoft Process Scheduler Domain: [ OK ]
Setting up PeopleSoft PIA Domain:           [ OK ]
Changing the Passwords for the Environment:  [ OK ]
Configuring Pre-Boot PeopleSoft Environment: [ OK ]
Starting PeopleSoft Domains:                [ OK ]
Configuring Post-Boot PeopleSoft Environment: [ OK ]
Setting up Source Details for PeopleTools Client: [ OK ]
The PeopleSoft Environment Setup Process Ended.
```

The complete setup log is written to the file psft_dpk_setup.log in the same location as the DPK setup script.

Task 9-1-2: Running with the Mid-Tier Option on Linux, AIX, or Solaris as the Root User

If you are installing the PeopleSoft environment as a non-root user, see the following section, Running with the Mid-Tier Option on Linux, AIX, or Solaris as a Non-Root User.

To deploy mid-tier components on Linux, AIX, or Solaris hosts as the root user:

1. Extract the first zip file, *FILENAME_1ofn.zip*.

It is recommended that you extract into the same directory where you downloaded the zip file, *DPK_INSTALL*. The extraction creates the *DPK_INSTALL/setup* directory and other files.

Note. It is important that you retain the *DPK_INSTALL/setup* directory, even after deploying, because it holds the DPK setup script, which must be used for both deploying an environment and cleanup of deployed environment.

2. Open a terminal window and change directory to *DPK_INSTALL/setup*.
3. Run the script as follows:
 - If you extracted the first zip file into the same directory where you downloaded the zip files, use this command:


```
./psft-dpk-setup.sh --env_type midtier
```
 - If you extracted the first zip file into a different directory, include the option *dpk_src_dir* to specify the location of the downloaded zip files, such as *DPK_INSTALL*.

```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL --env_type midtier
```

Note. Running the DPK setup script with the `--env_type midtier` option deploys all servers. If you want to deploy one of the servers (application server, Process Scheduler server, PIA, or application server and Process Scheduler server) see the command options in the section *Reviewing the DPK Setup Script Options*.

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

```
Validating User Arguments:                [ OK ]
Validating PeopleSoft Supported Platform: [ OK ]
```

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The directory `/cs1/psft` is used in this example:

Note. When entering the path for the base directory, use forward slashes (/). For example, `/cs1/psft`. If the name includes any non-alphanumeric characters such as periods, enclose the name in double quotes. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter `/ds1/psft/`). Confirm your choice or change it if necessary.

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory: /cs1/psft
Are you happy with your answer? [Y|n|q]:
```

The script creates the following sub-directories under the user provided base directory, `BASE_DIR`:

- `BASE_DIR/db`
This directory is not used for this deployment.
- `BASE_DIR/dpk`
The script uses this directory to extract the archives from the PeopleSoft PeopleTools DPKs, and contains the Puppet YAML files for the deployment.
- `BASE_DIR/psft_puppet_agent`
This script uses this directory to install Puppet software.
- `BASE_DIR/pt`
The script uses this directory to deploy PeopleSoft components.

6. Specify a writable directory for the user home directory at the following prompt.

The PeopleSoft environment setup using DPKs creates local users on the host. These users deploy the PeopleSoft components and own the PeopleSoft runtime domains. Enter a new location to be used for creating the home directories for these local users, or specify the default home directory, `/home`. Enter the full path, and ensure that the directory is writable. Confirm your choice or change it if necessary.

```
Enter the full path for the User Home directory
```

```
that is writable [/home]: /ds1
Are you happy with your answer? [y|n|q]:
```

If the script finds that the location you enter (either a new location or the default) is not writable, it exits with the following message.

```
The User does not have write permission to create the user's home
directory under [<user input>] on the Linux VM.
Exiting the PeopleSoft environment setup process.
```

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hiera Backend on this host:                      [ OK ]
Checking if PeopleSoft DPKs are Present:                         [ OK ]
Checking if the Base Directory has Enough Free Space:            [ OK ]
```

8. Review the status messages as the script validates the files found in *DPK_INSTALL* and extracts the DPK archives.

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

After the script completes the extraction, it deletes the original files. Make a backup copy if you need to keep them.

See "Preparing for Installation," Understanding the PeopleSoft Installation Using Deployment Packages, for the filename syntax of the DPK zip files.

Note. The messages have been truncated for brevity.

```
Validating the PeopleSoft DPKs in the Linux Host:
[...]
Extracting the PeopleSoft DPK Archives in the Linux Host:
[...]
```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host or VM. As part of this setup, if the eYAML files are installed, it will generate the encryption keys. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the Linux VM:
Generating eYAML Hiera Backend Encryption Keys:                  [ OK ]
Updating the Puppet Hiera YAML Files in the Linux Host:          [ OK ]
Updating the Role in Puppet Site File for the Linux Host:        [ OK ]
```

10. Specify FRESH for the installation type.

Confirm your choice or change it if necessary.

```
Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
Are you happy with your answer? [y|n]:
```

Note. You see this prompt only when PeopleSoft application DPKs that were built on the same PeopleTools release, are present in *DPK_INSTALL*.

11. Specify the information for the database that you want to connect to.

- a. For the database platform, enter ORACLE.

Enter the PeopleSoft database platform [ORACLE]: **ORACLE**

- b. Enter y (yes) if the database you are connecting to is a Unicode database, or n (no) for a non-Unicode database.

Is the PeopleSoft database unicode? [Y|n]:

- c. Enter y (yes) if you want to install the files needed for multi-language support.

Note. You see this prompt only when PeopleSoft application DPKs that were built on the same PeopleTools release, are present in *DPK_INSTALL*.

Do you want Multi Language support in PeopleSoft database? [y|N]:

- d. Enter the database name.

If the database name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92".

Enter the PeopleSoft database name:

- e. Enter the database service name.

For the service name, enter the full name, including the domain, if the database was installed with the domain. Use forward slashes if necessary. If the service name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92.example.com". Do not enter an IP address.

Enter the PeopleSoft database service name [HCM92]:

- f. Enter the name of the host where the database is installed, and the port number:

Use forward slashes if necessary. If the host name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "host.example.com". Do not enter an IP address.

Enter the PeopleSoft database host name:

Enter the PeopleSoft database port [1521]:

12. Enter the PeopleSoft Connect ID at the following prompt:

The default is people.

Enter a new PeopleSoft database Connect ID [people]:

13. Enter a password for the PeopleSoft Connect ID, and enter again on the next line, at the following prompt.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Connect ID [people] password.

Ensure that the password meets the length and complexity requirements for your database platform:

Re-Enter the PeopleSoft Connect ID password:

14. Enter the PeopleSoft Operator ID (user ID):

Enter the PeopleSoft database Operator ID [PS]:

15. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

Enter a new PeopleSoft database Operator ID [PS] password.
 Ensure that the password is between 1 and 32 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Operator ID password:

16. Enter the Application Server Domain Connection password, following the guidelines in the prompt.

Note. This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

[Optional] Enter a new Application Server Domain connection password.
 Ensure the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the Application Server Domain connection password.

17. Enter the password twice for the PTWEBSEVER web profile user.

Enter a new PeopleSoft Web Profile user [PTWEBSEVER] password.
 Ensure that the password is between 8 and 32 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Web Profile user password:

18. Enter the Oracle WebLogic Server Admin password, following the guidelines in the prompt.

The default Oracle WebLogic server administrator is system. The window does not display masking characters as you type. There is no default password.

Enter a new WebLogic Server Admin user [system] password.
 Ensure that the password is between 8 and 30 characters in length
 with at least one lowercase letter and one uppercase letter.
 It must also contain one number or
 one of these special characters !@#\$\$%^& :
 Re-Enter the WebLogic Server Admin user password:

19. Enter the Integration Gateway user ID and password.

The default user ID is administrator.

Enter the PeopleSoft Integration Gateway user [administrator]:
 Enter the PeopleSoft Integration Gateway user [administrator] password.
 Ensure the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway user password:

20. Enter the Integration Gateway keystore password.

This is the SSL Keystore password, which is required for web servers and Integration Broker gateways in SSL-enabled environments. The password you enter is used for the default keystore. If you need to reset the password, use the pskeymanager utility.

See *PeopleTools: System and Server Administration*, "Implementing WebLogic SSL Keys and Certificates."

See *PeopleTools: Integration Broker Administration*, "Configuring Security and General Properties."

Enter the PeopleSoft Integration Gateway Keystore password. Ensure the password is between 8 and 30 characters in length.

You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway Keystore password:

21. If you want to change any of the answers to the previous questions, enter *n* (no) at the following prompt, or enter *y* (yes) to continue:

Are you happy with your answers? [y|n]:

22. Review the status messages as the script updates the Puppet YAML files with the user input.

If eYAML files are installed, the passwords are encrypted and updated in the YAML file.

```
Encrypting the Passwords in the User Data:           [ OK ]
Updating the Puppet Hiera YAML Files with User Data: [ OK ]
```

23. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the following prompt, and continue with the next step.

Note. If you select the default initialization process, the PeopleSoft environment is created with one Application Server domain, one Process Scheduler domain, and one PIA domain.

If you want to customize the PeopleSoft environment, answer *n* (no) to stop the script. You must use customizations to complete the mid-tier deployment.

See "Completing the DPK Initialization with Customizations."

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

24. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Default Initialization of PeopleSoft Environment:

```
Setting Up System Settings:                             [FAILED]
```

The initialization of PeopleSoft environment setup failed. Check the log file [/cs1/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following commands to continue with the setup of PeopleSoft environment.

From the shell, run /cs1/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.
 The PeopleSoft Environment Setup Process Ended.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

```
Starting the Default Initialization of PeopleSoft Environment:
Setting Up System Settings: [ OK ]
Deploying PeopleTools Components: [ OK ]
DSetting up PeopleSoft OS Users Environment: [ OK ]
Setting up PeopleSoft Application Server Domain: [ OK ]
Setting up PeopleSoft Process Scheduler Domain: [ OK ]
Setting up PeopleSoft PIA Domain: [ OK ]
Changing the Passwords for the Environment: [ OK ]
Configuring Pre-Boot PeopleSoft Environment: [ OK ]
Starting PeopleSoft Domains: [ OK ]
Configuring Post-Boot PeopleSoft Environment: [ OK ]
Setting up Source Details for PeopleTools Client: [ OK ]
The PeopleSoft Environment Setup Process Ended.
```

The complete setup log is written to the file `psft_dpk_setup.log` in the same location as the DPK setup script.

Task 9-1-3: Running with the Mid-Tier Option on Linux, AIX, or Solaris as a Non-Root User

If you are installing the PeopleSoft environment as a non-root user, ensure that you fulfill the prerequisites in the section Deploying as a Non-Root User on Linux, AIX, or Solaris.

To deploy mid-tier components on Linux, AIX, or Solaris hosts as a non-root user

1. Open a terminal window and change directory to `DPK_INSTALL/setup`.
2. Run the script as follows:
 - If you extracted the first zip file into the same directory where you downloaded the zip files, use this command:


```
./psft-dpk-setup.sh --env_type midtier
```
 - If you extracted the first zip file into a different directory, include the option `dpk_src_dir` to specify the location of the downloaded zip files, such as `DPK_INSTALL`.


```
./psft-dpk-setup.sh --dpk_src_dir DPK_INSTALL --env_type midtier
```

Note. Running the DPK setup script with the `--env_type midtier` option deploys all servers. If you want to deploy one of the servers (Application Server, Process Scheduler server, PIA, or application server and Process Scheduler server) see the command options in the section Reviewing the DPK Setup Script Options.

3. Answer y (yes) at the following prompt:

```
You are running DPK setup without root/administrator access.
This is fine as long as the system administrator has performed
all necessary tasks and all prerequisites have been met.
Please see the documentation to determine the prerequisite tasks
that need to be performed to successfully run DPK set up
without root/administrator privilege.
```

```
Would you like to proceed with the setup as a non-root user? [y/n]: y
```

4. Wait while the script begins the setup process.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [OK] or [FAILED].

Starting the PeopleSoft Environment Setup Process:

Validating User Arguments: [OK]

Validating PeopleSoft Supported Platform: [OK]

5. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components. The directory /cs1/psft is used in this example:

Note. When entering the path for the base directory, use forward slashes (/). For example, /cs1/psft. If the name includes any non-alphanumeric characters such as periods, enclose the name in double quotes. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter /ds1/psft/). Confirm your choice or change it if necessary.

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

Enter the full path for the PeopleSoft Base Directory: /cs1/psft
Are you happy with your answer? [Y|n|q]:

The script creates the following three sub-directories under the user provided base directory, *BASE_DIR*:

- *BASE_DIR/db*
This directory is not used for this deployment.
- *BASE_DIR/dpk*
The script uses this directory to extract the archives from the PeopleSoft PeopleTools DPKs, and contains the Puppet YAML files for the deployment.
- *BASE_DIR/psft_puppet_agent*
This script uses this directory to install Puppet software.
- *BASE_DIR/pt*
The script uses this directory to deploy PeopleSoft components.

6. Enter the full path for a writable directory with at least 10 GB available space for *PS_CFG_HOME*.

The default is *USER_HOME*/psft/pt/8.61, where *USER_HOME* is the home directory for the logged-in user. The *PS_CFG_HOME* directory holds the configuration and log files for the PeopleSoft Application Server, Process Scheduler, and PIA domains. Confirm your choice or change it if necessary.

Enter a writable ps_config_home directory for PeopleSoft domains with at least 10.0GB space [/home/psftuser/psft/pt/8.61]:
Are you happy with your answer? [Y|n|q]: y

7. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

Note. A mid-tier setup of a PeopleSoft environment takes about 25 GB of disk space.

```

Installing PSFT Relocatable Puppet Software in the base directory:
[ OK ]
Installing eYAML Hierarchical Backend on this host:                [ OK ]
Checking if PeopleSoft DPKs are Present:                          [ OK ]
Checking if the Base Directory has Enough Free Space:             [ OK ]

```

8. Review the status messages as the script validates the files found in *DPK_INSTALL* and extracts the DPK archives.

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

After the script completes the extraction, it deletes the original files. Make a backup copy if you need to keep them.

See "Preparing for Installation," Understanding the PeopleSoft Installation Using Deployment Packages, for the filename syntax of the DPK zip files.

Note. The messages have been truncated for brevity.

```

Validating the PeopleSoft DPKs in the Linux VM:
[...]
Extracting the PeopleSoft DPK Archives in the Linux VM:
[...]

```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host or VM. As part of this setup, if the eYAML files are installed, it will generate the encryption keys. It then copies the PeopleSoft Puppet modules to the standard location (*BASE_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```

Setting up Puppet on the Linux Host:
Generating eYAML Hierarchical Backend Encryption Keys:           [ OK ]
Updating the Puppet Hierarchical YAML Files in the Linux Host:    [ OK ]
Updating the Role in Puppet Site File for the Linux Host:         [ OK ]

```

10. Specify FRESH for the installation type.

Confirm your choice or change it if necessary.

```

Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
Are you happy with your answer? [y|n]:

```

Note. You see this prompt only when PeopleSoft application DPKs that were built on the same PeopleTools release, are present in *DPK_INSTALL*.

11. Specify the information for the database that you want to connect to.

- a. For the database platform, enter ORACLE.

```

Enter the PeopleSoft database platform [ORACLE]: ORACLE

```

- b. Enter y (yes) if the database you are connecting to is a Unicode database, or n (no) for a non-Unicode database.

```

Is the PeopleSoft database unicode? [Y|n]:

```

- c. Enter y (yes) if you want to install the files needed for multi-language support.

Note. You see this prompt only when PeopleSoft application DPKs that were built on the same PeopleTools release, are present in *DPK_INSTALL*.

Do you want Multi Language support in PeopleSoft database? [y|N]:

- d. Enter the database name.

If the database name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92".

Enter the PeopleSoft database name:

- e. Enter the database service name.

For the service name, enter the full name, including the domain, if the database was installed with the domain. Use forward slashes if necessary. If the service name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "HCM.92.example.com". Do not enter an IP address.

Enter the PeopleSoft database service name [HCM92]:

- f. Enter the name of the host where the database is installed, and the port number:

Use forward slashes if necessary. If the host name includes non-alphanumeric characters such as periods, enclose the name in double quotes. For example, "host.example.com". Do not enter an IP address.

Enter the PeopleSoft database host name:

Enter the PeopleSoft database port [1521]:

12. Enter the PeopleSoft Connect ID at the following prompt:

The default is people.

Enter a new PeopleSoft database Connect ID [people]:

13. Enter a password for the PeopleSoft Connect ID, and enter again on the next line, at the following prompt.

See E-DPK - PeopleTools 8.59 and later - DPK setup does not support some special characters for passwords, My Oracle Support, Doc ID 2765013.1.

Enter a new PeopleSoft database Connect ID [people] password.

Ensure that the password meets the length and complexity requirements for your database platform :

Re-Enter the PeopleSoft database Connect ID password:

14. Enter the PeopleSoft Operator ID (user ID):

Enter the PeopleSoft database Operator ID [PS]:

15. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

Enter the PeopleSoft database Operator ID [PS] password.

Ensure that the password is between 1 and 32 characters in length.

You may include these special characters !@#\$\$%^& :

Re-Enter the PeopleSoft database Operator ID password:

16. Enter the Application Server Domain Connection password, following the guidelines in the prompt.

Note. This is an optional password. If no password is entered, the connection between Web Server and Application Server will not be password protected.

[Optional] Enter a new Application Server Domain connection password.
 Ensure that the password is between 8 and 30 characters in length:
 You may include these special characters !@#\$\$%^& :
 Re-Enter the Application Server Domain connection password.

17. Enter the password twice for the PTWEBSEVER web profile user.

Enter the PeopleSoft Web Profile user [PTWEBSEVER] password.
 Ensure that the password is between 8 and 32 characters in length:
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Web Profile user password:

18. Enter the Oracle WebLogic Server Admin password, following the guidelines in the prompt.

The default Oracle WebLogic server administrator is system. The window does not display masking characters as you type. There is no default password.

Enter a new WebLogic Server Admin user [system] password.
 Ensure that the password is between 8 and 30 characters in length
 with at least one lowercase letter and one uppercase letter.
 It must also contain one number or
 one of these special characters !@#\$\$%^& :
 Re-Enter the WebLogic Server Admin user password:

19. Enter the Integration Gateway user ID and password.

The default user ID is administrator.

Enter the PeopleSoft Integration Gateway user [administrator]:
 Enter the PeopleSoft Integration Gateway user [administrator] password.
 Ensure that the password is between 8 and 30 characters in length:
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway user password:

20. Enter the Integration Gateway keystore password.

This is the SSL Keystore password, which is required for web servers and Integration Broker gateways in SSL-enabled environments. The password you enter is used for the default keystore. If you need to reset the password, use the pskeymanager utility.

See *PeopleTools: System and Server Administration*, "Implementing WebLogic SSL Keys and Certificates."

See *PeopleTools: Integration Broker Administration*, "Configuring Security and General Properties."

Enter the PeopleSoft Integration Gateway Keystore password. Ensure
 the password is between 8 and 30 characters in length.
 You may include these special characters !@#\$\$%^& :
 Re-Enter the PeopleSoft Integration Gateway Keystore password:

21. If you want to change any of the answers to the previous questions, enter *n* (no) at the following prompt, or enter *y* (yes) to continue:

Are you happy with your answers? [y|n]:

22. Review the status messages as the script updates the Puppet YAML files with the user input.

If eYAML files are installed, the passwords are encrypted and updated in the YAML file.

```
Encrypting the Passwords in the User Data:          [ OK ]
Updating the Puppet Hiera YAML Files with User Data: [ OK ]
```

23. If you want to continue running the initialization script using the default configuration, answer *y* (yes) to the

following prompt, and continue with the next step.

Note. If you select the default initialization process, the PeopleSoft environment is created with one Application Server domain, one Process Scheduler domain, and one PIA domain.

If you want to customize the PeopleSoft environment, answer *n* (no) to stop the script. You must use customizations to complete the mid-tier deployment.

See "Completing the DPK Initialization with Customizations."

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft_customizations.yaml' and running the psft_puppet_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

24. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [OK] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Default Initialization of PeopleSoft Environment:

Setting Up System Settings: [FAILED]

The initialization of PeopleSoft environment setup failed. Check the log file [/cs1/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors. After correcting the errors, run the following script to continue with the setup of PeopleSoft environment.

From the shell, run /cs1/psft/psft_puppet_apply.sh

Exiting the PeopleSoft environment setup process.
The PeopleSoft Environment Setup Process Ended.

See "Completing the DPK Initialization with Customizations."

Upon successful completion, the DPK setup script displays the following message:

```
Starting the Default Initialization of PeopleSoft Environment:
Setting Up System Settings: [ OK ]
Deploying PeopleTools Components: [ OK ]
DSetting up PeopleSoft OS Users Environment: [ OK ]
Setting up PeopleSoft Application Server Domain: [ OK ]
Setting up PeopleSoft Process Scheduler Domain: [ OK ]
Setting up PeopleSoft PIA Domain: [ OK ]
Changing the Passwords for the Environment: [ OK ]
```

```
Configuring Pre-Boot PeopleSoft Environment:      [ OK ]
Starting PeopleSoft Domains:                      [ OK ]
Configuring Post-Boot PeopleSoft Environment:     [ OK ]
Setting up Source Details for PeopleTools Client: [ OK ]
The PeopleSoft Environment Setup Process Ended.
```

The setup.log is written to the file `<USER_HOME>/psft_dpk_work/psft_dpk_setup_<PID>.log`, where `<USER_HOME>` is the home directory for the user running the script, and `<PID>` is a process ID

Task 9-2: Completing Installation Tasks

After completing the installation process, be sure to go to the chapter "Completing the Installation." This chapter includes information on accessing the PeopleSoft environment, as well as post-installation steps.

It is important that you perform the tasks in the section Completing Post-Installation Steps that apply to your environment.

Chapter 10

Completing the Installation

This chapter discusses:

- Accessing the PeopleSoft Environment
- Completing Post-Installation Steps
- Reviewing the Deployed File System and Users
- Working with PeopleSoft Utilities and Programs for Root Deployments on Linux, AIX, and Solaris
- Setting Environment Variables for the Non-Root User on Linux, AIX, or Solaris

Task 10-1: Accessing the PeopleSoft Environment

This section discusses:

- Accessing the Environment in a Browser
- Using Fluid User Interface

Task 10-1-1: Accessing the Environment in a Browser

To sign in to the deployed PeopleSoft environment in a browser (that is, use the PeopleSoft Pure Internet Architecture, or PIA), use a URL with this format:

`http://<host_name>:<http_port>/<PIA_site_name>/signon.html`

For example, for a deployment with the default port, 8000, and default PIA site name, ps, the URL would be `http://server1.example.com:8000/ps/signon.html`.

See the PeopleSoft product documentation for information on working with the components in a PeopleSoft installation.

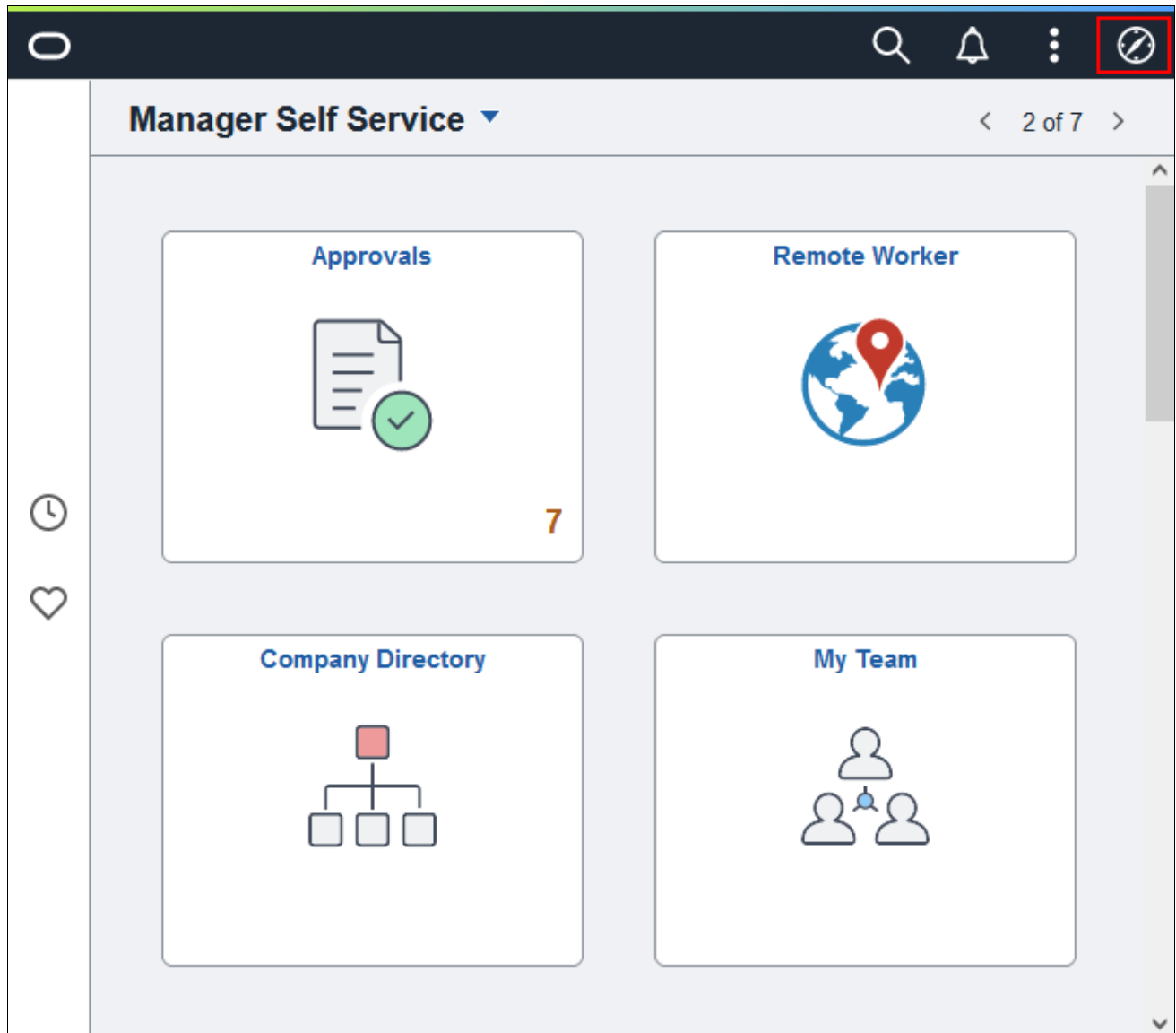
See PeopleSoft PeopleTools on the Oracle Help Center,
<https://docs.oracle.com/en/applications/peoplesoft/peopletools/index.html>.

Task 10-1-2: Using Fluid User Interface

When you sign in to your PeopleSoft application, you may see the PeopleSoft Fluid User Interface by default. To access the menu items, as seen in the classic user interface, from the PeopleSoft Fluid User Interface:

1. On the PeopleSoft Fluid User Interface select (press) the NavBar button at the top right.

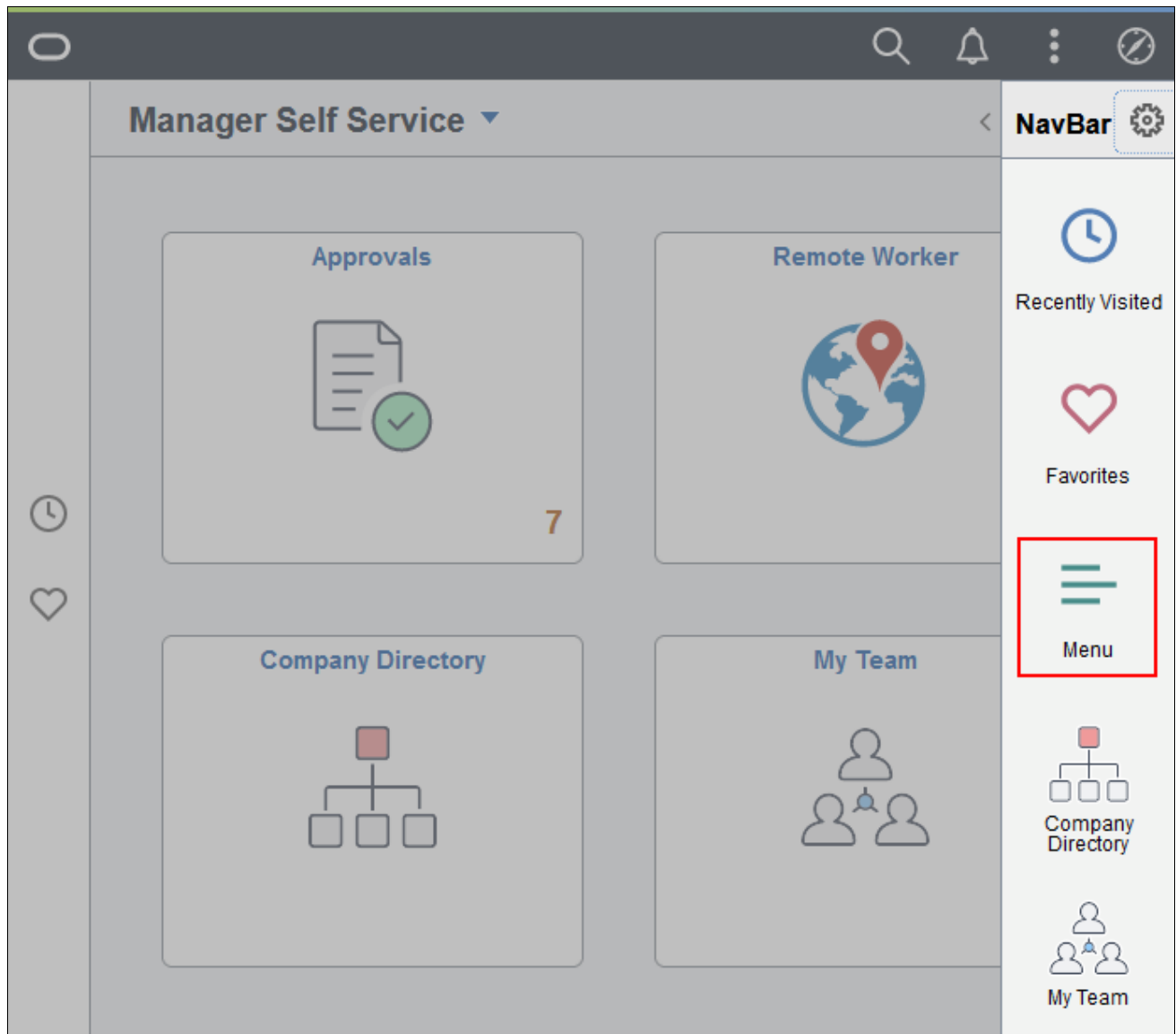
In this example the NavBar button, which looks like a compass, is surrounded by a red border. This example shows the top portion of an FSCM home page.



PeopleSoft Fluid User Interface home page

The Navigation bar (NavBar) side page appears.

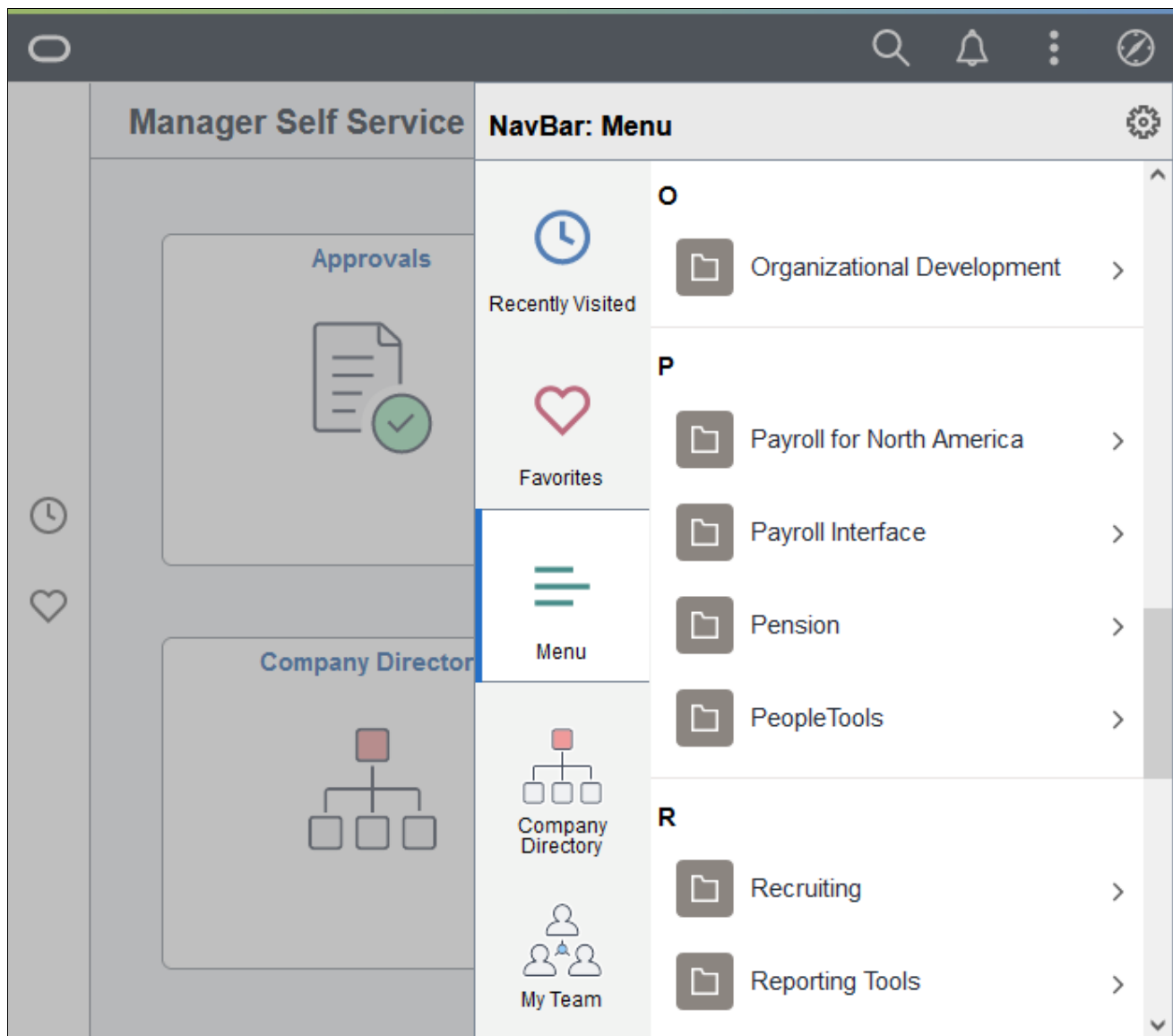
2. Select (press) Menu.



NavBar side page

The menu structure appears.

3. Navigate to the desired item, such as PeopleTools.



Navigator side page with PeopleSoft menu items

See Also

PeopleTools: Applications User's Guide, "Working With Fluid Homepages"

PeopleTools: Fluid User Interface Developer's Guide

Task 10-2: Completing Post-Installation Steps

This section discusses:

- Updating the Installation Table
- Setting Options for Multilingual Databases

- Updating PeopleTools Options
- Updating Time Zone Information
- Updating Database Information
- Building a New Encryption Key and Re-encrypting Passwords
- Installing the fontconfig Package for Download to Excel

Task 10-2-1: Updating the Installation Table

After you complete the installation process, creating the database, installing the Application Server, and installing the PeopleSoft Pure Internet Architecture, you must complete this additional step. This post-installation step ensures that only the products you are entitled to use are active in the installation. The location of the installation table in the PeopleSoft system varies depending upon the PeopleSoft application that you installed.

Note. For information on the products you are entitled to use, contact your Oracle Support representative.

1. Sign on to the PeopleSoft system in a browser.
2. Select Set Up *Application_name* (where *Application_name* is the PeopleSoft application you installed), Install, Installation Table.
3. Select the Products tab.
4. Clear the check boxes for the products that you are not entitled to use.

Task 10-2-2: Setting Options for Multilingual Databases

Setting the Data Field Length Checking Option

The value to specify data field length checking must be set correctly in order for PeopleSoft applications to perform correctly in a browser. Use one of these methods to set the data field length checking option:

- Select PeopleTools > Utilities > Administration > PeopleTools Options, and select the Data Field Length Checking option from the drop-down list.
 - If your database uses the Shift-JIS character set for Japanese, select MBCS.
 - For all other databases, verify that the option is set to Others, the default setting.
- Alternatively, use the SQL tool for your database platform to modify the DBLENGTHTYPE parameter in the PSOPTIONS table.
 - If your database uses the Shift-JIS character set for Japanese, enter M.
 - For all other databases, verify that the option is set to N, the default setting.

See *PeopleTools: Global Technology*, "Setting Data Field Length Checking."

See *PeopleTools: Global Technology*, "Selecting Character Sets."

Setting the Unicode Enabled Option

If you are running a Unicode database, verify that the UNICODE_ENABLED parameter in the PSSTATUS table is set correctly. For example:

- For non-Unicode databases, including those using the Shift-JIS character set for Japanese, set UNICODE_ENABLED=0.

- For Unicode databases, set UNICODE_ENABLED=1.

See the information on converting to Unicode in the *PeopleTools: Global Technology* product documentation.

Task 10-2-3: Updating PeopleTools Options

You can set the following options on the PeopleTools Options page:

- Multi-Currency — Select this check box if you plan to use currency conversion.
See *PeopleTools: Global Technology*, "Using System-Wide Multicurrency Settings."
- Base Time Zone — Enter a value for the base time zone for your PeopleTools database.
See *PeopleTools: Global Technology*, "Setting the Base Time Zone."
- Sort Order Option — If you specified a non-binary sort order for your database, choose the Sort Order Option that most closely approximates your database sort order.
See *PeopleTools: Global Technology*, "Setting the Sort Order."

Task 10-2-4: Updating Time Zone Information

Additional steps may be required to configure your time zone after you complete the installation.

See *PeopleTools: Global Technology*, "Maintaining Time Zones."

Task 10-2-5: Updating Database Information

The database information updated in this procedure is used by the PeopleSoft software update tools to identify your PeopleSoft database when searching for updates. These steps should be followed for all additional databases that you create to enable the accurate identification of your databases.

1. Sign on to your PeopleSoft database.
2. Navigate to PeopleTools > Utilities > Administration > PeopleTools Options.
3. Specify long and short names for your environment. For example:
 - Environment Long Name — Customer HR Demo Database
 - Environment Short Name — HR Demo DB
4. Select a system type from the drop-down list. For example, Demo Database.
5. Save your changes.

Task 10-2-6: Building a New Encryption Key and Re-encrypting Passwords

The PeopleTools installation includes a default encryption key (psvault), which is used to encrypt the passwords that you enter during the installation. For security reasons, create a new key after you complete the installation and use the new key to re-encrypt passwords included in your PeopleSoft environment files.

1. Use the PSCipher utility to build a new key.

See *PeopleTools: Security Administration*, "Generating a Unique Encryption Key."

For example, run the following command from `<PIA_HOME>/webserv/<DOMAIN_NAME>/piabin:`

Microsoft Windows

pscipher.bat -buildkey

Your environment has been set.

A new key of version {V2.2} is generated successfully

UNIX

./PSCipher.sh -buildkey

Your environment has been set.

A new key of version {V2.2} is generated successfully

2. Use the new key from step 1 to re-encrypt passwords that you supply as plain text.

See *PeopleTools: Security Administration*, "Using the PSCipher Utility."

3. Replace the existing encrypted values for the passwords in web server files with the newly created encrypted passwords.

Ensure that the password values begin with {V2.2}, which indicates the AES implementation. This table lists web server files and passwords to check.

See *PeopleTools: Security Administration*, "Understanding the Advanced Encryption Standard (AES) Implementation."

Location	File	Examples of Password Text
<PIA_HOME>\websrv\ <DOMAIN_NAME>\ applications\peoplesoft\PSIGW.war\ WEB-INF	integrationGateway.properties	- ig.isc.NODE_NAME.password={V2.2}XXXXXX - ig.isc.NODE_NAME.DomainConnectionPwd={V2.2}XXXXXX - Others as needed. There are several sections including passwords. Be sure to update all that apply to your environment.
<PIA_HOME>\websrv\ <DOMAIN_NAME>\ applications\peoplesoft\PSIGW.war\ WEB-INF	gatewayUserProfile.xml	<password>{V2.2}XXXXXX</password>
<PIA_HOME>\websrv\ <DOMAIN_NAME>\ applications\peoplesoft\PORTAL.war\ WEB-INF\psftdocs\<SITE_NAME>	configuration.properties	- KeyStorePwd={V2.2}XXXXXX - DomainConnectionPwd={V2.2}XXXXXX - WebUserId={V2.2}XXXXXX - WebPassword={V2.2}XXXXXX

4. After building the new key, copy psvault from the web server location to the application server location.

Copy from <PIA_HOME>\websrv\<DOMAIN_NAME>\piaconfig\properties.

Copy to <PS_HOME>\secvault.

Task 10-2-7: Installing the fontconfig Package for Download to Excel

The fontconfig package is required for the download to Excel feature, which downloads query results or data from a grid to a Microsoft Excel spreadsheet. The package is available in *PS_HOME/setup/fontconfig*. This applies to installations on Linux.

To install the fontconfig package:

1. If necessary, sign out of PIA.
2. In a terminal window, log in to the PeopleSoft environment as the root user.
3. Enter this command:

```
yum info fontconfig
```

If the package is installed in the environment, the command lists it. If it is not present, the command lists the repository where it is available.

4. If the package is not installed, as the root user, enter this command to install it from *PS_HOME/setup*:

```
yum install fontconfig
```

5. Sign in to PIA and try the download to Excel again.

Note. Restarting the Application Server should not be necessary.

If you are still unable to use download to Excel, check to be sure the machine can access the Internet.

See Also

PeopleTools: Applications User's Guide, "Navigating Through Data"

PeopleTools: Query, "Downloading Queries"

Task 10-3: Reviewing the Deployed File System and Users

This section discusses:

- Reviewing the Deployment File System
- Reviewing the DPK-Created Users for Root Deployments on Linux, AIX, and Solaris

Task 10-3-1: Reviewing the Deployment File System

The PeopleSoft installation deployed by the PeopleSoft DPKs sets up an environment comprised of several directories. This table lists the directories with the location, contents of the directory, and the owner.

The users listed in the Access column are installed when the root user performs a default deployment on Linux, AIX, or Solaris.

Directory	Description	Default Location	Access
PS_HOME	<i>PS_HOME</i> is a secure location for the PeopleTools binary installation files.	<BASE_DIR>/pt/ps_home <ptools_patch_ver> The descriptor <ptools_patch_ver> is the PeopleSoft PeopleTools full release, for example 8.61.01.	This directory can only be written to by the PeopleSoft administrator, psadm1 (Linux, AIX, or Solaris).
PS_CFG_HOME	The <i>PS_CFG_HOME</i> location holds the configuration and log files for the PeopleSoft Application Server and Process Scheduler server domains.	- On Linux, AIX, or Solaris, when deploying as the root user, <USER_HOME>/psadm2/psft/pt/<ptools_major_ver>. You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home. - On Linux, AIX, or Solaris, when deploying as a non-root user, <prompted_ps_cfg_home>/psft/pt/<ptools_major_ver> You supply the location for <i>prompted_ps_cfg_home</i> when you run the DPK setup script. - On Microsoft Windows, C:\%USERPROFILE%\psft\pt\<ptools_major_ver> For example, if the USERPROFILE environment variable is C:\Users\username, the location is C:\Users\username\psft\pt\8.61. The descriptor <ptools_major_ver> is the PeopleSoft PeopleTools major release without patch numbers; for example, 8.61.	This directory is owned by psadm2 (Linux, AIX, Solaris).

Directory	Description	Default Location	Access
Web server (PIA) installation	The web server (PIA) configuration files are located in <i>PS_CFG_HOME</i> /webserv.	- On Linux, AIX, or Solaris, when deploying as the root user, <code><USER_HOME>/psadm2/psft/pt/<ptools_major_ver>/webserv</code> You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home. - On Linux, AIX, or Solaris, when deploying as a non-root user, <code><prompted_ps_cfg_home>/psft/pt/<ptools_major_ver>/webserv</code> You supply the location for <i>prompted_ps_cfg_home</i> when you run the DPK setup script. - On Microsoft Windows, <code>C:\%USERPROFILE%\psft\pt\<ptools_major_ver>\webserv</code> For example, if the <i>USERPROFILE</i> environment variable is <code>C:\Users\username</code>, the location is <code>C:\Users\username\psft\pt\8.61\webserve</code>. The descriptor <i><ptools_major_ver></i> is the PeopleSoft PeopleTools major release without patch numbers; for example, 8.61.	This directory is owned by psadm2 (Linux, AIX, Solaris).
PS_APP_HOME	The <i>PS_APP_HOME</i> location holds the PeopleSoft application installation files.	<code>BASE_DIR/pt/<Product>_app_home</code> The descriptor <i><Product></i> is an abbreviation for the PeopleSoft application, such as hcm for PeopleSoft Human Capital Management.	This directory can only be written to by psadm3 (Linux, AIX, or Solaris).

Directory	Description	Default Location	Access
ORACLE_HOME (Oracle RDBMS software)	This directory includes the Oracle RDBMS database server and client connectivity software, including the SQL*Plus program. The Oracle RDBMS client installation is the 64-bit client used by PeopleSoft PeopleTools to connect from the PeopleSoft Application Server and Process Scheduler domains to the PeopleTools Database. Note. The default listener port is 1521.	<i>BASE_DIR</i> /db/oracle-server	This directory is owned by user oracle2 (Linux, AIX, or Solaris).
Oracle WebLogic	This directory includes the installation files for the Oracle WebLogic web server. Note. The configuration files for the PIA domain are located in <i>PS_CFG_HOME</i>/webserv.	<i>BASE_DIR</i> /pt/bea/wlserver	This directory is owned by psadm1 (Linux, AIX, or Solaris).
Oracle Tuxedo	This directory includes the installation files for Oracle Tuxedo.	<i>BASE_DIR</i> /pt/bea/tuxedo	This directory is owned by psadm1 (Linux, AIX, or Solaris).
PeopleSoft database files (on Oracle RDBMS)	This directory includes the Oracle database files and tables for the PeopleSoft application.	<i>BASE_DIR</i> /db/oradata	The owner of the database tables is oracle2 and its group is oinstall (Linux, AIX, or Solaris). Note. This is different from the users for the PeopleSoft installation and configuration.

See Also

PeopleTools: System and Server Administration, "Securing PS_HOME and PS_CFG_HOME"

Task 10-3-2: Reviewing the DPK-Created Users for Root Deployments on Linux, AIX, and Solaris

When deploying on Linux, AIX, and Solaris as the root user, the deployed configuration includes the default users and default passwords described in the following table.

Important! For Linux and Solaris, all of the passwords for the DPK-created users are set to expire immediately. On the first login of one of the DPK-created users, the system will prompt you to provide new passwords.

In the case of the passwords that expire immediately, such as those for `psadm1` and so on, if you do not log in as the user specified in this table and change the password, the default passwords documented here remain in effect.

For AIX, the passwords for the DPK-created users will remain in effect unless you change them. The system will not prompt you for new passwords when you log in. Oracle recommends that in all cases you log in immediately and change the passwords.

New passwords must include the following characteristics:

- At least 14 characters long
- At least one digit (0–9)
- At least one special character (for example, * or #)
- At least one lowercase letter (a–z)
- At least one uppercase letter (A–Z)

User Name	Default Password	Home Directory	Role Definition
psadm1	Oradmin (the first character is the number zero)	<i>USER_HOME</i> /psadm1 You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home.	The PeopleSoft installation administrator who owns <i>PS_HOME</i> . This user cannot write into <i>PS_CFG_HOME</i> .
psadm2	Oradmin (the first character is the number zero)	<i>USER_HOME</i> /psadm2 You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home.	The PeopleTools domain user who creates and configures the Application Server domain, Process Scheduler (batch server) domain, and the PIA. This user cannot write to <i>PS_HOME</i> , but has read-execute access.
psadm3	Oradmin (the first character is the number zero)	<i>USER_HOME</i> /psadm3 You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home.	The PeopleSoft installation administrator who owns <i>PS_APP_HOME</i> .

User Name	Default Password	Home Directory	Role Definition
oracle2	oracle	<i>USER_HOME</i> /oracle2 You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home.	The Oracle Database Server user name.
esadm1	Oradmin (the first character is the number zero)	<i>USER_HOME</i> /esadm1 You supply the location for the <i>USER_HOME</i> when you run the DPK setup script. The default value is /home.	This user is not needed for the current release.

See Also

"Completing the DPK Initialization with Customizations," Preparing the Customization File for Linux, AIX, or Solaris Users

Task 10-4: Working with PeopleSoft Utilities and Programs for Root Deployments on Linux, AIX, and Solaris

When you run the DPK setup script with the default initialization, the script installs, configures and starts a single Application Server, a single Process Scheduler, and a single PIA domain. After the root user completes the deployment of the PeopleSoft environment using the DPK setup script *DPK_INSTALL/setup/psft-dpk-setup.sh*, in order to carry out operations on the PeopleSoft environment such as stopping and starting the DPK-created domains, or creating additional domains with PSADMIN, the root user must start a new shell session, and sign in with the DPK-created user psadm2.

See *PeopleTools: System and Server Administration* for information on working with PeopleSoft domains.

The first time that you sign in as user psadm2, you are prompted to change the default password. You must start the session again and sign in with the new password. When you first sign in, the system sources the *PS_HOME/psconfig.sh* script. Sourcing the psconfig.sh script sets environment variables such as TUXDIR, PATH, and LD_LIBRARY_PATH, which are needed to run PeopleSoft utilities and programs. Sourcing the psconfig.sh script sets the environment variables for the current session in the current shell, so that the programs and utilities you run in that shell inherit the environment variables.

Similarly, to carry out operations using programs owned by the DPK-created users psadm1 or psadm3, sign in to a shell as those users.

See Reviewing the DPK-Created Users for Root Deployment on Linux, AIX, and Solaris.

Task 10-5: Setting Environment Variables for the Non-Root User on Linux, AIX, or Solaris

This section discusses:

- Sourcing the psft_env.sh Script

- Creating a `psft_env.sh` Script

Task 10-5-1: Sourcing the `psft_env.sh` Script

When you use the DPK setup script with the default initialization, the script installs, configures and starts a single Application Server, a single Process Scheduler, and a single PIA domain.

When a non-root user deploys the PeopleSoft environment, as part of the deployment, the DPK setup script sources a shell script that sets environment variables, such as `TUXDIR`, `PATH`, and `LD_LIBRARY_PATH`, which are needed to run PeopleSoft utilities and programs.

See *PeopleTools: System and Server Administration* for information on working with PeopleSoft domains.

After the non-root user completes the deployment of the PeopleSoft environment using the DPK setup script `DPK_INSTALL/setup/psft-dpk-setup.sh`, in order to carry out operations on the PeopleSoft environment such as stopping and starting the DPK-created domains, creating additional domains with `PSADMIN`, or running Application Engine programs, the non-root user must source the script `BASE_DIR/pt/psft_env.sh`. For example, use the following command:

```
source BASE_DIR/pt/psft_env.sh
```

Note. If you are performing a deployment using the `deploy_only` option, see the next section.

Note that it is important to source the shell script (`source BASE_DIR/pt/psft_env.sh`), rather than simply running it (`BASE_DIR/pt/psft_env.sh`) in order for the environment variables to persist in the current shell. See your operating system documentation for the correct command to source the script.

Sourcing the `psft_env.sh` script sets the environment variables for the current session in the current shell, so that the programs and utilities you run in that shell inherit the environment variables. You must source the script and run the PeopleSoft utilities and programs from the same `BASE_DIR`. That is, the environment variables apply only to the programs in the `PS_HOME` installed under the `BASE_DIR` from which you run the script.

If your environment includes more than one deployment, be sure to source `BASE_DIR/pt/psft_env.sh` as needed in separate shells for each `BASE_DIR`.

The `psft_env.sh` script points to default or user-specified installation locations as set up by the DPK setup script. See *Reviewing the Deployment File System* for default locations. Here is a summary of the environment variables set by the `BASE_DIR/pt/psft_env.sh` script:

- The script sets a pseudo random number generator to avoid getting stuck in entropy collection for the default random number generation.
- The script sets the `TUXDIR`, `PATH`, and `LD_LIBRARY_PATH` environment variables to point to the Tuxedo installation.
- The script sets the `TNS_ADMIN`, `ORACLE_HOME`, and `LD_LIBRARY_PATH` environment variables to point to the installations of the Oracle database and Oracle database client.
- The script sets `language/locale`.
- The script sets `PS_CFG_HOME`.
- The script adds the `PS_HOME/appserv` and `PS_HOME/setup` directories to the `PATH`.
- The script sources the `PS_HOME/psconfig.sh` script.

The `psconfig.sh` script was used previously to set environment variables for non-DPK installations. Because it is included in the `BASE_DIR/pt/psft_env.sh` script, you do not need to source `psconfig.sh` separately.

Task 10-5-2: Creating a psft_env.sh Script

If you are running as a non-root user, the *BASE_DIR*/pt/psft_env.sh script will not be available if you run the DPK setup script using one of the *deploy_only* options. For example:

- `psft-dpk-setup.sh --env_type midtier --deploy_only`
- `psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type tools_home`
- `psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type app_home`
- `psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type app_and_tools_home`

In this case, the *BASE_DIR*/pt/psft_env.sh file is not installed automatically. You must create and run the script to set the required environment variables.

Use the following as a template, and make the necessary modifications for your environment.

In this example, *<BASE_DIR>* refers to the DPK deployment location, and *<psftsuser>* is the non-root user.

```
# User specific aliases and functions
export _JAVA_OPTIONS=-Djava.security.egd=file:/dev/./urandom

export TNS_ADMIN=<BASE_DIR>/db
export ORACLE_HOME=<BASE_DIR>/pt/oracle-client/19.3.0.0
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH
export PATH=.:$ORACLE_HOME/bin:$ORACLE_HOME/OPatch:$ORACLE_HOME/perl/bin:$PATH

TUXDIR=<BASE_DIR>/pt/bea/tuxedo
if [ -d $TUXDIR ]; then
    export TUXDIR=$TUXDIR/tuxedo22.1.0.0
    export PATH=$TUXDIR/bin:$PATH
    export LD_LIBRARY_PATH=$TUXDIR/bin:$TUXDIR/lib:$LD_LIBRARY_PATH
fi

export PATH=<BASE_DIR>/pt/ps_home8.61.04/appserv: <BASE_DIR>/pt/ps_
home8.61.04/setup:$PATH

export LANG=C
if [ -d <BASE_DIR>/pt/ps_home8.61.04 ]; then
    CWD=$PWD
    cd <BASE_DIR>/pt/ps_home8.61.04 && . psconfig.sh
    cd $CWD
fi
export PS_CFG_HOME=/home/<psftsuser>/pscfg_pt861_lnx
```

Save the file as *psft_env.sh* in *BASE_DIR*/pt, and source it to set the environment variables. For example, use this command:

```
source BASE_DIR/pt/psft_env.sh
```


Chapter 11

Deploying the PeopleTools Client DPK

This chapter discusses:

- Deploying the PeopleTools Client DPK

Task 11-1: Deploying the PeopleTools Client DPK

This section discusses:

- Understanding the Standalone Mode Deployment
- Preparing for the PeopleTools Client DPK Deployment
- Deploying in Standalone Mode

Task 11-1-1: Understanding the Standalone Mode Deployment

Use the standalone mode (SA mode) deployment for the PeopleTools Client DPK when deploying the DPK alone, without first deploying the PeopleSoft application or PeopleSoft PeopleTools DPKs. Use this method, for example, when carrying out a PeopleTools-only upgrade, or to install Change Assistant or one of the other utilities.

Install the PeopleTools Client DPK on a Microsoft Windows host that is certified for PeopleTools client installation.

Use SA mode deployment for the following tasks:

- PeopleTools Upgrade

The deployment process installs a PeopleTools client *PS_HOME* that includes the directories needed for a PeopleSoft PeopleTools-only upgrade, such as data, projects, and scripts directories.

- PeopleTools Patch

The deployment process installs a PeopleTools client *PS_HOME* that includes the directories needed for a PeopleSoft PeopleTools patch application, such as the PTP directory.

See "Learning About the PeopleSoft Deployment Process," Reviewing the PeopleTools Patch DPKs.

- PeopleTools Client

The deployment process installs a PeopleTools client *PS_HOME*. Choose the deployment type "None of the above" for this deployment.

- Change Assistant installation

You can install Change Assistant as part of the PeopleTools Client deployment, or as a separate installation. The deployment process installs, but does not configure Change Assistant. To use Change Assistant for a PeopleSoft PeopleTools-only upgrade or to apply a PeopleSoft PeopleTools patch, you must configure Change Assistant manually. See the PeopleTools upgrade or patch documentation for information.

If there is an existing Change Assistant installation, the deployment process removes or upgrades it to the current release, and saves a configuration file with the existing setup.

- **Change Impact Analyzer**

You can install Change Impact Analyzer as part of the PeopleTools Client deployment, or as a separate installation.

- **PeopleSoft Test Framework (PTF) installation**

You can install PeopleSoft Test Framework as part of the PeopleTools Client deployment, or as a separate installation.

- **PeopleSoft Test Framework (PTF) configuration**

If you choose to configure PTF, the deployment process prompts you for setup parameters. You can configure PTF either at the same time that you install it or later. For example, you may choose to configure PTF separately if you install and configure it first, and then later the middle-tier components in your environment change. In this case, you do not need to install, but you can use the deployment process to reconfigure PTF.

- **Configuration Manager**

If you accept the option to configure the PeopleTools client, the information that you supply is used to configure Configuration Manager.

- **The PeopleTools Client deployment installs Microsoft Visual C++ Redistributable Packages for Visual Studio, which include required Microsoft C++ runtime libraries.**

In addition to the Standalone Mode deployment described in this section, it is possible to deploy the PeopleTools Client in Update Manager mode. To deploy in Update Manager mode, you must have installed a PeopleSoft application image in full-tier mode and specified the PUM installation type. A full-tier PUM installation installs the directory `BASE_DIR\pt\tools_client`. The installation files in this directory are reserved for use in the Update Manager mode deployment.

See *PeopleSoft Deployment Packages for Update Images Installation (PeopleSoft PeopleTools 8.61)*.

Task 11-1-2: Preparing for the PeopleTools Client DPK Deployment

To obtain and extract the PeopleTools Client DPK:

1. Go to the download location for the PeopleSoft PeopleTools DPKs, and download only the last zip file to a location known as `DPK_INSTALL` on a Microsoft Windows computer.

The last zip file, for example `Filename_4of4.zip`, is the PeopleSoft PeopleTools client DPK.

See Obtaining the PeopleSoft PeopleTools Patch DPKs, for the filename syntax of the DPK zip files.

2. Extract the downloaded zip file, which yields another zip file.
3. Extract the resulting zip file to a local or shared directory; for example `C:\tools_client`.

Task 11-1-3: Deploying in Standalone Mode

This section assumes that the user running the script has administrative permission. The script includes the options in the following table:

Deployment	Script Commands
Install the PeopleTools client software in standalone mode.	<code>SetupPTClient.bat -t</code>

Deployment	Script Commands
The setup script deploys to drive C by default. To deploy to a different drive, you can use the option <code>-d <drive></code> This option installs all specified software (Change Assistant, Change Impact Analyzer, PeopleSoft Test Framework), installation and temporary directories, and log files to the specified drive. The drive can be any valid local or mapped shared drive.	<pre>SetupPTClient.bat -t -d <drive></pre> For example, to install to drive E: <pre>SetupPTClient.bat -t -d E</pre>
Install the PeopleTools client software in standalone mode and enable logging.	<pre>SetupPTClient.bat -t -l</pre>
Apply CPUs for JDK and the Oracle Database Client on an existing PeopleTools client environment. This usage requires the presence of the PT-INFRA DPK.	For information on using the PT-INFRA DPK, see <i>PT-INFRA Deployment Package Installation (PeopleSoft PeopleTools 8.61)</i>.

To deploy the PeopleTools Client DPK in SA mode:

1. Verify that the Microsoft Windows folders options are set to show known file extensions.

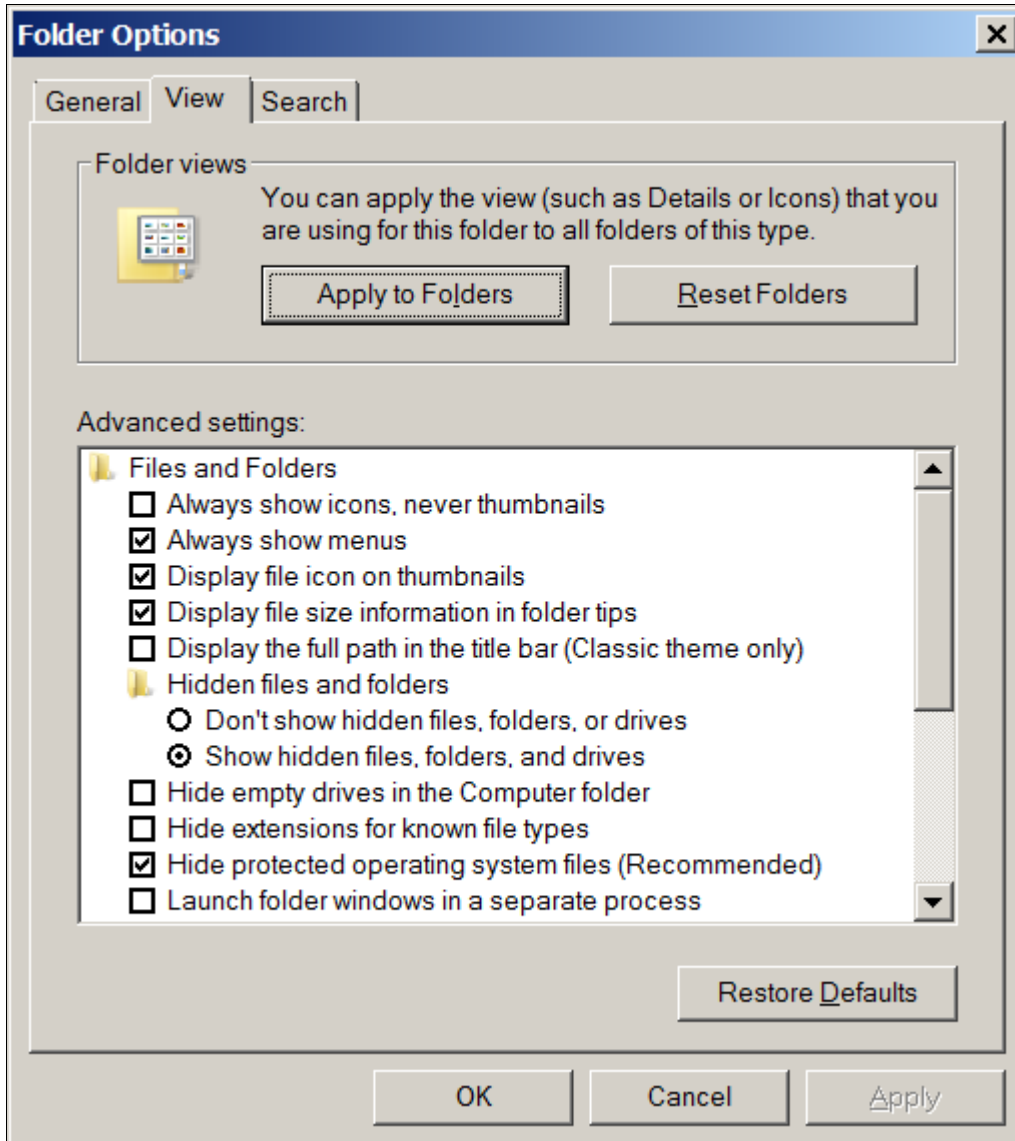
Hidden file extensions may interfere with the script. To show file extensions, for example:

- a. Open Windows Explorer and select Tools, Folder Options.

Note. Depending upon the Microsoft Windows operating system, you may use a different method to set the folder options.

- b. On the Folder Options dialog box, select the View tab.

- c. Verify that the check box for Hide extensions for known file types is not selected, as shown in this example:



Folder Options dialog box: View tab

- d. Click OK to close the box.
2. Open a command prompt, running as administrator, and change directory to the C:\tools_client directory. The tools_client directory includes various sub-directories, and the following files:

- SetupPTClient.bat

The interactive script that installs the PeopleSoft PeopleTools components such as Application Designer, Change Assistant, Change Impact Analyzer, and PeopleSoft Test Framework.

- readme.txt

3. Run the setup script with the following command to install to drive C.

For other script options, see the table at the beginning of this section.

```
SetupPTClient.bat -t
```

Note. If you see an error message similar to "The application has failed to start because its side-by-side configuration is incorrect," it indicates that your machine does not include the necessary Microsoft C++ runtime libraries. Go to the Microsoft Web site, locate the Microsoft Visual C++ redistributable package for your system, and install as directed.

4. Answer *y* (yes) at the following prompt to deploy the PeopleTools Client.

If you are running the script after having deployed the PeopleTools Client previously, and you want to install Change Assistant, Change Impact Analyzer, or PeopleSoft Test Framework without deploying the PeopleTools Client again, answer *n* (no), and continue with step 9.

```
***** SetupPTClient started at 11:42:38.91 *****
set logger to true
Do you want to deploy PeopleTools client? [Y/N]: y
```

5. Specify the RDBMS type for the PeopleTools Client that you want to deploy.

In this example, the RDBMS is option 1, Oracle.

```
Please Select the Database Platform:
1. Oracle
2. Microsoft SQL Server
3. DB2 for zOS
Enter your choice [1-3] : 1
```

6. Specify the installation directory, referred to as PSHOME, for the PeopleTools Client, or press ENTER to accept the default directory, C:\PT<release_number>_Client_<database_type>, for example C:\PT8.61.02_Client_ORA.

```
Please specify the PSHOME for the PeopleTools Client
[C:\PT8.61.02_Client_ORA]:
```

7. Specify whether you want to supply configuration details at the following prompt.

```
Do you want to configure PeopleTools client? [Y/N]:
```

If you answer *n* (no), you do not want to configure the PeopleTools client, continue with step 9.

If you answer *y* (yes), specify the information for your environment at the following prompts:

```
Database Name: HCM92
Server Name: example.com
UserId: VP1
Connect ID: people
Connect Password:
Retype Connect Password:
```

Note. When you enter the password, the script does not echo the password or any masking characters as you type.

- Specify the database name and database server to connect to.
 - The connect ID a valid database-level ID that the PeopleSoft system uses to make the initial connection to the database.
 - For User ID, specify a PeopleSoft user ID, such as VP1 or PS, that has permission to access the database from the PeopleTools client, Application Designer, and so on.
8. Select the type of deployment at the following prompt:

See the definitions in Understanding the Standalone Mode Deployment.

Please make your selection for the Tools Client deployment:

1. People Tools Full Upgrade
2. People Tools Patch
3. None of the above

Enter your choice [1-3]:

9. Specify whether you want to install Change Assistant at the following prompt:

Do you want to install Change Assistant? [Y/N]:

If you answer *y* (yes), specify the installation directory, or accept the default, C:\Program Files\PeopleSoft\Change Assistant:

Please specify the directory to install Change Assistant
[C:\Program Files\PeopleSoft\Change Assistant]:

10. Specify whether you want to install Change Impact Analyzer at the following prompt:

Do you want to install Change Impact Analyzer? [Y/N]:

If you answer *y* (yes), specify the installation directory for Change Impact Analyzer, or accept the default, C:\Program Files\PeopleSoft\Change Impact Analyzer:

Please specify the directory to install Change Impact Analyzer
[C:\Program Files\PeopleSoft\Change Impact Analyzer]:

11. Specify whether you want to install PeopleSoft Test Framework at the following prompt:

Do you want to install PeopleSoft Test Framework? [Y/N]:

If you answer *y* (yes), specify the installation directory for PeopleSoft Test Framework, or accept the default, C:\Program Files\PeopleSoft\PeopleSoft Test Framework:

Please specify the directory to install PeopleSoft Test Framework
[C:\Program Files\PeopleSoft\PeopleSoft Test Framework]:

12. Specify whether you want to configure the PeopleSoft Test Framework at the following prompt:

Do you want to configure PeopleSoft Test Framework? [Y/N]:

If you answer *y* (yes), specify the information for your environment. For information on these parameters, see the PeopleTools Test Framework product documentation.

See *PeopleTools: Test Framework*, "Installing a PTF Client."

```
Database Name: HCM92
Server:Port: example.com:443
Node ID: node_name
User ID: VP1
Proxy [Y/N]: y
Proxy Server: proxyserver.com
Proxy Port: 5000
Proxy User: username
Proxy Password:*****
Retype Proxy Password:*****
```

13. Review the setup steps.

The messages you see depend upon your choices.

```
Starting Tools Client Deployment!  
Deploying PeopleTools 8.61.02 Client in C:\PT8.61.02_Client_ORA  
Configuring PeopleTools 8.61.02 Client  
Deployment of PeopleTools Client Complete.  
Tools Client Deployment Ended.  
***** SetupPTClient ended at 11:35:08.91 *****  
Please review C:\PeopleSoft\PTClientDeploy.log for additional⇒  
information.
```

14. To review the log file for the setup process, go to
%USERPROFILE%\AppData\Local\Temp\PeopleSoft\PTClientDeploy.log.

For example, if the USERPROFILE environment variable is C:\Users\username, the log file location is C:\Users\username\AppData\Local\Temp\PeopleSoft\PTClientDeploy.log.

Note. If you used the `-d <drive>` option to deploy to a drive other than drive C:\, the log file is found in `<drive>:\Users\<username>\AppData\Local\Temp\PeopleSoft\PTClientDeploy.log` and creates the directory if it does not exist.

The PTClientDeploy.log file includes a record of each of the steps in the PeopleTools Client deployment process. If any of the steps fail, a detailed error or warning message will be written to the same log file.

Part II

Discretionary Installation

The second part of the installation guide includes optional tasks, tasks that are only required by certain environments, and those that you may decide to defer until after the initial installation.

Chapter 12A

Installing and Compiling COBOL on Windows

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Preparing COBOL for a PeopleTools-only Upgrade
- Installing Micro Focus Visual COBOL on Microsoft Windows
- Using the Micro Focus Visual COBOL Compiler on Microsoft Windows

Understanding COBOL

This chapter describes how to compile and link PeopleSoft COBOL batch programs, if necessary.

COBOL is not needed for PeopleSoft PeopleTools because the Process Scheduler is written in C++. In addition, COBOL is not required for PeopleSoft applications that contain no COBOL programs. See My Oracle Support for the details on whether your application requires COBOL.

The chapter includes instructions for the Micro Focus Visual COBOL compiler.

See Also

"Preparing for Installation," Installing Supporting Applications

Using Visual COBOL with PeopleSoft, My Oracle Support, Doc ID 2523494.1.

PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers, My Oracle Support, Doc ID 747059.1.

PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the IBM COBOL Compiler, My Oracle Support, Doc ID 1211907.1.

PeopleTools Certifications - Suggested Fixes COBOL, My Oracle Support, (search for the article name and select the current release)

PeopleTools: Global Technology, "Understanding COBOL in a Unicode Environment"

Prerequisites

Before you attempt to run COBOL from the command line you should do the following:

- Make sure the variable PS_SERVER_CFG points to a valid psprcs.cfg file.

- Make sure %PS_HOME%\bin\server\winx86 is in your path. It should appear before %PS_HOME%\bin\client\winx86 if that also appears in the path.
- Before compiling COBOL, you must obtain and install Perl on the machine used to compile COBOL. Perl is used to perform conversions on COBOL source files. Make sure the Perl installation location is included in the system's PATH environment variable. Contact the Perl vendor for installation and reference documentation.

Task 12A-1: Preparing COBOL for a PeopleTools-only Upgrade

This section discusses:

- Preparing Micro Focus Visual COBOL for a PeopleTools-only Upgrade

Task 12A-1-1: Preparing Micro Focus Visual COBOL for a PeopleTools-only Upgrade

When performing a PeopleTools-only upgrade, if you have COBOL modules, recompile all PeopleSoft PeopleTools and PeopleSoft application COBOL programs, as explained in a later section.

See *Recompiling COBOL on Microsoft Windows*.

Ensure that the following COBOL runtime files in your CBLBINX directories match those of your Micro Focus Visual COBOL installation. For Visual COBOL 6, the files are located in the *COBROOT*\bin64 folder, where *COBROOT* refers to the Visual COBOL installation folder.

For Visual COBOL 7, the files are located in the *COBROOT*\bin folder, where *COBROOT* refers to the Visual COBOL installation folder.

- adis.dll
- cbldwinm.dll
- cblintm.dll
- cblprnt.dll
- cblrtsm.dll
- cblviom.dll
- csqsupp.dll
- fs.dll
- fsmgr.dll
- mffh.dll
- mfsqlsmf.dll
- odbcrw64.dll
- oesqlebc.dll
- shell.dll
- cblxecm.exe
- cblxecwm.exe
- fs.exe
- fsclose.exe

- fsservice.exe
- mfsort.exe
- rebuild.exe
- run.exe
- runm.exe
- runw.exe
- runmw.exe

You can also refer to this list if you need to copy the run-time system files manually.

See the information on the Run-time System Files to Ship in the Micro Focus Visual COBOL documentation.

Task 12A-2: Installing Micro Focus Visual COBOL on Microsoft Windows

This section discusses:

- Understanding Micro Focus Visual COBOL for Microsoft Windows
- Obtaining Micro Focus Visual COBOL Files from Oracle Software Delivery Cloud
- Managing Licenses for Micro Focus Visual COBOL 6.0 for Microsoft Windows
- Managing Licenses for Micro Focus Visual COBOL 7.0 for Microsoft Windows
- Managing Licenses for Micro Focus Visual COBOL 9.0 for Microsoft Windows
- Installing Micro Focus Visual COBOL 6.0 for Visual Studio 2017
- Installing Micro Focus Visual COBOL 7.0 for Visual Studio 2017
- Installing Micro Focus Visual COBOL 6.0 for Visual Studio 2019
- Installing Micro Focus Visual COBOL 7.0 for Visual Studio 2019
- Installing Micro Focus Visual COBOL 9.0 for Visual Studio 2022
- Installing Micro Focus Visual COBOL 6.0 for Eclipse on Windows
- Installing Micro Focus Visual COBOL 7.0 for Eclipse on Windows
- Installing Micro Focus Visual COBOL 9.0 for Eclipse on Windows
- Installing Micro Focus Visual COBOL 6.0 Build Tools for Windows
- Installing Micro Focus Visual COBOL 7.0 Build Tools for Windows
- Installing Micro Focus Visual COBOL 9.0 Build Tools for Windows
- Installing COBOL Server 6.0 for Windows
- Installing COBOL Server 7.0 for Windows
- Installing COBOL Server 9.0 for Windows

Understanding Micro Focus Visual COBOL for Microsoft Windows

Micro Focus® Visual COBOL® is a suite of products for developing, compiling, and debugging COBOL. You can select a product to integrate with your choice of integrated development environment (IDE).

Review the Visual COBOL documentation for an overview of the Micro Focus Visual COBOL products.

See Visual COBOL Brochure, https://www.microfocus.com/media/brochure/visual_cobol_brochure.pdf.

The current PeopleSoft PeopleTools release supports Micro Focus Visual COBOL 6.0 Patch Update 2.0, Visual COBOL 7.0 Patch Update 18.0, and Visual COBOL 9.0. You must install the base version of Visual COBOL products for Microsoft Windows before installing the patch updates.

Before installing any of the products of the current supported versions (Micro Focus Visual COBOL 6.0 Patch Update 2.0, Visual COBOL 7.0 Patch Update 18.0, and Visual COBOL 9.0) for Microsoft Windows, remove any existing installation of Micro Focus Visual COBOL 4.0. See the information on uninstalling in the Micro Focus documentation.

See Visual COBOL 4.0 Patch Update 2.0 Documentation, <https://www.microfocus.com/documentation/visual-cobol/visualcobol40pu4/>.

Use these guidelines in choosing a Visual COBOL product supported for PeopleSoft installations on Microsoft Windows:

- Visual COBOL Build Tools for Windows.
 - Compiler and runtime
 - Install on systems to both compile and run COBOL programs.
 - Command-line tool.
 - Use this command-line tool for environments that do not require advanced editing and debugging functionality.
 - Visual COBOL Build Tools for Windows has a separate installer, but the documentation is included with that for Visual COBOL for Visual Studio 2017, Visual COBOL for Visual Studio 2019, or Visual COBOL for Visual Studio 2022.
- Visual COBOL for Visual Studio 2017
 - Compiler, runtime, and IDE integration
 - Install on systems to both compile and run COBOL programs.
 - Use Visual Studio 2017 for editing and debugging.
 - You are responsible for obtaining and installing Visual Studio 2017 separately.
- Visual COBOL for Visual Studio 2019
 - Compiler, runtime, and IDE integration
 - Install on systems to both compile and run COBOL programs.
 - Use Visual Studio 2019 for editing and debugging.
 - You are responsible for obtaining and installing Visual Studio 2019 separately.
- Visual COBOL for Visual Studio 2022
 - Compiler, runtime, and IDE integration
 - Install on systems to both compile and run COBOL programs.
 - Use Visual Studio 2022 for editing and debugging.
 - You are responsible for obtaining and installing Visual Studio 2022 separately.
- Visual COBOL for Eclipse on Windows
 - Compiler, runtime, and IDE integration
 - Install on systems to both compile and run COBOL programs.
 - Use Eclipse for editing and debugging.
 - Micro Focus Eclipse is included as part of the installation.

- COBOL Server for Windows
 - Runtime only
 - Install on systems where you want to run compiled COBOL programs only.
 - The version of COBOL Server for Windows must be the same as or higher than that of the Visual COBOL program that you use to compile.
 - COBOL Server for Windows works with programs compiled with Visual COBOL products. You cannot use it as the runtime for programs that were compiled with Micro Focus Net Express.
 - COBOL Server for Windows cannot coexist on the same machine with Visual COBOL for Visual Studio 2017, Visual COBOL for Visual Studio 2019, Visual COBOL for Visual Studio 2022, or Visual COBOL for Eclipse on Windows.

See Also

Using Micro Focus Visual COBOL with PeopleSoft, My Oracle Support, Doc ID 2523494.1, <https://support.oracle.com/epmos/faces/DocumentDisplay?id=2523494.1>

Micro Focus Visual COBOL, <https://www.microfocus.com/products/visual-cobol/>

Visual COBOL 6.0 and Patch Updates Documentation web site, <https://www.microfocus.com/documentation/visual-cobol/vc60/>

Visual COBOL 7.0 and Patch Updates Documentation web site, <https://www.microfocus.com/documentation/visual-cobol/vc70/>

Visual COBOL 9.0 and Patch Updates Documentation web site, <https://www.microfocus.com/documentation/visual-cobol/vc90/>

Task 12A-2-1: Obtaining Micro Focus Visual COBOL Files from Oracle Software Delivery Cloud

The Micro Focus Visual COBOL installation files are available on Oracle Software Delivery Cloud. At this point you may have already downloaded the necessary files. This section includes additional information on finding and using the files for Micro Focus Visual COBOL if necessary.

1. Log in to Oracle Software Delivery Cloud at <https://edelivery.oracle.com>.
2. Enter Micro Focus in the type-ahead search field, and select the download package for one of the supported versions of Micro Focus Visual COBOL.
3. Select the link Continue.
4. Select the products and documentation you want, and click Continue.
5. Read the license agreement, select the check box to acknowledge that you accept the agreement, and then click Continue.
6. Select the products that you want to download if necessary, and click Continue.
Note that you need both the base version and the patch update.
7. Click one of the filenames to download an individual zip file, or click Download to obtain all of the files listed.

Download both the base installation files and the patches.

The files include software and documentation. Save the zip files to a temporary directory on your local system. The directory where you save the zip files for both versions is referred to in this documentation as *VC_INSTALL*. You must extract (unzip) each file on the platform for which it is intended. For example, if you

download the zip file for Microsoft Windows, you must unzip it on Microsoft Windows to avoid problems.

Task 12A-2-2: Managing Licenses for Micro Focus Visual COBOL 6.0 for Microsoft Windows

Oracle is the exclusive reseller of the Micro Focus Visual COBOL compiler for use with PeopleSoft applications. Install a permanent or trial license.

- Obtain a permanent license from Oracle.

When a Micro Focus compiler is licensed from Oracle, licenses are provided for both the compiler and unlimited run-time.

Request the permanent license files by sending an email to licensecodes_ww@oracle.com. Specify the Micro Focus product that you are licensing, and include your Company Name, Customer ID, and CSI number (if available).

- Obtain a temporary license from Oracle.

You can use a 30-day trial license from Oracle to evaluate the Visual COBOL compiler products, including the embedded runtime functionality. The trial license is active for 30 days from the first use. At the end of the 30-day period, you cannot use the products to compile or run COBOL programs. The trial licenses are available in the same Oracle Software Delivery Cloud download package as the Micro Focus Visual COBOL software.

Download the trial license file for your Visual COBOL product, as mentioned in the readme.txt included with the trial licenses.

- Install the license.

After you complete the installation of the Visual COBOL product, start the Micro Focus License Administration utility, and install the permanent or trial license. You install the license in the Micro Focus License Administration tool. The Visual COBOL installation for the compiler or runtime software puts the Micro Focus License Administration tool in this location: C:\Program Files (x86)\Common Files\SafeNet Sentinel\Sentinel RMS License Manager\WinNT\cesadmintool.

See the Managing Licenses information in the Micro Focus documentation for the license installation options.

See Micro Focus Visual COBOL 6.0 for Visual Studio 2017, Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc60/VS2017/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

See Micro Focus Visual COBOL 6.0 for Visual Studio 2019, Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

See Micro Focus Visual COBOL 6.0 for Eclipse (Windows), Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

Task 12A-2-3: Managing Licenses for Micro Focus Visual COBOL 7.0 for Microsoft Windows

Oracle is the exclusive reseller of the Micro Focus Visual COBOL compiler for use with PeopleSoft applications.

- Obtain a permanent license from Oracle.

When a Micro Focus compiler is licensed from Oracle, licenses are provided for both the compiler and unlimited run-time.

Request the permanent license files by sending an email to licensecodes_ww@oracle.com. Specify the Micro

Focus product that you are licensing, and include your Company Name, Customer ID, and CSI number (if available).

Note. There are no trial (temporary) licenses available for Visual COBOL 7.0.

- Install the license.

After you complete the installation of the Visual COBOL product, start the Micro Focus License Administration utility, and install the permanent license. Visual COBOL 7.0 uses AutoPass licensing.

You install the license in the Micro Focus License Administration tool. The Visual COBOL installation for the compiler or runtime software puts the Micro Focus License Administration tool in this location:
C:\Program Files (x86)\Micro Focus\Licensing\cesadmintool.bat.

See the Managing Licenses information in the Micro Focus documentation for the license installation options.

See Micro Focus Visual COBOL 7.0 for Visual Studio 2017, Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc70/VS2017/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

See Micro Focus Visual COBOL 7.0 for Visual Studio 2019, Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

See Micro Focus Visual COBOL 7.0 for Eclipse (Windows), Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc70/EclWin/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

Task 12A-2-4: Managing Licenses for Micro Focus Visual COBOL 9.0 for Microsoft Windows

Oracle is the exclusive reseller of the Micro Focus Visual COBOL compiler for use with PeopleSoft applications.

- Obtain a permanent license from Oracle.

When a Micro Focus compiler is licensed from Oracle, licenses are provided for both the compiler and unlimited run-time.

Request the permanent license files by sending an email to licensecodes_ww@oracle.com. Specify the Micro Focus product that you are licensing, and include your Company Name, Customer ID, and CSI number (if available).

Note. There are no trial (temporary) licenses available for Visual COBOL 9.0.

- Install the license.

After you complete the installation of the Visual COBOL product, start the Micro Focus License Administration utility, and install the permanent license. Visual COBOL 9.0 uses AutoPass licensing.

You install the license in the Micro Focus License Administration tool. The Visual COBOL installation for the compiler or runtime software puts the Micro Focus License Administration tool in this location:
C:\Program Files (x86)\Micro Focus\Licensing\cesadmintool.bat.

See the Managing Licenses information in the Micro Focus documentation for the license installation options.

See Micro Focus Visual COBOL 9.0 for Visual Studio 2022, Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

See Micro Focus Visual COBOL 9.0 for Eclipse (Windows), Managing Licenses,
<https://www.microfocus.com/documentation/visual-cobol/vc90/EclWin/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

[5C0877300A27.html](#).

Task 12A-2-5: Installing Micro Focus Visual COBOL 6.0 for Visual Studio 2017

Install Visual COBOL 6.0 for Visual Studio 2017 on systems that you use to compile COBOL. You can also obtain Visual Studio 2017 separately to use for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Install Microsoft Windows Visual Studio 2017 if necessary.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 6.0 for Visual Studio 2017.
See Micro Focus Visual COBOL 6.0 for Visual Studio 2017,
<https://www.microfocus.com/documentation/visual-cobol/vc60/VS2017/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.
3. Review and fulfill the system requirements in the Micro Focus online documentation.
See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2017/GUID-1F00B89-90DA-4E93-B29E-BF9BED28C063.html>.
4. Install Visual COBOL 6.0 for Visual Studio 2017.
See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2017/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.
5. Install Patch Update 2.0 for Visual COBOL 6.0 for Visual Studio 2017.

To remove Micro Focus Visual COBOL 6.0 for Visual Studio 2017, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2017/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-6: Installing Micro Focus Visual COBOL 7.0 for Visual Studio 2017

Install Visual COBOL 7.0 for Visual Studio 2017 on systems that you use to compile COBOL. You can also obtain Visual Studio 2017 separately to use for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Install Microsoft Windows Visual Studio 2017 if necessary.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 7.0 for Visual Studio 2017.
See Micro Focus Visual COBOL 7.0 for Visual Studio 2017,
<https://www.microfocus.com/documentation/visual-cobol/vc70/VS2017/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.
3. Review and fulfill the system requirements in the Micro Focus online documentation.
See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2017/GUID-1F00B89-90DA-4E93-B29E-BF9BED28C063.html>.
4. Install Visual COBOL 7.0 for Visual Studio 2017.
See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2017/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

[BAE3-446C-B2B4-4379A5DF6D9F.html](https://www.microfocus.com/documentation/visual-cobol/vc70/VS2017/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html).

5. Install Patch Update 18.0 for Visual COBOL 7.0 for Visual Studio 2017.

To remove Micro Focus Visual COBOL 7.0 for Visual Studio 2017, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2017/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-7: Installing Micro Focus Visual COBOL 6.0 for Visual Studio 2019

Install Visual COBOL 6.0 for Visual Studio 2019 on systems that you use to compile COBOL. You can also obtain Visual Studio 2019 separately to use for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Install Microsoft Windows Visual Studio 2019 if necessary.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 6.0 for Visual Studio 2019.

See Micro Focus Visual COBOL 6.0 for Visual Studio 2019,
<https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.

3. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-1F000B89-90DA-4E93-B29E-BF9BED28C063.html>.

4. Install Visual COBOL 6.0 for Visual Studio 2019.

See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

5. Install Patch Update 2.0 for Visual COBOL 6.0 for Visual Studio 2019.

To remove Micro Focus Visual COBOL 6.0 for Visual Studio 2019, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-8: Installing Micro Focus Visual COBOL 7.0 for Visual Studio 2019

Install Visual COBOL 7.0 for Visual Studio 2019 on systems that you use to compile COBOL. You can also obtain Visual Studio 2019 separately to use for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Install Microsoft Windows Visual Studio 2019 if necessary.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 7.0 for Visual Studio 2019.

See Micro Focus Visual COBOL 7.0 for Visual Studio 2019,
<https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.

3. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-1F000B89-90DA-4E93-B29E-BF9BED28C063.html>.

4. Install Visual COBOL 7.0 for Visual Studio 2019.

See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

5. Install Patch Update 18.0 for Visual COBOL 7.0 for Visual Studio 2019.

To remove Micro Focus Visual COBOL 7.0 for Visual Studio 2019, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-9: Installing Micro Focus Visual COBOL 9.0 for Visual Studio 2022

Install Visual COBOL 9.0 for Visual Studio 2022 on systems that you use to compile COBOL. You can also obtain Visual Studio 2022 separately to use for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Install Microsoft Windows Visual Studio 2022 if necessary.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 9.0 for Visual Studio 2022.

See Micro Focus Visual COBOL 9.0 for Visual Studio 2022, <https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.

3. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-1F000B89-90DA-4E93-B29E-BF9BED28C063.html>.

4. Install Visual COBOL 9.0 for Visual Studio 2022.

See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

To remove Micro Focus Visual COBOL 9.0 for Visual Studio 2022, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-10: Installing Micro Focus Visual COBOL 6.0 for Eclipse on Windows

Install Visual COBOL 6.0 for Eclipse on Windows on systems that you use to compile COBOL, and use Eclipse for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Visual COBOL 6.0 for Eclipse on Windows.

See Micro Focus Visual COBOL 6.0 for Eclipse (Windows), <https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-8D6B7358-AC35-4DAF->

[A445-607D8D97EBB2.html](https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-A445-607D8D97EBB2.html).

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-28F91105-1188-40B7-AF41-CD5303CAA544.html>.

3. Install Visual COBOL 6.0 for Eclipse.

See Installing Micro Focus Visual COBOL 6.0 for Eclipse (Windows), <https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-6C2E928A-DE6C-4DBC-8F05-7816D71FAD9F.html>.

4. Install Patch Update 2.0 for Visual COBOL 6.0.

To remove Micro Focus Visual COBOL 6.0 for Eclipse on Windows, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-98EC358D-0BE5-4D01-866E-883068AD1282.html>.

Task 12A-2-11: Installing Micro Focus Visual COBOL 7.0 for Eclipse on Windows

Install Visual COBOL 7.0 for Eclipse on Windows on systems that you use to compile COBOL, and use Eclipse for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Visual COBOL 7.0 for Eclipse on Windows.

See Micro Focus Visual COBOL 7.0 for Eclipse (Windows), <https://www.microfocus.com/documentation/visual-cobol/vc70/EclWin/GUID-8D6B7358-AC35-4DAF-A445-607D8D97EBB2.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements for Visual COBOL for Eclipse (Windows), <https://www.microfocus.com/documentation/visual-cobol/vc70/EclWin/GUID-28F91105-1188-40B7-AF41-CD5303CAA544.html>.

3. Install Visual COBOL 7.0 for Eclipse.

See Installing Visual COBOL for Eclipse (Windows), <https://www.microfocus.com/documentation/visual-cobol/vc70/EclWin/GUID-6C2E928A-DE6C-4DBC-8F05-7816D71FAD9F.html>.

4. Install Patch Update 18.0 for Visual COBOL 7.0.

To remove Micro Focus Visual COBOL 7.0 for Eclipse on Windows, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc70/EclWin/GUID-98EC358D-0BE5-4D01-866E-883068AD1282.html>.

Task 12A-2-12: Installing Micro Focus Visual COBOL 9.0 for Eclipse on Windows

Install Visual COBOL 9.0 for Eclipse on Windows on systems that you use to compile COBOL, and use Eclipse for editing and debugging.

After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Visual COBOL 9.0 for Eclipse on Windows.

See Micro Focus Visual COBOL 9.0 for Eclipse (Windows),

<https://www.microfocus.com/documentation/visual-cobol/vc90/EclWin/GUID-8D6B7358-AC35-4DAF-A445-607D8D97EBB2.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements for Visual COBOL for Eclipse (Windows),

<https://www.microfocus.com/documentation/visual-cobol/vc90/EclWin/GUID-28F91105-1188-40B7-AF41-CD5303CAA544.html>.

3. Install Visual COBOL 9.0 for Eclipse.

See Installing Visual COBOL for Eclipse (Windows), <https://www.microfocus.com/documentation/visual-cobol/vc90/EclWin/GUID-6C2E928A-DE6C-4DBC-8F05-7816D71FAD9F.html>.

To remove Micro Focus Visual COBOL 9.0 for Eclipse on Windows, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc90/EclWin/GUID-98EC358D-0BE5-4D01-866E-883068AD1282.html>.

Task 12A-2-13: Installing Micro Focus Visual COBOL 6.0 Build Tools for Windows

Install Visual COBOL Build Tools for Windows on systems that you use to compile COBOL. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

Note. The documentation for Visual COBOL Build Tools is part of the Visual COBOL 6.0 for Visual Studio 2019 documentation.

1. Remove any existing installation of Micro Focus Visual COBOL 4.0 Build Tools for Windows.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 6.0 for Visual Studio 2019.

See Micro Focus Visual COBOL 6.0 for Visual Studio 2019,

<https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.

3. Review and fulfill the system requirements in the Micro Focus online documentation.

See Prerequisites for Using Visual COBOL Build Tools for Windows,

<https://www.microfocus.com/documentation/visual-cobol/vc60/EclWin/GUID-1E501959-6331-4CE3-814C-7A2FCA4736DD.html>.

4. Install Visual COBOL 6.0 Build Tools.

See Installing Visual COBOL Build Tools for Windows, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-34DFF119-58A8-4C98-938F-2B72FCE0FE31.html>.

5. Install Patch Update 2.0 for Visual COBOL 6.0.

To remove Micro Focus Visual COBOL 6.0 Build Tools, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-14: Installing Micro Focus Visual COBOL 7.0 Build Tools for Windows

Install Visual COBOL Build Tools for Windows on systems that you use to compile COBOL. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

Note. The documentation for Visual COBOL Build Tools is part of the Visual COBOL 7.0 for Visual Studio 2019 documentation.

1. Remove any existing installation of Micro Focus Visual COBOL 4.0 Build Tools for Windows.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 7.0 for Visual Studio 2019.
See Micro Focus Visual COBOL 7.0 for Visual Studio 2019,
<https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.
3. Review and fulfill the system requirements in the Micro Focus online documentation.
See Prerequisites for Using Visual COBOL Build Tools for Windows,
<https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-1E501959-6331-4CE3-814C-7A2FCA4736DD.html>.
4. Install Visual COBOL 7.0 Build Tools.
See Installing Visual COBOL Build Tools for Windows, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-34DFF119-58A8-4C98-938F-2B72FCE0FE31.html>.
5. Install Patch Update 18.0 for Visual COBOL 7.0.

To remove Micro Focus Visual COBOL 7.0 Build Tools, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc70/VS2019/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-15: Installing Micro Focus Visual COBOL 9.0 Build Tools for Windows

Install Visual COBOL Build Tools for Windows on systems that you use to compile COBOL. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

Note. The documentation for Visual COBOL Build Tools is part of the Visual COBOL 9.0 for Visual Studio 2022 documentation.

1. Remove any existing installation of Micro Focus Visual COBOL 4.0 Build Tools for Windows.
2. Access the Micro Focus documentation site for Micro Focus Visual COBOL 9.0 for Visual Studio 2022.
See Micro Focus Visual COBOL 9.0 for Visual Studio 2022,
<https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.
3. Review and fulfill the system requirements in the Micro Focus online documentation.
See Prerequisites for Using Visual COBOL Build Tools for Windows,
<https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-1E501959-6331-4CE3-814C-7A2FCA4736DD.html>.

4. Install Visual COBOL 9.0 Build Tools.

See Installing Visual COBOL Build Tools for Windows, <https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-34DFF119-58A8-4C98-938F-2B72FCE0FE31.html>.

To remove Micro Focus Visual COBOL 9.0 Build Tools, see the Micro Focus documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc90/VS2022/GUID-0AB211F0-41FD-43DE-9B55-2903EC37C126.html>.

Task 12A-2-16: Installing COBOL Server 6.0 for Windows

Install COBOL Server 6.0 for Windows on systems where you want to run compiled COBOL programs only. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

Note. The documentation for COBOL Server 6.0 is part of the Visual COBOL 6.0 for Visual Studio 2019 documentation.

1. Access the Micro Focus documentation site for Micro Focus Visual COBOL 6.0 for Visual Studio 2019.

See Micro Focus Visual COBOL 6.0 for Visual Studio 2019, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-CBF8DCDC-1F63-4C02-AC0C-7FABBE6A04AD.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-1F000B89-90DA-4E93-B29E-BF9BED28C063.html>.

3. Install COBOL Server for Windows.

See COBOL Server Installation Options, <https://www.microfocus.com/documentation/visual-cobol/vc60/VS2019/GUID-5342CB02-2439-446D-B304-7AA001B04382.html>.

4. Install Patch Update 2.0 for Visual COBOL 6.0.

Task 12A-2-17: Installing COBOL Server 7.0 for Windows

Install COBOL Server 7.0 for Windows on systems where you want to run compiled COBOL programs only. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for COBOL Server 7.0.

See Micro Focus COBOL Server 7.0 for Windows, <https://www.microfocus.com/documentation/visual-cobol/vc70/CSWin/GUID-F7D8FD6E-BDE0-4169-8D8C-96DDFFF6B495.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc70/CSWin/GUID-4FA82D12-240B-4705-ABE5-1FC560BF11F2.html>.

3. Install COBOL Server 7.0 for Windows.

See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc70/CSWin/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

4. Install Patch Update 18.0 for COBOL Server 7.0.

Task 12A-2-18: Installing COBOL Server 9.0 for Windows

Install COBOL Server 9.0 for Windows on systems where you want to run compiled COBOL programs only. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for COBOL Server 9.0.

See Micro Focus COBOL Server 9.0 for Windows, <https://www.microfocus.com/documentation/visual-cobol/vc90/CSWin/GUID-F7D8FD6E-BDE0-4169-8D8C-96DDFFF6B495.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc90/CSWin/GUID-4FA82D12-240B-4705-ABE5-1FC560BF11F2.html>.

3. Install COBOL Server 9.0 for Windows.

See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc90/CSWin/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

Task 12A-3: Using the Micro Focus Visual COBOL Compiler on Microsoft Windows

This section discusses:

- Understanding Visual COBOL Compilation
- Compiling Visual COBOL on Microsoft Windows with PS_HOME and PS_APP_HOME
- Compiling Visual COBOL on Microsoft Windows with PS_HOME, PS_APP_HOME, and PS_CUST_HOME Setup
- Recompiling Visual COBOL on Microsoft Windows
- Setting Up the COBOL Server for Windows Runtime
- Defining the GNT and INT Files
- Distributing Visual COBOL Binaries

Understanding Visual COBOL Compilation

This section assumes that you are carrying out the compile process from your file server. (The COBOL compiler itself does not need to be on the file server, as long as the user can write to the file server and can link to the src and bin directories.) The recommended approach for the PeopleSoft installation is to use CBLBLD.BAT to compile all your COBOL source files at once. Another alternative is CBLMAKE.BAT, which you can use to compile selected COBOL files.

The way that you set up your installation environment determines how you compile COBOL. This section includes different procedures for the different installation environments, as follows:

- Installations with PS_HOME and PS_APP_HOME

The PeopleSoft Application software is installed to a PS_APP_HOME location that is outside of the PeopleSoft PeopleTools installation location, PS_HOME. If the PS_APP_HOME environment variable is defined and is different from PS_HOME, the COBOL build scripts behave differently under certain build options. Follow the instructions in these sections:

- Compiling COBOL on Microsoft Windows with *PS_HOME* and *PS_APP_HOME*
- Defining the GNT and INT Files
- Installations with *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*

You have the option to place customized COBOL baseline sources into a location referenced by the environment variable *PS_CUST_HOME*.

The *PS_CUST_HOME* directory structure must replicate that of *PS_HOME* or *PS_APP_HOME*; that is, any COBOL source file that is customized should be placed in the same relative path as was present in the original location.

For example, if the original location for the COBOL source files is *PS_APP_HOME/src/cbl*, place the customized files in *PS_CUST_HOME/src/cbl*.

If your environment includes customized files in a *PS_CUST_HOME* directory, as well as in *PS_HOME* and *PS_APP_HOME*, follow the instructions in these sections:

- Compiling COBOL on Microsoft Windows with *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*
- Defining the GNT and INT Files

For those systems on which you only need to run COBOL, but do not need to compile it, you can install and configure the runtime product.

See Setting Up the COBOL Server for Windows Runtime.

Task 12A-3-1: Compiling Visual COBOL on Microsoft Windows with *PS_HOME* and *PS_APP_HOME*

This section discusses:

- Compiling with *CBLBLD.BAT* with *PS_HOME* and *PS_APP_HOME*
- Compiling with *CBLMAKE.BAT* with *PS_HOME* and *PS_APP_HOME*

This section assumes that there is no separate *PS_CUST_HOME* directory with customized COBOL source files.

Compiling with *CBLBLD.BAT* with *PS_HOME* and *PS_APP_HOME*

The usage for running *CBLBLD.BAT* is:

```
cblbld <compile drive> <compile directory> [BUILD_option] [BUILD_home]
```

Substitute the appropriate values as follows:

- <compile drive>
Enter the drive letter for the drive containing the directory where the compile takes place.
- <compile directory>
Enter the directory where the compile takes place. Be sure to include a space between <compile drive> and <compile directory>.
- BUILD_option
The allowed values are nothing (blank), ASCII or Unicode.
BUILD_option refers to the encoding scheme of your PeopleSoft installation. This parameter is optional.
- BUILD_home
The allowed values are nothing (blank), *PS_HOME* or *PS_APP_HOME*.

Note. The values PS_HOME and PS_APP_HOME are case-insensitive.

BUILD_home refers to the directory from which the COBOL source files will be compiled.

This parameter is optional.

- If the option is PS_HOME, the COBOL source files placed under %PS_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled, and then copied to the target directory.
- If the option is PS_APP_HOME, the COBOL source files placed under %PS_APP_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled, and then copied to the target directory.
- If the option is blank, the COBOL source files under %PS_HOME%\src\cbl and COBOL source files under %PS_APP_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled one after another, and then copied to the target directory.

To compile COBOL sources on Microsoft Windows:

1. In a command prompt, set the environment variables described in this table:

Environment Variable	Purpose
PS_HOME	PeopleSoft PeopleTools home directory—that is, the drive letter and high-level directory where you installed PeopleSoft PeopleTools.
COBROOT	Drive letter and root directory of the COBOL compiler.
PS_APP_HOME	PeopleSoft Application home directory—that is, the drive letter and high-level directory where you installed the PeopleSoft Application software.

For example:

```
set PS_HOME=C:\PTcompile
set COBROOT="C:\Program Files\VisualCobol60"
set PS_APP_HOME=C:\HRcompile
```

2. Change directory to PS_HOME\setup:

```
cd %PS_HOME%\setup
```

3. Run CBLBLD.BAT, using one of these methods:

- To compile all the COBOL source files under your PeopleSoft application, that is, all PeopleSoft PeopleTools source files and all PeopleSoft Application source files, run this command:

```
cblbld <compile drive> <compile directory>
```

For example:

```
cblbld c: \temp\PTcompile
```

- To compile only PeopleSoft PeopleTools COBOL source files, run this command:

```
cblbld <compile drive> <compile directory> PS_HOME
```

For example:

```
cblbld c: \temp\PTcompile PS_HOME
```

- To compile only PeopleSoft Application COBOL source files, run this command:

```
cblbld <compile drive> <compile directory> PS_APP_HOME
```

For example:

```
cblbld c: \temp\HRcompile PS_APP_HOME
```

PeopleSoft PeopleTools COBOL compiled executables will be placed under the `<PS_HOME>\CBLBIN<X>` directory. PeopleSoft Application COBOL compiled executables will be placed under the `<PS_APP_HOME>\CBLBIN<X>` directory. CBLBIN<X> will be one of the following:

- CBLBINA if you are using ANSI encoding scheme
- CBLBINU if you are using Unicode encoding scheme

Note. If you chose the Unicode option while installing PeopleSoft software, the file UNICODE.CFG was created in the `PS_HOME/setup` directory. UNICODE.CFG automatically triggers the batch file CBL2UNI.BAT when you run CBLBLD.BAT. Another batch file, CBLRTCPY.BAT, copies DLL files that are needed for COBOL to run from the compiler directory identified by the %COBROOT% setting into the appropriate CBLBIN directory (CBLBINA or CBLBINU) when you run CBLBLD. These files can reside anywhere as long as they are in the path. You can run either of these BAT files independently from the command line (they reside in `PS_HOME\setup`). For CBLRTCPY.BAT you need to specify a target directory.

Compiling with CBLMAKE.BAT with PS_HOME and PS_APP_HOME

CBLBLD.BAT compiles all your COBOL source files at once, which can take a lot of time. CBLMAKE.BAT, in contrast, lets you employ one or more parameters to compile a specific COBOL source file or a selected group of COBOL source files. The procedure is slightly different depending upon whether the file that you want to compile is a PeopleSoft Application or PeopleSoft PeopleTools COBOL file. Both procedures are covered in this section.

The following table describes the various options for CBLMAKE.BAT.

Option	Purpose
Cblmake	Compiles all source
Cblmake all	Compiles all source
Cblmake PT*	Compiles all source files that start with PT
Cblmake PT* ALL	Compiles all source files that start with PT
Cblmake PT* INT	Generates INT files for all source files that start with PT
Cblmake PT* GNT	Generates GNT files for all source files that start with PT
Cblmake PT* EXE	Generates EXE files for all source files that start with PT
Cblmake PTPDBTST INT	Generates PTPDBTST.INT file
Cblmake PTPDBTST INT LIST	Generates PTPDBTST.INT and source listing file
Cblmake PTPDBTST GNT	Generates PTPDBTST.GNT file

Option	Purpose
Cblmake PTPDBTST EXE	Generates PTPDBTST.EXE file

To compile a PeopleSoft Application COBOL file with CBLMAKE.BAT:

1. Open a command prompt window.
2. Verify that the PS_HOME, COBROOT, and PS_APP_HOME environment variables are set, as previously defined.

See Compiling with CBLBLD.BAT with a PS_APP_HOME Setup.

3. Verify that the environment variable PS_compile_apps is set, as follows:

```
set PS_compile_apps=Y
```

Important! This variable setting is required for individual file compilation with CBLMAKE.BAT.

4. Make sure the compile directory, *<compile directory>*, exists, and that you have write permission to it. This directory may already exist if you have run CBLBLD.BAT before. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.
5. Change to the *PS_HOME\setup* directory.
6. If the installation is Unicode, run CBL2UNI (with no parameters).
7. Execute the following command to copy all the COBOL source files from the *PS_APP_HOME* directory to the compile directory:

```
cblsrc <source directory> <compile directory>
```

Here *<source directory>* is the drive and directory where the source resides (it should be the same as *PS_APP_HOME*), and *<compile directory>* is the drive and directory to which the source files will be copied.

For example, the following command will take the COBOL source from *PS_APP_HOME* and copy all the necessary files to the location where the compile process will take place, *c:\temp\HRcompile* in this example:

```
cblsrc %PS_APP_HOME% c:\temp\HRcompile
```

Note. The compile in the next step will generate a GNT file unless the exception file, CBLINT.XX already exists (the XX represents the Product ID). CBLINT.XX contains the list of files that need to be compiled to the INT file. Make sure the intended CBLINT.XX is located under *<compile directory>* before executing CBLMAKE.

8. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

For example, to compile a file named GPPDPRUN, run this command:

```
cblmake GPPDPRUN
```

9. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate *<PS_APP_HOME>\CBLBIN<X>* directory (CBLBINA for ANSI or CBLBINU for Unicode).

These examples use the ANSI encoding:

```
copy *.exe %PS_APP_HOME%\cblbina
copy *.gnt %PS_APP_HOME%\cblbina
copy *.int %PS_APP_HOME%\cblbina
```

Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

10. Verify that the compiler runtime files (*.EXE and *.DLL) are present in the <PS_APP_HOME>\CBLBIN <X> directory.

If they are not present, then you will have to run %PS_HOME%\setup\cblrtcpy.bat as follows:

```
cblrtcpy %PS_APP_HOME%\cblbina
```

See Preparing Micro Focus Visual COBOL for a PeopleTools-only Upgrade for the list of files.

The procedure to compile a PeopleSoft PeopleTools COBOL file with CBLMAKE.BAT is similar, but the environment variable PS_compile_apps must *not* be set.

1. Open a command prompt window.
2. Verify that the PS_HOME, COBROOT, and PS_APP_HOME environment variables are set, as previously defined.

See Compiling with CBLBLD.BAT with a PS_HOME and PS_APP_HOME.

3. Verify that the environment variable PS_compile_apps is *not* set, as follows:

```
set PS_compile_apps=
```

Important! Unsetting this environment variable is required for individual file compilation with CBLMAKE.BAT for PeopleSoft PeopleTools files.

4. Make sure the compile directory, <compile directory>, exists, and that you have write permission to it. This directory may already exist if you have run CBLBLD.BAT before. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.
5. Change to the PS_HOME\setup directory.
6. If the installation is Unicode, run CBL2UNI (with no parameters).
7. Execute the following command to copy all the COBOL source files from the PS_HOME directory to the compile directory:

```
cblsrc <source directory> <compile directory>
```

where <source directory> is the drive and directory where the source resides (it should be the same as PS_HOME), and <compile directory> is the drive and directory to which the source files will be copied.

For example, the following command will take the COBOL source from PS_HOME and copy all the necessary files to the location where the compile process will take place, c:\temp\PTcompile in this example:

```
cblsrc %PS_HOME% c:\temp\PTcompile
```

8. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

For example, to compile a file named PTPDBTST, run this command:

```
cblmake PTPDBTST
```

9. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate <PS_HOME>\CBLBIN<X> directory (CBLBINA for ANSI or CBLBINU for Unicode).

These examples use the ANSI encoding:

```
copy *.exe %PS_HOME%\cblbina
```

```
copy *.gnt %PS_HOME%\cblbina
copy *.int %PS_HOME%\cblbina
```

Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

10. Verify that the compiler runtime files (*.EXE and *.DLL) are present in the <PS_HOME>\CBLBIN<X> directory.

If they are not present, then you will have to run %PS_HOME%\setup\cblrtcpy.bat as follows:

```
cblrtcpy %PS_HOME%\cblbina
```

See Preparing Micro Focus Visual COBOL for a PeopleTools-only Upgrade for the list of files.

Note. If you plan to use cblmake.bat to compile a single (or a set) of PeopleSoft PeopleTools or PeopleSoft Application COBOL program at the same time, it would be a good idea to use two different command prompts and two different compile directories—one for PeopleSoft PeopleTools COBOL programs and the other for the PeopleSoft Application COBOL programs. This avoids setting and unsetting the PS_compile_apps environment variable.

Task 12A-3-2: Compiling Visual COBOL on Microsoft Windows with PS_HOME, PS_APP_HOME, and PS_CUST_HOME Setup

This section discusses:

- Compiling with CBLBLD.BAT with PS_HOME, PS_APP_HOME, and PS_CUST_HOME
- Compiling with CBLMAKE.BAT with PS_HOME, PS_APP_HOME, and PS_CUST_HOME

This section assumes that you have set up a PS_CUST_HOME environment variable for customized COBOL source files.

Compiling with CBLBLD.BAT with PS_HOME, PS_APP_HOME, and PS_CUST_HOME

The usage for running CBLBLD.BAT is:

```
cblbld <compile drive> <compile directory> [BUILD_option] [BUILD_home]
```

Substitute the appropriate values as follows:

- <compile drive>
Enter the drive letter for the drive containing the directory where the compile takes place.
- <compile directory>
Enter the directory where the compile takes place. Be sure to include a space between <compile drive> and <compile directory>.
- BUILD_option
The allowed values are nothing (blank), ASCII or Unicode.
BUILD_option refers to the encoding scheme of your PeopleSoft installation. This parameter is optional.
- BUILD_home
The allowed values are nothing (blank), PS_HOME, PS_APP_HOME, or PS_CUST_HOME.

Note. The values PS_HOME, PS_APP_HOME, and PS_CUST_HOME are case-insensitive.

BUILD_home refers to the directory from which the COBOL source files will be compiled.

This parameter is optional.

- If the option is PS_HOME, the COBOL source files placed under %PS_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled, and then copied to the target directory.
- If the option is PS_APP_HOME, the COBOL source files placed under %PS_APP_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled, and then copied to the target directory.
- If the option is PS_CUST_HOME, the COBOL source files placed under %PS_CUST_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled, and then copied to the target directory.
- If the option is blank, the COBOL source files under %PS_HOME%\src\cbl, under %PS_APP_HOME%\src\cbl (if PS_APP_HOME is different from PS_HOME), and under %PS_CUST_HOME%\src\cbl will be copied to <compile drive>\<compile directory>, compiled one after the other, and then copied to the target directory.

To compile COBOL sources on Microsoft Windows:

1. In a command prompt, set the environment variables described in this table:

Environment Variable	Purpose
PS_HOME	PeopleSoft PeopleTools home directory—that is, the drive letter and high-level directory where you installed PeopleSoft PeopleTools.
PS_APP_HOME	PeopleSoft Application home directory—that is, the drive letter and high-level directory where you installed the PeopleSoft Application software.
PS_CUST_HOME	PeopleSoft Application customized home directory—that is, the drive letter and high-level directory containing your customized PeopleSoft COBOL programs.
COBROOT	Drive letter and root directory of the COBOL compiler.

For example:

```
set PS_HOME=C:\PTcompile
set COBROOT="C:\Program Files\Micro Focus\VisualCobol60"
set PS_CUST_HOME=C:\CUSTcompile
set PS_APP_HOME=C:\HRcompile
```

2. Change directory to PS_HOME\setup:

```
cd %PS_HOME%\setup
```

3. Run CBLBLD.BAT, using one of these methods:

- To compile all the COBOL source files under your PeopleSoft application, that is, all PeopleSoft PeopleTools source files, all PeopleSoft Application source files, and all customized PeopleSoft source files, run this command:

```
cblbld <compile drive> <compile directory>
```


For example:

```
cblbld c: \temp\PTcompile
```

- To compile only PeopleSoft PeopleTools and PeopleSoft Application COBOL source files, run this command:

```
cblbld <compile drive> <compile directory> PS_HOME
```

For example:

```
cblbld c: \temp\PTcompile PS_HOME
```

- To compile only customized PeopleSoft Application or PeopleSoft PeopleTools COBOL source files, run this command:

```
cblbld <compile drive> <compile directory> PS_CUST_HOME
```

For example:

```
cblbld c: \temp\CUSTcompile PS_CUST_HOME
```

Delivered (that is, non-customized) PeopleSoft PeopleTools and PeopleSoft Application COBOL compiled executables will be placed under the `<PS_HOME>\CBLBIN<X>` directory. Customized PeopleSoft Application or PeopleSoft PeopleTools COBOL compiled executables will be placed under the `<PS_CUST_HOME>\CBLBIN<X>` directory. CBLBIN<X> will be one of the following:

- CBLBINA if you are using ANSI encoding scheme
- CBLBINU if you are using Unicode encoding scheme

Compiling with CBLMAKE.BAT with PS_HOME, PS_APP_HOME, and PS_CUST_HOME

CBLBLD.BAT compiles all your COBOL source files at once, which can take a lot of time. CBLMAKE.BAT, in contrast, lets you employ one or more parameters to compile a specific COBOL source file or a selected group of COBOL files. The procedure is slightly different depending upon whether the file that you want to compile is a PeopleSoft Application, PeopleSoft PeopleTools, or customized COBOL source file. Both procedures are covered in this section.

Note. The options for CBLMAKE.BAT are defined in a table in the previous section Compiling with CBLMAKE.BAT with a `PS_APP_HOME` Setup.

To compile a customized COBOL file with CBLMAKE.BAT:

1. Open a command prompt window.
2. Verify that the `PS_HOME`, `COBROOT`, `PS_APP_HOME`, and `PS_CUST_HOME` environment variables are set, as previously defined.

See Compiling with CBLBLD.BAT with a `PS_CUST_HOME` Setup.

3. Verify that the environment variable `PS_compile_cust` is set, as follows:

```
set PS_compile_cust=Y
```

Important! This variable setting is required for individual file compilation with CBLMAKE.BAT.

4. Ensure that the compile directory, `<compile directory>`, exists, and that you have write permission to it. This directory may already exist if you have run CBLBLD.BAT before. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.

5. Change to the *PS_HOME*\setup directory.
6. If the installation is Unicode, run CBL2UNI (with no parameters).
7. Execute the following command to copy all the COBOL source files from the *PS_CUST_HOME* directory to the compile directory:

```
cblsrc <source directory> <compile directory>
```

Here *<source directory>* is the drive and directory where the source resides (it should be the same as *PS_CUST_HOME*), and *<compile directory>* is the drive and directory to which the source files will be copied.

For example, the following command will take the COBOL source files from *PS_CUST_HOME* and copy all the necessary files to the location where the compile process will take place, *c:\temp\CUSTcompile* in this example:

```
cblsrc %PS_CUST_HOME% c:\temp\CUSTcompile
```

Note. The compile in the next step will generate a GNT file unless the exception file, CBLINT.*XX* already exists (the *XX* represents the Product ID). CBLINT.*XX* contains the list of files that need to be compiled to the INT file. Make sure the intended CBLINT.*XX* is located under *<compile directory>* before executing CBLMAKE.

8. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

For example, to compile a file named GPPDPRUN, run this command:

```
cblmake GPPDPRUN
```

9. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate *<PS_CUST_HOME>\CBLBIN<X>* directory (CBLBINA for ANSI or CBLBINU for Unicode).

These examples use the ANSI encoding:

```
copy *.exe %PS_CUST_HOME%\cblbina
copy *.gnt %PS_CUST_HOME%\cblbina
copy *.int %PS_CUST_HOME%\cblbina
```

Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

10. Verify that the compiler runtime files (*.EXE and *.DLL) are present in the *<PS_CUST_HOME>\CBLBIN<X>* directory.

If they are not present, then you will have to run *%PS_HOME%\setup\cblrtcpy.bat* as follows:

```
cblrtcpy %PS_CUST_HOME%\cblbina
```

See Preparing Micro Focus Visual COBOL for a PeopleTools-only Upgrade for the list of files.

The procedure to compile a PeopleSoft PeopleTools COBOL file with CBLMAKE.BAT is similar, but the environment variable *PS_compile_cust* must *not* be set.

1. Open a command prompt window.
2. Verify that the *PS_HOME*, *COBROOT*, and *PS_APP_HOME* environment variables are set, as previously defined.

See Compiling with CBLBLD.BAT with a *PS_HOME* and *PS_APP_HOME*.

3. Verify that the environment variable *PS_compile_cust* is *not* set, as follows:

```
set PS_compile_cust=
```

Important! Unsetting this environment variable is required for individual file compilation with CBLMAKE.BAT for PeopleSoft PeopleTools files.

4. Make sure the compile directory, *<compile directory>*, exists, and that you have write permission to it. This directory may already exist if you have run CBLBLD.BAT before. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.
5. Change to the *PS_HOME\setup* directory.
6. If the installation is Unicode, run CBL2UNI (with no parameters).
7. Execute the following command to copy all the COBOL source files from the *PS_HOME* directory to the compile directory:

```
cblsrc <source directory> <compile directory>
```

Here *<source directory>* is the drive and directory where the source resides (it should be the same as *PS_HOME*), and *<compile directory>* is the drive and directory to which the source files will be copied.

For example, the following command will take the COBOL source from *PS_HOME* and copy all the necessary files to the location where the compile process will take place, *c:\temp\PTcompile* in this example:

```
cblsrc %PS_HOME% c:\temp\PTcompile
```

8. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

For example, to compile a file named PTPDBTST, run this command:

```
cblmake PTPDBTST
```

9. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate *<PS_HOME>\CBLBIN<X>* directory (CBLBINA for ANSI or CBLBINU for Unicode).

These examples use the ANSI encoding:

```
copy *.exe %PS_HOME%\cblbina
copy *.gnt %PS_HOME%\cblbina
copy *.int %PS_HOME%\cblbina
```

Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

10. Verify that the compiler runtime files (*.EXE and *.DLL) are present in the *<PS_HOME>\CBLBIN<X>* directory.

If they are not present, then you will have to run *%PS_HOME%\setup\cblrtcpy.bat* as follows:

```
cblrtcpy %PS_HOME%\cblbina
```

See Preparing Micro Focus Visual COBOL for a PeopleTools-only Upgrade for the list of files.

Note. If you plan to use *cblmake.bat* to compile a single (or a set) of PeopleSoft PeopleTools or PeopleSoft Application COBOL program at the same time, it would be a good idea to use two different command prompts and two different compile directories—one for PeopleSoft PeopleTools COBOL programs and the other for the PeopleSoft Application COBOL programs. This avoids setting and unsetting the *PS_compile_cust* environment variable.

Task 12A-3-3: Recompiling Visual COBOL on Microsoft Windows

You always need to compile at installation, so you will only need to recompile COBOL in the following situations:

- You are installing PeopleSoft software for the first time.
- The supported COBOL compiler changes.
- You change the version of your RDBMS.
- You change the version of your operating system.
- You apply a PeopleSoft PeopleTools upgrade, patch, or fix.

You can recompile selected COBOL files by using CBLMAKE.BAT, or recompile all your COBOL source files by using CBLBLD.BAT.

Note. If you want to recompile all your COBOL, you can follow the appropriate procedure for compiling COBOL, as described earlier.

See Compiling COBOL on Microsoft Windows with PS_HOME and PS_APP_HOME, or Compiling COBOL on Microsoft Windows with PS_HOME, PS_APP_HOME, and PS_CUST_HOME.

Task 12A-3-4: Setting Up the COBOL Server for Windows Runtime

This section discusses:

- Understanding the COBOL Server for Windows Runtime
- Managing the COBOL Server for Windows Runtime License
- Setting Up the COBOL Server for Windows Runtime

Understanding the COBOL Server for Windows Runtime

For systems that will only run PeopleSoft application COBOL programs, where no compiling is needed, you can install the Visual COBOL runtime program only, COBOL Server for Windows. Typically, PeopleSoft application COBOL programs are run on PeopleSoft Application Server systems and PeopleSoft Process Scheduler systems.

Do not install the runtime program on the same system as the Visual COBOL development and integration program. The Visual COBOL development programs include a runtime program. On systems where you compiled the programs you do not need to install a separate runtime program. Be sure to obtain separate installation files and separate license files for COBOL Server for Windows.

Managing the COBOL Server for Windows Runtime License

The installation for the COBOL Server for Windows runtime software puts the Micro Focus License Administration tool in this location:

C:\Program Files (x86)\Common Files\SafeNet Sentinel\Sentinel RMS License Manager\WinNT\cesadmintool

After obtaining your license file from Oracle, see the Managing Licenses information in the Micro Focus documentation to install it for the COBOL Server for Windows.

Setting Up the COBOL Server for Windows Runtime

To set up the COBOL Server for Windows runtime:

1. Install Visual COBOL Build Tools for Windows, Visual COBOL for Visual Studio 2019, or Visual COBOL for Eclipse for Windows on the development system.
2. On the Visual COBOL development system, compile the PeopleSoft application COBOL files.
When CBLBLD.bat is run as part of the compilation process, it invokes CBLRTCPY.bat to copy the COBOL runtime .dll and .exe files, from the %COBROOT%\bin directory to *PS_HOME\CBLBINX* directory on the development system.

CBLBINX is CBLBINA, or CBLBINU, based on the compilation mode of ASCII or Unicode respectively.

3. On the runtime system, install the runtime program, COBOL Server for Windows.
4. On the runtime system, install the license for COBOL Server for Windows.
5. Copy *PS_HOME\CBLBINX* from the development system to the runtime system.
See Distributing Visual COBOL Binaries.
6. On the runtime system, set the COBROOT environment variable to reference the installation location for COBOL Server for Windows; for example:

```
set COBROOT="C:\Program Files\CobolServer60"
```

7. On the runtime system, run CBLRTCPY.bat to copy the COBOL runtime .dll and .exe files, from the %COBROOT%\bin directory to the CBLBINX directories under *PS_HOME*, *PS_APP_HOME*, and (if necessary) *PS_CUST_HOME* (all locations on the runtime system).

Run the following commands and specify the location of the files that you copied in step 5.

```
PS_HOME\setup\cblrtcpy.bat PS_HOME\CBLBINX
PS_HOME\setup\cblrtcpy.bat PS_APP_HOME\CBLBINX
PS_HOME\setup\cblrtcpy.bat PS_CUST_HOME\CBLBINX
```

8. Start running the COBOL programs.

Task 12A-3-5: Defining the GNT and INT Files

By default, the compile generates a GNT file unless the exception file, CBLINT.XX already exists. CBLINT.XX contains the list of files that need to be compiled to the INT file.

Note. The INT exception file is sometimes needed to overcome Micro Focus execution error with GNT files.

For example, the exception file, CBLINT.PT, where *PT* represents PeopleTools, would contain the following information:

```
Call cblcrint <file name without file extension>
```

or:

```
Call cblcprint PTPDBTST
```

Task 12A-3-6: Distributing Visual COBOL Binaries

After you have compiled your COBOL, you must transfer it to the needed locations. The required action depends upon how you set up *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*.

- Installations with *PS_HOME* and *PS_APP_HOME*

If you do not have a *PS_CUST_HOME* location with customized files:

1. Copy the contents of *<PS_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) directory into *<PS_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) on your batch and application server machines.
2. Copy the contents of *<PS_APP_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) directory into *<PS_APP_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) on your batch and application server machines.

- Installations with *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*

If you have customized files in *PS_CUST_HOME*:

1. Copy the contents of *<PS_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) directory into *<PS_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) on your batch and application server machines.
2. Copy the contents of *<PS_APP_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) directory into *<PS_APP_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) on your batch and application server machines.
3. Copy the contents of *<PS_CUST_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) directory into *<PS_CUST_HOME>\CBLBIN<X>* (CBLBINA or CBLBINU) on your batch and application server machines.

Chapter 12B

Installing and Compiling COBOL on UNIX

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Preparing COBOL for a PeopleTools-only Upgrade
- Installing Micro Focus Visual COBOL on UNIX
- Using Micro Focus Visual COBOL Compiler on UNIX
- Installing IBM COBOL on IBM AIX
- Using the IBM COBOL Compiler on IBM AIX

Understanding COBOL

This chapter describes how to compile and link PeopleSoft COBOL batch programs, if necessary.

COBOL is not needed for PeopleSoft PeopleTools because the Process Scheduler is written in C++. In addition, COBOL is not required for PeopleSoft applications that contain no COBOL programs. See My Oracle Support for the details on whether your application requires COBOL.

The chapter includes instructions for Micro Focus Visual COBOL compiler and the IBM COBOL compiler for IBM AIX, sometimes referred to here as "IBM COBOL".

See Also

"Preparing for Installation," Installing Supporting Applications

Using Visual COBOL with PeopleSoft, My Oracle Support, Doc ID 2523494.1.

PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers, My Oracle Support, Doc ID 747059.1.

PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the IBM COBOL Compiler, My Oracle Support, Doc ID 1211907.1.

PeopleTools Certifications - Suggested Fixes COBOL, My Oracle Support, (search for the article name and select the current release)

PeopleTools: Global Technology, "Understanding COBOL in a Unicode Environment"

Prerequisites

Before you attempt to run COBOL from the command line you should make sure the variable `PS_SERVER_CFG` points to a valid `psprcs.cfg` file.

Task 12B-1: Preparing COBOL for a PeopleTools-only Upgrade

When performing a PeopleTools-only upgrade, if you have COBOL modules, you must recompile all COBOL. For Micro Focus Visual COBOL, recompile and relink all COBOL programs for PeopleSoft PeopleTools and PeopleSoft applications, as described in a later section.

See Using the Micro Focus Visual COBOL Compiler on UNIX.

Task 12B-2: Installing Micro Focus Visual COBOL on UNIX

This section discusses:

- Understanding Micro Focus Visual COBOL for UNIX
- Managing Licenses for Micro Focus Visual COBOL 6.0 on UNIX
- Managing Licenses for Micro Focus Visual COBOL 7.0 on UNIX
- Managing Licenses for Micro Focus Visual COBOL 9.0 on UNIX
- Obtaining Micro Focus Visual COBOL Files from Oracle Software Delivery Cloud
- Installing Micro Focus Visual COBOL 6.0 Development Hub for Linux or UNIX
- Installing Micro Focus Visual COBOL 7.0 Development Hub for Linux or UNIX
- Installing Micro Focus Visual COBOL 9.0 Development Hub for Linux or UNIX
- Installing COBOL Server 6.0 for Linux or UNIX
- Installing COBOL Server 7.0 for Linux or UNIX
- Installing COBOL Server 9.0 for Linux or UNIX

Understanding Micro Focus Visual COBOL for UNIX

Micro Focus Visual COBOL is a suite of products for developing, compiling, and debugging COBOL.

Review the Visual COBOL documentation for an overview of the Micro Focus Visual COBOL products.

See Visual COBOL Brochure, https://www.microfocus.com/media/brochure/visual_cobol_brochure.pdf.

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

The current PeopleSoft PeopleTools release supports Micro Focus Visual COBOL 6.0 Patch Update 2.0, Visual COBOL 7.0 Patch Update 18.0, and Visual COBOL 9.0. The patch updates are full releases for Linux or UNIX.

If you have an existing installation of Micro Focus Visual COBOL 4.0 Patch Update 4.0 on UNIX, you *do not* have to remove it. Visual COBOL 6.0 Patch Update 2.0, Visual COBOL 7.0 Patch Update 18.0, and Visual COBOL 9.0 can coexist with Visual COBOL 4.0 Patch Update 4.0 on UNIX.

Use these guidelines in choosing a Visual COBOL product supported for PeopleSoft installations on Linux or UNIX:

- Visual COBOL Development Hub for Linux or UNIX
 - Compiler and runtime
 - Install on systems to both compile and run COBOL programs.
- COBOL Server for Linux or UNIX
 - Runtime only
 - Install on systems where you want to run compiled COBOL programs.
 - The version of COBOL Server for Linux or UNIX must be the same as or higher than that of the Visual COBOL program that you use to compile.
 - COBOL Server for Linux or UNIX works with programs compiled with Visual COBOL products. You cannot use it as the runtime for programs that were compiled with Micro Focus Server Express.

See Also

Using Micro Focus Visual COBOL with PeopleSoft, My Oracle Support, Doc ID 2523494.1, <https://support.oracle.com/epmos/faces/DocumentDisplay?id=2523494.1>

Micro Focus Visual COBOL, <https://www.microfocus.com/products/visual-cobol/>

Visual COBOL 6.0 and Patch Updates Documentation web site, <https://www.microfocus.com/documentation/visual-cobol/vc60/>

Visual COBOL 7.0 and Patch Updates Documentation web site, <https://www.microfocus.com/documentation/visual-cobol/vc70/>

Visual COBOL 9.0 and Patch Updates Documentation web site, <https://www.microfocus.com/documentation/visual-cobol/vc90/>

Task 12B-2-1: Managing Licenses for Micro Focus Visual COBOL 6.0 on UNIX

Oracle is the exclusive reseller of the Micro Focus Visual COBOL compiler for use with PeopleSoft applications. Install a permanent or trial license.

- Obtain a permanent license from Oracle.

When a Micro Focus compiler is licensed from Oracle, licenses are provided for both the compiler and unlimited run-time.

Request the permanent license files by sending an email to licensecodes_ww@oracle.com. Specify the Micro Focus product that you are licensing, and include your Company Name, Customer ID, and CSI number (if available).

- Obtain a temporary license from Oracle.

You can use a 30-day trial license from Oracle to evaluate the Visual COBOL compiler products, including the embedded runtime functionality. The trial license is active for 30 days from the first use. At the end of the 30-day period, you cannot use the products to compile or run COBOL programs. The trial licenses are available in the same Oracle Software Delivery Cloud download package as the Micro Focus Visual COBOL

software.

Download the trial license file for your Visual COBOL product, as mentioned in the readme.txt included with the trial licenses.

- Install the license.

After you complete the installation of the Visual COBOL product, start the Micro Focus License Administration utility, and install the permanent or trial license. You install the license in the Micro Focus License Administration tool. The Visual COBOL installation for the compiler or runtime software puts the Micro Focus License Administration tool in this location: `/var/microfocuslicensing/bin/cesadmintool.sh`.

See the Managing Licenses information in the Micro Focus documentation for the license installation options.

See Visual COBOL Development Hub 6.0, Managing Licenses,

<https://www.microfocus.com/documentation/visual-cobol/vc60/DevHub/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

Task 12B-2-2: Managing Licenses for Micro Focus Visual COBOL 7.0 on UNIX

Oracle is the exclusive reseller of the Micro Focus Visual COBOL compiler for use with PeopleSoft applications.

- Obtain a permanent license from Oracle.

When a Micro Focus compiler is licensed from Oracle, licenses are provided for both the compiler and unlimited run-time.

Request the permanent license files by sending an email to licensecodes_ww@oracle.com. Specify the Micro Focus product that you are licensing, and include your Company Name, Customer ID, and CSI number (if available).

Note. There are no trial (temporary) licenses available for Visual COBOL 7.0.

- Install the license.

After you complete the installation of the Visual COBOL product, start the Micro Focus License Administration utility, and install the permanent license. Visual COBOL 7.0 uses AutoPass licensing.

You install the license in the Micro Focus License Administration tool. The Visual COBOL installation for the compiler or runtime software puts the Micro Focus License Administration tool in this location: `/var/microfocuslicensing/bin/cesadmintool.sh`.

See the Managing Licenses information in the Micro Focus documentation for the license installation options.

See Visual COBOL Development Hub 7.0, Managing Licenses,

<https://www.microfocus.com/documentation/visual-cobol/vc70/CSUNIX/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

Task 12B-2-3: Managing Licenses for Micro Focus Visual COBOL 9.0 on UNIX

Oracle is the exclusive reseller of the Micro Focus Visual COBOL compiler for use with PeopleSoft applications.

- Obtain a permanent license from Oracle.

When a Micro Focus compiler is licensed from Oracle, licenses are provided for both the compiler and unlimited run-time.

Request the permanent license files by sending an email to licensecodes_ww@oracle.com. Specify the Micro Focus product that you are licensing, and include your Company Name, Customer ID, and CSI number (if

available).

Note. There are no trial (temporary) licenses available for Visual COBOL 9.0.

- Install the license.

After you complete the installation of the Visual COBOL product, start the Micro Focus License Administration utility, and install the permanent license. Visual COBOL 9.0 uses AutoPass licensing.

You install the license in the Micro Focus License Administration tool. The Visual COBOL installation for the compiler or runtime software puts the Micro Focus License Administration tool in this location:
/var/microfocuslicensing/bin/cesadmintool.sh.

See the Managing Licenses information in the Micro Focus documentation for the license installation options.

See Visual COBOL Development Hub 9.0, Managing Licenses,

<https://www.microfocus.com/documentation/visual-cobol/vc90/DevHub/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

Task 12B-2-4: Obtaining Micro Focus Visual COBOL Files from Oracle Software Delivery Cloud

The Micro Focus Visual COBOL installation files are available on Oracle Software Delivery Cloud. At this point you may have already downloaded the necessary files. This section includes additional information on finding and using the files for Micro Focus Visual COBOL if necessary.

1. Log in to Oracle Software Delivery Cloud at <https://edelivery.oracle.com>.
2. Enter Micro Focus in the type-ahead search field, and select the download package for one of the supported versions of Micro Focus Visual COBOL.
3. Select the link Continue.
4. For the products that you want to download, select your operating system from the Platform/Languages drop-down list, and click Continue.
5. Read the license agreement, select the check box to acknowledge that you accept the agreement, and then click Continue.
6. Select the products that you want to download if necessary, and click Continue.
Note that you need both the base version and the patch update.
7. Click one of the filenames to download an individual zip file, or click Download to obtain all of the files listed.

Download the installation files.

The files include software and documentation. Save the zip files to a temporary directory on your local system. The directory where you save the zip files for both versions is referred to in this documentation as *VC_INSTALL*. You must extract (unzip) each file on the platform for which it is intended. For example, if you download the zip file for Linux, you must unzip it on Linux to avoid problems.

Task 12B-2-5: Installing Micro Focus Visual COBOL 6.0 Development Hub for Linux or UNIX

Install Visual COBOL Development Hub on systems to both compile and run COBOL programs. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Visual COBOL Development Hub 6.0 for Linux or UNIX.

See Visual COBOL Development Hub 6.0 for Linux or UNIX documentation, <https://www.microfocus.com/documentation/visual-cobol/vc60/DevHub/GUID-67254EE8-C935-4180-ACB4-8BF9A8D2853A.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc60/DevHub/GUID-9B374744-8D70-48A6-AD4A-F3B6EC0D0B75.html>.

3. Install Visual COBOL 6.0 Update Patch 2 Development Hub for Linux or UNIX.

See Basic Installation, <https://www.microfocus.com/documentation/visual-cobol/vc60/DevHub/GUID-F5EED470-4ED6-4F4C-93CF-56E714802194.html>.

To remove Visual COBOL Development Hub, see the Visual COBOL Development Hub 6.0 for Linux or UNIX documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc60/DevHub/GUID-B5263997-FBC6-4AB0-AB10-68544B88FF31.html>.

Task 12B-2-6: Installing Micro Focus Visual COBOL 7.0 Development Hub for Linux or UNIX

Install Visual COBOL Development Hub on systems to both compile and run COBOL programs. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Visual COBOL Development Hub 7.0 for Linux or UNIX.

See Visual COBOL Development Hub 7.0 documentation, <https://www.microfocus.com/documentation/visual-cobol/vc70/DevHub/GUID-67254EE8-C935-4180-ACB4-8BF9A8D2853A.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc70/DevHub/GUID-9B374744-8D70-48A6-AD4A-F3B6EC0D0B75.html>.

3. Install Visual COBOL 7.0 Update Patch 18 Development Hub for Linux or UNIX.

See Basic Installation, <https://www.microfocus.com/documentation/visual-cobol/vc70/DevHub/GUID-F5EED470-4ED6-4F4C-93CF-56E714802194.html>.

To remove Visual COBOL Development Hub, see the Visual COBOL Development Hub 7.0 documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc70/DevHub/GUID-B5263997-FBC6-4AB0-AB10-68544B88FF31.html>.

Task 12B-2-7: Installing Micro Focus Visual COBOL 9.0 Development Hub for Linux or UNIX

Install Visual COBOL Development Hub on systems to both compile and run COBOL programs. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Visual COBOL Development Hub 9.0 for Linux or UNIX.

See Visual COBOL Development Hub 9.0 documentation, <https://www.microfocus.com/documentation/visual-cobol/vc90/DevHub/GUID-67254EE8-C935-4180-ACB4-8BF9A8D2853A.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc90/DevHub/GUID-9B374744-8D70-48A6-AD4A-F3B6EC0D0B75.html>.

3. Install Visual COBOL 9.0 Development Hub for Linux or UNIX.

See Basic Installation, <https://www.microfocus.com/documentation/visual-cobol/vc90/DevHub/GUID-F5EED470-4ED6-4F4C-93CF-56E714802194.html>.

To remove Visual COBOL Development Hub, see the Visual COBOL Development Hub 9.0 documentation.

See Uninstalling, <https://www.microfocus.com/documentation/visual-cobol/vc90/DevHub/GUID-B5263997-FBC6-4AB0-AB10-68544B88FF31.html>.

Task 12B-2-8: Installing COBOL Server 6.0 for Linux or UNIX

Install COBOL Server on systems where you want to run compiled COBOL programs. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Micro Focus COBOL Server 6.0 for UNIX.

See Micro Focus COBOL Server 6.0 for UNIX, <https://www.microfocus.com/documentation/visual-cobol/vc60/CSUNIX/GUID-F7D8FD6E-BDE0-4169-8D8C-96DDFFF6B495.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc60/CSUNIX/GUID-4462ED73-CFC0-4EDF-9FFA-AB6D4314B36F.html>.

3. Install COBOL Server.

See Installation <https://www.microfocus.com/documentation/visual-cobol/vc60/CSUNIX/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

Task 12B-2-9: Installing COBOL Server 7.0 for Linux or UNIX

Install COBOL Server on systems where you want to run compiled COBOL programs. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Micro Focus COBOL Server 7.0 for UNIX.

See Micro Focus COBOL Server 7.0 for UNIX documentation, <https://www.microfocus.com/documentation/visual-cobol/vc70/CSUNIX/GUID-24E20084-06D2-4505-B10B-5C0877300A27.html>.

2. Review and fulfill the system requirements in the Micro Focus online documentation.

See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc70/CSUNIX/GUID-4462ED73-CFC0-4EDF-9FFA-AB6D4314B36F.html>.

3. Install COBOL Server.

See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc70/CSUNIX/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

Task 12B-2-10: Installing COBOL Server 9.0 for Linux or UNIX

Install COBOL Server on systems where you want to run compiled COBOL programs. After downloading your Visual COBOL files from Oracle Software Delivery Cloud, locate the installation instructions in the Micro Focus documentation. Review the prerequisites, licensing information, and installation instructions.

1. Access the Micro Focus documentation site for Micro Focus COBOL Server 9.0 for UNIX.
See Micro Focus COBOL Server 9.0 for UNIX documentation,
<https://www.microfocus.com/documentation/visual-cobol/vc90/CSUNIX/GUID-F7D8FD6E-BDE0-4169-8D8C-96DDFFF6B495.html>.
2. Review and fulfill the system requirements in the Micro Focus online documentation.
See System Requirements, <https://www.microfocus.com/documentation/visual-cobol/vc90/CSUNIX/GUID-4462ED73-CFC0-4EDF-9FFA-AB6D4314B36F.html>.
3. Install COBOL Server.
See Installation, <https://www.microfocus.com/documentation/visual-cobol/vc90/CSUNIX/GUID-FACEF60F-BAE3-446C-B2B4-4379A5DF6D9F.html>.

Task 12B-3: Using Micro Focus Visual COBOL Compiler on UNIX

This section discusses:

- Understanding Visual COBOL Compilation on UNIX
- Setting Environment Variables for Visual COBOL
- Modifying the Liblist64 File (for IBM AIX)
- Compiling Visual COBOL on UNIX with PS_HOME and PS_APP_HOME
- Compiling Visual COBOL on UNIX with PS_HOME, PS_APP_HOME, and PS_CUST_HOME
- Linking Visual COBOL
- Recompiling Visual COBOL on UNIX
- Setting Up the Visual COBOL Runtime

Understanding Visual COBOL Compilation on UNIX

You always need to compile your COBOL programs at installation time. After you set up your application or batch server, perform the steps discussed in this section.

Note. For situations that require compiling your COBOL programs after installation, see *Recompiling Visual COBOL on UNIX*.

You have two options for compiling:

- You can treat one application or batch server as your compile server, compile all your COBOL programs there, and then distribute cblbin from there to all other relevant servers. In this case, you would copy any patches and customizations to this designated server before carrying out the compile. You would also need to install the Visual COBOL runtime program on the other servers.
- The second option is to compile on all servers. In this situation, all servers would need a COBOL compiler, and you would need to copy any patches and customizations to all of these servers before carrying out the compile. In this case, you would install one of the Visual COBOL development programs, which include runtime capability, on all servers.

Note. You should have read/write access to the directory *PS_HOME/cblbin* to be able to compile the COBOL programs.

Note. To copy a compiled COBOL program from one UNIX server to another, they must be on the same operating system that the compile took place on. For example, if you compile on Linux for the Application Server, and the Process Scheduler is on AIX, you cannot copy the compiled program (you will also need to compile on the AIX machine).

The way that you set up your installation environment determines how you compile COBOL. This section includes different procedures for the different installation environments, as follows:

- Installations with *PS_HOME* and *PS_APP_HOME*

As mentioned, for the current release, the PeopleSoft Application software is installed to a *PS_APP_HOME* location that is different from the *PS_HOME* location for PeopleSoft PeopleTools. For this installation follow the instructions in the section Compiling COBOL on UNIX with *PS_HOME* and *PS_APP_HOME*.

- Installations with *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*.

You have the option to place customized COBOL baseline sources into a location referenced by the environment variable *PS_CUST_HOME*.

The *PS_CUST_HOME* directory structure must replicate that of *PS_HOME* or *PS_APP_HOME*; that is, any COBOL source file that is customized should be placed in the same relative path as was present in the original location. For example, if the original location for the COBOL source files is *PS_APP_HOME/src/cbl*, place the customized files in *PS_CUST_HOME/src/cbl*.

If your environment includes customized files in a *PS_CUST_HOME* directory, follow the instructions in the section Compiling COBOL on UNIX with *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*.

Task 12B-3-1: Setting Environment Variables for Visual COBOL

On your UNIX system, you need to log in and ensure the following environment variables are set appropriately. Alternatively, make sure the following environment variables are set in the *.profile* file in the user's home directory:

- *\$COBDIR* must be set to the correct Micro Focus Visual COBOL installation.

For example, for the Visual COBOL Development Hub for UNIX compiler software:

```
COBDIR=/products/mf/visualcobol_devhub_6.0;export COBDIR
```

For example, for COBOL Server for Linux/UNIX runtime software:

```
COBDIR=/products/mf/cobol_server_6.0;export COBDIR
```

- *\$COBDIR/lib* must be appended to *LD_LIBRARY_PATH*, *LIBPATH*, or *SHLIB_PATH*, whichever is appropriate for your platform.

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$COBDIR/lib; export LD_LIBRARY_PATH
LIBPATH=$LIBPATH:$COBDIR/lib; export LIBPATH
SHLIB_PATH=$SHLIB_PATH:$COBDIR/lib; export SHLIB_PATH
```

- *\$COBDIR/bin* must be appended to the *PATH*; for example:

```
PATH=$PATH:$COBDIR/bin;export PATH
```

- *\$ORACLE_HOME* must point to the correct Oracle installation; for example:

```
ORACLE_HOME=/home/psft/db/oracle-server/19.3.0.0;export ORACLE_HOME
```

- *\$ORACLE_HOME/bin* must be added to *PATH*; for example:

```
PATH=$PATH:$ORACLE_HOME/bin;export PATH
```

- \$ORACLE_HOME/lib must be appended to LD_LIBRARY_PATH, LIBPATH, or SHLIB_PATH, whichever is appropriate for your platform.
- \$ORACLE_SID must be set to the correct Oracle instance; for example:
`ORACLE_SID=hrdmo;export ORACLE_SID`

To set the required PeopleSoft environment variables, source the script psconfig.sh. Enter the following command from the *PS_HOME* directory:

```
. ./psconfig.sh
```

Task 12B-3-2: Modifying the Liblist64 File (for IBM AIX)

If you are compiling Visual COBOL on AIX, modify the liblist64 file as described here. Check My Oracle Support for additional information about modifications that need to be made in the liblist64 file for Visual COBOL.

See My Oracle Support, Certifications.

To modify the liblist64 file for AIX:

1. Change directory to \$COBDIR/lib.
`cd $COBDIR/lib`
2. Add the following line to the liblist file:
`x:*:s!t:-lC`

The following listing shows where to make the changes (in bold font):

```
#      More emulation of cc (MUST be after MF/user libraries):
x:*:st:-L/usr/lib/threads
x:*:st:-lpthreads
x:*:s!t:-lC                <=== Add this line
x:*:s:-lc
```

Task 12B-3-3: Compiling Visual COBOL on UNIX with PS_HOME and PS_APP_HOME

This section assumes that there is no separate *PS_CUST_HOME* directory with customized COBOL source files.

Use the shell script pscbl.mak, found in *PS_HOME/setup*, to do the PeopleSoft COBOL compilation. This table describes the allowed arguments for pscbl.mak:

Command	Description
pscbl.mak	Use this command, with no argument, to compile all the COBOL programs.
pscbl.mak PS_HOME	Use this argument to compile only the PeopleSoft PeopleTools COBOL programs.
pscbl.mak PS_APP_HOME	Use this argument to compile only the PeopleSoft Application COBOL programs.

Command	Description
pscbl.mak <COBOL_PROGRAM>	Enter the name for a valid PeopleSoft PeopleTools or PeopleSoft Application COBOL program to compile a specific program.

If you specify any argument other than the ones mentioned above, you will get the following usage display message:

```
echo Correct usage of the program is:
echo 1. pscbl.mak
echo 2. pscbl.mak PS_HOME
echo 3. pscbl.mak PS_APP_HOME
echo 4. pscbl.mak PTPDBTST (or any tools/apps program, Note Peoplesoft⇒
COBOL programs are 6, 7 or 8 characters long)
```

To compile COBOL programs on UNIX:

1. Set PS_HOME environment variable in the UNIX shell prompt from which you want to run the COBOL compile.

You can run PS_HOME/psconfig.sh with the following command to set the PS_HOME environment variable in the shell.

```
cd <PS_HOME>
. ./psconfig.sh
```

Verify if PS_HOME is set with this command:

```
$ echo $PS_HOME
$ /home/<user>/PTcompile
```

2. Set the PS_APP_HOME environment variable (PS_APP_HOME refers to the location where you have installed the PeopleSoft Application software) with this command:

```
PS_APP_HOME=/home/<user>/HRcompile; export PS_APP_HOME
```

3. Run pscbl.mak, using one of these methods:

- To compile all PeopleSoft COBOL programs, that is, those for PeopleSoft PeopleTools and PeopleSoft Application, run this command:

```
pscbl.mak
```

This will compile the programs that are under PS_HOME/src/cbl and PS_APP_HOME/src/cbl.

- To compile only PeopleSoft PeopleTools COBOL programs, run this command:

```
pscbl.mak PS_HOME
```

- To compile only PeopleSoft Application COBOL programs, run this command:

```
pscbl.mak PS_APP_HOME
```

- To compile a single COBOL program, run the command with the COBOL program name excluding the .cbl extension.

For example, for a PeopleSoft PeopleTools COBOL program PTPDBTST.CBL, or a PeopleSoft Application COBOL program GPPDPRUN.CBL, run:

```
pscbl.mak PTPDBTST
```

```
pscb1.mak GPPDPRUN
```

PeopleSoft PeopleTools compiled COBOL programs will be placed under the *PS_HOME*\cblbin directory.
 PeopleSoft Application compiled COBOL programs will be placed under the *PS_APP_HOME*\cblbin directory.

Task 12B-3-4: Compiling Visual COBOL on UNIX with PS_HOME, PS_APP_HOME, and PS_CUST_HOME

This section assumes that you have set up a *PS_CUST_HOME* environment variable for customized COBOL source files.

To compile COBOL programs on UNIX:

1. Set *PS_HOME* environment variable in the UNIX shell prompt from which you want to run the COBOL compile.

You can run *PS_HOME*/psconfig.sh with the following command to set the *PS_HOME* environment variable in the shell:

```
cd <PS_HOME> . ./psconfig.sh
```

Verify if the *PS_HOME* environment variable is set with this command:

```
$ echo $PS_HOME $ /home/<user>/PTcompile
```

2. Set the *PS_APP_HOME* environment variable with this command:

```
PS_APP_HOME=/home/<user>/HRcompile; export PS_APP_HOME
```

3. Set the *PS_CUST_HOME* environment variable with this command:

```
PS_CUST_HOME=/home/<user>/CUSTcompile; export PS_CUST_HOME
```

4. To compile all the COBOL source under *PS_CUST_HOME* dynamically, issue the command:

```
./pscb1.mak PS_CUST_HOME
```

PeopleSoft PeopleTools compiled COBOL programs and PeopleSoft Application compiled COBOL programs will be placed under the *PS_CUST_HOME*\cblbin directory.

Task 12B-3-5: Linking Visual COBOL

Understanding Visual COBOL Linking

PSRUN is the PeopleSoft procedure that connects the COBOL batch programs with the RDBMS API.

PSRUNRMT is the PeopleSoft procedure that connects the remote COBOL programs with the RDBMS API.

Both PSRUN and PSRUNRMT are compiled uniquely for each platform and consist of modules provided with PeopleSoft software, the RDBMS platform, and the operating system.

You need to create the PSRUN and PSRUNRMT programs in the following situations:

- You are installing PeopleSoft software for the first time.
- Any COBOL programs have changed.
- The version of the RDBMS running the PeopleSoft system has changed.
- The COBOL compiler has changed.
- One of the C programs supplied with the PeopleSoft system has changed.

Note. The PeopleSoft system only supports dynamic linking of COBOL. Static linking is not an option.

Linking Visual COBOL Components on UNIX

To link Visual COBOL components on UNIX:

1. Change to the *PS_HOME/setup* directory:

```
cd $PS_HOME/setup
```

2. For dynamic linking, run:

```
./psrun.mak
```

The PSRUN.MAK script should return the UNIX prompt when done. If the compile completes without errors, the files PSRUN and PSRUNRMT will now exist in the *PS_HOME/bin* directory. If you encounter errors, check *PS_HOME/setup/psrun.err* and *PS_HOME/setup/psrunrmt.err*

Task 12B-3-6: Recompiling Visual COBOL on UNIX

You always need to compile at installation, so you will only need to recompile COBOL in the following situations:

- You are installing PeopleSoft software for the first time.
- The supported COBOL compiler changes.
- You change the version of your RDBMS.
- You change the version of your operating system.
- You apply a PeopleSoft PeopleTools upgrade, patch, or fix.

Note. Remember, you must always use your file server as the source repository for your COBOL. You should download any patches and apply any customizations to the file server, and disseminate them from there.

You can compile a *single* COBOL program dynamically by using this command syntax:

```
./pscbl.mak <PROGRAM NAME WITHOUT ".cbl" EXTENSION>
```

For example, the following command compiles the lone file PTPDBTST.

```
./pscbl.mak PTPDBTST
```

Note. If you want to recompile all your COBOL, you can follow the appropriate procedure as described earlier.

See Compiling COBOL on UNIX with *PS_HOME* and *PS_APP_HOME*, or Compiling COBOL on UNIX with *PS_HOME*, *PS_APP_HOME*, and *PS_CUST_HOME*.

The compile should run without errors until it completes. After the script is complete, check the destination directories for the newly created files. They should have a length greater than zero as well as a current date and time stamp. You can find the files in the following locations:

- For environments with *PS_HOME*: *PS_HOME/src/cbl/int*, *PS_HOME/src/cbl/lst*, and *PS_HOME/cblbin*
For environments with *PS_APP_HOME*: *PS_APP_HOME/src/cbl/int*, *PS_APP_HOME/src/cbl/lst*, and *PS_APP_HOME/cblbin*
- For environments with *PS_CUST_HOME*: *PS_CUST_HOME/src/cbl/int*, *PS_CUST_HOME/src/cbl/lst*, and *PS_CUST_HOME/cblbin*

Note. You can also use `pscb1.mak PTP***` to compile all source files that start with PTP.

Task 12B-3-7: Setting Up the Visual COBOL Runtime

Understanding the Micro Focus Visual COBOL Runtime

For systems that will only run PeopleSoft COBOL programs, where no compiling is needed, you only need to install the Visual COBOL runtime program, COBOL Server for Linux or UNIX. Typically, PeopleSoft COBOL application programs are run on PeopleSoft Application Server systems and PeopleSoft Process Scheduler systems.

Do not install the runtime program on the same system as the Visual COBOL development and integration program, Visual COBOL Development Hub for Linux or UNIX. The Visual COBOL development programs include a runtime program. On systems where you compiled the development programs you do not need to install a separate runtime program.

Setting Up the Micro Focus Visual COBOL Runtime

To set up the Visual COBOL runtime:

1. Install Visual COBOL Development Hub for Linux or UNIX on the development system.
2. Compile the PeopleSoft COBOL application files on the Visual COBOL development system.

When you compile by running `pscb1.mak`, it copies the COBOL runtime files from the `COBDIR/bin` directory to `PS_HOME/cblbin` directory.

3. Install the COBOL Server for Linux or UNIX program on the runtime system.
4. Set the `COBDIR` and other environment variables as previously described on the runtime system.

Be sure to set the correct value for the runtime system. For example, for COBOL Server for Linux or UNIX runtime software:

```
COBDIR=/products/mf/cobol_server_6.0;export COBDIR
```

See Setting Environment Variables for Visual COBOL.

5. Copy `PS_HOME/cblbin` from the development system to the runtime system.
6. Link with `PS_HOME/setup/psrun.mak` and start running the compiled COBOL programs.

Task 12B-4: Installing IBM COBOL on IBM AIX

This section discusses:

- Understanding the IBM COBOL for AIX Installation
- Prerequisites
- Installing IBM COBOL for AIX v5.1.0.0

Understanding the IBM COBOL for AIX Installation

The IBM COBOL for AIX compiler version 5.1.0.0 is supported for the current PeopleSoft PeopleTools release. This section includes the installation of the IBM COBOL Compiler on IBM AIX.

Prerequisites

To install and use IBM COBOL for AIX 5.1.0.0, you must have the following:

- PeopleSoft PeopleTools

We recommend that you take the latest available PeopleSoft PeopleTools patch level. You should install PeopleSoft PeopleTools and your PeopleSoft application software before you compile the IBM COBOL for AIX source files.

- IBM COBOL for AIX version 5.1.0.0.

You must obtain IBM COBOL for AIX compiler from your IBM vendor. Obtain the installation documentation and review the information on system prerequisites and installation methods. The following instructions assume that you have the IBM installation files and installation documentation. Contact your IBM representative to obtain the software.

See IBM COBOL for AIX on the IBM web site, <https://www.ibm.com/us-en/marketplace/cobol-compiler-aix/>.

See IBM Knowledge Center, <https://www.ibm.com/support/knowledgecenter/>.

- The IBM COBOL compiler uses the system temporary space for some steps. Be sure the space is not full before beginning the compilation.

See Using the IBM COBOL Compiler on IBM AIX, Troubleshooting the IBM COBOL Compiler.

Task 12B-4-1: Installing IBM COBOL for AIX v5.1.0.0

This procedure assumes that you have obtained the installation file from IBM and installed the COBOL compiler and COBOL runtime components on your system.

See IBM Knowledge Center, COBOL for AIX, V5.1 Documentation, https://www.ibm.com/support/knowledgecenter/SS6SGM_5.1.0/com.ibm.cobol51.aix.doc/welcome.html.

Task 12B-5: Using the IBM COBOL Compiler on IBM AIX

This section discusses:

- Setting Environment Variables for IBM COBOL
- Compiling COBOL on AIX with a PS_HOME Setup
- Compiling COBOL on AIX with a PS_APP_HOME Setup
- Compiling COBOL on AIX with a PS_CUST_HOME Setup
- Troubleshooting the IBM COBOL Compiler
- Setting Up the IBM COBOL Runtime
- Removing the IBM COBOL Installation

Setting Environment Variables for IBM COBOL

Before compiling the IBM COBOL for AIX, or before installing the files on machines where the COBOL will be run, you must specify environment variables as described in this section. This procedure assumes that the installation directory for PeopleSoft PeopleTools is *PS_HOME*.

To set the environment variables for IBM COBOL for AIX, go to the PeopleSoft PeopleTools installation directory and source the *psconfig.sh* script:

```
cd <PS_HOME>
. ./psconfig.sh
```

This section includes different procedures depending upon how you set up your installation environment.

- *PS_HOME Setup*

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is the same as the *PS_HOME* location where you installed the PeopleSoft PeopleTools software, follow the instructions in the section Compiling COBOL on AIX with a *PS_HOME Setup*.

- *PS_APP_HOME Setup*

If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is different from the *PS_HOME* location where you installed the PeopleSoft PeopleTools software, follow the instructions in the section Compiling COBOL on AIX with a *PS_APP_HOME Setup*.

- *PS_CUST_HOME Setup*

For PeopleSoft PeopleTools 8.53 and later, you have the option to place customized COBOL baseline sources into a location referenced by the environment variable *PS_CUST_HOME*.

The *PS_CUST_HOME* directory structure must replicate that of *PS_HOME* or *PS_APP_HOME*; that is, any COBOL source file that is customized should be placed in the same relative path as was present in the original location. If you set up a *PS_CUST_HOME* directory for your customized COBOL source files, follow the instructions in the section Compiling COBOL on AIX with a *PS_CUST_HOME Setup*.

See Also

"Preparing for Installation," Defining Installation Locations.

Task 12B-5-1: Compiling COBOL on AIX with a PS_HOME Setup

This section assumes that you have installed the PeopleSoft Application software in the same directory (*PS_APP_HOME*) where you installed the PeopleSoft PeopleTools software (*PS_HOME*), and that you do not have customized COBOL source files in a *PS_CUST_HOME* directory. In addition, this procedure assumes that you have set the environment variables as described in the previous section.

This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL.

To compile the COBOL source files:

1. Change the directory to *PS_HOME/setup*; for example:

```
cd $PS_HOME/setup
```

2. Depending on the character encoding type that your installation uses, set the environment variable `PS_ENCODING`, as specified in this table:

Database Encoding	Command
ANSI	<code>export PS_ENCODING=ansi</code>
Unicode	<code>export PS_ENCODING=unicode</code>

Make sure that you are giving the correct value of this environment variable. You will receive errors if the wrong value of this environment variable is specified.

- If your setup includes the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is Unicode, but you set the value of `PS_ENCODING` to `ansi` with the commands above, you will get the following error

```
psclibm.mak : ERROR : <PS_HOME>/unicode.cfg EXISTS, but INCOMPATIBLE⇒
encoding of $PS_ENCODING was specified, EXITING!!!
```

- If your setup does not have the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is non-Unicode, but you set the value of `PS_ENCODING` to `unicode`, you will get the following error

```
psclibm.mak : ERROR : <PS_HOME>/setup/unicode.cfg does not EXIST,⇒
but INCOMPATIBLE encoding of $PS_ENCODING was specified, EXITING!!!
```

3. Use this command to compile:

```
./psclibm.mak apps
```

The optional parameter *apps* determines the location of the work area where the compilation takes place. The allowed values and compilation location for PeopleSoft product lines are listed in this table:

Product Line	Apps Parameter	Location
PeopleSoft PeopleTools	pt (default)	<code>PS_HOME/sdk/cobol/psclpt/src</code>
Human Capital Management	hcm	<code>PS_HOME/sdk/cobol/psclhrms/src</code>
Financials/Supply Chain Management	fscm	<code>PS_HOME/sdk/cobol/psclfscm/src</code>

The compiled COBOL programs will be placed under `<PS_HOME>/CBLBIN_IBM<X>`.

`<X>` is A for ANSI or U for Unicode.

Note. If you see the following output during the compilation, you can ignore it:

```
Preprocessing COBOL files ls: 0653-341 The file *.cfg does not exist.
Preprocessing the file PSPBASCH.cbl Can't open input file
```

Task 12B-5-2: Compiling COBOL on AIX with a PS_APP_HOME Setup

This section assumes that you have installed the PeopleSoft Application software in a directory (*PS_APP_HOME*) which is different than the PeopleSoft PeopleTools software installation directory (*PS_HOME*) and that you do not have customized COBOL source files in a *PS_CUST_HOME* directory. In addition, this procedure assumes that you have set the environment variables as described earlier.

This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL.

To compile the COBOL source files:

1. Ensure that the directory `sdk/cobol/psclapps` is present under *PS_APP_HOME* directory for the application you are trying to compile.

For example if the installed PeopleSoft Application is Human Capital Management (*apps* = *hcm*), then the following directory structure should be present and the user must have write access to it:

```
sdk/cobol/psclhcm
```

2. Set the environment variable for *PS_HOME*, the directory where you installed the PeopleSoft software; for example:

```
PS_HOME = ~/PTcompile; export PS_HOME
```

3. Set the environment variable for *PS_APP_HOME*, the directory where you installed the PeopleSoft Application software; for example:

```
PS_APP_HOME = ~/HRcompile; export PS_APP_HOME
```

4. Change the directory to *PS_HOME/setup*; for example:

```
cd $PS_HOME/setup
```

5. Depending on the character encoding type that your installation uses, set the environment variable *PS_ENCODING*, as specified in this table:

Database Encoding	Command
ANSI	<code>export PS_ENCODING=ansi</code>
Unicode	<code>export PS_ENCODING=unicode</code>

Make sure that you are giving the correct value of this environment variable. You will receive errors if the wrong value of this environment variable is specified, as follows:

- If your setup includes the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is Unicode, but you set the value of *PS_ENCODING* to `ansi` with the commands above, you will get the following error:

```
psclibm.mak : ERROR : <PS_HOME>/unicode.cfg EXISTS, but INCOMPATIBLE⇒
encoding of $PS_ENCODING was specified, EXITING!!!
```

- If your setup does not have the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is non-Unicode, but you set the value of *PS_ENCODING* to `unicode`, you will get the following error:

```
psclibm.mak : ERROR : <PS_HOME>/setup/unicode.cfg does not EXIST,⇒
but INCOMPATIBLE encoding of $PS_ENCODING was specified, EXITING!!!
```


6. Use this command to compile:

```
./pscbllibm.mak apps
```

The optional parameter *apps* determines the location of the work area where the compilation takes place. The allowed values and compilation locations are listed in this table:

Product Line	Apps Parameter	Location
PeopleSoft PeopleTools	pt (default)	<i>PS_HOME</i> /sdk/cobol/pscbllpt/src
Human Capital Management	hcm	<i>PS_APP_HOME</i> /sdk/cobol/pscbllhcms/src
Financials/Supply Chain Management	fscm	<i>PS_APP_HOME</i> /sdk/cobol/pscbllfscm/src

The PeopleSoft PeopleTools compiled COBOL programs will be placed under *<PS_HOME>/CBLBIN_IBM<X>* and the PeopleSoft Application compiled COBOL programs will be placed under *<PS_APP_HOME>/CBLBIN_IBM<X>*.

<X> is A for ANSI or U for Unicode.

Task 12B-5-3: Compiling COBOL on AIX with a PS_CUST_HOME Setup

This section assumes that you have set up a *PS_CUST_HOME* environment variable for customized COBOL source files. Furthermore, it assumes that you have set the environment variables as described earlier.

This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL.

1. Ensure that the directory *sdk/cobol/pscbllapps* is present under the *PS_APP_HOME* directory for the application you are trying to compile.

For example if the installed PeopleSoft Application is Human Capital Management (*apps* = *hcm*), then the following directory structure should be present and the user must have write access to it:

```
sdk/cobol/pscbllhcm
```

2. Set the environment variable for *PS_HOME*, the directory where you installed the PeopleSoft PeopleTools software; for example:

```
PS_HOME = ~/PTcompile; export PS_HOME
```

3. If *PS_APP_HOME* is different from *PS_HOME*, set the environment variable for *PS_APP_HOME*, the directory where you installed the PeopleSoft Application software; for example:

```
PS_APP_HOME = ~/HRcompile; export PS_APP_HOME
```

4. Set the environment variable for *PS_CUST_HOME*, the directory where you installed the PeopleSoft Application software; for example:

```
PS_CUST_HOME = ~/CUSTcompile; export PS_CUST_HOME
```

5. Change the directory to *PS_HOME/setup*; for example:

```
cd $PS_HOME/setup
```

6. Depending on the character encoding type that your installation uses, set the environment variable `PS_ENCODING`, as specified in this table:

Database Encoding	Command
ANSI	<code>export PS_ENCODING=ansi</code>
Unicode	<code>export PS_ENCODING=unicode</code>

Make sure that you are giving the correct value of this environment variable. You will receive errors if the wrong value of this environment variable is specified, as follows:

- If your setup includes the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is Unicode, but you set the value of `PS_ENCODING` to `ansi` with the commands above, you will get the following error:

```
psclibm.mak : ERROR : <PS_HOME>/unicode.cfg EXISTS, but INCOMPATIBLE⇒
encoding of $PS_ENCODING was specified, EXITING!!!
```
- If your setup does not have the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is non-Unicode, but you set the value of `PS_ENCODING` to `unicode`, you will get the following error:

```
psclibm.mak : ERROR : <PS_HOME>/setup/unicode.cfg does not EXIST,⇒
but INCOMPATIBLE encoding of $PS_ENCODING was specified, EXITING!!!
```
- Use this command to compile:

```
./psclibm.mak cust
```

The customized PeopleSoft PeopleTools and PeopleSoft Application COBOL programs will be placed under `<PS_CUST_HOME>/CBLBIN_IBM<X>`.

`<X>` is A for ANSI or U for Unicode.

Task 12B-5-4: Troubleshooting the IBM COBOL Compiler

This section discusses:

- Understanding Troubleshooting for the IBM COBOL Compiler
- Reviewing Screen Output from `psclibm.mak`
- Reviewing `erroribm.lst`
- Reviewing the `LISTOUT.LST` file
- Reviewing `COBOL_PROGRAM.LST` files
- Reviewing temporary space errors

Understanding Troubleshooting for the IBM COBOL Compiler

You can find the error and list files discussed in this section in the following locations, depending upon your installation setup:

- If `PS_APP_HOME` and `PS_CUST_HOME` are the same as `PS_HOME` or both `PS_APP_HOME` and `PS_CUST_HOME` are undefined, all error and list files mentioned here are placed in directories under `PS_HOME`.

- If *PS_APP_HOME* is different from *PS_HOME*, and you compile PeopleSoft PeopleTools COBOL source files, the error and list files mentioned here are placed in directories under *PS_HOME*.
- If *PS_APP_HOME* is different from *PS_HOME*, and you compile PeopleSoft Application COBOL source files, the error and list files mentioned here are placed in directories under *PS_APP_HOME*.
- If *PS_CUST_HOME* is different from *PS_HOME*, and you compile PeopleSoft Application COBOL source files, the error and list files mentioned here are placed in directories under *PS_CUST_HOME*.

When compiling COBOL programs on AIX using the IBM COBOL compiler, compiler and linker informational messages are reported in the following locations:

- screen output from *psclibm.mak*
- *erroribm.lst*
PS_HOME/setup/erroribm.lst
- *LISTOUT.lst* file
<PS_HOME>/sdk/cobol/pscl<APPS>/src/LISTOUT.lst
<APPS> is the PeopleSoft product family, such as *hcm*.
See Compiling COBOL on AIX with a *PS_HOME* Setup
- *COBOL_PROGRAM.lst*
<PS_HOME>/sdk/cobol/pscl<APPS>/lst/<COBOL_PROGRAM>.lst

Initially, either review the screen output or the *erroribm.lst* file in *PS_HOME/setup*. The *erroribm.lst* file will contain the names of the programs that failed to compile. You can examine the file *LISTOUT.lst* to find the COBOL program names listed in *erroribm.lst* to review the cause of the failures. Then review the *COBOL_PROGRAM.lst* file to analyze the COBOL error in context of the COBOL source code. After you have corrected the compile or linker errors, you can simply start a complete re-compile.

Depending on the relevancy of the failing compiled modules to your project mission, you can decide to resolve all compile and linker errors or continue without the failed modules.

The programs *PTPPSRUN* and *PTPPSRMT* must be compiled correctly. If these programs do not compile correctly, none of the COBOL programs will run. These programs are located at *PS_HOME/src/cbl/ibm/unix*.

If these programs fail to compile, you will get the following errors:

```
./psclibm.mak : Error : Critical program PTPPSRUN did not compile
./psclibm.mak : Error : This error must be fixed prior to running any⇒
cobol programs...

./psclibm.mak : Error : Critical program PTPPSRMT did not compile
./psclibm.mak : Error : This error must be fixed prior to running any⇒
cobol programs via RemoteCall
```

Be sure to resolve the errors for these programs before proceeding.

Reviewing Screen Output from *psclibm.mak*

The screen output is the first place you should look to determine if there is a compilation or linking error. Errors including the phrase "fail to compile/link" will be displayed at the end of the screen output. For example:

```
./psclibm.mak: Error : The list of file(s) failed to compile/link.
CEPCROLL fail to compile/link
ENPBTRNS fail to compile/link
ENPMMAIN fail to compile/link
```

```

GLPJEDT2 fail to compile/link
SFPCRELS fail to compile/link
SFPREVAL fail to compile/link
./psclibm.mak : The list of file(s) that failed to compile/link can be⇒
  found at /data1/home/easa/pt854/setup/erroribm.lst
./psclibm.mak : The compilation log is generated at /data1/home/easa⇒
  /pt854/sdk/cobol/psclpt/src/LISTOUT.lst
./psclibm.mak : The compile listing of the COBOL programs can be seen at ⇒
  /data1/home/easa/pt854/sdk/cobol/psclpt/lst

```

Reviewing erroribm.lst

The erroribm.lst file is located in the *PS_HOME*/setup directory, and contains a list of the programs that failed to compile. For example:

```

CEPCROLL fail to compile/link
ENPBTRNS fail to compile/link
ENPMAIN fail to compile/link
GLPJEDT2 fail to compile/link
SFPCRELS fail to compile/link
SFPREVAL fail to compile/link

```

Reviewing the LISTOUT.LST file

The LISTOUT.lst file is located in the *<PS_HOME>/sdk/cobol/pscl<APPS>/src* directory and contains compiler and linker informational, warning and error messages.

For example, the following error is related to program PTPDBTST:

```

exec: /usr/bin/ld -b64 -bpT:0x100000000 -bpD:0x110000000 -bhalt:5 /lib⇒
  /crt0_64.o -lg -bexport:/usr/lib/libg.exp -o PTPCURND PTPCURND.o -brtl -bE⇒
  symlist.
exp -lpthreads -ldl -lnsl -L/home/sphilli2/852-803-I1-AIX-ORAU-DEBUG/bin -⇒
  lpscompat_ansi -lpssqlapi_ansi -lpsuser_ansi -lpspetssl -lpsora_ansi -⇒
  lpscobnet_ansi -L/usr/lpp/cobol/lib -L/usr/lpp/SdU/vsam/lib -L/usr/lpp/Sd⇒
  U/sfs/lib -lcob2s -lsmrtlite -lC128 -lc -lc
unlink: PTPCURND.o
exec: /usr/lpp/cobol/bin/IGYCCOB2 -qtest -qdynamic -qaddr(64),flag(w),trunc⇒
  (bin),arith(extend) -qADDR(64) PTPDBTST.cbl
PP 5724-V62 IBM COBOL for AIX 3.1.0 in progress ...
LineID  Message code  Library phase message text
          IGYLI0090-W    4 sequence errors were found in this program.
Messages      Total      Informational      Warning      Error      Severe      ⇒
Terminating
Printed:          1                          1
LineID  Message code  Message text
          IGYSC0205-W    Warning message(s) were issued during library phase⇒
  processing. Refer to the beginning of the listing.
  588  IGYPA3007-S      "ZZ000-SQL-ERROR-ROUTINE" was not defined as a
                                procedure-name. The statement was discarded.

```

```

Messages      Total      Informational      Warning      Error      Severe      =>
Terminating
Printed:        2                      1                      1
Suppressed:     6                      6
End of compilation 1,  program PTPDBTST,  highest severity: Severe.
Return code 12
PTPDBTST fail to compile/link

```

Reviewing COBOL_PROGRAM.LST files

The COBOL_PROGRAM.lst files are located in `<PS_HOME>/sdk/cobol/pscbi<APPS>/lst` directory and contain the compiler output for a specific program.

For example, a portion of the PTPDBTST.lst file contains this compilation error found for program PTPDBTST, where the ZZ000-SQL-ERROR-ROUTINE was not defined:

```

588  IGYPA3007-S  "ZZ000-SQL-ERROR-ROUTINE" was not defined as a
procedure-name.  The statement was discarded.
-
Messages      Total      Informational      Warning      Error      Severe      =>
Terminating
0Printed:        2                      1                      1
0Suppressed:     6                      6
-* Statistics for COBOL program PTPDBTST:
*   Source records = 805
*   Data Division statements = 213
*   Procedure Division statements = 52

```

Reviewing temporary space errors

IBM COBOL compiler uses the system temporary space to do some steps of the compilation. Like other UNIX processes, the compiler may give errors when the system temporary space is full.

To avoid or correct this problem, clean up the system temporary space on your machine.

Here is a sample of errors seen during compilation, when the system temporary space (/tmp) was full in a development AIX machine:

```

pscbibm.mak : Compiling EGPPRCTL.cbl ...
IGYDS5247-U  An error occurred while attempting to write a compiler work=>
file, "SYSUT7".
Compiler aborted with code 1247
IGYSI5258-U  Error removing WCode file.: A file or directory in the path=>
name does not exist.
IGYSI5258-U  Error removing WCode file.: A file or directory in the path=>
name does not exist.
IGYSI5259-U  Error closing WCode file.: A file descriptor does not refer=>
to an open file.
IGYSI5258-U  Error removing WCode file.: A file or directory in the path=>
name does not exist.
IGYSI5259-U  Error closing WCode file.: A file descriptor does not refer=>
to an open file.
IGYSI5258-U  Error removing WCode file.: A file or directory in the path=>

```

```
name does not exist.
IGYSI5259-U   Error closing WCode file.: A file descriptor does not refer⇒
to an open file.
IGYSI5258-U   Error removing WCode file.: A file or directory in the path⇒
name does not exist.
IGYSI5259-U   Error closing WCode file.: A file descriptor does not refer⇒
to an open file.
```

Task 12B-5-5: Setting Up the IBM COBOL Runtime

This section discusses:

- Installing the IBM COBOL for AIX Runtime Files
- Setting Environment Variables for a PS_APP_HOME or PS_CUST_HOME Setup
- Configuring the Application Server Domain
- Configuring the Process Scheduler Domain

Installing the IBM COBOL for AIX Runtime Files

For those machines that only need to run the compiled COBOL files, you must have obtained the installation file from IBM and installed the cobol runtime components on your system. You do not need to install the compiler. You must also configure the PeopleSoft Application Server and Process Scheduler domains.

See Installing IBM COBOL on IBM AIX.

Setting Environment Variables for a PS_APP_HOME or PS_CUST_HOME Setup

This section applies to those installations in which:

- You have several Application Server or Process Scheduler domains.
- Each of those domains is going to be associated with a particular *PS_APP_HOME* or *PS_CUST_HOME* directory.

In this case it is a good idea to define *PS_APP_HOME* or *PS_CUST_HOME* in *PS_HOME/psconfig.sh*. For example, edit *psconfig.sh* to add one of these lines:

```
PS_APP_HOME="/home/psft/HRcompile"; export PS_APP_HOME
PS_CUST_HOME="/home/psft/CUSTcompile"; export PS_CUST_HOME
```

After making this change, you must source the *PS_HOME/psconfig.sh* file again.

This way you would not need to add the *PS_APP_HOME* or *PS_CUST_HOME* environment variable through the "Edit environment variable" Application Server and Process Scheduler administration menus in PSADMIN each time you create a new domain.

Configuring the Application Server Domain

This section assumes that you have created an Application Server domain, as described in the chapter "Configuring the Application Server on UNIX." The configuration and log files for application server domains reside in a directory referred to as *PS_CFG_HOME*.

See the information on working with *PS_CFG_HOME* in the *PeopleTools: System and Server Administration* product documentation.

Note. You must create a new domain to configure the environment for running IBM COBOLs. You will not be able to reuse an existing domain for the same.

To create and configure the Application Server domain:

1. Go to the *PS_HOME/appserv* directory and run `psadmin`.
2. When the menu appears, specify *1* for Application Server and press ENTER.
3. Enter *2* for Create a Domain, and press ENTER.
4. Specify the domain name. For example:

```
Please enter name of domain to create : HCM92
```

Note. If you have already set the environment variables *PS_APP_HOME* and/or *PS_CUST_HOME*, as explained in the section Setting Environment Variables for a *PS_APP_HOME* or *PS_CUST_HOME* Setup, you can skip the steps 5 through 10.

5. On the Quick-configure menu, select *16*, Edit environment settings.
6. If *PS_APP_HOME* is different from *PS_HOME*, carry out steps a and b below.

Note. If *PS_APP_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 7.

- a. On the PeopleSoft Domain Environment Settings, select *2* to add environment variable.
- b. Enter *PS_APP_HOME* as the name of the environment variable, and installation directory where you installed your PeopleSoft Application software as the value of the environment variable. For example:

```
Enter name of environment variable: PS_APP_HOME
Enter value: /home/psft/HRcompile
```

You will see an asterisk (*) in front of the modified environment variables, because these variables have not been saved.

7. If your *PS_CUST_HOME* is defined and is different from *PS_HOME*, carry out the following two steps:

Note. If *PS_CUST_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 8.

- a. On the PeopleSoft Domain Environment Settings, select *2* to add environment variable.
- b. Enter *PS_CUST_HOME* as the name of the environment variable, and the installation directory where you installed the customized COBOL files as the value of the environment variable.

For example:

```
Enter name of environment variable: PS_CUST_HOME
Enter value: /home/psft/CUSTcompile
```

You will see an asterisk in front of the *PS_APP_HOME* and *PS_CUST_HOME* environment variables, indicating that these variables have not been saved.

8. Specify *6* to save the environment variables.
9. Press ENTER to continue at the following message:

```
Your changes have been saved.
```

```
Please be aware these changes will not take effect until you complete⇒
```

```
the domain configuration process.
Press Enter to continue...
```

10. Enter *q* for return to the previous menu.
11. On the Quick-configure menu, enter *15*, for Custom configuration.
12. Answer *n* (no) when asked if you want to change the values, until you see the section Remote Call.

```
Values for config section - RemoteCall
COBOL Platform=
RCCBL Redirect=0
RCCBL PRDBIN=%PS_HOME%\cblbin%PS_COBOLTYPE%
Do you want to change any values (y/n/q)? [n]: y
```

Enter *y* (yes) to make a change, as shown in this example.

13. Enter *IBM* as the COBOL platform and ignore the remaining options.

```
COBOL Platform [] : IBM
```

14. Answer *n* (no) when asked if you want to change any of the remaining sections.
15. Enter *1* to boot the domain.
16. Enter *1* for Boot (Serial Boot), or *2* for Parallel Boot.

Configuring the Process Scheduler Domain

To create and configure the Process Scheduler domain:

Note. You must create a new domain to configure the environment for running IBM COBOLs. You will not be able to reuse an existing domain for the same.

1. Go to the *PS_HOME/appserv* directory and run *psadmin*.
2. When the menu appears, specify *2* for Process Scheduler and press ENTER.
3. Enter *2* for Create a Domain.
4. Specify the domain name. For example:

```
Please enter name of domain to create : HCM92
```

Note. Domain names are case-sensitive and must be eight characters or less.

Note. If you have already set the environment variables *PS_APP_HOME* and/or *PS_CUST_HOME*, as explained in the section Setting Environment Variables for a *PS_APP_HOME* or *PS_CUST_HOME* Setup, you can skip the steps 5 through 10.

5. On the Quick-configure menu, select *7*, Edit environment settings.
6. If *PS_APP_HOME* is different from *PS_HOME*, carry out steps a and b below.

Note. If *PS_APP_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 7.

- a. On the PeopleSoft Domain Environment Settings, select *2* to add environment variable.
- b. Enter *PS_APP_HOME* as the name of the environment variable, and the installation directory where you installed your PeopleSoft Application software as the value of the environment variable.

For example:

Enter name of environment variable: PS_APP_HOME

Enter value: /home/psft/HRcompile

7. If your *PS_CUST_HOME* is different from *PS_HOME*, carry out the following two steps.

Note. If *PS_CUST_HOME* is the same as *PS_HOME*, skip these two steps and continue with step 8.

- a. On the PeopleSoft Domain Environment Settings, select 2 to add an environment variable.
- b. Enter PS_CUST_HOME as the name of the environment variable, and the installation directory where you installed your PeopleSoft Application software as the value of the environment variable.

For example:

Enter name of environment variable: PS_CUST_HOME

Enter value: /home/psft/CUSTcompile

8. Enter 6 to save the environment variables.

9. Press ENTER to continue at the following message:

Your changes have been saved.

Please be aware these changes will not take effect until you complete⇒
the domain configuration process.

Press Enter to continue...

10. Enter *q* to return to the previous menu.

11. On the Quick-configure menu, enter 6, for Custom configuration.

12. Answer *n* (no) when asked if you want to change the values, until you see the section Remote Call.

Values for config section - RemoteCall

COBOL Platform=

RCCBL Redirect=0

RCCBL PRDBIN=%PS_HOME%\cblbin%PS_COBOLTYPE%

Do you want to change any values (y/n/q)? [n]: **y**

Enter *y* (yes) to make a change, as shown in this example.

13. Enter *IBM* as the COBOL Platform and ignore the remaining options.

COBOL Platform [] : **IBM**

14. Answer *n* (no) when asked if you want to change any of the remaining sections.

15. Enter *1* to boot the domain.

Task 12B-5-6: Removing the IBM COBOL Installation

Before you remove the IBM COBOL compiler on IBM AIX, review the requirements in the IBM documentation. Follow the uninstalling instructions in the IBM COBOL for AIX installation guide.

See IBM Knowledge Center, COBOL for AIX v5.1 Documentation,

https://www.ibm.com/support/knowledgecenter/SS6SGM_5.1.0/com.ibm.cobol51.aix.doc/welcome.html.

Chapter 13

Installing Oracle Tuxedo

This chapter discusses:

- Preparing to Install Oracle Tuxedo
- Obtaining Oracle Tuxedo
- Installing Oracle Tuxedo on Microsoft Windows
- Installing Oracle Tuxedo on UNIX
- Ensuring that Oracle Tuxedo Coexists with Earlier Versions

Preparing to Install Oracle Tuxedo

This section discusses:

- Understanding Oracle Tuxedo
- Prerequisites
- Reviewing Oracle Tuxedo Installation Errors

Understanding Oracle Tuxedo

This section describes a traditional installation of Oracle Tuxedo. When you use the PeopleSoft DPKs for either a full-tier installation using the PeopleSoft Application Images or for a mid-tier installation using the PeopleTools DPKs, Oracle Tuxedo is installed as part of the installation, and you do not need to carry out the separate installation in this section. If you choose to install Oracle Tuxedo independently of the DPK installation, you can obtain installation files for Oracle Tuxedo on the Oracle Software Delivery Cloud portal and use the steps in this section. The current PeopleSoft PeopleTools release supports Oracle Tuxedo 22c Release 1 (64-bit).

Note that to use a separate Oracle Tuxedo installation with a DPK deployment, you must use customizations to specify the Oracle Tuxedo installation location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for Component Software Locations.

The PeopleSoft application server uses the Oracle® Fusion Middleware product, Oracle Tuxedo, to perform transaction management, messaging, and administration. This task guides you through the installation of Oracle Tuxedo on your server. It is essential that you install Oracle Tuxedo 64-bit, version 22c Release 1 (22.1.0.0.0), which is available on Oracle Software Delivery Cloud. You need to install Oracle Tuxedo before you set up your application server and your PeopleSoft Pure Internet Architecture. After you perform the installation described here, you will configure the application server environment to incorporate Oracle Tuxedo with the PeopleSoft components.

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

You can locate the minimum patch level certified for running Oracle Tuxedo 22c Release 1 in My Oracle Support, Certifications. The certification notes for Oracle Tuxedo include the patch levels for the supported operating systems.

1. Go to My Oracle Support, Certifications.
2. Search for PeopleSoft PeopleTools 8.61.
See PeopleSoft PeopleTools 8.61 certifications,
https://support.oracle.com/epmos/faces/CertifyHome?_adf.ctrl-state=ubz5osn41_4&_afLoop=133087821078981.
3. Select Oracle Tuxedo from the Middleware category.
4. Select your operating system and look in the Notes section for the minimum Oracle Tuxedo patch level.

These installation instructions include the installation of the base Oracle Tuxedo 22c Release 1, followed by the patch installation.

Note. For the sake of brevity and convenience, this documentation shortens "Oracle Tuxedo 22c Release 1 (64-bit)" to "Oracle Tuxedo 22cR1."

If you have a previous version of Oracle Tuxedo installed, you need to install the new version of Oracle Tuxedo, and re-create your application server domains. (You must create your domains using PSADMIN; you cannot migrate existing domains.) You can also use the PSADMIN domain import utility.

You can install Oracle Tuxedo once for each release on a machine, regardless of the number of PeopleSoft applications or databases the server supports. For example, if you installed Oracle Tuxedo 10gR3 for an earlier release of your PeopleSoft application, you may install Oracle Tuxedo 22cR1 on the same machine in a separate directory. For example:

On Microsoft Windows, you may install into C:\oracle\tuxedo10gR3_VS2008 and C:\oracle\tuxedo22.1.0.0.0.

On UNIX, you may install into /home/oracle/tuxedo10gR3 and /home/oracle/tuxedo22cR1.

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

See Also

Oracle Tuxedo on Oracle Technology Network,
<http://www.oracle.com/technetwork/middleware/tuxedo/documentation/index.html>

Oracle Tuxedo Release 22c Documentation, <https://docs.oracle.com/en/database/oracle/tuxedo/22/index.html>

PeopleTools: Portal Technology

PeopleTools: System and Server Administration

Clustering and High Availability for PeopleTools, My Oracle Support, Doc ID 747378.1

Prerequisites

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

- Before beginning the Oracle Tuxedo installation you must install a supported 64-bit Java JDK.
The specific JDK required depends upon the operating system and vendor. Follow the instructions in the Oracle WebLogic section to install the appropriate Java JDK for your operating system.
See "Installing Web Server Products," Installing JDK for Oracle WebLogic.
- TCP/IP connectivity (required for PeopleSoft PeopleTools 8.50 or higher) between the client machine and the application server
- For UNIX, you must have root access.
- Enough free disk space on the application server to install the product.
The disk space requirements vary by operating system. For free disk space requirements, see the Oracle Tuxedo documentation.

Reviewing Oracle Tuxedo Installation Errors

Here are a few tips to help with installation errors.

- Change the debug level.
If the Oracle Tuxedo installation fails with no error message, open a command prompt and enter the following command:

```
set LAX_DEBUG=1
```


After entering this command, start the installer again. If you are using GUI mode on Microsoft Windows, you must start the installer using the same command prompt.
- Change the default temporary space.
The Oracle Tuxedo installer uses the default system temporary space. If there is not enough space for installation, it will stop with an error. To specify a different temporary directory on Microsoft Windows, use the following command before starting the installer:

```
set IATEMPDIR=Complete_Path_Temp_Dir
```


Replace *Complete_Path_Temp_Dir* with the full path to the temporary directory that you want to use for the installation.
- Change the BLOCKSIZE on Linux
If you are sure you have enough space, but the installer still gives an error about low disk space (this usually happens on Linux), run the following command before starting the installer:

```
unset BLOCKSIZE
```
- Install Microsoft Windows files.
If you see a message saying certain DLL files can not be found, install vc_redist.x64.exe from %PS_HOME%\setup\psvcrt.

Task 13-1: Obtaining Oracle Tuxedo

This section discusses:

- Obtaining the Oracle Tuxedo Installation Files from Oracle Software Delivery
- Obtaining the Oracle Tuxedo Patches from My Oracle Support

Task 13-1-1: Obtaining the Oracle Tuxedo Installation Files from Oracle Software Delivery

You can obtain the files needed to install Oracle Tuxedo 22cR1 from the Oracle Software Delivery Cloud portal. At this point you should have already downloaded the necessary files. If you have not yet downloaded the files, this section includes additional information on finding and using the files for Oracle Tuxedo if necessary.

See "Preparing for Installation," Using Oracle Software Delivery Cloud to Obtain Installation Files.

See Oracle Software Delivery Cloud, <https://edelivery.oracle.com>.

1. After logging in to Oracle Software Delivery Cloud, read the export restrictions, and then click Accept.
2. Enter Oracle Tuxedo in the search field, and select Oracle Tuxedo 22.1.0.0.0 to add it to the download queue.
3. Click Continue at the top of the page.
4. From the Platforms/Languages drop-down list, select the operating system you are running on, and then click Continue.
5. Read the license agreement and select the check box to acknowledge that you accept the agreement.
6. Click Continue.
7. Click the filenames to download.

Save the zip file to a temporary directory on your local system, referred to in this documentation as *TUX_INSTALL*.

8. After you download the installation files from Oracle Software Delivery Cloud, if it is necessary, transfer the files to a UNIX computer using FTP. Unzip the file and change the permissions of the unzipped file to make it an executable, for example using the `chmod +x` command.
9. Extract the files into *TUX_INSTALL*.

After you extract, you see a Disk1 folder with two subfolders, install and stage.

Note. If you are installing Oracle Tuxedo for the PeopleTools Client, install Oracle Tuxedo 22cR1 for Microsoft Windows (64-bit) to run with PeopleSoft PeopleTools.

Task 13-1-2: Obtaining the Oracle Tuxedo Patches from My Oracle Support

You can download the latest patch for Oracle Tuxedo 22cR1 from My Oracle Support.

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

To obtain the latest Oracle Tuxedo patch:

1. Sign in to My Oracle Support with your account name and password:
<https://support.oracle.com>

2. Select the Patches & Updates tab.
3. Under Patch Search, select Product or Family (Advanced Search).
4. Select *Oracle Tuxedo* from the product drop-down list.
5. Select *Oracle Tuxedo 22.1.0.0.0* from the release drop-down list.
6. Select your platform.

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

7. Click Search.

Download the necessary files from the list of results.

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

8. Download the patch file for your operating system platform to a convenient directory, referred to here as *TUX_INSTALL*.
9. After you install a patch, use these steps to verify the installation:
 - a. In a command prompt, change directory to *TUXDIR\bin* (where *TUXDIR* is the Oracle Tuxedo installation location).
 - b. Execute the following command:

```
tmadmin -v
```

The command displays the patch level. For example:

```
INFO: Oracle Tuxedo, Version 22.1.0.0.0, 64-bit, Patch Level 004
```

Task 13-2: Installing Oracle Tuxedo on Microsoft Windows

This section discusses:

- Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional)
- Designating the Application Server Administrator on Microsoft Windows
- Installing Oracle Tuxedo on Microsoft Windows in GUI Mode
- Installing Oracle Tuxedo on Microsoft Windows in Silent Mode
- Installing Oracle Tuxedo Patch on Microsoft Windows
- Uninstalling the Oracle Tuxedo Patch on Microsoft Windows
- Uninstalling Oracle Tuxedo in GUI Mode
- Checking the Windows Service Account
- Restricting Domain Process Privileges
- Setting Up the Windows Services for Oracle Tuxedo
- Verifying the Server Installation on Microsoft Windows

Task 13-2-1: Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional)

You may already have prior versions of Oracle Tuxedo installed on your system from an earlier version of PeopleSoft PeopleTools. If you are completely upgrading to PeopleSoft PeopleTools 8.61 from an earlier version of PeopleSoft PeopleTools, then you may uninstall the existing version and patches.

Note. It is not mandatory to uninstall the existing version of PeopleSoft PeopleTools, as Oracle Tuxedo 22cR1 can coexist with prior versions on the same machine.

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

You may have to uninstall Oracle Tuxedo for these reasons:

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

To uninstall Oracle Tuxedo from Microsoft Windows:

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

Replace *VERSION* with the version number for the existing service. For example, this would be TListen 10gR3 or TListen 12c.

 - a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
 - b. Select TListen *VERSION* and click the Stop button.
 - c. Choose the Startup Type and set to Manual.
4. Stop and set the ORACLE ProcMGR *VERSION* (or BEA ProcMGR *VERSION* for earlier releases) service to manual.
 - a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
 - b. Select ORACLE ProcMGR *VERSION* and click the Stop button.
 - c. Choose the Startup Type and set to Manual.
5. Reboot your machine.
6. Uninstall Oracle Tuxedo in one of the following ways:
 - Using the Add/Remove Programs dialog, in sequence remove: Oracle Tuxedo*VERSION* RP and then Oracle Tuxedo *VERSION*.
 - If you still have the installation files and documentation, follow the instructions in the documentation to remove the installation.

7. Go to the Control Panel, double-click on the System icon, and then perform the following actions:
 - a. Make sure *TUXDIR*\bin is deleted from the PATH environment variable definition.
TUXDIR refers to the Oracle Tuxedo installation directory.
 - b. Delete the environment variable *TUXDIR*.
 - c. Make sure you click on Apply and OK to save your changes.
8. Using Explorer, delete the Tuxedo home directory, such as C:\bea\tuxedo9.1.
 If you are unable to delete any files, reboot your machine and retry.

Task 13-2-2: Designating the Application Server Administrator on Microsoft Windows

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

The designated user must be a local Microsoft Windows administrator and must have full system privileges. The Oracle Tuxedo installation program creates a new service for Microsoft Windows—called ORACLE ProcMGR V22.1.0.0.0—for which you need administrator privileges. This service was developed to port Oracle Tuxedo from UNIX to Microsoft Windows. Administrator rights are required since system registry settings are updated. Once this new service is created, you must reboot to start it.

When you configure your application server domain in a read-only *PS_HOME* environment, the user ID designated to be the Application Server Administrator must have read-only access to *PS_HOME*, read and write access to *PS_CFG_HOME*, and read-only access to the Oracle Tuxedo installation directory, *TUXDIR*, (for example, C:\tuxedo\tuxedo22.1.0.0.0).

See "Configuring the Application Server on Windows."

See "Preparing for Installation," Defining Installation Locations.

To designate the Application Server Administrator:

1. Add the user ID by selecting Start, Administrative Tools, Computer Management, Local Users and Groups.
 Keep in mind that you can also use an existing account if you do not care to create a new one. You can set this to the system account or an account that is a domain administrator (if there is a need to access files on the domain).
2. Expand Local Users and Groups.
3. If the user ID does not yet exist, highlight the Users folder, and select Action, New User.
4. On the New User dialog box, specify the information for the new account.
 Make sure to deselect the User must change password at next logon check box.
5. Expand the Groups folder.
6. Right-click the Administrators group, and select All Tasks, Add to Group, Add.
7. Click Locations to select the local machine or the network domain in which you created the new user.
8. Enter the new user name you created in the object names box.
9. Click OK, and click Apply and OK again to accept the changes.

Task 13-2-3: Installing Oracle Tuxedo on Microsoft Windows in GUI Mode

Installation in GUI mode is normally used for Microsoft Windows operating systems.

Note. Oracle Tuxedo 22cR1 can coexist on a machine with other versions of Oracle Tuxedo.

To install Oracle Tuxedo on Microsoft Windows, follow the instructions in the Oracle Tuxedo documentation.

See Oracle Tuxedo Installation Guide, <https://docs.oracle.com/en/database/oracle/tuxedo/22/otxig/installing-oracle-tuxedo-using-gui-mode-installation.html#GUID-4FAB0624-AD42-4885-90AE-23D39FF2BCEB>.

Make the following selections when installing Oracle Tuxedo for PeopleSoft environments:

Installation Window	Selection for PeopleSoft Environments
Select Installation Type	Full Install
TSAM Plus agent enable choice	No
Oracle Tuxedo Samples Installation Choice	No
Oracle Tuxedo tlisten configuration Choice	No
SSL Support Choice	No

Task 13-2-4: Installing Oracle Tuxedo on Microsoft Windows in Silent Mode

You can carry out a silent installation of Oracle Tuxedo 22cR1 by providing all the required settings in a response file. With silent installation there is little or no user interaction. Follow the instructions for silent mode installation in the Oracle Tuxedo documentation.

See Oracle Tuxedo Installation Guide, <https://docs.oracle.com/en/database/oracle/tuxedo/22/otxig/installing-oracle-tuxedo-using-silent-installation.html#GUID-B0A705A7-7627-45B1-AF85-F987FCAB38CC>.

Use a text editor to create the response file and specify the values according to your installation requirements. Here is a sample response file:

```
#
# ..... Silent Installation Properties file .....
#
```

```
RESPONSEFILE_VERSION=2.2.1.0.0
```

```
ORACLE_HOME="C:\Tuxedo22cR1"
ORACLE_HOME_NAME="Tuxedo22cR1"
DEINSTALL_LIST={"Tuxedo", "22.1.0.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Full Install"
ENABLE_TSAM_AGENT=false
LDAP_SUPPORT_SSL=false
INSTALL_SAMPLES=false
ENCRYPT_CHOICE=0
CONFIG_TLISTEN=false
MIN_CRYPT_BITS_CHOOSE=0
MAX_CRYPT_BITS_CHOOSE=3
```

Most of the entries are similar to those seen in the GUI installation. Note the following definitions:

- **ORACLE_HOME:** The high level installation directory, for example C:\Tuxedo22cR1.
The installer creates the Oracle Tuxedo installation directory, *TUXDIR*, as *ORACLE_HOME*tuxedo22.1.0.0.0.
- **ORACLE_HOME_NAME:** The name of the current Oracle installation, for example Tuxedo22cR1.
This identifies the Oracle Tuxedo installation in the Oracle Universal Installer, when reviewing the Installed Products list.

Task 13-2-5: Installing Oracle Tuxedo Patch on Microsoft Windows

After installing the base Oracle Tuxedo 22cR1, download the platform-specific version of the latest rolling patch from My Oracle Support, Patches and Updates. Follow the instructions in the Read Me file included with the patch.

Before installing the patch, stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation. Carry out the patch installation as a user with administrative privileges.

Task 13-2-6: Uninstalling the Oracle Tuxedo Patch on Microsoft Windows

To remove an Oracle Tuxedo installation, you must first remove the rolling patch.

1. Stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation.
2. Select each of the following services, right-click, and select Stop:
 - ORACLE ProcMGR V22.1.0.0.0
 - TListen 22.1.0.0.0 (Port: 3050)

Note. The port number is variable.

3. Follow the rollback instructions in the Read Me file included with the patch.

Task 13-2-7: Uninstalling Oracle Tuxedo in GUI Mode

To remove the Oracle Tuxedo 22cR1 installation, follow the instructions in the Oracle Tuxedo documentation.

See Oracle Tuxedo Installation Guide, <https://docs.oracle.com/en/database/oracle/tuxedo/22/otxig/performing-installation-tasks.html#GUID-5B14DCEC-0D88-4862-9540-4FA0959C79AD>.

Task 13-2-8: Checking the Windows Service Account

Use the information in this section to ensure that the Microsoft Windows services are properly configured. Oracle recommends installing the application server binaries locally on your C drive, for best performance. The procedure to set up the ORACLE ProcMGR V22.1.0.0.0 service in the next section includes options for the account type. Use the following guidelines to choose between the Local System account option and the This Account option. (For the option This Account, you must specify a user ID and password.)

Note. For the sake of brevity and convenience, this documentation sometimes shortens "ORACLE ProcMGR V22.1.0.0.0" to "Oracle ProcMGR."

- If you plan to install the PeopleSoft application server binaries (as in, psappsrv.exe and so on) on a remote file server, you must select the This Account option.
- If the PeopleSoft application server binaries are *local*, that is, they exist on your local hard drive, you can use

either the Local System account or This Account option.

- If you intend to use this Microsoft Windows service to start Process Scheduler, you must *always* select the This Account option. Enter the name of your Domain/Windows user name—not the machine name—and your password.
- If you are running on Microsoft Windows and are configuring a search index that resides on a mapped network drive, you must ensure that the user ID of the Oracle ProcMGR service has access to network drives accessed by the search engine. The search engine stores the search indexes at *PS_HOME/data/search*. However, this path can be changed in the application or the Process Scheduler's configuration. If this path is changed in these configurations and it points to a network drive, you must ensure that the user ID that starts the Oracle ProcMGR service has access to these network drives. The application server and the Process Scheduler are started by the Oracle ProcMGR service and therefore inherit the same permissions as the Oracle ProcMGR service.

See Also

"Setting Up Process Scheduler on Windows," Setting Up Process Scheduler Security

Task 13-2-9: Restricting Domain Process Privileges

This section discusses:

- Understanding Domain Process Privileges
- Setting TM_CPAU Environment Variable

Understanding Domain Process Privileges

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

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

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

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

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

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

- The Oracle ProcMGR service can be run as the Local System user, but domain processes can be run using a minimally privileged user. This reduces the chance of a compromised PeopleSoft PeopleTools process being used to gain unauthorized access to the system. Note that the option "Allow services to interact with Desktop" should *not* be selected.
- The Oracle ProcMGR service can be configured to log on to Microsoft Windows using a minimally privileged user ID and PeopleSoft PeopleTools processes can run as a user with more privileges than the Oracle Tuxedo user ID. For example, the Oracle Tuxedo user ID could have read-only access to `PS_CFG_HOME`, but the PeopleSoft PeopleTools user could have read-write access. The Oracle Tuxedo user ID does not actually require read access to `PS_HOME`. When `CreateProcessAsUser` runs, access to the executable to start is evaluated using the user ID that the process will run as.
- A single Microsoft Windows system can be used to host multiple PeopleSoft PeopleTools installations that are each administered by a different user. A non-administrative user ID used to boot one domain will have no privileges to processes started with a different user ID.
- Domain processes can be identified and managed in Windows Task Manager by a non-administrative user.

See File Formats, Data Descriptions, MIBs, and System Processes Reference, Oracle Tuxedo Reference Topics, https://docs.oracle.com/cd/E35855_01/tuxedo/docs12c/rf5/rf5.html.

Setting `TM_CPAU` Environment Variable

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

To set the `TM_CPAU` environment variable:

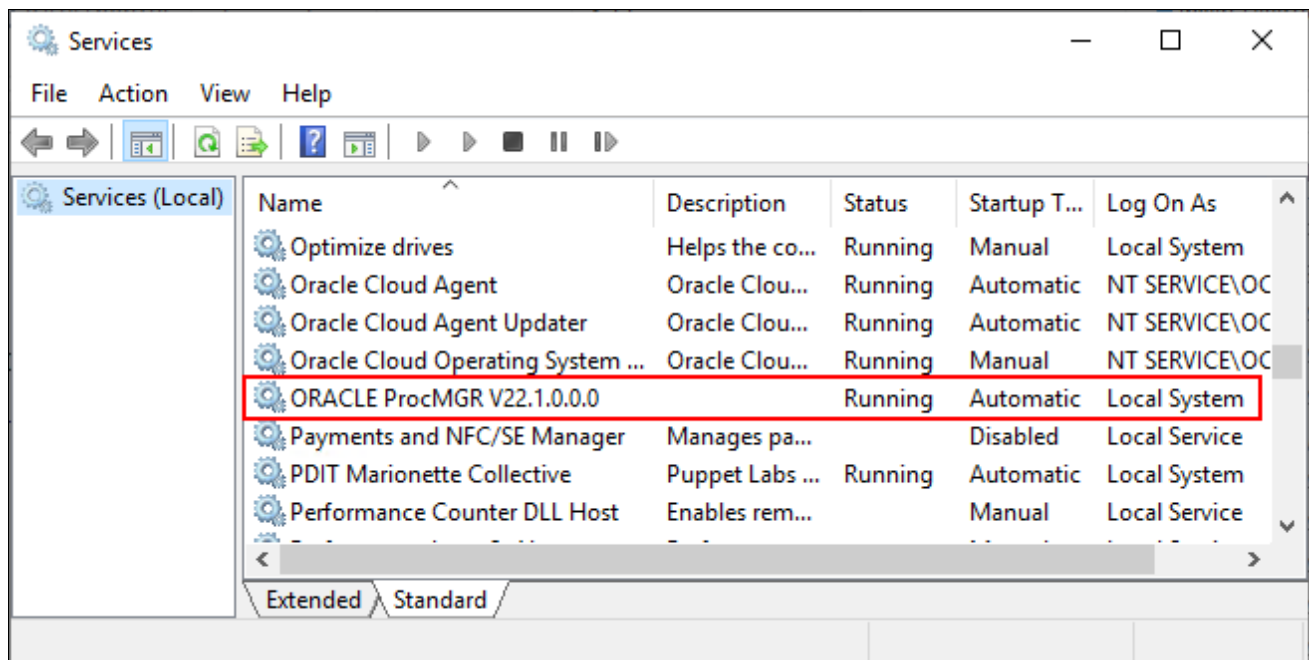
1. Access the Control Panel, and then select System and Security, System.
2. Select Advanced system settings.
3. Select the Advanced tab.
4. Click Environment Variables.
5. In the System variables area, click New to add a new environment variable.
6. Enter `TM_CPAU` as the variable name, YES as the value, and click OK three times to close the dialog boxes.
7. Restart your machine.

Task 13-2-10: Setting Up the Windows Services for Oracle Tuxedo

To set up the Microsoft Windows services for Oracle Tuxedo:

1. Log on again as the Application Server Administrator, TUXADM, or a designated user ID.
2. Access the Services dialog box, for example from Windows Administrative Tools.

3. Locate the service labeled *ORACLE ProcMGR V22.1.0.0.0*.



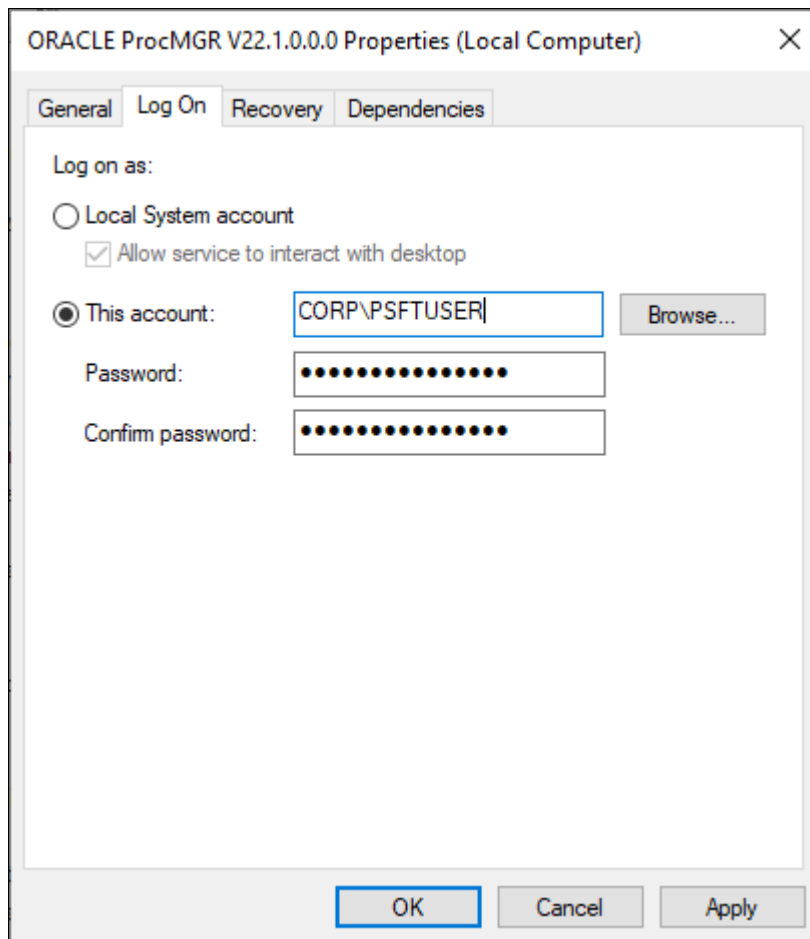
Services dialog box

4. Double-click ORACLE ProcMGR V22.1.0.0.0 to open the properties dialog box.
5. On the General tab, if the Stop button is enabled, click it to stop the current ORACLE ProcMGR V22.1.0.0.0 process.
6. Select Log On.

7. Choose either Local System account or This account.

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

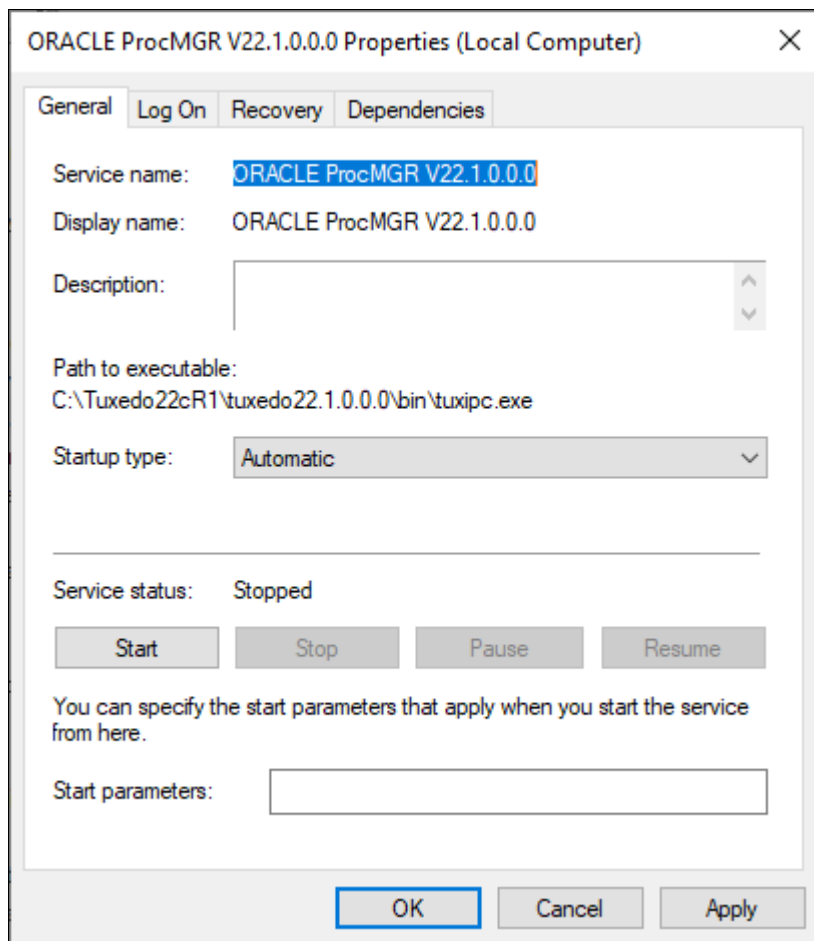
See Checking the Windows Service Account.



ORACLE ProcMGR V22.1.0.0.0 Properties dialog box: Log On tab

8. Select General.

Make sure that Startup Type is set to *Automatic*, as shown in this example.



ORACLE ProcMGR V22.1.0.0.0 Properties dialog box: General tab

9. Click Start.

The status Started appears both on the General tab of the Oracle ProcMGR V22.1.0.0.0 Properties dialog box and in the Services dialog box. Click OK to close the dialog box.

10. As mentioned, unless you intend to use the Tuxedo Web Monitor, you should disable the TListen 22.1.0.0.0 (Port: *PORT*) service, where *PORT* is the port number you entered during the installation. The default is 3050.

Task 13-2-11: Verifying the Server Installation on Microsoft Windows

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

To verify the installation:

1. Open a command prompt.
2. Set the TUXDIR environment variable; for example:

```
set TUXDIR=C:\Tuxedo22cR1\tuxedo22.1.0.0.0
```
3. Go to the directory where you installed Oracle Tuxedo, *TUXDIR*, and then to the bin sub-directory. For example:


```
cd C:\Tuxedo22cR1\tuxedo22.1.0.0.0\bin
```

4. Issue this command:

```
tmadmin -v
```

The command will return the Oracle Tuxedo version that is installed. For example:

```
INFO: Oracle Tuxedo, Version 22.1.0.0.0, 64-bit, Patch Level 004
```

If you do not see the desired output, review your steps and reinstall Oracle Tuxedo 22cR1.

5. Open the Microsoft Windows registry, for example by selecting Start, Run, regedit.

Verify that the following key is created in the Windows registry:

```
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\TUXEDO\22.1.0.0.0
```

Task 13-3: Installing Oracle Tuxedo on UNIX

This section discusses:

- Removing Existing Oracle Tuxedo Installation from UNIX (Optional)
- Completing the Preinstallation Checklist on UNIX
- Designating the Oracle Tuxedo Owner on UNIX
- Installing Oracle Tuxedo in Silent Mode on UNIX
- Installing the Oracle Tuxedo Patch on UNIX
- Uninstalling the Oracle Tuxedo Patch from UNIX
- Uninstalling Oracle Tuxedo from UNIX in Silent Mode
- Verifying the Server Installation on UNIX

Task 13-3-1: Removing Existing Oracle Tuxedo Installation from UNIX (Optional)

You may have older versions of Oracle Tuxedo installed on your system from an earlier version of PeopleSoft PeopleTools. If you are completely upgrading to PeopleSoft PeopleTools 8.61 from an earlier version of PeopleSoft PeopleTools and you do not require the older Oracle Tuxedo anymore, then, you may uninstall it.

Note. It is not mandatory to uninstall older Oracle Tuxedo versions from the machine where you are installing Oracle Tuxedo 22cR1, as older Oracle Tuxedo versions and Oracle Tuxedo 22cR1 can exist on the same machine.

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

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

To remove Oracle Tuxedo from UNIX,::

1. Using PSADMIN, shut down any PeopleSoft domains that may be running on the machine.
2. Follow the instructions in the later section Uninstalling Oracle Tuxedo from UNIX in Silent Mode.

Task 13-3-2: Completing the Preinstallation Checklist on UNIX

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

Item	Description	Example Value	Real Value
ORACLE_HOME	The high level installation directory. You specify this value in the silent installation file.	/home/tuxedo	<enter value>
ORACLE_HOME_NAME	The name of the current Oracle installation. This identifies the Oracle Tuxedo installation in the Oracle Universal Installer, when reviewing the Installed Products list.	tuxedo2210	<enter value>
TUXDIR	The full path to the Oracle Tuxedo installation. The installer creates this as ORACLE_HOME/tuxedo22.1.0.0.0	/home/tuxedo/tuxedo22.1.0.0.0	<enter value>
Username	The UNIX user name of the Application Server Administrator (Oracle Tuxedo owner). See the next section for instructions.	tuxedo	<enter value>
UNIX_GROUP_NAME	The UNIX group name of the Oracle Tuxedo owner. See the next section for instructions.	tuxedo	<enter value>
FROM_LOCATION	The full path to the directory containing the product list to be installed.	/home/temp/Disk1/stage/products.xml	<enter value>

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

Task 13-3-3: Designating the Oracle Tuxedo Owner on UNIX

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

Note. The application server can be booted only by the Oracle Tuxedo owner or the group that the owner is in. The predefined UNIX "other" group does not have read or execute permission. If it is required that members of the "other" group be able to boot and shut down an application server domain, you must manually give read and execute permissions to all files and folders under the *TUXDIR/locale* and *TUXDIR/udataobj* directories.

To designate the Oracle Tuxedo owner:

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

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

Note. The utility that you use to create the user and group varies, depending on your operating system. For example, HP-UX Itanium uses the "sam" utility, IBM AIX uses the "smit" utility, and so on. For the exact utility, refer to your operating system documentation.

Task 13-3-4: Installing Oracle Tuxedo in Silent Mode on UNIX

You can carry out a silent installation of Oracle Tuxedo 22cR1 by providing all the required settings in a response file. With silent installation there is little or no user interaction. Follow the instructions for silent mode installation in the Oracle Tuxedo documentation.

See Oracle Tuxedo Installation Guide, <https://docs.oracle.com/en/database/oracle/tuxedo/22/otxig/installing-oracle-tuxedo-using-silent-installation.html#GUID-B0A705A7-7627-45B1-AF85-F987FCAB38CC>.

Note. Console mode installation is not supported for Oracle Tuxedo 22cR1.

Use a text editor to modify the values in the response file according to your installation requirements. Here is a sample response file:

```
#
# ..... Silent Installation Properties file .....
#

RESPONSEFILE_VERSION=2.2.1.0.0
#Unix group to be set for the inventory directory. Valid only in Unix⇒
platforms.
UNIX_GROUP_NAME="dba"

#Complete path of the Oracle Home.
ORACLE_HOME="/home/tuxedo"

#Oracle Home Name. Used in creating folders and services.
ORACLE_HOME_NAME="tuxedo2210"
DEINSTALL_LIST={"Tuxedo", "22.1.0.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Full Install"
ENABLE_TSAM_AGENT=false
LDAP_SUPPORT_SSL=false
INSTALL_SAMPLES=false
ENCRYPT_CHOICE=0
```

```
CONFIG_TLISTEN=false  
MIN_CRYPT_BITS_CHOOSE=0  
MAX_CRYPT_BITS_CHOOSE=3
```

Task 13-3-5: Installing the Oracle Tuxedo Patch on UNIX

After installing the base Oracle Tuxedo 22cR1, download the platform-specific version of the latest rolling patch from My Oracle Support, Patches and Updates.

Before installing the patch, stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation, and shut down any tlisten processes.

Follow the instructions in the Readme file included with the patch.

Task 13-3-6: Uninstalling the Oracle Tuxedo Patch from UNIX

To remove an Oracle Tuxedo installation, you must first remove the rolling patch, as follows:

1. Stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation.
2. Follow the rollback instructions in the Read Me file included with the patch.

Task 13-3-7: Uninstalling Oracle Tuxedo from UNIX in Silent Mode

To remove the Oracle Tuxedo 22cR1 installation from UNIX, follow the instructions in the Oracle Tuxedo documentation.

See Oracle Tuxedo Installation Guide, <https://docs.oracle.com/en/database/oracle/tuxedo/22/otxig/performing-installation-tasks.html#GUID-5B14DCEC-0D88-4862-9540-4FA0959C79AD>.

Task 13-3-8: Verifying the Server Installation on UNIX

To verify that the server installation was successful:

1. Open a shell.
2. Change directory to *TUXDIR*/bin. For example:
`/home/tuxedo/tuxedo22.1.0.0.0/bin`
3. Issue the following command:
`tmadmin -v`

The command will return the Oracle Tuxedo version that is installed. For example:

```
INFO: Oracle Tuxedo, Version 22.1.0.0.0, 64-bit, Patch Level 004
```

If you do not see the desired output, review your steps and reinstall Oracle Tuxedo 22cR1.

Task 13-4: Ensuring that Oracle Tuxedo Coexists with Earlier Versions

This section discusses:

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

Understanding the Use of Multiple Oracle Tuxedo Versions

Earlier versions of PeopleSoft PeopleTools rely on earlier versions of Oracle Tuxedo—for example, PeopleSoft PeopleTools 8.53 uses Oracle Tuxedo 11gR1 for UNIX, and Oracle Tuxedo 11gR1_VS2010 for Microsoft Windows. If you are installing only PeopleSoft PeopleTools 8.61, you can safely skip this section. If you need to run application servers on PeopleSoft PeopleTools 8.61 and earlier PeopleSoft PeopleTools versions on the same machine, read this section to learn about coexistence issues. Although Oracle Tuxedo 22cR1 coexists with earlier Oracle Tuxedo versions on the same machine, you may need to take a number of manual steps to ensure that these products share the same environment gracefully.

Task 13-4-1: Checking Your Environment Variables

Installing Oracle Tuxedo on UNIX changes your TUXDIR and PATH environment variables. Although you do not need to change these environment variables to successfully run PeopleSoft PeopleTools 8.61 with Oracle Tuxedo 22cR1, earlier versions of PeopleSoft PeopleTools rely on these environment variables being set.

To change your environment variables manually:

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

For example, Oracle Tuxedo 11gR1 may be installed to /home/oracle/tuxedo11gR1. This means that TUXDIR=/home/oracle/tuxedo11gR1 is the correct setting.

2. Your PATH environment variable must contain TUXDIR/bin for the earlier Oracle Tuxedo version before any entries for TUXDIR/bin for Oracle Tuxedo 22cR1.

For example the setting PATH=/usr/local/bin:/home/psftuser/tuxedo22cR1/bin:/home/oracle/tuxedo11gR1/bin will cause your pre-8.53 domains to no longer work. You would need to change this to PATH=/usr/local/bin:/home/oracle/tuxedo11gR1/bin:/home/oracle/tuxedo22cR1/bin to work with pre-PeopleSoft PeopleTools 8.53 domains.

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

3. Your library path on UNIX (whichever of the environment variables LD_LIBRARY_PATH, LIBPATH, or SHLIB_PATH is appropriate for your platform) must contain TUXDIR/lib for the earlier Oracle Tuxedo version before any entries for Oracle Tuxedo 22cR1.

For example the setting LD_LIBRARY_PATH=/lib:/usr/lib:/home/user/oracle/tuxedo22cR1/lib:/home/oracle/tuxedo11gR1/lib, will cause your pre-8.53 domains to no longer work. You would need to change this to LD_LIBRARY_PATH=/lib:/usr/lib:/home/oracle/tuxedo11gR1/lib:/home/user/Oracle/tuxedo22cR1/lib for your pre-8.53 domains to work.

Alternatively, you can set the environment variables for a desired release using these steps:

1. Go to the TUXDIR directory for the release that you want to run and run the command `./tux.env`.
This command sets the environment variables needed to run Oracle Tuxedo.
2. Verify the correct Oracle Tuxedo version by running this command:

```
tmadmin -v
```

See Verifying the Server Installation on UNIX.

Task 13-4-2: Changing the TListen Port

Installing Oracle Tuxedo 22cR1 and earlier creates a new service known as TListen. In most cases, you can disable this service as it is not required to run PeopleSoft PeopleTools application server domains. However, if you intend to use the Tuxedo Web Monitor you may wish to ensure that there is no port clash with earlier versions. This port is determined at installation and should be changed to a port other than the default 3050 if you intend on using the TListen service for Oracle Tuxedo 22cR1 and earlier Oracle Tuxedo versions concurrently.

Chapter 14

Installing Web Server Products

This chapter discusses:

- Installing Oracle WebLogic Server

Task 14-1: Installing Oracle WebLogic Server

This section discusses:

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

Understanding the Oracle WebLogic Installation

PeopleSoft PeopleTools 8.61 supports Java-enabled Oracle WebLogic Server 14.1.1.0. You must install an operating-system specific 64-bit Java Developers Kit (JDK) before beginning the Oracle WebLogic installation.

See [Installing JDK for Oracle WebLogic](#).

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

This section describes a traditional installation of Oracle WebLogic. When you use the PeopleSoft DPKs for either a full-tier installation using the PeopleSoft Application Images or for a mid-tier installation using the PeopleTools DPKs, Oracle WebLogic is installed as part of the installation, and you do not need to carry out the separate installation in this section. If you choose to install Oracle WebLogic independently of the DPK installation, you can obtain installation files for Oracle WebLogic on the Oracle Software Delivery Cloud portal and use the steps in this section.

See [Obtaining Oracle WebLogic Installation Files from Oracle Software Delivery Cloud](#).

Note that to use a separate Oracle WebLogic installation with a DPK deployment, you must use customizations to specify the Oracle WebLogic installation location.

See "Completing the DPK Initialization with Customizations," Preparing the Customization File for Component Software Locations.

Oracle publishes critical patch updates for Oracle WebLogic regularly. After completing the installation instructions in this section, review the information for FMW Infrastructure / WebLogic Server and apply the latest patch.

See Critical Patch Update (CPU) Patch Advisor for Oracle Fusion Middleware, My Oracle Support, Doc ID 2806740.2.

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

See Also

Oracle Software Delivery Cloud, <https://edelivery.oracle.com>

My Oracle Support, Certifications

Clustering and High Availability for PeopleTools, My Oracle Support, (search for the article title)

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

Oracle WebLogic Server 14.1.1.0 documentation, <https://docs.oracle.com/en/middleware/standalone/weblogic-server/14.1.1.0/index.html>

Reviewing Troubleshooting Tips

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

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

The following command is a sample Linux command for silent mode installation, which uses the "temp" directory under your Home directory. *RESPONSE_DIR* refers to the location of the silent mode response file, and *INVENTORY_DIR* refers to the location of the Oracle inventory file.

See Installing Oracle WebLogic on UNIX in Silent Mode.

```
$JAVA_HOME/bin/java -jar -Djava.io.tmpdir=~/.temp ./fmw_14.1.1.0_wls.jar -
=>
silent -responseFile RESPONSE_DIR/res.rsp -invPtrLoc INVENTORY_DIR/ora
Inst.loc
```

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

- If the installation fails, and the Middleware Home directory that you specified for the Oracle WebLogic 14.1.1.0 installation is one in which other Oracle products have been installed in previous releases, (for example c:\oracle folder in Microsoft Windows), it may indicate corruption in the registry.xml file inside your existing Middleware Home. Pick a different location for the Oracle WebLogic 14.1.1.0 installation directory and try the installation again.
- If you are installing onto a UNIX environment, in case of installation failure, refer to the log file Wls1411Install.log under the installation logs directory to view the events that occurred.
- If you encounter the following error message while running in console mode on a Microsoft Windows operating system, it means an environment variable `_JAVA_OPTIONS` has been set in your system. It causes the Java process initiated by the Oracle WebLogic installer to fail.

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

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

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

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

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

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

For more information, search the Oracle documentation for Oracle WebLogic.

Task 14-1-1: Obtaining Oracle WebLogic Installation Files from Oracle Software Delivery Cloud

At this point you should have already downloaded the necessary files from Oracle Software Delivery Cloud. If not, this section includes additional information on finding and using the files for Oracle WebLogic if necessary.

See "Preparing for Installation," Using Oracle Software Delivery Cloud to Obtain Installation Files.

See Oracle Software Delivery Cloud, <https://edelivery.oracle.com>.

To obtain the files for Oracle WebLogic installation:

1. After logging in to Oracle Software Delivery Cloud, read the information about export restrictions, and then click Accept.
2. Enter Oracle WebLogic in the Product field, and select Oracle WebLogic Server 14c 14.1.1.0 (Oracle WebLogic Server Enterprise Edition, Oracle WebLogic Server Standard Edition), from the results.

Note. The Enterprise Edition includes Oracle WebLogic Server and Oracle Coherence, as well as other items.

3. Click Continue.
4. From the drop-down list under Platform/Languages, select the operating system you are running on.
The following operating systems are supported:
 - IBM AIX
 - HP-UX
 - Linux
 - Microsoft Windows
 - Oracle Solaris
5. Click Continue.
6. Read the license agreements, and select the check box to acknowledge that you accept the agreement, and then click Continue.
7. On the File Download window, download the zip files for Oracle WebLogic Server and Oracle Coherence.
Choose the generic files, which include the WebLogic Administration console. Download the files you need by clicking a file name to download an individual file, or click Download to obtain all of the files listed.
Save the zip files to a temporary directory on your local system. The directory where you save the zip file is referred to in this documentation as *WLS_INSTALL*. You must extract (unzip) the file on the platform for which it is intended. For example, if you download the zip file for Linux, you must unzip it on Linux to avoid problems. If you unzip the file to a staging directory on a Microsoft Windows computer and copy the staging directory to a Linux computer, the stage area files may be corrupt.
8. Extract the files into *WLS_INSTALL*.
The Oracle WebLogic installer file is *fmw_14.1.1.0_wls.jar* for Microsoft Windows, Linux, HP-UX and Solaris. For IBM AIX, the installer file is *fmw_14.1.1.0_wls_lite_generic_AIX_zLinux_JDK11.jar*.
See WebLogic Server installation Support on Java SE 11 for AIX and zLinux, What's New in Oracle WebLogic Server, <https://docs.oracle.com/en/middleware/standalone/weblogic-server/14.1.1.0/notes/whatsnew.html#GUID-D2002C97-70A2-4568-B387-D169047DDAC8>.

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

Task 14-1-2: Installing JDK

This section discusses:

- Understanding the JDK Requirement for Oracle WebLogic
- Installing JDK for IBM AIX
- Installing JDK for HP-UX Itanium
- Installing JDK for Linux
- Installing JDK for Microsoft Windows
- Installing JDK for Oracle Solaris on SPARC

Understanding the JDK Requirement for Oracle WebLogic

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

Operating System Platforms	JDK Version Supported	64-bit or Mixed Mode*
IBM AIX	IBM Semeru Certified Edition JDK 11.0.14 or later	64-bit
HP-UX Itanium	Java version 11.0.5 and later	Mixed mode Use "-d64" to run in 64-bit mode.
Linux	Oracle JDK 11.0.6 and later	64-bit
Microsoft Windows	Oracle JDK 11.0.6 and later	64-bit
Oracle Solaris on SPARC	Oracle JDK 11.0.6 and later	64-bit

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

Installing JDK for IBM AIX

To install 64-bit IBM JDK for IBM AIX:

1. Go to the IBM JDK download and service site:

<https://www.ibm.com/support/pages/java-sdk>

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

2. Select Downloads.
3. Select the link for IBM Semeru Runtime Certified Edition, Version 11.
4. Provide the required information to sign in.
5. Install the JDK on the AIX computer where you will install the Oracle WebLogic server.

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

Note. Spaces are not allowed in the *JAVA_HOME* name.

Installing JDK for HP-UX Itanium

To install Hewlett-Packard JDK on HP-UX Itanium:

1. Go to the Hewlett-Packard software site and search for Java.

See Hewlett-Packard, Free Software, https://myenterpriselicense.hpe.com/cwp-ui/free-software/?lc=EN_US.

2. Select the link for JDK 11.0.x.
3. If necessary, provide the required information to sign in.

4. Install the JDK on the computer where you will install the Oracle WebLogic server, following the instructions in the Hewlett-Packard documentation.

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

Note. Spaces are not allowed in the *JAVA_HOME* name.

Installing JDK for Linux

To install 64-bit JDK on Linux:

1. Go to the Oracle Java download site:
<https://www.oracle.com/java/technologies/downloads/>
 2. Download Oracle Java 11 64-bit JDK version 11.0.6 or higher for Linux x86-64.
Refer to the JDK installation instructions on the download page.
 3. Install the JDK on the computer where you will install the Oracle WebLogic server. The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.
-

Note. Spaces are not allowed in the *JAVA_HOME* name.

Installing JDK for Microsoft Windows

To install 64-bit JDK on Microsoft Windows:

1. Go to the Oracle JDK download site:
<https://www.oracle.com/java/technologies/downloads/>
 2. Download Oracle Java 11 64-bit JDK version 11.0.6 or higher for Microsoft Windows x86-64.
Refer to the JDK installation instructions on the download page.
 3. Install the JDK on the computer where you will install the Oracle WebLogic server. The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.
-

Note. Spaces are not allowed in the *JAVA_HOME* name.

Installing JDK for Oracle Solaris on SPARC

To install JDK on Oracle Solaris on SPARC (64-bit):

1. Go to the Oracle JDK download site:
<https://www.oracle.com/java/technologies/downloads/>
 2. Download the Oracle Java 11 64-bit JDK version 11.0.6 or higher for Solaris SPARC.
Refer to the installation instructions on the download page.
 3. Install the JDK on the computer where you will install the Oracle WebLogic server.
The directory where you install the JDK is referred to in this documentation as *JAVA_HOME*.
-

Note. Spaces are not allowed in the *JAVA_HOME* name.

Task 14-1-3: Installing Oracle WebLogic on Microsoft Windows

The following procedure assumes that you saved the installation file `fmw_14.1.1.0_wls.jar` from Oracle Software Delivery Cloud in the directory `WLS_INSTALL`. Installation in GUI mode is normally used for Microsoft Windows operating systems. You should have installed the appropriate JDK to `JAVA_HOME` before beginning this installation.

See Installing JDK for Oracle WebLogic.

Note. Previous releases of Oracle WebLogic Server, such as 9.2 MPX, and 10.3.X, can coexist with 14.1.1.0 on a single machine. The best practice is to install Oracle WebLogic 14.1.1.0 into an empty directory, or at least one that does not contain other Oracle WebLogic (previously BEA) products.

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

To install Oracle WebLogic Server 14.1.1.0:

1. Open a command prompt and change directory to `WLS_INSTALL`.
-

Note. If you are running on a Microsoft Windows operating system, you must run the command prompt as administrator.

2. Set the environment variable `JAVA_HOME` to be the location where you installed the Oracle Java JDK 11. For example, if you installed JDK to `D:\jdk11` use this command:

```
set JAVA_HOME=D:\jdk11
```

3. Use the following command to launch the installer:

```
%JAVA_HOME%\bin\java -jar fmw_14.1.1.0_wls.jar
```

Note. It may take up to five minutes to extract the installer. You see system check messages during the extraction process. The Welcome window appears when the extraction is complete.

4. Click Next on the Welcome window for Oracle Fusion Middleware 14c (14.1.1.0) WebLogic Server and Coherence Installer.



Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 1 of 8

5. Select the Skip Auto Updates radio button.

Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 2 of 8

Auto Updates

[Welcome](#)

Auto Updates

[Installation Location](#)

[Installation Type](#)

[Prerequisite Checks](#)

[Installation Summary](#)

Installation Progress

Installation Complete

☒ Skip Auto Updates

☐ Select patches from directory

Location: [Browse](#)

☐ Search My Oracle Support for Updates

Username:

Password:

[Proxy Settings](#) [Test Connection](#)

[Search](#)

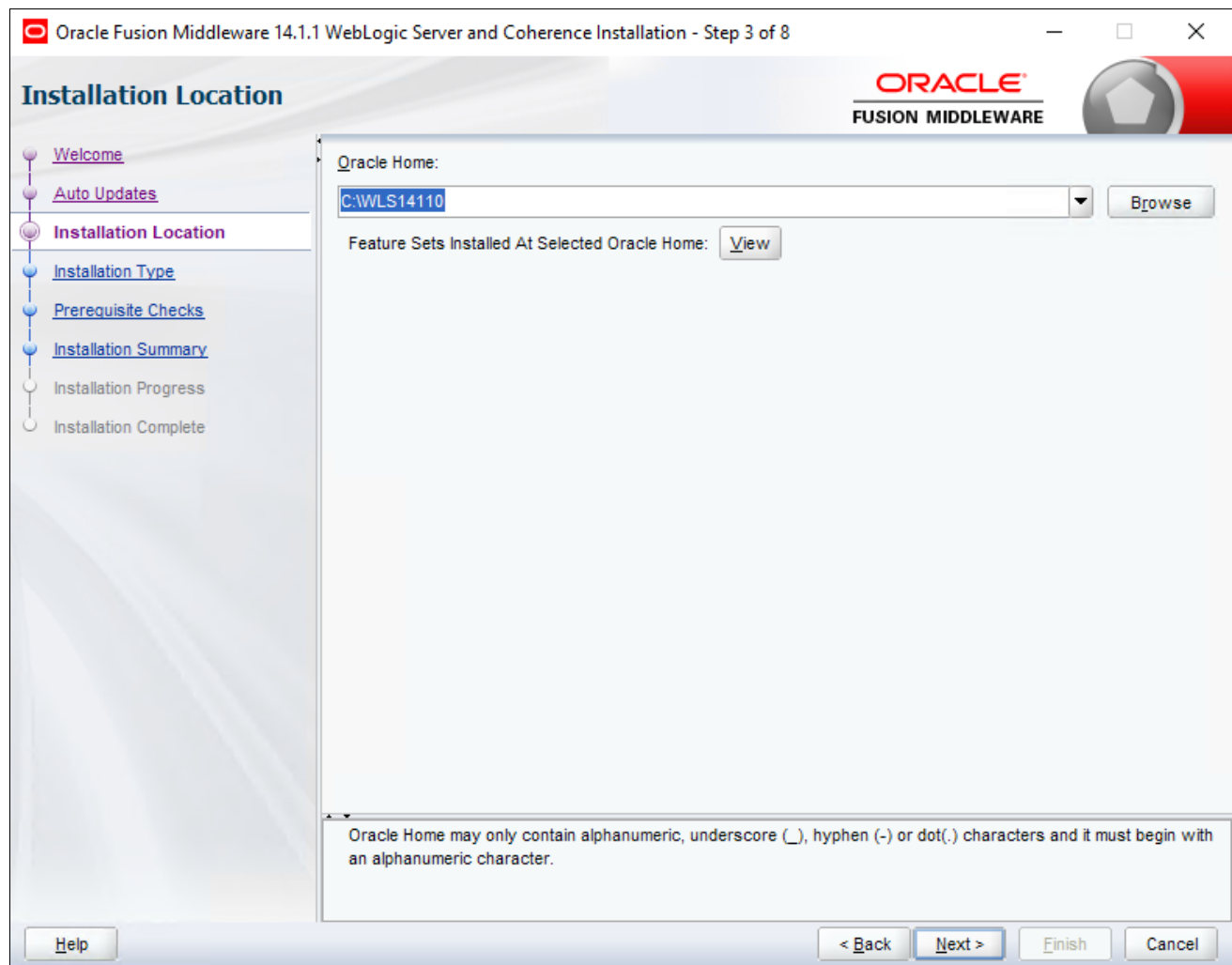
[Help](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 2 of 8

6. On the Installation Location window, enter a location for the Oracle Home, or browse to an existing directory. Do not choose a directory that contains an existing installation of Oracle WebLogic.

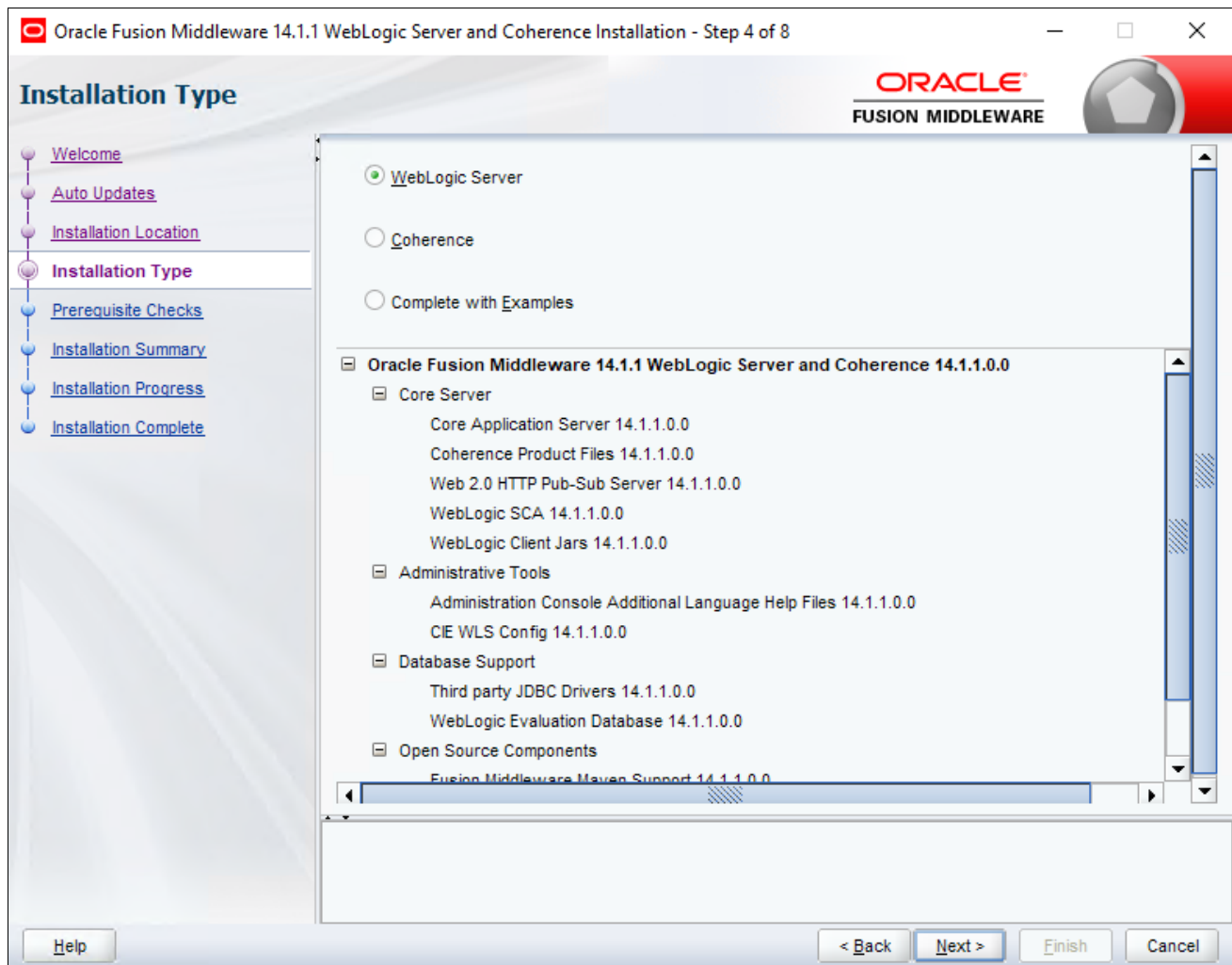
If the directory does not exist, the Oracle WebLogic installer creates it. The directory where you install Oracle WebLogic is referred to as *WLS_HOME* in this documentation. In this example *WLS_HOME* is C:\WLS1411.

Click Next to continue.



Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 3 of 8

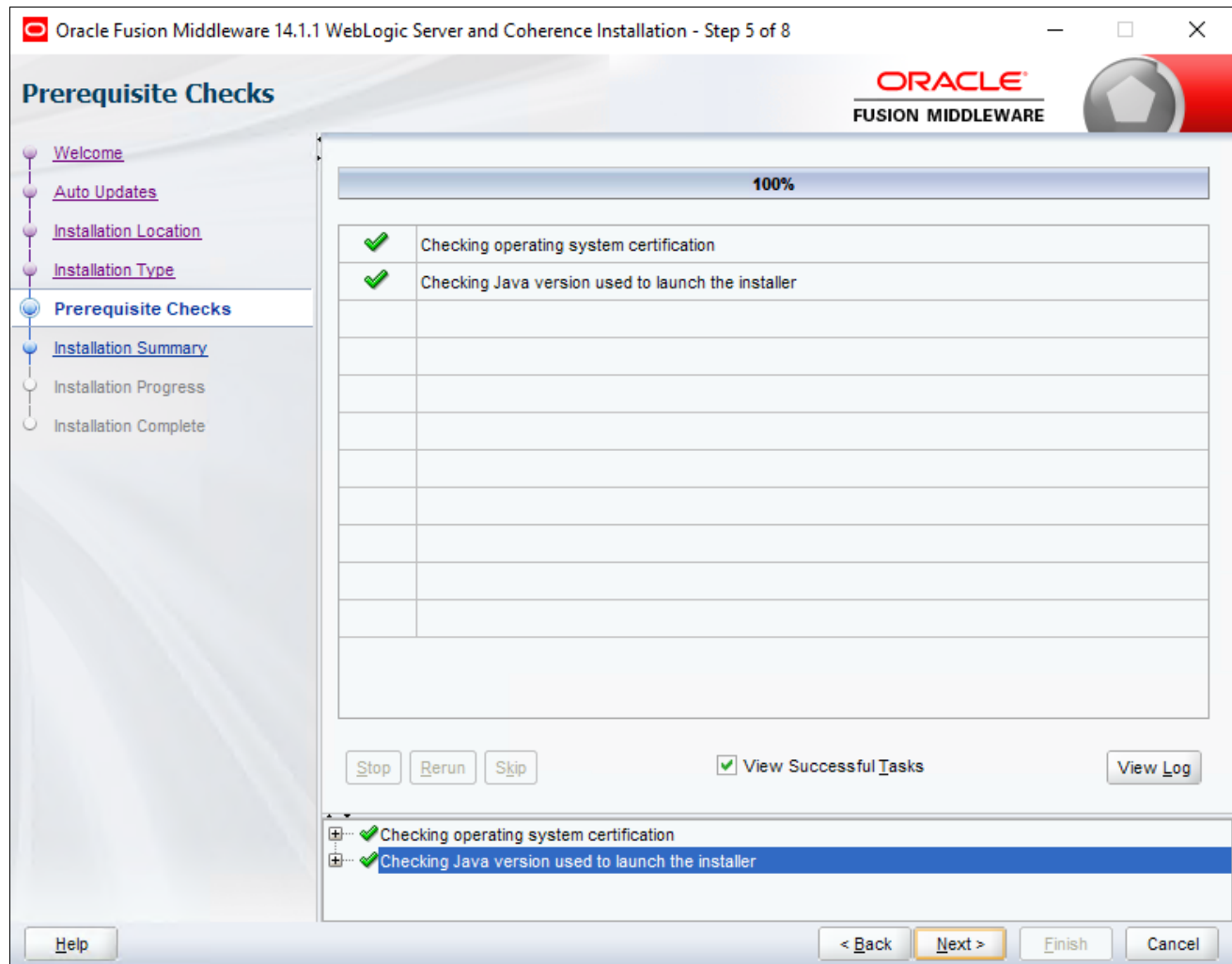
7. Accept the default WebLogic Server installation option on the Installation Type window, for WebLogic Server Installation, and then click Next.



Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 4 of 8

8. Wait while the installer carries out prerequisite checks, and then click Next.

In this example the system passed the prerequisite checks.

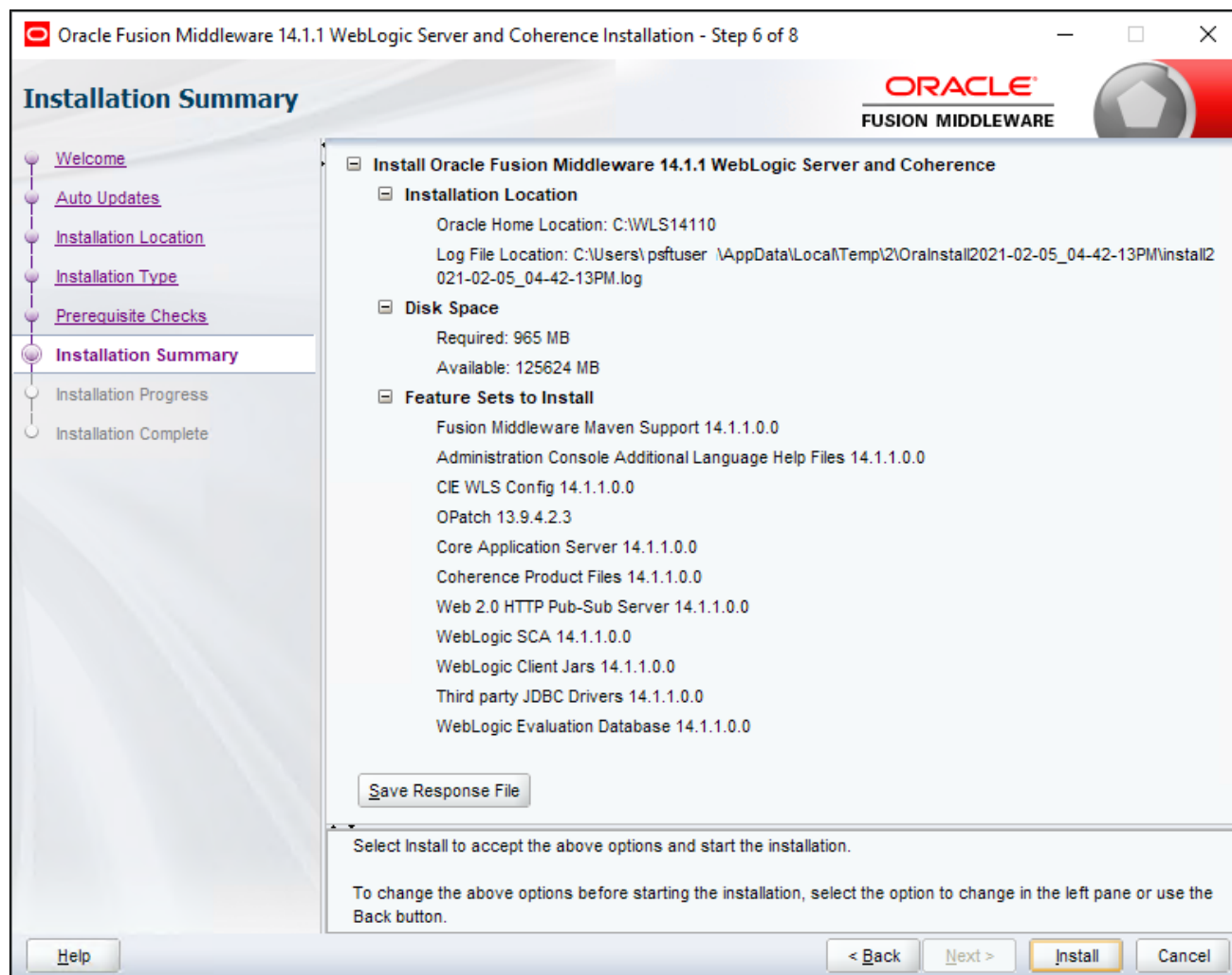


Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 5 of 8

9. Verify your choices in the installation summary, such as the installation location and features to install.

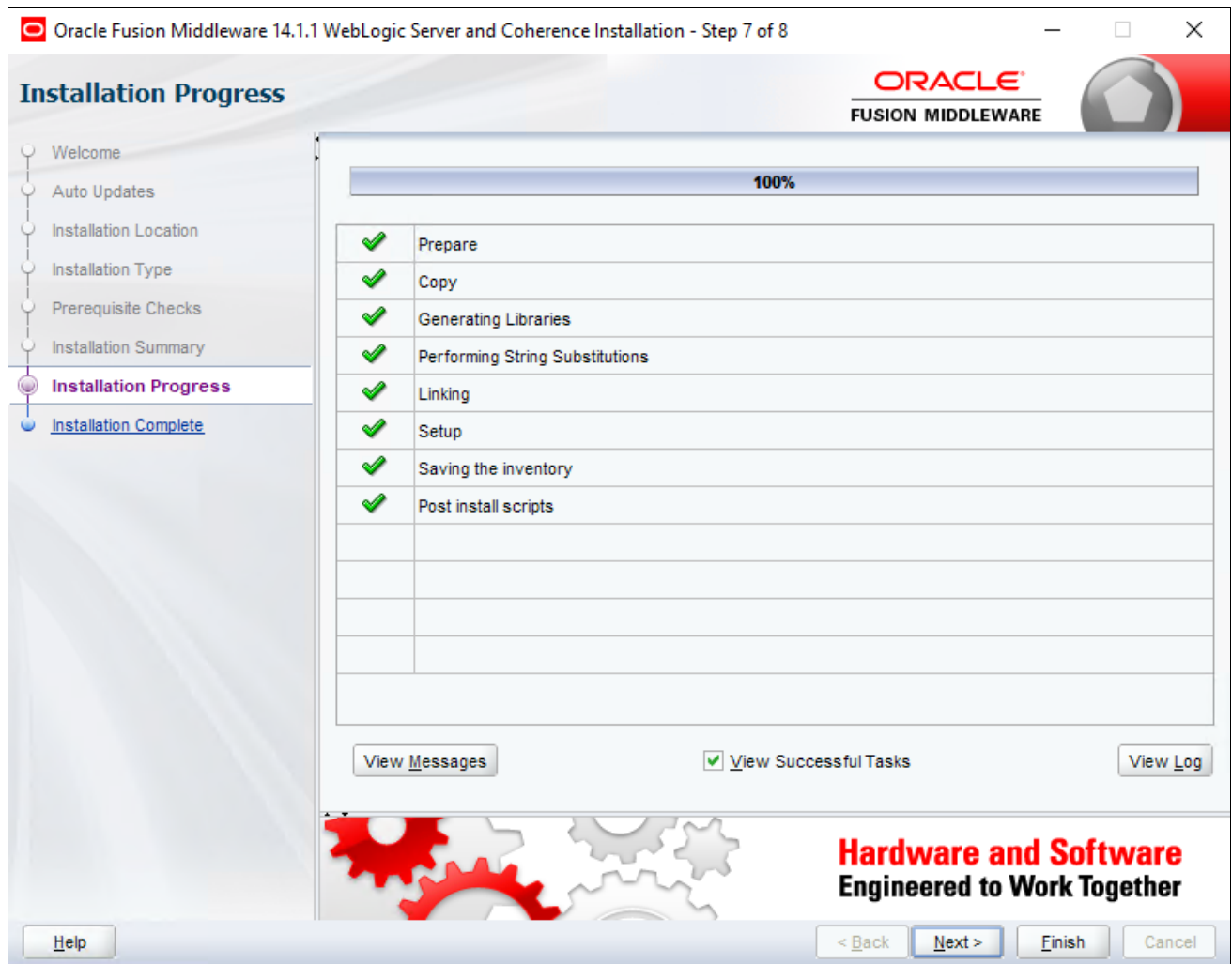
If you want to save a response file to be used in silent installation, click Save Response File and provide a location.

Click Install to begin the installation.



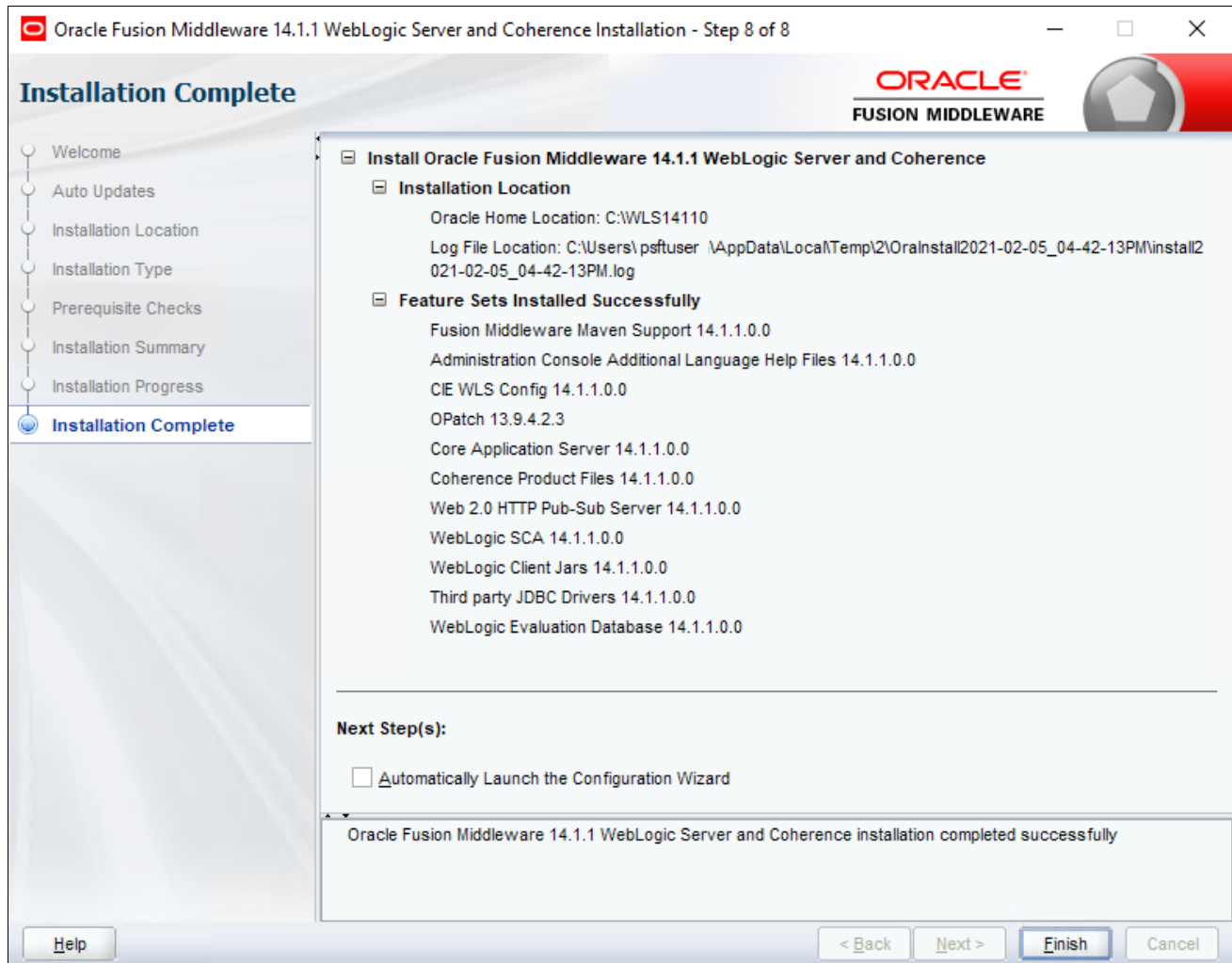
Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 6 of 8

A progress indicator appears. Click Next when the tasks are complete, as shown in this example:



Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 7 of 8

10. When the installation has completed successfully, clear the Automatically Launch the Configuration Wizard option, and click Finish.



Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence Installation - Step 8 of 8

Task 14-1-4: Installing Oracle WebLogic on UNIX in Silent Mode

Use these instructions for silent mode installation for UNIX operating systems. With silent mode installation, you provide the required settings in a response file.

Note. Console mode installation is not supported for Oracle WebLogic 14.1.1.0.

See the information on silent installation for Oracle WebLogic in the Oracle Middleware documentation.

The following procedure assumes that you saved the installation file from Oracle Software Delivery Cloud in the directory *WLS_INSTALL*. You should have installed the appropriate JDK to *JAVA_HOME* before beginning this installation.

For Linux, HP-UX, or Solaris, the installation file is *fmw_14.1.1.0_wls.jar*. For IBM AIX, the installation file is *fmw_14.1.1.0_wls_lite_generic_AIX_zLinux_JDK11.jar*.

Note. If you downloaded the zip file for the Oracle WebLogic installation from Oracle Software Delivery Cloud to a Microsoft Windows computer, FTP the zip file in binary mode to your UNIX computer before unzipping it into *WLS_INSTALL*.

To run the Oracle WebLogic installation in silent mode:

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

For Linux, HP-UX, or Solaris:

```
chmod a+x fmw_14.1.1.0_wls.jar
```

For IBM AIX:

```
chmod a+x fmw_14.1.1.0_wls_lite_generic_AIX_zLinux_JDK11.jar
```

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

```
cd WLS_INSTALL
```

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

For example, if the JDK is installed under "/home/jdk11", use the following command:

```
export JAVA_HOME=/home/jdk11
```

4. If it does not exist, use a text editor, such as "vi", to create the central inventory location file, named *oraInst.loc*, in a directory referred to in this documentation as *INVENTORY_DIR*.

The *oraInst.loc* file contains only the following two lines:

```
inventory_loc=/home/psftuser/oraInventory
inst_group=wlsgrp
```

The *oraInst.loc* file contains the following information:

- *inventory_loc* — Specify the full path to the directory where you want the installer to create the inventory directory. The location in the example is /home/psftuser/oraInventory. Use any directory other than the *WLS_INSTALL* directory where you placed the *fmw_14.1.1.0_wls.jar* (or *fmw_14.1.1.0_wls_lite_generic_AIX_zLinux_JDK11.jar*) file.
- *oui_install_group* — Specify the name of the group whose members have write permissions to this directory. The group name in the example is *wlsgrp*.

5. Copy the following content into a text editor and save it as *res.rsp*.

This is the silent response file. The directory where you save it is referred to here as *RESPONSE_DIR*.

```
[ENGINE]
```

```
#DO NOT CHANGE THIS.
```

```
Response File Version=1.0.0.0.0
```

```
[GENERIC]
```

```
#Set this to true if you wish to skip software updates
```

```
DECLINE_AUTO_UPDATES=true
```

```
#My Oracle Support User Name
```

```
MOS_USERNAME=
```

```
#My Oracle Support Password
```

```
MOS_PASSWORD=<SECURE VALUE>
```

```
#If the Software updates are already downloaded and available
on your local system, then specify the path to the directory where
these patches are available and set SPECIFY_DOWNLOAD_LOCATION to true
AUTO_UPDATES_LOCATION=
```

```
#Proxy Server Name to connect to My Oracle Support
SOFTWARE_UPDATES_PROXY_SERVER=
```

```
#Proxy Server Port
SOFTWARE_UPDATES_PROXY_PORT=
```

```
#Proxy Server Username
SOFTWARE_UPDATES_PROXY_USER=
```

```
#Proxy Server Password
SOFTWARE_UPDATES_PROXY_PASSWORD=<SECURE VALUE>
```

```
#The oracle home location. This can be an existing Oracle Home or a new⇒
Oracle Home
ORACLE_HOME=
```

```
#Set this variable value to the Installation Type selected.
e.g. WebLogic Server, Coherence, Complete with Examples.
INSTALL_TYPE=WebLogic Server
```

6. Use a text editor to enter the full path for ORACLE_HOME; for example:

```
#The oracle home location. This can be an existing Oracle Home or a new⇒
Oracle Home
ORACLE_HOME=/home/wls14110
```

Oracle WebLogic will be installed into the ORACLE_HOME directory entered here. This must be a new directory; do not enter a directory that has been used previously.

7. If this is the first time you are installing on your system (meaning there is no pre-existing Oracle inventory location), use the following commands to perform a silent installation.

These commands use res.rsp as the name for the response file.

- For Linux or Oracle Solaris on SPARC:

```
$JAVA_HOME/bin/java -jar ./fmw_14.1.1.0_wls.jar -silent -responseFile ⇒
RESPONSE_DIR/res.rsp -invPtrLoc INVENTORY_DIR/oraInst.loc
```

- For IBM AIX:

```
$JAVA_HOME/bin/java -jar ./fmw_14.1.1.0_wls_lite_generic_AIX_zLinux_⇒
JDK11.jar -silent -responseFile RESPONSE_DIR/res.rsp -invPtrLoc ⇒
INVENTORY_DIR/oraInst.loc
```

- For HP-UX Itanium, the JVM parameter "-d64" is required:

```
$JAVA_HOME/bin/java -d64 -jar ./fmw_14.1.1.0_wls.jar -silent -⇒
responseFile RESPONSE_DIR/res.rsp -invPtrLoc INVENTORY_DIR/ora⇒
Inst.loc
```

8. If you have previously installed an Oracle product on your system and do not need to specify an Oracle inventory location, use the following commands to perform a silent installation:

- For Linux or Oracle Solaris on SPARC:

```
$JAVA_HOME/bin/java -jar ./fmw_14.1.1.0_wls.jar -silent -responseFile ⇒  
RESPONSE_DIR/res.rsp
```

- For IBM AIX:

```
$JAVA_HOME/bin/java -jar ./fmw_14.1.1.0_wls_lite_generic_AIX_zLinux_⇒  
JDK11.jar -silent -responseFile RESPONSE_DIR/res.rsp
```

- For HP-UX Itanium, the JVM parameter "-d64" is required:

```
$JAVA_HOME/bin/java -d64 -jar ./fmw_14.1.1.0_wls.jar -silent -⇒  
responseFile RESPONSE_DIR/res.rsp
```

9. After you enter the appropriate command from the previous steps, the installer is launched in silent mode, and a progress indicator tracks the installation.

When the installation is complete, you should see a completion message such as "The installation of Oracle Fusion Middleware 14.1.1 WebLogic Server and Coherence completed successfully."

Task 14-1-5: Configuring JDK for Daylight Savings Time Change

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

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

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

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

The JDK being used for different operating systems is different. For Oracle WebLogic 14.1.1.0, refer to the `commBaseEnv.cmd` (for Microsoft Windows), or `commBaseEnv.sh` (for UNIX) file under `WLS_HOME\oracle_common\common\bin` to determine the setting for `JAVA_HOME` and the exact name and location for the JDK being used by your Oracle WebLogic server. `WLS_HOME` is the directory where Oracle WebLogic is installed.

3. Download the appropriate updater utility for your operating system from the JDK vendor.

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

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

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

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

See Also

Timezone Updater Tool, Oracle Technology Network,
<https://www.oracle.com/java/technologies/javase/tzupdater-readme.html>

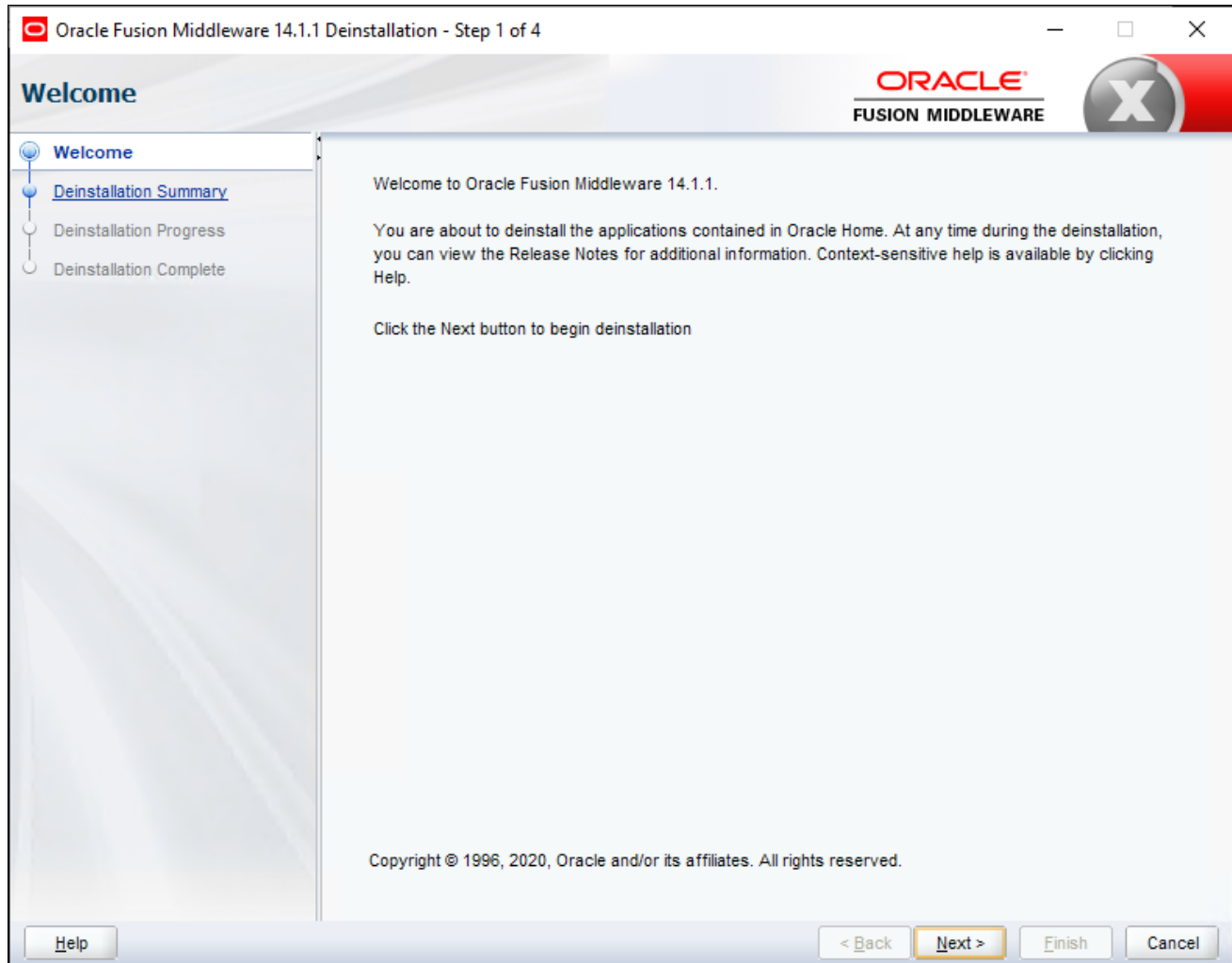
Task 14-1-6: Removing the Oracle WebLogic Installation on Microsoft Windows

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

1. Before running the deinstaller, stop all servers and processes associated with the Oracle home you are going to remove.

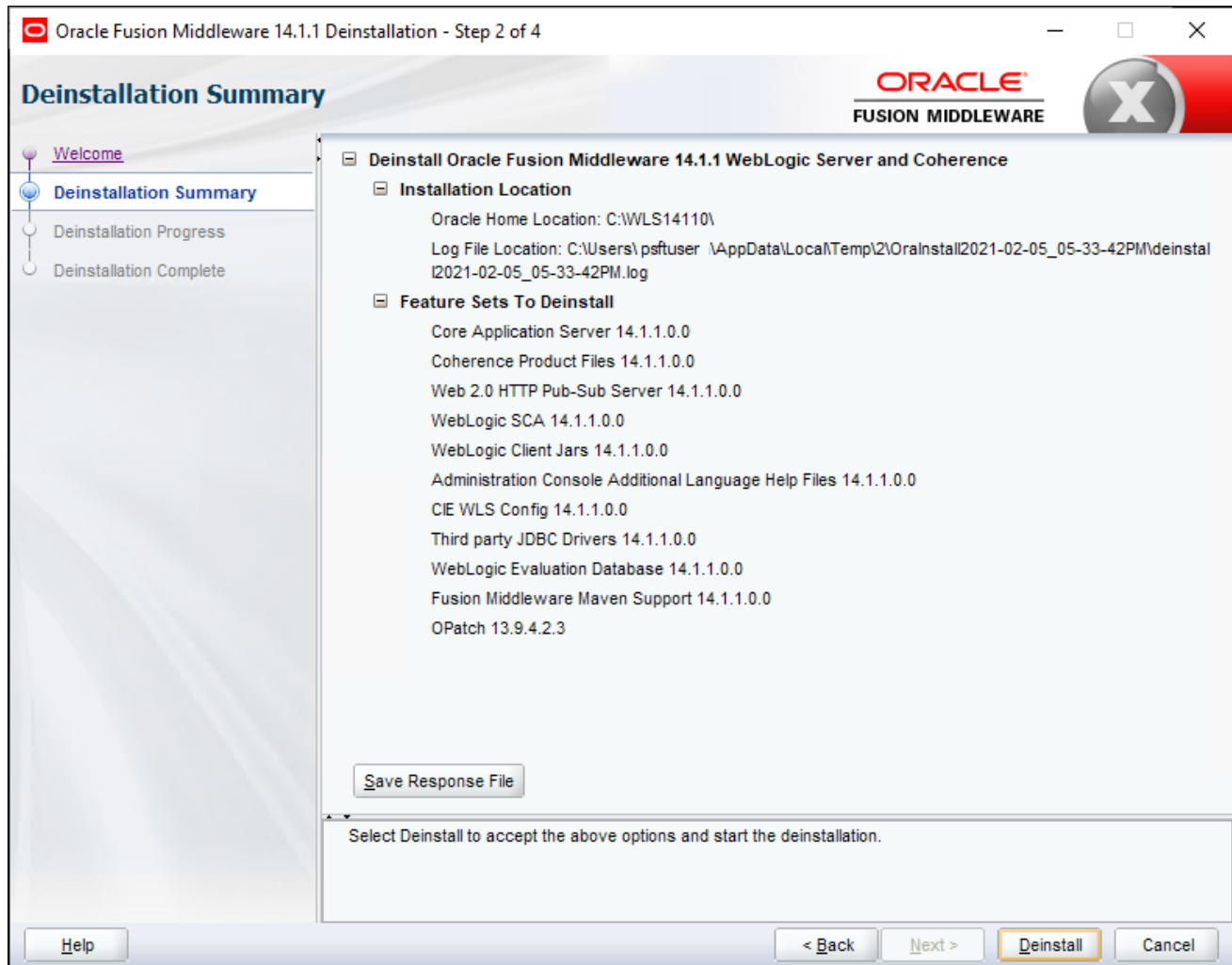
2. Change directory to the `WLS_HOME\oui\bin` folder and run the `deinstall.cmd` script.

You see one or two command prompts with progress messages, and then the Welcome window appears. `WLS_HOME` is the location where you installed your Oracle WebLogic 14.1.1.0, for example `C:\WLS1411`. Click Next on the Welcome window.



Oracle Fusion Middleware 14.1.1 Deinstallation - Step 1 of 4

3. Verify the components that you want to uninstall on the summary page (by default all components are selected as shown in this example).

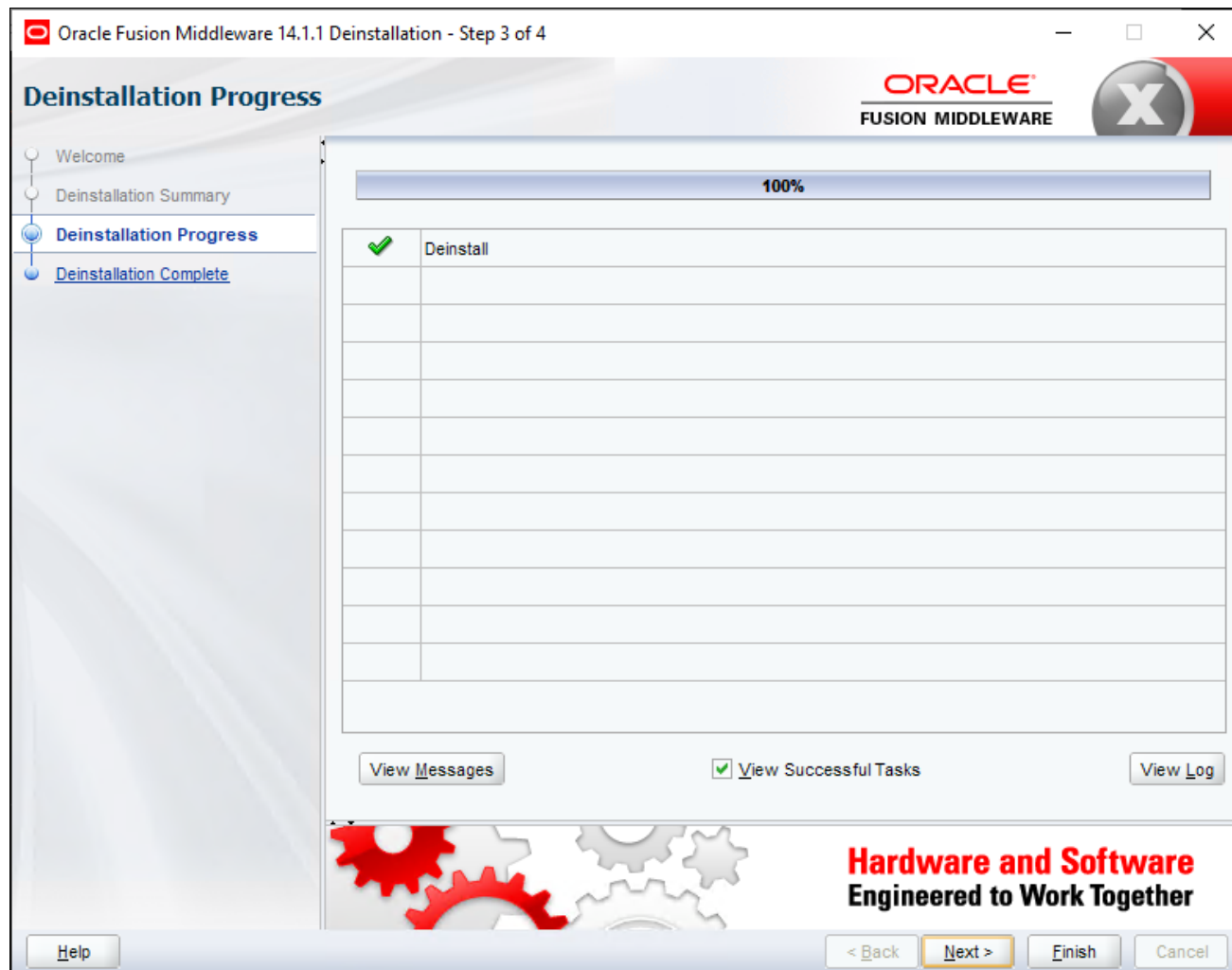


Oracle Fusion Middleware 14.1.1 Deinstallation - Step 2 of 4

4. Click the Save Response File button and browse to a location to save the file, which you can use for a silent mode deinstallation at another time.

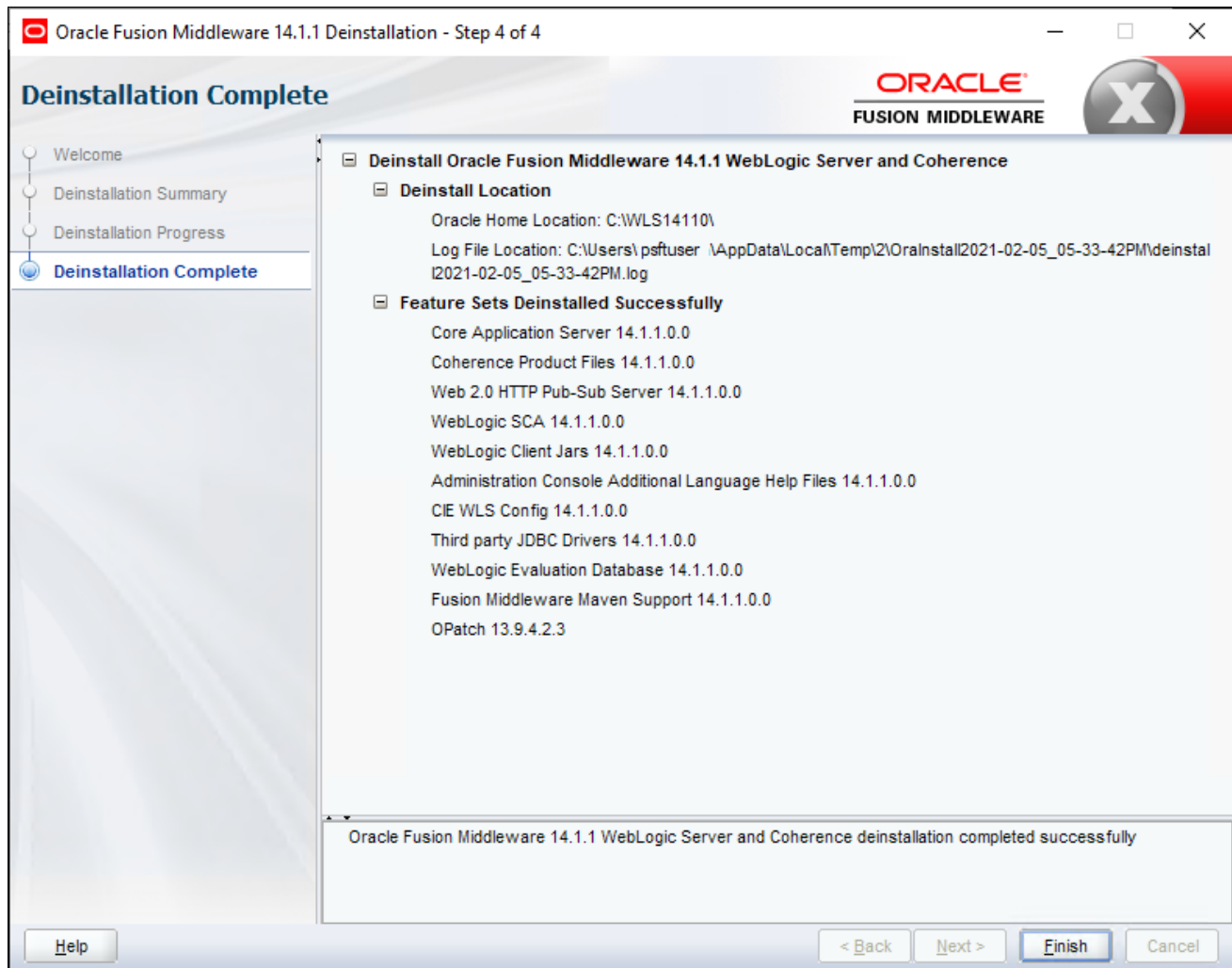
See Removing the Oracle WebLogic Installation on UNIX.

Click Deinstall. A progress indicator appears. Click Next when the tasks are complete, as shown in this example.



Oracle Fusion Middleware 14.1.1 Deinstallation - Step 3 of 4

- Click Finish on the Deinstallation Complete window.



Oracle Fusion Middleware 14.1.1 Deinstallation - Step 4 of 4

- Remove the `WLS_HOME` directory manually after the deinstallation.

Task 14-1-7: Removing the Oracle WebLogic Installation on UNIX

To remove the installation on UNIX, you run in console mode, and use a response file.

Note. The previous section, Removing the Oracle WebLogic Installation on Microsoft Windows, included a step in which you saved a response file. You can edit and use this response file for different operating system platforms.

To remove the Oracle WebLogic installation on UNIX in silent mode:

- Before running the deinstaller, stop all servers and processes associated with the Oracle home you are going to remove.
- If you need to create a response file, copy the following content into a text editor and save it.

This is the silent response file, referred to here as `RESPONSE_DIR/response.txt`.

```
[ENGINE]
```

```
#DO NOT CHANGE THIS.
Response File Version=1.0.0.0.0
```

```
[GENERIC]
```

```
#This will be blank when there is nothing to be de-installed in⇒
distribution level
SELECTED_DISTRIBUTION=WebLogic Server~14.1.1.0
```

```
#The oracle home location. This can be an existing Oracle Home or a new⇒
Oracle Home
ORACLE_HOME=
```

3. Edit the ORACLE_HOME line to add the location where you installed Oracle WebLogic 14.1.1.0; for example:

```
#The oracle home location. This can be an existing Oracle Home or a new⇒
Oracle Home
ORACLE_HOME=/home/wls14110
```

4. Change directory to *WLS_HOME*/oui/bin and locate the deinstall.sh script.

WLS_HOME is the location where you installed your Oracle WebLogic 14.1.1.0.

5. Run the following command.

For *INVENTORY_DIR*, specify the full directory path containing the Oracle installer inventory file, oraInst.loc.

See Installing Oracle WebLogic on UNIX in Silent Mode.

```
./deinstall.sh -silent -response RESPONSE_DIR/response.txt -invPtrLoc ⇒
INVENTORY_DIR/oraInst.loc
```

6. An indicator shows the progress of the removal process, followed by a completion message such as "The uninstall of Oracle Fusion Middleware 14.1.1.0 WebLogic Server and Coherence completed successfully."
7. Remove the *WLS_HOME* directory manually to complete the deinstallation.

Chapter 15A

Configuring the Application Server on Windows

This chapter discusses:

- Understanding the Application Server
- Prerequisites
- Creating a Wallet for the SSL/TLS Setup
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain

Understanding the Application Server

The information in this chapter is provided to help you configure your PeopleSoft application server.

Note. COBOL is not needed for PeopleSoft PeopleTools or for PeopleSoft Applications that contain no COBOL programs. Check the information on My Oracle Support, and your application-specific documentation, for the details on whether your application requires COBOL.

Oracle supports a Microsoft Windows application server to use with any of our supported databases for the PeopleSoft installation. For detailed information, consult the certification information on My Oracle Support. The application server support can be found on the certification pages for PeopleSoft systems.

You can install the application server using either a "logical" or "physical" three-tier configuration.

- Installing the application server on the same machine as the database server is known as a logical three-tier configuration. For your initial PeopleSoft installation, Oracle suggests that you install a logical configuration to simplify setup.
- Installing the application server on a machine separate from the database server machine is known as a physical three-tier configuration.

The configuration and log files for application server domains reside in *PS_CFG_HOME*. If you do not set a *PS_CFG_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
%USERPROFILE%\psft\pt\<peopletools_version>
```

See "Preparing for Installation," Defining Installation Locations.

Note. You can start application servers as a Windows service, which means that administrators no longer need to manually start each application server that runs on a Windows machine.

See Also

"Preparing for Installation," Understanding PeopleSoft Servers and Clients

"Setting Up Process Scheduler on Windows," Starting Process Scheduler as a Windows Service

PeopleTools: System and Server Administration, "Using PSADMIN Menus"

PeopleTools: Data Management

My Oracle Support, Certifications

"Setting Up the Install Workstation"

"Installing and Compiling COBOL on Windows"

Prerequisites

Before beginning this procedure, you should have completed the following tasks:

- Installed the application server files.
See "Preparing for Installation," Planning Your Initial Configuration.
See "Deploying Mid-Tier Components."
- Installed the supported version of Oracle Tuxedo
See "Installing Oracle Tuxedo."
- Set up SSL/TLS protocol for the workstation connection.
The Secure Socket Layers/Transport Layer Security (SSL/TLS) protocol is supported for Workstation Listener and Jolt Listener ports for the current PeopleSoft PeopleTools release. The application server domain configuration requires a wallet.
See Creating a Wallet for the SSL/TLS Setup.
See *PeopleTools: Security Administration*, "Installing Web Server-Based Digital Certificates."
- Granted authorization to a PeopleSoft user ID to start the application server.
The database configuration procedure includes a step for setting up the user ID with authorization to start the application server. See the application-specific installation instructions for information on the user IDs for your PeopleSoft application. See the *PeopleTools: Security Administration* product documentation for information on PeopleSoft PeopleTools delivered user profiles.
See "Creating a Database on UNIX," Running the Database Configuration Wizard.
See "Creating a Database Manually on Windows," Creating Data Mover Import Scripts.
See "Creating a Database Manually on UNIX," Creating Data Mover Import Scripts.
- Run the following SQL statements on your database server to review and if needed, update the PSCLASSDEFN table:

```
SELECT CLASSID, STARTAPPSERVER FROM PSCLASSDEFN
WHERE CLASSID IN (SELECT OPRCLASS FROM PSOPRCLS WHERE OPRID='<OPRID>')
UPDATE PSCLASSDEFN SET STARTAPPSERVER=1 WHERE CLASSID='<CLASSID>'
```

Note. Installers typically use VP1 or PS to test the application server. If these users are deleted or their passwords are changed, the application server will no longer be available. To avoid this problem, you can set up a new operator (called PSADMIN or PSASID, for instance) with privileges to start the application server. If you do this, you can use the new operator for your application servers and you won't need to change the password each time VP1 or PS is changed.

Task 15A-1: Creating a Wallet for the SSL/TLS Setup

This section discusses:

- Understanding Wallets
- Creating a Wallet with orapki
- Creating a Wallet with OpenSSL

Task 15A-1-1: Understanding Wallets

Before you configure the application server to use the SSL/TLS protocol, you need a wallet. Use these instructions to create wallets for the application server and workstation client. Wallets store security credentials (for example, private key, server certificate, CA certificate) for the application server and workstation client. You can create a wallet using OpenSSL, or orapki for Oracle databases.

Note. The term "Oracle Wallet" is sometimes used in the software and documentation, for example in PSADMIN custom configuration, to refer to wallets on all RDBMS. In this context it does not refer to an entity specific to an Oracle RDBMS.

In addition to the application server wallet, you may need to configure the keystore for the Web server (PIA). Web server domains use Keystore files to contain security credentials. Keystore files are created and managed using keytool commands, or the PeopleSoft delivered pskeymanager.

In the case that the application server and Web server communicate by SSL, both the wallet and keystore should be configured. For example, suppose a connection request is initiated from the Web server (which is acting as a client), to the application server (which is acting as the server). The application server needs to produce a certificate from the configured Oracle Wallet, which it will provide to the Web server. The Web server's keystore should contain the CA certificate that the server certificate sent by the application server.

See Also

E-AS: / E-WL: How to Enable Jolt SSL Without Creating a Wallet? My Oracle Support, Doc ID 2961285.1

PeopleTools: System and Server Administration, "Implementing WebLogic SSL Keys and Certificates."

"Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode," Configuring the SSL/TLS Port for JSL

Task 15A-1-2: Creating a Wallet with orapki

This section discusses:

- Creating a Server Wallet for the Application Server Domain with orapki
- Creating a Client Wallet for Workstation Clients with orapki
- Adding the Server's Certificate to the Client's Trust Store with orapki

Creating a Server Wallet for the Application Server Domain with orapki

On an Oracle database, you can use the orapki command-line utility to create a wallet.

See the Oracle database security documentation for more information on orapki.

To create a server wallet for the application server domain:

1. Enter this command to create the server wallet:

```
orapki wallet create -wallet <server_wallet> -pwd <server_wallet_
password>
```

For example:

```
orapki wallet create -wallet wallet.psft -pwd ServerPassword
```

2. Enter this command to add a self-signed certificate to the wallet:

Note. Distinguished name is the unique name of a directory entry. It is comprised of all of the individual names of the parent entries back to the root entry of the directory information tree. See the Oracle database security documentation for more information.

```
orapki wallet add -wallet <server_wallet> -dn <distinguished_name> ->
keysize 1024 -self_signed -validity 3650 -pwd <server_wallet_password>
```

For example:

```
orapki wallet add -wallet wallet.psft -dn user_dn -keysize 1024 -self_
signed -validity 3650 -pwd ServerPassword
```

Creating a Client Wallet for Workstation Clients with orapki

To create a client wallet for workstation clients:

1. Enter this command to create the workstation client wallet:

```
orapki wallet create -wallet <client_wallet> -pwd <client_wallet_
password>
```

For example:

```
orapki wallet create -wallet wallet.wscpsft -pwd ClientPassword
```

2. Add a self-signed certificate to the wallet with this command:

```
orapki wallet add -wallet <client_wallet> -dn <distinguished_name> ->
keysize 1024 -self_signed -validity 3650 -pwd <client_wallet_password>
```

For example:

```
orapki wallet add -wallet wallet.wscpsft -dn user_dn -keysize 1024 ->
self_signed -validity 3650 -pwd ClientPassword
```

3. Export a public key from the server certificate with this command:

```
orapki wallet export -wallet <server_wallet> -dn <distinguished_name> ->
cert <server_wallet>/<server_certificate> -pwd <server_password>
```

For example:

```
orapki wallet export -wallet wallet.psft -dn user_dn -cert wallet.psft⇒
/psft.cer -pwd ServerPassword
```

4. Add the public key from the server certificate to the client certificate with this command:

```
orapki wallet add -wallet <client_wallet> -trusted_cert -cert <server_⇒
wallet>/<certificate> -pwd <client_password>
```

For example:

```
orapki wallet add -wallet wallet.wscpsft -trusted_cert -cert $PWD⇒
/wallet.psft/psft.cer -pwd ClientPassword
```

5. Use a tool such as OpenSSL to remove the client wallet password:

- a. Change directory to the client wallet that you created, called wallet.wscpsft in this example::

```
cd wallet.wscpsft
```

- b. Make a backup copy of the wallet, ewallet.p12:

On Microsoft Windows:

```
xcopy ewallet.p12 oldwallet.p12
```

- c. Run this command:

```
openssl pkcs12 -clcerts -nokeys -in oldwallet.p12 -out⇒
certificate.crt -password pass:<client_password> -passin pass:⇒
<client_password>
```

- d. Run this command:

```
openssl pkcs12 -cacerts -nokeys -in oldwallet.p12 -out ca-cert.ca -⇒
password pass:<client_password> -passin pass:<client_password>
```

- e. Run this command:

```
openssl pkcs12 -nocerts -in oldwallet.p12 -out private.key -password⇒
pass:<client_password> -passin pass:<client_password> -passout pass:⇒
temp
```

- f. Run this command:

```
openssl rsa -in private.key -out NewKeyFile.key -passin pass:temp
```

- g. Run the command to create the PEM.pem file.

This file is created to copy the public key and root certificates.

On Microsoft Windows:

```
type certificate.crt ca-cert.ca >PEM.pem
```

- h. Run this command:

```
openssl pkcs12 -export -nodes -in PEM.pem -inkey NewKeyFile.key -out⇒
ewallet.p12 -passout pass:TrustedCertsOnlyNoPWNeeded
```

Adding the Server's Certificate to the Client's Trust Store with orapki

To complete the setup, add the application server's certificate to the workstation client's trust store:

1. Export the public key from the server certificate:

```
orapki wallet export -wallet <server_wallet> -dn <distinguished_name> ->
cert <server_wallet>/<certificate> -pwd <server_password>
```

For example:

```
orapki wallet export -wallet wallet.psft -dn user_dn -cert wallet.psft->
/psft.cer -pwd ServerPassword
```

2. Change directory to the JDK/bin directory for the Oracle installation.

```
cd %ORACLE_HOME%\jdk\bin
```

3. Add the certificate to the trust store found in the web server directory for the application server domain.

```
keytool -import -file <server_wallet>/<certificate> -alias srv_cert ->
keystore <PIA_HOME>\webserver\<DOMAIN_NAME>\piaconfig\keystore\pskey ->
storepass password -noprompt
```

For example, on Microsoft Windows:

```
keytool -import -file wallet.server/caCert.crt -alias srv_cert ->
keystore C:\user\psft\pt\8.61\webserver\ps\piaconfig\keystore\pskey ->
storepass password -noprompt
```

Task 15A-1-3: Creating a Wallet with OpenSSL

This section discusses:

- Defining OpenSSL Options
- Creating a Server Wallet for the Application Server Domain with OpenSSL
- Creating a Client Wallet for the Workstation Client with OpenSSL
- Adding the Server's Certificate to the Client's Trust Store with OpenSSL

Defining OpenSSL Options

An example of an OpenSSL command that can be used to create a wallet is as follows.

For more information, see the OpenSSL documentation.

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in server.crt ->
chain -CAfile caCert.crt -passout pass:<password>
```

- **-export**: indicates that a PKCS 12 file is being created
- **-chain**: specifies that an attempt is made to include the entire certificate chain of the user certificate
- **-inkey**: specifies the private key file
- **-in**: specifies the file that contains the user certificate and any other certificates in the certificate chain

- **-CAfile:** specifies a file containing trusted certificates
- **-out:** specifies the output file name, which must be ewallet.p12 for an Oracle Wallet for PeopleSoft installations.
- **-passin:** specifies the password for the private key file
- **-passout:** specifies the password for the newly created wallet

Creating a Server Wallet for the Application Server Domain with OpenSSL

This section gives an example of creating a wallet for the application server with the open-source tool OpenSSL.

1. Create a directory, for example wallet.server.

For example on Microsoft Windows:

```
mkdir C:\wallet.server
```

2. Change directory to wallet.server.

```
cd wallet.server
```

3. Enter the following command:

```
openssl genrsa -out server.key 4096
```

4. Enter the following command.

```
openssl req -new -key server.key -out server.csr -subj <subject>
```

For example:

```
openssl req -new -key server.key -out server.csr -subj '/C=country/CN=>commonName'
```

The *<subject>* values in this step and step 7 are used to replace the specified data in an input request, and output a modified request. The format for *<subject>* is

'/type0=value0/type1=value1/type2=...'. Characters must be escaped with a backslash (\), and no spaces are skipped. Use the following fields:

- */C* — Country
- */CN* — Common name
- */L* — Location
- */O* — Organization
- */OU* — Organizational Unit
- */ST* — State

5. Enter the following command:

```
openssl genrsa -out caCert.key 4096
```

6. Enter the following command,

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj =><subject>
```

For example:

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj=>
'/C=US/OU=Class 2 Public Primary Certification Authority/O=My=>
Organization'
```

7. Enter the following command:

```
openssl x509 -req -days 730 -in server.csr -CA caCert.crt -CAkey ca=>
Cert.key -set_serial 01 -out server.crt
```

8. Enter the following command to create the wallet ewallet.p12 and specify the server password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in=>
server.crt -chain -CAfile caCert.crt -passout pass:<server_password>
```

Creating a Client Wallet for the Workstation Client with OpenSSL

This section gives an example of creating a client wallet with the open-source tool OpenSSL.

1. Create a directory, for example wallet.client, and change to that directory.

```
mkdir wallet.client
cd wallet.client
```

2. Copy the server's trust store to the client wallet.

```
cp wallet.server\caCert.crt wallet.client
cp wallet.server\caCert.key wallet.client
```

3. Enter these commands:

```
openssl genrsa -out client.key 4096
```

4. Run this command:

```
openssl req -new -key client.key -out client.csr -subj <subject>
```

For example:

```
openssl req -new -key client.key -out client.csr -subj '/C=country/CN=>
commonName'
```

5. Run this command:

```
openssl x509 -req -days 730 -in client.csr -CA caCert.crt -CAkey ca=>
Cert.key -set_serial 01 -out client.crt
```

6. Enter the following command to create the wallet ewallet.p12 and specify the client password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey client.key -in=>
client.crt -chain -CAfile caCert.crt -passout pass:<client_password>
```

7. Remove the client wallet password:

- a. Make a backup copy of the wallet, ewallet.p12:

On Microsoft Windows:

```
xcopy ewallet.p12 oldwallet.p12
```

- b. Run this command:

```
openssl pkcs12 -clcerts -nokeys -in oldwallet.p12 -out⇒
certificate.crt -password pass:<client_password> -passin pass:⇒
<client_password>
```

- c. Run this command:

```
openssl pkcs12 -cacerts -nokeys -in oldwallet.p12 -out ca-cert.ca -⇒
password pass:C<client_password> -passin pass:<client_password>
```

- d. Run this command:

```
openssl pkcs12 -nocerts -in oldwallet.p12 -out private.key -password⇒
pass:<client_password> -passin pass:<client_password> -passout pass:⇒
temp
```

- e. Run this command:

```
openssl rsa -in private.key -out NewKeyFile.key -passin pass:temp
```

- f. Run the command to create the PEM.pem file.

This file is created to copy the public key and root certificates.

On Microsoft Windows:

```
type certificate.crt ca-cert.ca >PEM.pem
```

- g. Run this command:

```
openssl pkcs12 -export -nodes -in PEM.pem -inkey NewKeyFile.key -out⇒
ewallet.p12 -passout pass:TrustedCertsOnlyNoPWNeeded
```

Adding the Server's Certificate to the Client's Trust Store with OpenSSL

To complete the setup, add the application server's certificate to the workstation client's trust store:

1. Change directory.

```
cd %ORACLE_HOME%\jdk\bin
```

2. Add the certificate to the trust store found in the web server directory for the application server domain.

```
keytool -import -file <server_wallet>/<certificate> -alias srvcert -⇒
keystore <PIA_HOME>\webserver\<DOMAIN_NAME>\piaconfig\keystore\pskey -⇒
storepass password -noprompt
```

For example, on Microsoft Windows:

```
keytool -import -file wallet.server/caCert.crt -alias srvcert -keystore⇒
C:\user\psft\pt\8.61\webserver\ps\piaconfig\keystore\pskey -storepass⇒
password -noprompt
```

Task 15A-2: Setting Up COBOL for Remote Call

Remote Call is a PeopleCode feature that launches a COBOL program from an application server, PeopleCode program or a batch Application Engine PeopleCode program and waits for it to complete execution before continuing. The execution of a COBOL program via Remote Call is completely independent of the Process Scheduler. You need to set up a COBOL runtime environment and COBOL executables on the application server to support Remote Call.

See "Installing and Compiling COBOL on Windows."

Note. If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

Task 15A-3: Verifying Database Connectivity

Before continuing, it is critical to verify connectivity to the database that the application server domain will use. To verify connectivity, connect to the database server from the application server using the native SQL tool on the application server.

For Oracle use SQL*Plus.

Task 15A-4: Creating, Configuring, and Starting an Initial Application Server Domain

This section discusses:

- Creating, Configuring, and Starting the Application Server Domain
- Testing the Three-Tier Connection
- Importing an Existing Application Server Domain Configuration
- Setting Up a Custom Application Server Domain Configuration
- Troubleshooting Common Errors

Task 15A-4-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----  
PeopleSoft Server Administration  
-----  
  
PS_CFG_HOME:   C:\Users\JSMITH\psft\pt\8.61  
PS_HOME:       C:\psft\pt\ps_home8.61  
PS_APP_HOME:   C:\psft\pt\hcm_app_home
```


- 1) Application Server
- 2) Process Scheduler
- 3) Search Server
- 4) Web (PIA) Server
- 5) Switch Config Home
- 6) Service Setup
- 7) Replicate Config Home
- 8) Refresh Config Home
- q) Quit

Command to execute (1-8, q): **1**

Note. Make sure you change the directory from the *PS_HOME* on the file server to the *PS_HOME*, or high-level directory, on the application server.

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS_CFG_HOME*/peopletools.properties file with the current *PS_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS_CFG_HOME* that you are working with was used previously from a different *PS_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS_CFG_HOME*.
- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME*/peopletools.properties file. Continue with the next step.

3. Specify **1** for Application Server and press ENTER.
4. Specify **2** to Create a domain and press ENTER.

```
-----
PeopleSoft Application Server Administration
-----
```

- 1) Administer a domain
- 2) Create a domain
- 3) Delete a domain
- 4) Import domain configuration
- q) Quit

Command to execute (1-4, q): **2**

5. Specify the domain name.

In this example the domain name is HRDMO:

Please enter name of domain to create : **HRDMO**

Domain names are case sensitive and must be eight US-ASCII characters or less. The domain name is used to create a directory name under the *PS_CFG_HOME*\appserv directory.

See the information on *PS_CFG_HOME* and server domain configuration in the *PeopleTools: System and Server Administration* product documentation.

- 6. Specify 4 for small if this is your initial domain installation, press ENTER.
See *PeopleTools: System and Server Administration*.
- 7. After the system creates the domain, the PeopleSoft Application Server Administration menu appears with a Quick-configure menu similar to this:

```
-----
Quick-configure menu -- domain: HRDMO
-----

          Features                               Settings
          =====                               =====
1) Pub/Sub Servers      : No                    17) DBNAME           : [HRDMO]
2) Quick Server         : No                    18) DBTYPE           : [ORACLE]
3) Query Servers       : No                    19) UserId           : [QEDMO]
4) Jolt                 : Yes                   20) UserPswd         : []
5) Jolt Relay          : No                    21) DomainID         : [TESTSERV]
6) WSL                  : No                    22) AddToPATH        : [c:\psft\db⇒
\oracle-server\19.3.0.0\bin]
7) PC Debugger          : No                    23) ConnectID        : [people]
8) Event Notification   : Yes                   24) ConnectPswd      : []
9) MCF Servers         : No                    25) DomainConnectPswd: []
10) Perf Collator       : No                    26) PHC Remote Admin Settings: []
11) Analytic Servers    : Yes                   27) WSL Port         : [7000]
12) Domains Gateway     : No                    28) WSL SSL Port     : [7010]
13) Push Notifications  : No                    29) JSL Port         : [9000]
                                     30) JSL SSL Port     : [9010]
                                     31) JRAD Port        : [9100]

          Actions
          =====
14) Load config as shown
15) Custom configuration
16) Edit environment settings
   h) Help for this menu
   q) Return to previous menu

HINT: Enter 17 to edit DBNAME, then 14 to load

Enter selection (1-28, h, or q):
```

Note. If your installation includes more than one application server domain on a given machine, read the troubleshooting section for more information.

See Troubleshooting Common Errors.

8. If you need to change any of the features, type the number next to the feature name and press ENTER.

If you need to modify the values for any of the settings, enter the number next to the parameter name, press ENTER, then type the new value, and press ENTER again. This table lists the parameters and gives brief descriptions.

Parameter	Description
WSL	Configure the WSL to boot by changing option 6 to Yes. To change the option, enter 6 and press ENTER.
Event Notification	To use the PeopleSoft Report Distribution system, select Yes for Event Notification. This enables the REN server, which is used by the "run to window" functionality of the Report Distribution system. <i>The Report Distribution system, MultiChannel Framework, and Optimization Framework use REN servers.</i> You must also remember to enter an Authentication Token Domain when installing the PeopleSoft Pure Internet Architecture (PIA).
MCF Servers	If you are configuring an application server domain to support applications based on the PeopleSoft MultiChannel Framework (such as PeopleSoft CRM ERMS), select Yes for MCF Servers. See the information on configuring REN Servers in the product documentation. See <i>PeopleTools: MultiChannel Framework</i>.
AddToPATH	Enter the path to the 64-bit connectivity software. For example: C:\psft\db\oracle-server\19.3.0.0⇒ \bin
UserPswd	Enter the password value that you specified during the database configuration or installation. Reenter each password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.
ConnectPswd	Enter the password value that you specified during the database configuration or installation. Reenter each password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.

Parameter	Description
DomainConnectPswd	If you want to set a Domain Connection password, enter 25 and specify a password of 8 characters or less. Reenter the password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu. The Domain Connection password is optional. You can specify a value or leave it blank. However, if you do specify a value, you must supply the same value when installing the PeopleSoft Pure Internet Architecture, to ensure the connection to the Application Server.

9. Use setting 26) PHC Remote Admin Settings if you want to enable JMX agents for use with PeopleSoft Health Center (PHC).

The remote administration settings are enabled by default. After you select this setting, you must supply a port, user name and password.

Note. If you do not disable the setting and you do not supply any information, you see a message when you configure the Application Server domain, such as "Enable PS JMX is not 0, but some of PS JMX parameters (userId, userPwd) are empty. PHC will not be able to work."

You can also enable SSL for the JMX agents for improved security. If you enable SSL, you are prompted to supply the location, password, and type for the SSL keystore and truststore.

See *PeopleTools: Performance Monitor*, Configuring PeopleSoft Health Center.

Note. You can also specify the necessary values using the custom configuration. The Enable Remote Administration parameters are in the PSTOOLS section.

- a. Enter 26 to access the PHC Remote Admin Settings.
- b. Accept the value 1 to enable remote administration, or change to 0 to disable.
Enter new value for Enable Remote Administration [1]:
- c. Enter the port number to use for remote administration of domain processes.
All embedded JMX agents will use the port in the JMX service URL.
Enter new value for Remote Administration Port [10100]:
- d. Enter the user name for remote administration connections.
Enter new value for Remote Administration UserId [psftuser]:
- e. Enter a user password two times.

Note. You do not have to enter an encrypted password. The psadmin utility encrypts the password during configuration.

Enter new value for Remote Administration Password []:
Reenter the Remote Administration Password :

- f. Enter 1 if you want to enable SSL for the JMX agents, or 0 if you want to disable it.
The default is 0, disabled.

Enter new value for Remote Administration SSL Enabled [1]:

- g. If you enable SSL, enter the location for the SSL keystore.

Enter new value for Remote Administration SSL Keystore [piahome]:

- h. Enter the password two times for the SSL keystore.

The password is masked.

Enter new value for Remote Administration SSL Keystore Password :

Reenter the Remote Administration SSL Keystore Password :

- i. Enter the format for the keystore, PKCS12 or JKS.

Enter new value for Remote Administration SSL Keystore Type [PKCS12]:

- j. Enter the location for the SSL truststore.

Enter new value for Remote Administration SSL Truststore [piahome]:

- k. Enter the password two times for the SSL truststore.

Enter new value for Remote Administration SSL Truststore Password :

Reenter the Remote Administration SSL Truststore Password :

- l. Enter the format for the truststore, PKCS12 or JKS.

Enter new value for Remote Administration SSL Truststore Type ⇒
[PKCS12]:

- m. Continue with the Quick-configure menu.

- 10. To set up the Workstation Listener for SSL/TLS protocol, enter 28 for WSL SSL Port, and specify an available port number.

The default port number is 7010.

- 11. To set up the Jolt listener for SSL/TLS protocol, enter 30 for JSL SSL Port, and specify an available port number.

The default port number is 9010.

- 12. Use the custom configuration menu to specify the settings for SSL/TLS encryption and the wallet location.

See *PeopleTools: Integration Broker*, "Installing Web Server-Based Digital Certificates."

- a. To specify the minimum and maximum encryption for SSL/TLS, select 15 for Custom Configuration.

- b. Reply y, and press ENTER, at this prompt:

Do you want to change any config values (y/n) [n]?

- c. Reply n, and press ENTER, at this prompt:

Do you want to change any values (y/n) [n]?

Continue to enter n, for No, for all sections until you see the Workstation Listener section, and then answer y. (Be aware that there are several sections.)

- d. If necessary, change the values for WSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

Values for config section - Workstation Listener
Address=%PS_MACH%

```

Port=7000
SSL Port=7010
WSL Min Encryption=0
WSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=60
Init Timeout=5
Tuxedo Compression Threshold=5000

```

- e. Accept the defaults for the next series of questions until asked if you want Oracle Wallet configured. In this case, answer *y*.

- f. Specify the values for the location, name, and password for the Oracle Wallet that you created.

```

Values for config section - Oracle Wallet
SEC_PRINCIPAL_LOCATION=%PS_SERVDIR%\security
SEC_PRINCIPAL_NAME=psft
SEC_PRINCIPAL_PASSWORD=

```

- g. Accept the defaults for the next series of questions until asked if you want the JOLT Listener configured. In this case, answer *y*

- h. If necessary, change the values for JSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

```

Values for config section - JOLT Listener
Address=%PS_MACH%
Port=9000
SSL Port=9010
JSL Min Encryption=0
JSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=10
Init Timeout=5
Client Connection Mode=ANY
Jolt Compression Threshold=1000000

```

- i. Accept the default for the remaining questions; the configuration will load automatically.

13. If you are installing a REN server:

- a. Enter *15* for Custom configuration.

- b. Reply *y*, and press ENTER, at this prompt:

```
Do you want to change any config values (y/n) [n]?
```

- c. Reply *n*, and press ENTER, at this prompt:

```
Do you want to change any values (y/n) [n]?
```

Continue to enter *n*, for No, for all sections until you see the PSRENSRV section, and then answer *y*. (Be aware that there are several sections.)

- d. Leave the defaults for all settings except for `default_auth_token`, which you should set to the domain name

for your web server.

Note. The default `_auth_token` setting should be identical to the Authentication Token Domain that you set during PIA installation.

Note. When you use the DPK setup script, the `psft_configuration.yaml` file includes the value for `_auth_token_domain` in the `pia_domain_list` area.

See "Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode."

- e. Accept the defaults for the next series of questions until asked if you want Event Notification configured. In this case, answer *y*.
 - f. Accept the default for the remaining questions; the configuration will load automatically.
14. If you are not installing a REN server, after you update the settings you can load the configuration by entering *14*, for Load config as shown, from the Quick-configure menu.
 15. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.
 16. Select *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

17. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.
18. If you want to shut down your PeopleSoft application server domain later, follow these simple steps:
 - a. From the PeopleSoft Domain Administration menu, enter *2* for Domain shutdown menu.
 - b. From the PeopleTools Domain Shutdown Menu, enter *1* for Normal shutdown.
You see messages about the application server processes being shut down. The number of processes stopped will vary depending on the number of processes that started when you booted the domain.
 - c. Enter *q* to quit the PeopleSoft Domain Administration Menu.

Task 15A-4-2: Testing the Three-Tier Connection

If you get an error message when you try to sign in to the Application Server in Application Designer (that is, three-tier mode), it may be due to an incorrect server name or port number, because the database server is not running, or because the application server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Start Configuration Manager with one of these methods:
 - Locate PeopleTools 8.61, Configuration Manager in the list of programs, for example from the Start menu or the Apps screen.
 - Run `PS_HOME\bin\client\winx86\pscfg.exe`.
2. Select the Profile Tab. Highlight Default and select Edit.
3. On the Edit Profile dialog box, select *Application Server* as the Connection Type.
4. Enter values for these parameters:
 - Application Server Name
 - Machine Name or IP Address
 - Port Number (WSL)

Enter the WSL port that you specified when creating the application server domain. If you want to use the SSL/TLS protocol for connection, enter the WSL SSL port number (the default is 7010). If you want to use the LLE protocol, enter the non-SSL WSL port (the default is 7000).

- Domain Connection Password and Domain Connection Password (confirm)

Specify a value for the password, and repeat your entry for confirmation. The password must be 8 characters or less.

This password is optional. If you did not set the Domain Connection Password in Configuration Manager or in the Application Server configuration, leave it blank. If you specify a password, you must supply the same password during the PeopleSoft Pure Internet Architecture installation for a successful connection between the Application Server and PeopleSoft Pure Internet Architecture.

See the *PeopleTools: System and Server Administration* product documentation for information on using PeopleSoft Configuration Manager and PSADMIN.

- Wallet Location

Enter the location that you specified for the client wallet.

- Wallet Name

Enter the name for the client wallet that you specified.

5. Select Set to add the definition to the list and select OK to close the dialog box.
6. On the Configuration Manager dialog box, select the Startup tab.
7. Select *Application Server* from the Database Type list. Your application server name should be displayed.
8. Enter the values for User ID, Connect ID, and password.
9. Click OK.

Note. Confirm that the application server is running by booting it from PSADMIN. Select *1, Boot this domain*, from the PeopleSoft Domain administration menu. Select option *1, Boot (Serial Boot)* or *2, Parallel Boot*, from the PeopleSoft Domain Boot menu.

10. Start Application Designer with one of these methods:

- Locate PeopleTools 8.61, Application Designer, in the list of programs, for example from the Start menu or the Apps screen.
- Run `PS_HOME\bin\client\winx86\pside.exe`.

11. In the PeopleSoft Signon dialog box:

- Select *Application Server* as the Connection Type.
- Confirm that the Application Server Name is correct.
- Enter values for User ID and password.

12. Select OK to open Application Designer.

If you see the following error message when you try to sign in to the Application Server in Application Designer:

```
Network API: "Could not connect to application server 'Application Server=>
Name' Make sure the PeopleTools authentication server (PSAUTH) is booted."
```

This may indicate a problem with the Domain Connection Password. For example, if the password set in the Application Server configuration file does not match the value in Configuration Manager, you may get this error message when you sign in to Application Designer in three-tier mode. Check the Application Server logs for more information.

Task 15A-4-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous PeopleSoft PeopleTools release, you can import it to create a new domain. You can import an existing domain configuration by specifying a file or by specifying the path to an existing domain. To import from a file, you must use the `psappsrv.cfg` file found inside an existing application server domain folder (you must specify the full path to `psappsrv.cfg`). This file can be located anywhere in the file system, but must be named `psappsrv.cfg`. To import from an existing domain configuration that you created in the current PeopleSoft PeopleTools release, you must specify `PS_CFG_HOME` and the name of an existing application server domain. (If you are importing a domain from a release before PeopleSoft PeopleTools 8.50, note that the domains were created in `PS_HOME`, and that is the path that you should provide.)

To import an existing application server domain configuration:

1. Go to the `PS_HOME\appserv` directory and run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----

PS_CFG_HOME:  C:\Users\JSMITH\psft\pt\8.61
PS_HOME:      C:\psft\pt\ps_home8.61
PS_APP_HOME:  C:\psft\pt\hcm_app_home

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Service Setup
7) Replicate Config Home
8) Refresh Config Home
q) Quit

Command to execute (1-8, q): 1
```

The `PS_CONFIG_HOME` location, also referred to as Config Home, corresponds to the current working directory. For information on how Config Home is set, see the *PeopleTools: System and Server Administration* product documentation.

Note. Make sure you change the directory from the `PS_HOME` on the file server to the `PS_HOME` on the application server.

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
```

Alternatively, you may recreate all of your domains.
Please press any key to continue...

This indicates that one of these situations exists:

- The *PS_CFG_HOME* that you are working with was used previously from a different *PS_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS_CFG_HOME*.
- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME/peopletools.properties* file. Continue with the next step.

3. Specify *1* for Application Server.

4. Specify *4* for Import domain configuration.

PeopleSoft Application Server Administration

- 1) Administer a domain
- 2) Create a domain
- 3) Delete a domain
- 4) Import domain configuration
- q) Quit

Command to execute (1-4, q): **4**

5. Specify *1* for Import regular domain.

PeopleSoft Import Application Server Configuration

- 1) Import regular domain
- 2) Import IB Master Configuration
- q) Quit

Command to execute (1-2, q) : **1**

6. Specify whether to import the domain configuration from a file (option 1) or from an existing application domain configuration (option 2).

PeopleSoft Import Application Server Configuration

- 1) Import from file
- 2) Import from application domain
- q) Quit

Command to execute (1-2, q) :

7. If you selected *1*, provide the full path to the file *psappsrv.cfg*, and then specify the name of the domain you want to create. If you selected *2*, go to the next step.

Enter full path to configuration file
:C:\temp\oldconfig\psappsrv.cfg

```
Enter domain name to create
:HRDMO
```

8. If you selected 2, to Import from application domain, provide the full path to the *PS_CFG_HOME* of the existing domain.

If importing from PeopleTools 8.49 or earlier, provide *PS_HOME* for *PS_CFG_HOME*.

```
Enter PS_CFG_HOME of domain you wish to import: C:\Users\JSMITH\psft\pt⇒
\8.61
```

If applicable, choose among the existing application server domains in the specified *PS_CFG_HOME*:

Tuxedo domain list:

- 1) HRDBA
- 2) HRDBB

```
Select domain number to import: 1
```

```
Enter a name for new domain: HRDMO
```

After you create the domain, continue to the next task to verify that the imported configuration parameters are appropriate for the newly created domain. You may need to change the following values:

- **DBName**
DBName can be the same or different, depending on which database the application server needs to point to.
- **DBType**
DBType depends on the database type of DBName.
- **UserId and UserPswd**
UserId and UserPswd are the user's choice.
- **Workstation Listener Port**
Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine.
- **Jolt Listener Port**
Jolt Listener Port will also need a different number if the old domain will be up and running in the same machine.
- **Jolt Relay Adapter Listener Port**
Jolt Relay Adapter Listener Port will need a different number if the old domain will be up and running in the same machine, and will be using Jolt Relay Adapter.

Task 15A-4-4: Setting Up a Custom Application Server Domain Configuration

The Quick-configure menu is initially displayed when you choose to configure your domain. This menu is intended for the commonly adjusted parameters—those most likely to change from domain to domain. However, there are additional configuration parameters that are not available through the Quick-configure menu. For such configuration parameters, you must use the Custom Configuration option, which you can access from the Quick-configure menu. Feel free to skip this procedure if you have already created and configured your Application Server using the Quick-configure menu and want to move forward.

The following steps assume you will be using PSADMIN to specify parameter settings.

To reconfigure an application server domain:

1. Go to the *PS_HOME*\appserv directory and run the `psadmin` command.

Note. Make sure you change the directory from the *PS_HOME* on the file server to the *PS_HOME* on the application server.

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS_CFG_HOME*/peopletools.properties file with the current *PS_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS_CFG_HOME* that you are working with was used previously from a different *PS_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS_CFG_HOME*.
- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME*/peopletools.properties file. Continue with the next step.

3. Specify *1* for Application Server and press ENTER.
4. Specify *1* for Administer a domain and press ENTER.
5. Select the domain to administer and press ENTER.
6. Specify *4* for Configure this domain and press ENTER.

The option Configure this domain performs the following tasks:

- Shuts down the application server, if it is running. (Shutdown is required since the binary file PSTUXCFG must be deleted and re-created to enable new configuration values. If there are no processes running when shutdown is attempted, an error will be displayed but the script continues on. This is normal.)
- Initiates an interactive dialog, prompting for configuration parameters.
- Updates psappsrv.cfg, generates psappsrv.ubb, and internally invokes Tuxedo's tmlodcf executable to create binary file PSTUXCFG used during the domain boot process.

7. Specify *15* for Custom Configuration and press ENTER.

8. Respond to this prompt:

```
Do you want to change any config values (y/n):
```

- Specify *y* to start an interactive dialog to change or examine parameter values, as described in the next step.

Oracle recommends this option for more experienced users.

- Specify *n* if you have already edited psappsrv.cfg, skip the next step, and continue with the step to select server process options.

9. Complete the interactive dialog to specify configuration parameters.

Configuration parameters are grouped into sections. For each section, you are asked whether you want to change any parameters in that section, as in the following example:

```
Values for config section - Startup
      DBName=
      DBType=
      UserId=
      UserPswd=
      ConnectId=
      ConnectPswd=
      ServerName=
      StandbyDBName=
      StandbyDBType=
      StandbyUserId=
      StandbyUserPswd=
      InMemoryDBName=
      InMemoryDBType=
Do you want to change any values (y/n)? [n]:  y
```

- Specify *y* to change any parameter values for the current configuration section displayed.
You are prompted for each parameter value. Either specify a new value, or press ENTER to accept the default if applicable. After pressing ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- Enter the user ID and user password that has security to start the application server. All application databases are delivered with one or more application server security users, usually PS or VP1.
The password you enter is hidden by masking characters.
- The parameters StandbyDBName, StandbyDBType, StandbyUserId, and StandbyUserPswd, are used for a standby database in an Oracle environment.
See *PeopleTools: Data Management*, "Implementing Oracle Active Data Guard."
- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- The WSL, JSL, and JRAD port numbers, which are found in other sections of the configuration parameters, have default values of 7000, 9000, and 9100, respectively. These values must be unique for each application server domain. You may alter the port values if necessary to ensure that they are unique
- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

Note. When setting up your application server, make a note of the values you use for Database Name, Application Server Name (the machine name), and JSL Port. You will need to use these same values when installing the PeopleSoft Pure Internet Architecture.

See *PeopleTools: System and Server Administration*.

10. Select server process options.

At this point, you will be prompted to select server process options. If this is your initial installation, we suggest you accept the defaults. A message similar to this appears:

```
Setting Log Directory to the default... [PS_SERVDIR\LOGS]
Configuration file successfully created.
Loading new configuration...
```

The message "Loading new configuration" indicates that PSADMIN is generating a binary file named

PSTUXCFG, which is used to boot the application server. At this point, your application server should be properly configured.

Task 15A-4-5: Troubleshooting Common Errors

For troubleshooting help, you can access a log file through the PSADMIN PeopleSoft Domain Administration menu. The following list includes possible errors and troubleshooting tips.

- Use PSADMIN menu option 6 for Edit configuration/log files menu to check for errors in `<PS_CFG_HOME>\appserv\<domain>\LOGS\APPSRV_mmdd.log` and `<PS_CFG_HOME>\appserv\<domain>\LOGS\TUXLOG.mmddyy`.
- If a PeopleSoft server such as PSAPPSRV fails, examine your configuration parameters. The failure of the PSAPPSRV process is often signalled by the message "Assume failed"—which means the process has failed to start. Check the SIGNON section for misspelled or invalid database name, an invalid or unauthorized OprId, or ConnectId or ServerName is missing or invalid. Finally, make sure the database connectivity is set correctly.
- If a WSL (or JSL) fails to start, try specifying another port number (it may be in use already by another application server domain process).
- If you are unable to start the BBL, check that your Tuxedo is installed fully and that the directory really exists.
- If the installation includes more than one application server domain on a single machine, before booting the second domain, adjust the REN server configuration to avoid conflict in one of these ways:
 - Use PSADMIN to disable Event Notification (option 8 on the Quick-configure menu) for the second and subsequent application server domains.
 - Change default_http_port to a value other than 7180.

See Also

PeopleTools: System and Server Administration

PeopleTools: MultiChannel Framework

Chapter 15B

Configuring the Application Server on UNIX

This chapter discusses:

- Understanding the Application Server
- Understanding the Application Server Domain Processes
- Prerequisites
- Creating a Wallet for the SSL/TLS Setup
- Setting Environment Variables
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain

Understanding the Application Server

The information in this chapter is provided to help you configure your PeopleSoft application server.

Note. COBOL is not needed for PeopleSoft PeopleTools or for PeopleSoft Applications that contain no COBOL programs. Check the information on My Oracle Support, and your application-specific documentation, for the details on whether your application requires COBOL.

Oracle supports application servers for the PeopleSoft installation on several UNIX and Linux operating system platforms. For detailed information, consult the certification information on My Oracle Support. The application server support can be found on the certification pages for PeopleSoft systems.

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

You can install the application server using either a "logical" or "physical" three-tier configuration.

- Installing the application server on the same machine as the database server is known as a logical three-tier configuration. For your initial PeopleSoft installation, Oracle suggests that you install a logical configuration to simplify setup.
- Installing the application server on a machine separate from the database server machine is known as a physical three-tier configuration.

The configuration and log files for application server domains reside in *PS_CFG_HOME*. If you do not set a *PS_CFG_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
$HOME/psft/pt/<peopletools_version>
```

See "Preparing for Installation," Defining Installation Locations.

See Also

"Preparing for Installation," Understanding PeopleSoft Servers and Clients

PeopleTools: System and Server Administration, "Using PSADMIN Menus"

PeopleTools: Data Management

My Oracle Support, Certifications

"Setting Up the Install Workstation"

"Installing and Compiling COBOL on UNIX"

Understanding the Application Server Domain Processes

On most platforms (IBM AIX, Oracle Solaris, Linux, and HP-UX Itanium) no changes are required from the system defaults, in order to allow the "small" and "development" domains that are shipped with PeopleSoft PeopleTools to boot successfully.

Refer to the performance documentation for guidance in configuring your system to run larger domains. That document describes the suggested minimum kernel settings for running PeopleSoft PeopleTools in a real-world environment.

See PeopleTools Performance Guidelines Red Paper on My Oracle Support (search for the article title).

Permanently changing system-wide parameters generally requires root privileges, and any changes to the kernel configuration of your operating system should be done with care.

If you are installing on HP-UX 11.31 operating systems, be aware that hosts with machine names longer than 8 characters require the HP-UX kernel configuration `uname_eoverflow` to be set to 0 (zero).

Prerequisites

Before beginning this procedure, you should have completed the following tasks:

- Installed the application server files.
See "Preparing for Installation," Planning Your Initial Configuration.
See "Deploying Mid-Tier Components."
- Installed the supported version of Oracle Tuxedo
See "Installing Oracle Tuxedo."
- Set up SSL/TLS protocol for the workstation connection.
The Secure Socket Layers/Transport Layer Security (SSL/TLS) protocol is supported for Workstation Listener and Jolt Listener ports for the current PeopleSoft PeopleTools release. The application server domain configuration requires a wallet.
See Creating a Wallet for the SSL/TLS Setup.
See *PeopleTools: Security Administration*, "Installing Web Server-Based Digital Certificates."
- Granted authorization to a PeopleSoft user ID to start the application server.
The database configuration procedure includes a step for setting up the user ID with authorization to start the

application server. See the application-specific installation instructions for information on the user IDs for your PeopleSoft application. See the *PeopleTools: Security Administration* product documentation for information on PeopleSoft PeopleTools delivered user profiles.

See "Creating a Database on UNIX," Running the Database Configuration Wizard.

See "Creating a Database Manually on Windows," Creating Data Mover Import Scripts.

See "Creating a Database Manually on UNIX," Creating Data Mover Import Scripts.

- Run the following SQL statements on your database server to review and if needed, update the PSCLASSDEFN table:

```
SELECT CLASSID, STARTAPPSERVER FROM PSCLASSDEFN
WHERE CLASSID IN (SELECT OPRCLASS FROM PSOPRCLS WHERE OPRID='<OPRID>')
UPDATE PSCLASSDEFN SET STARTAPPSERVER=1 WHERE CLASSID='<CLASSID>'
```

Note. Installers typically use VP1 or PS to test the application server. If these users are deleted or their passwords are changed, the application server will no longer be available. To avoid this problem, you can set up a new operator (called PSADMIN or PSASID, for instance) with privileges to start the application server. If you do this, you can use the new operator for your application servers and you won't need to change the password each time VP1 or PS is changed.

Task 15B-1: Creating a Wallet for the SSL/TLS Setup

This section discusses:

- Understanding Wallets
- Creating a Wallet with orapki
- Creating a Wallet with OpenSSL

Task 15B-1-1: Understanding Wallets

Before you configure the application server to use the SSL/TLS protocol, you need a wallet. Use these instructions to create wallets for the application server and workstation client. Wallets store security credentials (for example, private key, server certificate, CA certificate) for the application server and workstation client. You can create a wallet using OpenSSL, or orapki for Oracle databases.

Note. The term "Oracle Wallet" is sometimes used in the software and documentation, for example in PSADMIN custom configuration, to refer to wallets on all RDBMS. In this context it does not refer to an entity specific to an Oracle RDBMS.

In addition to the application server wallet, you may need to configure the keystore for the Web server (PIA). Web server domains use Keystore files to contain security credentials. Keystore files are created and managed using keytool commands, or the PeopleSoft delivered pskeymanager.

In the case that the application server and Web server communicate by SSL, both the wallet and keystore should be configured. For example, suppose a connection request is initiated from the Web server (which is acting as a client), to the application server (which is acting as the server). The application server needs to produce a certificate from the configured Oracle Wallet, which it will provide to the Web server. The Web server's keystore should contain the CA certificate that the server certificate sent by the application server.

See Also

E-AS: / E-WL: How to Enable Jolt SSL Without Creating a Wallet? My Oracle Support, Doc ID 2961285.1

PeopleTools: System and Server Administration, "Implementing WebLogic SSL Keys and Certificates."

"Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode," Configuring the SSL/TLS Port for JSL

Task 15B-1-2: Creating a Wallet with orapki

This section discusses:

- Creating a Server Wallet for the Application Server Domain with orapki
- Creating a Client Wallet for Workstation Clients with orapki
- Adding the Server's Certificate to the Client's Trust Store with orapki

Creating a Server Wallet for the Application Server Domain with orapki

On an Oracle database, you can use the orapki command-line utility to create a wallet.

See the Oracle database security documentation for more information on orapki.

To create a server wallet for the application server domain:

1. Enter this command to create the server wallet:

```
orapki wallet create -wallet <server_wallet> -pwd <server_wallet_>
password>
```

For example:

```
orapki wallet create -wallet wallet.psft -pwd ServerPassword
```

2. Enter this command to add a self-signed certificate to the wallet:

Note. Distinguished name is the unique name of a directory entry. It is comprised of all of the individual names of the parent entries back to the root entry of the directory information tree. See the Oracle database security documentation for more information.

```
orapki wallet add -wallet <server_wallet> -dn <distinguished_name> ->
keysize 1024 -self_signed -validity 3650 -pwd <server_wallet_password>
```

For example:

```
orapki wallet add -wallet wallet.psft -dn user_dn -keysize 1024 -self_>
signed -validity 3650 -pwd ServerPassword
```

Creating a Client Wallet for Workstation Clients with orapki

To create a client wallet for workstation clients:

1. Enter this command to create the workstation client wallet:

```
orapki wallet create -wallet <client_wallet> -pwd <client_wallet_>
password>
```

For example:

```
orapki wallet create -wallet wallet.wscpsft -pwd ClientPassword
```

2. Add a self-signed certificate to the wallet with this command:

```
orapki wallet add -wallet <client_wallet> -dn <distinguished_name> ->
keysize 1024 -self_signed -validity 3650 -pwd <client_wallet_password>
```

For example:

```
orapki wallet add -wallet wallet.wscpsft -dn user_dn -keysize 1024 ->
self_signed -validity 3650 -pwd ClientPassword
```

3. Export a public key from the server certificate with this command:

```
orapki wallet export -wallet <server_wallet> -dn <distinguished_name> ->
cert <server_wallet>/<server_certificate> -pwd <server_password>
```

For example:

```
orapki wallet export -wallet wallet.psft -dn user_dn -cert wallet.psft=>
/psft.cer -pwd ServerPassword
```

4. Add the public key from the server certificate to the client certificate with this command:

```
orapki wallet add -wallet <client_wallet> -trusted_cert -cert <server_>
wallet>/<certificate> -pwd <client_password>
```

For example:

```
orapki wallet add -wallet wallet.wscpsft -trusted_cert -cert $PWD=>
/wallet.psft/psft.cer -pwd ClientPassword
```

5. Use a tool such as OpenSSL to remove the client wallet password:

- a. Change directory to the client wallet that you created, called wallet.wscpsft in this example::

```
cd wallet.wscpsft
```

- b. Make a backup copy of the wallet, ewallet.p12:

On UNIX:

```
cp ewallet.p12 oldwallet.p12
```

- c. Run this command:

```
openssl pkcs12 -clcerts -nokeys -in oldwallet.p12 -out=>
certificate.crt -password pass:<client_password> -passin pass:>
<client_password>
```

- d. Run this command:

```
openssl pkcs12 -cacerts -nokeys -in oldwallet.p12 -out ca-cert.ca ->
password pass:<client_password> -passin pass:<client_password>
```

- e. Run this command:

```
openssl pkcs12 -nocerts -in oldwallet.p12 -out private.key -password=>
pass:<client_password> -passin pass:<client_password> -passout pass:>
```

temp

- f. Run this command:

```
openssl rsa -in private.key -out NewKeyFile.key -passin pass:temp
```

- g. Run the command to create the PEM.pem file.

This file is created to copy the public key and root certificates.

On UNIX:

```
cat certificate.crt ca-cert.ca >PEM.pem
```

- h. Run this command:

```
openssl pkcs12 -export -nodes -in PEM.pem -inkey NewKeyFile.key -out⇒  
ewallet.p12 -passout pass:TrustedCertsOnlyNoPWNeeded
```

Adding the Server's Certificate to the Client's Trust Store with orapki

To complete the setup, add the application server's certificate to the workstation client's trust store:

1. Export the public key from the server certificate:

```
orapki wallet export -wallet <server_wallet> -dn <distinguished_name> -⇒  
cert <server_wallet>/<certificate> -pwd <server_password>
```

For example:

```
orapki wallet export -wallet wallet.psft -dn user_dn -cert wallet.psft⇒  
/psft.cer -pwd ServerPassword
```

2. Change directory to the JDK/bin directory for the Oracle installation.

```
cd %ORACLE_HOME%\jdk\bin
```

3. Add the certificate to the trust store found in the web server directory for the application server domain.

```
keytool -import -file <server_wallet>/<certificate> -alias srv_cert -⇒  
keystore <PIA_HOME>\webserver\<DOMAIN_NAME>\piaconfig\keystore\pskey -⇒  
storepass password -noprompt
```

For example, on UNIX:

```
keytool -import -file wallet.server/caCert.crt -alias srv_cert -⇒  
keystore /home/psft_user/psft/pt/8.61/webserver/ps/piaconfig/keystore⇒  
/pskey -storepass password -noprompt
```

Task 15B-1-3: Creating a Wallet with OpenSSL

This section discusses:

- Defining OpenSSL Options
- Creating a Server Wallet for the Application Server Domain with OpenSSL
- Creating a Client Wallet for the Workstation Client with OpenSSL
- Adding the Server's Certificate to the Client's Trust Store with OpenSSL

Defining OpenSSL Options

An example of an OpenSSL command that can be used to create a wallet is as follows.

For more information, see the OpenSSL documentation.

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in server.crt ->
chain -CAfile caCert.crt -passout pass:<password>
```

- **-export:** indicates that a PKCS 12 file is being created
- **-chain:** specifies that an attempt is made to include the entire certificate chain of the user certificate
- **-inkey:** specifies the private key file
- **-in:** specifies the file that contains the user certificate and any other certificates in the certificate chain
- **-CAfile:** specifies a file containing trusted certificates
- **-out:** specifies the output file name, which must be ewallet.p12 for an Oracle Wallet for PeopleSoft installations.
- **-passin:** specifies the password for the private key file
- **-passout:** specifies the password for the newly created wallet

Creating a Server Wallet for the Application Server Domain with OpenSSL

This section gives an example of creating a wallet for the application server with the open-source tool OpenSSL.

1. Create a directory, for example wallet.server.

For example on UNIX:

```
mkdir /home/wallet.server
```

2. Change directory to wallet.server.

```
cd wallet.server
```

3. Enter the following command:

```
openssl genrsa -out server.key 4096
```

4. Enter the following command.

```
openssl req -new -key server.key -out server.csr -subj <subject>
```

For example:

```
openssl req -new -key server.key -out server.csr -subj '/C=country/CN=>
commonName'
```

The *<subject>* values in this step and step 7 are used to replace the specified data in an input request, and output a modified request. The format for *<subject>* is

'/type0=value0/type1=value1/type2=...'. Characters must be escaped with a backslash (\), and no spaces are skipped. Use the following fields:

- /C — Country
- /CN — Common name
- /L — Location

- /O — Organization
- /OU — Organizational Unit
- /ST — State

5. Enter the following command:

```
openssl genrsa -out caCert.key 4096
```

6. Enter the following command,

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj =>
<subject>
```

For example:

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj=>
'/C=US/OU=Class 2 Public Primary Certification Authority/O=My=>
Organization'
```

7. Enter the following command:

```
openssl x509 -req -days 730 -in server.csr -CA caCert.crt -CAkey ca=>
Cert.key -set_serial 01 -out server.crt
```

8. Enter the following command to create the wallet ewallet.p12 and specify the server password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in=>
server.crt -chain -CAfile caCert.crt -passout pass:<server_password>
```

Creating a Client Wallet for the Workstation Client with OpenSSL

This section gives an example of creating a client wallet with the open-source tool OpenSSL.

1. Create a directory, for example wallet.client, and change to that directory.

```
mkdir wallet.client
cd wallet.client
```

2. Copy the server's trust store to the client wallet.

```
cp wallet.server\caCert.crt wallet.client
cp wallet.server\caCert.key wallet.client
```

3. Enter these commands:

```
openssl genrsa -out client.key 4096
```

4. Run this command:

```
openssl req -new -key client.key -out client.csr -subj <subject>
```

For example:

```
openssl req -new -key client.key -out client.csr -subj '/C=country/CN=>
commonName'
```

5. Run this command:

```
openssl x509 -req -days 730 -in client.csr -CA caCert.crt -CAkey ca=>
```

```
Cert.key -set_serial 01 -out client.crt
```

6. Enter the following command to create the wallet ewallet.p12 and specify the client password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey client.key -in⇒
client.crt -chain -CAfile caCert.crt -passout pass:<client_password>
```

7. Remove the client wallet password:

- a. Make a backup copy of the wallet, ewallet.p12:

On UNIX:

```
cp ewallet.p12 oldwallet.p12
```

- b. Run this command:

```
openssl pkcs12 -clcerts -nokeys -in oldwallet.p12 -out⇒
certificate.crt -password pass:<client_password> -passin pass:⇒
<client_password>
```

- c. Run this command:

```
openssl pkcs12 -cacerts -nokeys -in oldwallet.p12 -out ca-cert.ca -⇒
password pass:C<client_password> -passin pass:<client_password>
```

- d. Run this command:

```
openssl pkcs12 -nocerts -in oldwallet.p12 -out private.key -password⇒
pass:<client_password> -passin pass:<client_password> -passout pass:⇒
temp
```

- e. Run this command:

```
openssl rsa -in private.key -out NewKeyFile.key -passin pass:temp
```

- f. Run the command to create the PEM.pem file.

This file is created to copy the public key and root certificates.

On UNIX:

```
cat certificate.crt ca-cert.ca >PEM.pem
```

- g. Run this command:

```
openssl pkcs12 -export -nodes -in PEM.pem -inkey NewKeyFile.key -out⇒
ewallet.p12 -passout pass:TrustedCertsOnlyNoPWNeeded
```

Adding the Server's Certificate to the Client's Trust Store with OpenSSL

To complete the setup, add the application server's certificate to the workstation client's trust store:

1. Change directory.

```
cd %ORACLE_HOME%\jdk\bin
```

2. Add the certificate to the trust store found in the web server directory for the application server domain.

```
keytool -import -file <server_wallet>/<certificate> -alias srvcert -⇒
keystore <PIA_HOME>\webserver\<DOMAIN_NAME>\piaconfig\keystore\pskey -⇒
```

```
storepass password -noprompt
```

For example, on UNIX:

```
keytool -import -file wallet.server/caCert.crt -alias srvcert -keystore⇒  
/home/psft_user/psft/pt/8.61/webserve/ps/piaconfig/keystore/pskey -⇒  
storepass password -noprompt
```

Task 15B-2: Setting Environment Variables

Telnet to your UNIX system. Log in and ensure the following environment variables are set appropriately.

Note. The environment variables for Tuxedo must be set explicitly; they are not set by running `psconfig.sh`. These can be also set using the `.profile` file in the user's home directory.

- Set `$TUXDIR` to the correct Oracle Tuxedo installation directory. For example:
`TUXDIR=/home/user/Oracle/tuxedo22cR1; export TUXDIR`
- Add `$TUXDIR/lib` to the beginning of `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH`, whichever is appropriate for your platform. For example:
`LD_LIBRARY_PATH=$TUXDIR/lib:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH`
- Add `$TUXDIR/bin` to the beginning of `PATH`. For example:
`PATH=$TUXDIR/bin:$PATH; export PATH`

One method to ensure that the following PeopleSoft environment variables are set is to source `psconfig.sh`. Go to the `PS_HOME` directory, and enter the following command:

```
. ./psconfig.sh
```

Note. After running `psconfig.sh`, you can invoke the `psadmin` utility from any location.

Alternatively you can make sure the following environment variables are set in the `.profile` file in the user's home directory:

- Set `$ORACLE_HOME` to the correct Oracle installation. For example:
`ORACLE_HOME=/home/psft/db/oracle-server/19.3.0.0; export ORACLE_HOME`
- Add `$ORACLE_HOME/bin` to `PATH`. For example:
`PATH=$PATH:$ORACLE_HOME/bin; export PATH`
- Add `$ORACLE_HOME/lib` to `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH`, whichever is appropriate for your platform.
- Ensure that `$ORACLE_HOME/lib` is ahead of `$ORACLE_HOME/lib32` in the library path.
- Set `$ORACLE_SID` to the correct Oracle instance. For example:
`ORACLE_SID=hdmo; export ORACLE_SID`
- Set `$COBDIR` to the Micro Focus Visual COBOL installation directory. For example:
`COBDIR=/cobol/products/visualcobol_devhub_6.0; export COBDIR`

Note. If your application does not contain COBOL programs, you do not need to set the \$COBDIR environment variables.

- Add \$COBDIR/bin to the PATH. For example:
`PATH=$PATH:$COBDIR/bin;export PATH`
- Add \$COBDIR/lib to LD_LIBRARY_PATH, LIBPATH, or SHLIB_PATH, whichever is appropriate for your platform. For example:
`LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$COBDIR/lib;export LD_LIBRARY_PATH`
`LIBPATH=$LIBPATH:$COBDIR/lib;export LIBPATH`
`SHLIB_PATH=$SHLIB_PATH:$COBDIR/lib;export SHLIB_PATH`

Task 15B-3: Setting Up COBOL for Remote Call

Remote Call is a PeopleCode feature that launches a COBOL program from an application server, PeopleCode program or a batch Application Engine PeopleCode program and waits for it to complete execution before continuing. The execution of a COBOL program via Remote Call is completely independent of the Process Scheduler. You need to set up a COBOL runtime environment and COBOL executables on the application server to support Remote Call.

See "Installing and Compiling COBOL on UNIX."

Note. If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

Task 15B-4: Verifying Database Connectivity

Before continuing, it is critical to verify connectivity to the database that the application server domain will use. To verify connectivity, connect to the database server from the application server using the native SQL tool on the application server.

For Oracle use SQL*Plus.

Task 15B-5: Creating, Configuring, and Starting an Initial Application Server Domain

This section discusses:

- Creating, Configuring, and Starting the Application Server Domain
- Testing the Three-Tier Connection
- Importing an Existing Application Server Domain Configuration
- Setting Up a Custom Application Server Domain Configuration
- Troubleshooting Common Errors

Task 15B-5-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----
PS_CFG_HOME:  /home/JSMITH/peopletools/8.61
PS_HOME:      /opt/psft/pt/ps_home8.61
PS_APP_HOME:  /opt/psft/pt/hcm_app_home
```

```
1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
7) Refresh Config Home
q) Quit
```

Command to execute (1-7, q): **1**

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The `PS_CFG_HOME` that you are working with was used previously from a different `PS_HOME`. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this `PS_CFG_HOME`.
- You configured your environment such that `PS_CFG_HOME` is the same as `PS_HOME`. The first time you use PSADMIN to create a domain, it updates the `PS_CFG_HOME/peopletools.properties` file. Continue with the next step.

3. Specify `1` for Application Server and press ENTER.

4. Specify `2` to Create a domain and press ENTER.

```
-----
PeopleSoft Application Server Administration
-----
```

- 1) Administer a domain
- 2) Create a domain
- 3) Delete a domain
- 4) Import domain configuration
- q) Quit

Command to execute (1-4, q): **2**

5. Specify the domain name.

In this example the domain name is HRDMO:

Please enter name of domain to create : **HRDMO**

Domain names are case sensitive and must be eight characters or less. The domain name is used to create a directory name under the *PS_CFG_HOME/appserv* directory.

See the information on *PS_CFG_HOME* and server domain configuration in the *PeopleTools: System and Server Administration* product documentation.

6. Specify 4 for small if this is your initial domain installation, press ENTER.

See *PeopleTools: System and Server Administration*.

7. After the system creates the domain, the PeopleSoft Application Server Administration menu appears with a Quick-configure menu similar to this:

Quick-configure menu -- domain: HRDMO

Features =====		Settings =====	
1) Pub/Sub Servers	: No	17) DBNAME	: [HRDMO]
2) Quick Server	: No	18) DBTYPE	: [ORACLE]
3) Query Servers	: No	19) UserId	: [VP1]
4) Jolt	: Yes	20) UserPswd	: []
5) Jolt Relay	: No	21) DomainID	: [TESTSERV]
6) WSL	: No	22) AddToPATH	: [.]
7) PC Debugger	: No	23) ConnectID	: [people]
8) Event Notification	: Yes	24) ConnectPswd	: []
9) MCF Servers	: No	25) DomainConnectPswd	: []
10) Perf Collator	: No	26) PHC Remote Admin Settings	: []
11) Analytic Servers	: Yes	27) WSL Port	: [7000]
12) Domains Gateway	: No	28) WSL SSL Port	: [7010]
13) Push Notifications	: No	29) JSL Port	: [9000]
		30) JSL SSL Port	: [9010]
		31) JRAD Port	: [9100]
Actions =====			
14) Load config as shown			
15) Custom configuration			
16) Edit environment settings			
h) Help for this menu			
q) Return to previous menu			

HINT: Enter 17 to edit DBNAME, then 14 to load

Enter selection (1-28, h, or q):

Note. If your installation includes more than one application server domain on a given machine, read the troubleshooting section for more information.

See Troubleshooting Common Errors.

8. If you need to change any of the features, type the number next to the feature name and press ENTER.

If you need to modify the values for any of the settings, enter the number next to the parameter name, press ENTER, then type the new value, and press ENTER again. This table lists the parameters and gives brief descriptions.

Parameter	Description
WSL	Configure the WSL to boot by changing option 6 to Yes. To change the option, enter 6 and press ENTER.
Event Notification	To use the PeopleSoft Report Distribution system, select Yes for Event Notification. This enables the REN server, which is used by the "run to window" functionality of the Report Distribution system. <i>The Report Distribution system, MultiChannel Framework, and Optimization Framework use REN servers.</i> You must also remember to enter an Authentication Token Domain when installing the PeopleSoft Pure Internet Architecture (PIA).
MCF Servers	If you are configuring an application server domain to support applications based on the PeopleSoft MultiChannel Framework (such as PeopleSoft CRM ERMS), select Yes for MCF Servers. See the information on configuring REN Servers in the product documentation. See <i>PeopleTools: MultiChannel Framework</i>.
UserPswd	Enter the password value that you specified during the database configuration or installation. Reenter each password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.
ConnectPswd	Enter the password value that you specified during the database configuration or installation. Reenter each password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.
DomainConnectPswd	If you want to set a Domain Connection password, enter 25 and specify a password of 8 characters or less. Reenter the password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu. The Domain Connection password is optional. You can specify a value or leave it blank. However, if you do specify a value, you must supply the same value when installing the PeopleSoft Pure Internet Architecture, to ensure the connection to the Application Server.

9. Use setting 26) PHC Remote Admin Settings if you want to enable JMX agents for use with PeopleSoft

Health Center (PHC).

The remote administration settings are enabled by default. After you select this setting, you must supply a port, user name and password.

Note. If you do not disable the setting and you do not supply any information, you see a message when you configure the Application Server domain, such as "Enable PS JMX is not 0, but some of PS JMX parameters (userId, userPwd) are empty. PHC will not be able to work."

You can also enable SSL for the JMX agents for improved security. If you enable SSL, you are prompted to supply the location, password, and type for the SSL keystore and truststore.

See *PeopleTools: Performance Monitor*, Configuring PeopleSoft Health Center.

Note. You can also specify the necessary values using the custom configuration. The Enable Remote Administration parameters are in the PSTOOLS section.

- a. Enter 26 to access the PHC Remote Admin Settings.
- b. Accept the value 1 to enable remote administration, or change to 0 to disable.
Enter new value for Enable Remote Administration [1]:

- c. Enter the port number to use for remote administration of domain processes.
All embedded JMX agents will use the port in the JMX service URL.
Enter new value for Remote Administration Port [10100]:

- d. Enter the user name for remote administration connections.
Enter new value for Remote Administration UserId [psftuser]:

- e. Enter a user password two times.

Note. You do not have to enter an encrypted password. The psadmin utility encrypts the password during configuration.

Enter new value for Remote Administration Password []:
Reenter the Remote Administration Password :

- f. Enter 1 if you want to enable SSL for the JMX agents, or 0 if you want to disable it.
The default is 0, disabled.
Enter new value for Remote Administration SSL Enabled [1]:

- g. If you enable SSL, enter the location for the SSL keystore.
Enter new value for Remote Administration SSL Keystore [piahome]:

- h. Enter the password two times for the SSL keystore.
The password is masked.
Enter new value for Remote Administration SSL Keystore Password :
Reenter the Remote Administration SSL Keystore Password :

- i. Enter the format for the keystore, PKCS12 or JKS.
Enter new value for Remote Administration SSL Keystore Type [PKCS12]:

- j. Enter the location for the SSL truststore.

Enter new value for Remote Administration SSL Truststore [piahome]:

- k. Enter the password two times for the SSL truststore.

Enter new value for Remote Administration SSL Truststore Password :
Reenter the Remote Administration SSL Truststore Password :

- l. Enter the format for the truststore, PKCS12 or JKS.

Enter new value for Remote Administration SSL Truststore Type ⇒
[PKCS12]:

- m. Continue with the Quick-configure menu.

10. To set up the Workstation Listener for SSL/TLS protocol, enter 28 for WSL SSL Port, and specify an available port number.

The default port number is 7010.

11. To set up the Jolt listener for SSL/TLS protocol, enter 30 for JSL SSL Port, and specify an available port number.

The default port number is 9010.

12. Use the custom configuration menu to specify the settings for SSL/TLS encryption and the wallet location.

See *PeopleTools: Integration Broker*, "Installing Web Server-Based Digital Certificates."

- a. To specify the minimum and maximum encryption for SSL/TLS, select 15 for Custom Configuration.

- b. Reply *y*, and press ENTER, at this prompt:

Do you want to change any config values (y/n) [n]?

- c. Reply *n*, and press ENTER, at this prompt:

Do you want to change any values (y/n) [n]?

Continue to enter *n*, for No, for all sections until you see the Workstation Listener section, and then answer *y*. (Be aware that there are several sections.)

- d. If necessary, change the values for WSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

Values for config section - Workstation Listener

```
Address=%PS_MACH%
Port=7000
SSL Port=7010
WSL Min Encryption=0
WSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=60
Init Timeout=5
Tuxedo Compression Threshold=5000
```

- e. Accept the defaults for the next series of questions until asked if you want Oracle Wallet configured. In this case, answer *y*.

- f. Specify the values for the location, name, and password for the Oracle Wallet that you created.

Values for config section - Oracle Wallet

```
SEC_PRINCIPAL_LOCATION=%PS_SERVDIR%\security
SEC_PRINCIPAL_NAME=psft
SEC_PRINCIPAL_PASSWORD=
```

- g. Accept the defaults for the next series of questions until asked if you want the JOLT Listener configured. In this case, answer *y*
- h. If necessary, change the values for JSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

Values for config section - JOLT Listener

```
Address=%PS_MACH%
Port=9000
SSL Port=9010
JSL Min Encryption=0
JSL Max Encryption=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=10
Init Timeout=5
Client Connection Mode=ANY
Jolt Compression Threshold=1000000
```

- i. Accept the default for the remaining questions; the configuration will load automatically.

13. If you are installing a REN server:

- a. Enter *15* for Custom configuration.
- b. Reply *y*, and press ENTER, at this prompt:
Do you want to change any config values (y/n) [n]?

- c. Reply *n*, and press ENTER, at this prompt:
Do you want to change any values (y/n) [n]?

Continue to enter *n*, for No, for all sections until you see the PSRENSRV section, and then answer *y*. (Be aware that there are several sections.)

- d. Leave the defaults for all settings except for default_auth_token, which you should set to the domain name for your web server.

Note. The default_auth_token setting should be identical to the Authentication Token Domain that you set during PIA installation.

Note. When you use the DPK setup script, the psft_configuration.yaml file includes the value for auth_token_domain in the pia_domain_list area.

See "Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode."

- e. Accept the defaults for the next series of questions until asked if you want Event Notification configured. In this case, answer *y*.
- f. Accept the default for the remaining questions; the configuration will load automatically.

14. If you are not installing a REN server, after you update the settings you can load the configuration by entering *14*, for Load config as shown, from the Quick-configure menu.

15. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.
16. Select *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

17. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.
18. If you want to shut down your PeopleSoft application server domain later, follow these simple steps:
 - a. From the PeopleSoft Domain Administration menu, enter *2* for Domain shutdown menu.
 - b. From the PeopleTools Domain Shutdown Menu, enter *1* for Normal shutdown.
 You see messages about the application server processes being shut down. The number of processes stopped will vary depending on the number of processes that started when you booted the domain.
 - c. Enter *q* to quit the PeopleSoft Domain Administration Menu.

Task 15B-5-2: Testing the Three-Tier Connection

If you get an error message when you try to sign in to the Application Server in Application Designer (that is, three-tier mode), it may be due to an incorrect server name or port number, because the database server is not running, or because the application server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Start Configuration Manager with one of these methods:
 - Locate PeopleTools 8.61, Configuration Manager in the list of programs, for example from the Start menu or the Apps screen.
 - Run `PS_HOME\bin\client\winx86\pscfg.exe`.
2. Select the Profile Tab. Highlight Default and select Edit.
3. On the Edit Profile dialog box, select *Application Server* as the Connection Type.
4. Enter values for these parameters:
 - Application Server Name
 - Machine Name or IP Address
 - Port Number (WSL)

Enter the WSL port that you specified when creating the application server domain. If you want to use the SSL/TLS protocol for connection, enter the WSL SSL port number (the default is 7010). If you want to use the LLE protocol, enter the non-SSL WSL port (the default is 7000).

- Domain Connection Password and Domain Connection Password (confirm)

Specify a value for the password, and repeat your entry for confirmation. The password must be 8 characters or less.

This password is optional. If you did not set the Domain Connection Password in Configuration Manager or in the Application Server configuration, leave it blank. If you specify a password, you must supply the same password during the PeopleSoft Pure Internet Architecture installation for a successful connection between the Application Server and PeopleSoft Pure Internet Architecture.

See the *PeopleTools: System and Server Administration* product documentation for information on using PeopleSoft Configuration Manager and PSADMIN.

- Wallet Location

Enter the location that you specified for the client wallet.

- Wallet Name

Enter the name for the client wallet that you specified.

5. Select Set to add the definition to the list and select OK to close the dialog box.
6. On the Configuration Manager dialog box, select the Startup tab.
7. Select *Application Server* from the Database Type list. Your application server name should be displayed.
8. Enter the values for User ID, Connect ID, and password.
9. Click OK.

Note. Confirm that the application server is running by booting it from PSADMIN. Select *1*, Boot this domain, from the PeopleSoft Domain administration menu. Select option *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot menu.

10. Start Application Designer with one of these methods:
 - Locate PeopleTools 8.61, Application Designer, in the list of programs, for example from the Start menu or the Apps screen.
 - Run `PS_HOME\bin\client\winx86\pside.exe`.
11. In the PeopleSoft Signon dialog box:
 - Select *Application Server* as the Connection Type.
 - Confirm that the Application Server Name is correct.
 - Enter values for User ID and password.
12. Select OK to open Application Designer.

If you see the following error message when you try to sign in to the Application Server in Application Designer:

```
Network API: "Could not connect to application server 'Application Server=>
Name' Make sure the PeopleTools authentication server (PSAUTH) is booted."
```

This may indicate a problem with the Domain Connection Password. For example, if the password set in the Application Server configuration file does not match the value in Configuration Manager, you may get this error message when you sign in to Application Designer in three-tier mode. Check the Application Server logs for more information.

Task 15B-5-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous PeopleSoft PeopleTools release, you can import it to create a new domain. You can import an existing domain configuration by specifying a file or by specifying the path to an existing domain. To import from a file, you must use the `psappsrv.cfg` file found inside an existing application server domain folder (you must specify the full path to `psappsrv.cfg`). This file can be located anywhere in the file system, but must be named `psappsrv.cfg`. To import from an existing domain configuration that you created in the current PeopleSoft PeopleTools release, you must specify `PS_CFG_HOME` and the name of an existing application server domain. (If you are importing a domain from a release before PeopleSoft PeopleTools 8.50, note that the domains were created in `PS_HOME`, and that is the path that you should provide.)

To import an existing application server domain configuration:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----
PS_CFG_HOME:  /home/JSMITH/peopletools/8.61
PS_HOME:      /opt/psft/pt/ps_home8.61
PS_APP_HOME:  /opt/psft/pt/hcm_app_home
```

```
1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
7) Refresh Config Home
q) Quit
```

Command to execute (1-7, q): **1**

The PS_CONFIG_HOME location, also referred to as Config Home, corresponds to the current working directory. For information on how Config Home is set, see the *PeopleTools: System and Server Administration* product documentation.

- Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS_CFG_HOME/peopletools.properties* file with the current *PS_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS_CFG_HOME* that you are working with was used previously from a different *PS_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS_CFG_HOME*.
- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME/peopletools.properties* file. Continue with the next step.

- Specify **1** for Application Server.
- Specify **4** for Import domain configuration.

```
-----
PeopleSoft Application Server Administration
-----
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
```

q) Quit

Command to execute (1-4, q): **4**

5. Specify **1** for Import regular domain.

```
-----
PeopleSoft Import Application Server Configuration
-----
```

- 1) Import regular domain
- 2) Import IB Master Configuration
- q) Quit

Command to execute (1-2, q) : **1**

6. Specify whether to import the domain configuration from a file (option 1) or from an existing application domain configuration (option 2).

```
-----
PeopleSoft Import Application Server Configuration
-----
```

- 1) Import from file
- 2) Import from application domain
- q) Quit

Command to execute (1-2, q) :

7. If you selected **1**, provide the full path to the file `psappsrv.cfg`, and then specify the name of the domain you want to create. If you selected **2**, go to the next step.

Enter full path to configuration file
:/home/oldconfig/psappsrv.cfg

Enter domain name to create
:HRDMO

8. If you selected **2**, to Import from application domain, provide the full path to the `PS_CFG_HOME` of the existing domain.

If importing from PeopleTools 8.49 or earlier, provide `PS_HOME` for `PS_⇒CFG_HOME`.

Enter `PS_CFG_HOME` of domain you wish to import: /home/JSMITH⇒
/peopletools/8.61

If applicable, choose among the existing application server domains in the specified `PS_CFG_HOME`:

Tuxedo domain list:

- 1) HRDBA
- 2) HRDBB

Select domain number to import: **1**

Enter a name for new domain: **HRDMO**

After you create the domain, continue to the next task to verify that the imported configuration parameters are appropriate for the newly created domain. You may need to change the following values:

- **DBName**
DBName can be the same or different, depending on which database the application server needs to point to.
- **DBType**
DBType depends on the database type of DBName.
- **UserId and UserPswd**
UserId and UserPswd are the user's choice.
- **Workstation Listener Port**
Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine.
- **Jolt Listener Port**
Jolt Listener Port will also need a different number if the old domain will be up and running in the same machine.
- **Jolt Relay Adapter Listener Port**
Jolt Relay Adapter Listener Port will need a different number if the old domain will be up and running in the same machine, and will be using Jolt Relay Adapter.

Task 15B-5-4: Setting Up a Custom Application Server Domain Configuration

The Quick-configure menu is initially displayed when you choose to configure your domain. This menu is intended for the commonly adjusted parameters—those most likely to change from domain to domain. However, there are additional configuration parameters that are not available through the Quick-configure menu. For such configuration parameters, you must use the Custom Configuration option, which you can access from the Quick-configure menu. Feel free to skip this procedure if you have already created and configured your Application Server using the Quick-configure menu and want to move forward.

The following steps assume you will be using PSADMIN to specify parameter settings.

To reconfigure an application server domain:

1. Run the `psadmin` command.
2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The `PS_CFG_HOME` that you are working with was used previously from a different `PS_HOME`. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this `PS_CFG_HOME`.

- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME/peopletools.properties* file. Continue with the next step.
3. Specify *1* for Application Server and press ENTER.
 4. Specify *1* for Administer a domain and press ENTER.
 5. Select the domain to administer and press ENTER.
 6. Specify *4* for Configure this domain and press ENTER.

The option Configure this domain performs the following tasks:

- Shuts down the application server, if it is running. (Shutdown is required since the binary file PSTUXCFG must be deleted and re-created to enable new configuration values. If there are no processes running when shutdown is attempted, an error will be displayed but the script continues on. This is normal.)
 - Initiates an interactive dialog, prompting for configuration parameters.
 - Updates psappsrv.cfg, generates psappsrv.ubb, and internally invokes Tuxedo's tmlodcf executable to create binary file PSTUXCFG used during the domain boot process.
7. Specify *15* for Custom Configuration and press ENTER.
 8. Respond to this prompt:

Do you want to change any config values (y/n):

- Specify *y* to start an interactive dialog to change or examine parameter values, as described in the next step.
- Oracle recommends this option for more experienced users.
- Specify *n* if you have already edited psappsrv.cfg, skip the next step, and continue with the step to select server process options.
9. Complete the interactive dialog to specify configuration parameters.

Configuration parameters are grouped into sections. For each section, you are asked whether you want to change any parameters in that section, as in the following example:

Values for config section - Startup

```
DBName=
DBType=
UserId=
UserPswd=
ConnectId=
ConnectPswd=
ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=
```

Do you want to change any values (y/n)? [n]: y

- Specify *y* to change any parameter values for the current configuration section displayed.
- You are prompted for each parameter value. Either specify a new value, or press ENTER to accept the default if applicable. After pressing ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.

- Enter the user ID and user password that has security to start the application server. All application databases are delivered with one or more application server security users, usually PS or VP1.

The password you enter is hidden by masking characters.

- The parameters StandbyDBName, StandbyDBType, StandbyUserId, and StandbyUserPswd, are used for a standby database in an Oracle environment.

See *PeopleTools: Data Management*, "Implementing Oracle Active Data Guard."

- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- The WSL, JSL, and JRAD port numbers, which are found in other sections of the configuration parameters, have default values of 7000, 9000, and 9100, respectively. These values must be unique for each application server domain. You may alter the port values if necessary to ensure that they are unique
- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

Note. When setting up your application server, make a note of the values you use for Database Name, Application Server Name (the machine name), and JSL Port. You will need to use these same values when installing the PeopleSoft Pure Internet Architecture.

See *PeopleTools: System and Server Administration*.

10. Select server process options.

At this point, you will be prompted to select server process options. If this is your initial installation, we suggest you accept the defaults. A message similar to this appears:

```
Setting Log Directory to the default... [PS_SERVDIR/LOGS]
Configuration file successfully created.
Loading new configuration...
```

The message "Loading new configuration" indicates that PSADMIN is generating a binary file named PSTUXCFG, which is used to boot the application server. At this point, your application server should be properly configured.

Task 15B-5-5: Troubleshooting Common Errors

For troubleshooting help, you can access a log file through the PSADMIN PeopleSoft Domain Administration menu. The following list includes possible errors and troubleshooting tips.

- Use the PSADMIN PeopleSoft Domain Administration menu option 6 for Edit configuration/log files menu to check for errors in `<PS_CFG_HOME>/appserv/<domain>/LOGS/APPSRV_mmdd.LOG` and `<PS_CFG_HOME>/appserv/<domain>/LOGS/TUXLOG.mmddyy`.
- If a PeopleSoft server such as PSAPPSRV fails, examine your configuration parameters. The failure of the PSAPPSRV process is often signalled by the message "Assume failed"—which means the process has failed to start. Check the SIGNON section for misspelled or invalid database name, an invalid or unauthorized OprId, or ConnectId or ServerName is missing or invalid. Finally, make sure the database connectivity is set correctly.
- If a WSL (or JSL) fails to start, try specifying another port number (it may be in use already by another application server domain process).
- If you are unable to start the BBL, check that your Tuxedo is installed fully and that the directory really exists.
- If the installation includes more than one application server domain on a single machine, before booting the second domain, adjust the REN server configuration to avoid conflict in one of these ways:
 - Use PSADMIN to disable Event Notification (option 8 on the Quick-configure menu) for the second and

subsequent application server domains.

- Change default_http_port to a value other than 7180.
- Check that you do not have environment variables for older Tuxedo releases set at the beginning of your PATH or runtime library variables (LIBPATH, SHLIB_PATH or LD_LIBRARY_PATH, depending on the UNIX operating system).

See Also

PeopleTools: System and Server Administration

PeopleTools: MultiChannel Framework

Chapter 16

Setting Up the PeopleSoft Pure Internet Architecture in Silent Mode

This chapter discusses:

- Understanding PeopleSoft Pure Internet Architecture
- Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation
- Installing the PeopleSoft Pure Internet Architecture in Silent Mode
- Configuring the SSL/TLS Port for JSL
- Testing and Administering the PeopleSoft Pure Internet Architecture Installation
- Completing Post-Installation Steps

Understanding PeopleSoft Pure Internet Architecture

Use the silent mode installation described in this chapter to install and configure a web server domain. This is an optional installation. You may choose to use the silent mode installation for situations that are not covered by the DPK setup.

See "Preparing for Installation," Planning Your Initial Configuration.

- The files needed for the PIA silent-mode installation are included as part of the PeopleTools installation, in *PS_HOME/setup/PsMpPIAInstall/scripts*.

You must use the DPK setup script to install at least *PS_HOME*.

- You must install the Oracle WebLogic software before you install the PeopleSoft Pure Internet Architecture.

Oracle WebLogic is the certified web server for the current PeopleSoft PeopleTools release. If you did not install the Oracle WebLogic software using the DPK setup script, see the chapter "Installing Web Server Products."

- Before you install the PeopleSoft Pure Internet Architecture, you must also have configured an application server, either with the DPK setup script or with PSADMIN.

See "Configuring the Application Server on UNIX."

See "Configuring the Application Server on Windows."

- If your web server is on a different machine than your application server, make sure you have a supported version of JRE installed on your web server to run the PeopleSoft Pure Internet Architecture installation, and that its path is in the system's environment variable PATH.
- If you want to connect between multiple application databases, you need to implement single signon.
See *PeopleTools: Security Administration*, "Understanding Single Signon."
- You must use the silent mode installation to create a multi-server domain.

You cannot use the DPK setup script or PSADMIN.

- Enter passwords in clear text.

The sample response file in this section includes placeholders for several passwords. When creating the response file for silent mode installation, enter the passwords in clear text. Do not enter encrypted passwords.

- The URL that you use to invoke the PeopleSoft Pure Internet Architecture must conform to ASN.1 specifications.

That is, it may contain only alphanumeric characters, dots ("."), or dashes ("-"). The URL must not begin or end with a dot or dash, or contain consecutive dots (".."). If the URL includes more than one portion, separated by dots, do not use a number to begin a segment if the other segments contain letters. For example, "mycompany.second.country.com" is correct, but "mycompany.2nd.country.com" is wrong.

- If you are setting up the PeopleSoft Pure Internet Architecture on a Microsoft Windows platform, the directory and path that you specify for the installation directory may include spaces. However, parentheses in the directory name (for example, "C:\Program Files (x86)") are *not* allowed.

The location where you install the PeopleSoft Pure Internet Architecture is under *PS_CFG_HOME*. After you complete the PeopleSoft Pure Internet Architecture installation, you can locate the installation files in the directory *PS_CFG_HOME/webserv*.

Note. The documentation sometimes refers to the installation location for the PeopleSoft Pure Internet Architecture as *PIA_HOME*.

The initial PeopleSoft Pure Internet Architecture setup automatically creates the default PeopleSoft site named *ps*. In subsequent PeopleSoft Pure Internet Architecture setups, change the site name from *ps* to a unique value. We recommend using the database name. This is handy for easy identification and ensures that the database web server files are installed in a unique web site.

The PeopleSoft Pure Internet Architecture installation includes the following products:

- *PeopleSoft Pure Internet Architecture*. This product is the centerpiece of the PeopleSoft architecture that enables users to work on a machine with only a supported browser installed. This option installs the servlets required for deploying PeopleSoft Applications and for the PeopleSoft portal. The portal packs and PeopleSoft Portal Solutions have their own installation instructions, which are available on My Oracle Support. For an overview of the various types of portals, consult the *PeopleTools: Portal Technology* product documentation.
- *PeopleSoft Report Repository*. This product works in conjunction with Process Scheduler to allow report distribution over the web.
- *PeopleSoft Integration Gateway*. This product is the entry and exit point for all messages to and from the Integration Broker. Its Java-based Connector architecture allows asynchronous and synchronous messages to be sent over a variety of standard protocols, many that are delivered at install, or through custom connectors.

Important! For PeopleSoft PeopleTools 8.50 and later, review the product documentation concerning security properties for Integration Gateway. When setting the properties in the *integrationGateways.properties* file, the property *secureFileKeystorePasswd* must be encrypted, and the *secureFileKeystorePath* must be set.

See *PeopleTools: Integration Broker Administration*.

- *PeopleSoft CTI Console*. This product works in conjunction with CTI vendor software to enable call center agents to take advantage of browser-based teleset management and automatic population of application pages with relevant data associated with incoming calls, such as customer or case details.

See *PeopleTools: MultiChannel Framework*.

- *Environment Management Hub*. The Environment Management hub is a web application that is installed with the PeopleSoft Pure Internet Architecture and portal. It is started along with the rest of the web applications when the user boots the web server. You cannot start the Environment Management Hub on a server that is configured to run HTTPS; in other words, if you plan to run Environment Management, your PIA server

needs to be configured in HTTP mode.

See *PeopleTools: Change Assistant and Update Manager*.

See Also

PeopleTools: Security Administration

PeopleTools: System and Server Administration

Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation

You have the option to specify an authentication domain when you install the PeopleSoft Pure Internet Architecture on Oracle WebLogic.

Note. The authentication domain was referred to as the Authentication Token Domain in previous releases, and that term is still seen in the software.

When an authentication domain is specified during the PeopleSoft Pure Internet Architecture installation, that value gets used as the Cookie domain in the web server configuration. The main requirements when setting a cookie domain are:

- The cookie domain value being set must begin with a dot (.ps.com is valid, ps.com is NOT valid).
- The cookie domain value being set must contain at least 1 embedded dot (.ps.com is valid, .corp.ps.com is valid, .com is NOT valid).
- The cookie domain value can only be a single domain name. It cannot be a delimiter-separated list of domains.

By default, the browser only sends cookies back to the machine that set the cookie. So if web server `crm.yourdomain.com` sets a cookie, the browser will only send it back there. You can make the browser send the single signon cookie to all servers at `yourdomain.com` by typing your domain name in the Authentication Token Domain list box of web server `crm`.

Specifying the authentication domain may be necessary in certain cases. For example, if you plan to use the PeopleSoft portal technology, be sure to read the supporting documentation on configuring the portal environment, to determine whether setting the authentication domain is required for correct operation.

See *PeopleTools: Portal Technology*.

Specify an authentication domain if you plan to run a REN Server. REN Servers are required for PeopleSoft MultiChannel Framework, Reporting, and some PeopleSoft CRM applications supported by PeopleSoft MultiChannel Framework.

See *PeopleTools: MultiChannel Framework*.

Task 16-1: Installing the PeopleSoft Pure Internet Architecture in Silent Mode

This section discusses:

- Understanding the Silent Installation and the Response File

- Editing the Response File
- Running the Silent Mode Installation

Understanding the Silent Installation and the Response File

You can carry out a silent installation of the PeopleSoft Pure Internet Architecture by providing all the required settings in a response file. With silent installation there is no user interaction. Silent mode installation of PeopleSoft Pure Internet Architecture is supported for both Microsoft Windows and UNIX operating systems platforms.

Task 16-1-1: Editing the Response File

You need a response file to start the installer in silent mode. The PeopleSoft Pure Internet Architecture installer comes with a response file template (`resp_file.txt`) that can be found under `PS_HOME\setup\PsMpPIAInstall\`. Modify the values in the response file according to your installation requirements. To exclude sections that are not needed, begin the line with a pound sign (`#`).

Note. When specifying paths on Microsoft Windows operating systems, use forward slashes (`/`), as shown in the examples in the response file.

The response file should contain all the input parameters that are needed for deploying PeopleSoft Pure Internet Architecture. Modify the following sections in the response file for your environment:

- The location where you want to install the PeopleSoft Pure Internet Architecture.
`PS_CFG_HOME=<Specify PS Config Home Location>`
 - The default is the same as the same as the `PS_CFG_HOME`.
 - You can specify any directory on your machine, including `PS_HOME`.
 - To specify the path on both Microsoft Windows and UNIX operating systems, use a forward slash (`/`), not a back slash (`\`).
- The PIA Domain name, for example *peoplesoft*.
`DOMAIN_NAME=peoplesoft`
- Enter *weblogic* for the Web server type.
`SERVER_TYPE=weblogic`
- Enter the Oracle WebLogic installation location for the `BEA_HOME` parameter.
`BEA_HOME=<Specify Weblogic Home>`
- Specify the login ID for the Oracle WebLogic administration console, such as *system*.
`# Specify WebLogic administration console credential`
`USER_ID=<Specify User Name e.g. system>`
- Specify the password for the Oracle WebLogic administrator, following the guidelines for special characters.
`#The password for the WebLogic Administrator account. The password must⇒`
`be at least eight characters, and must contain at least one numeric⇒`
`character or at`
`#least one of the following characters: ! " # $ % & ' ( ) * + , - . / :⇒`
`; < = > ? @ [ \ ] ^ _ ` { | } ~`

USER_PWD=<Specify password>

- Enter one of the installation actions listed for the INSTALL_ACTION parameter.

```
# Install action to specify the core task that installer should perform.
# For creating new PIA domain - CREATE_NEW_DOMAIN.
# For redeploying PIA - REDEPLOY_PSAPP.
# For recreating PIA domain - REBUILD_DOMAIN.
# For installing additional PSFT site - ADD_SITE
# For installing Extensions - ADD_PSAPP_EXT
INSTALL_ACTION=CREATE_NEW_DOMAIN
```

- CREATE_NEW_DOMAIN

Create a new PeopleSoft Pure Internet Architecture domain.

- REDEPLOY_PSAPP

On an Oracle WebLogic web server, this option affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to redeploy all of the web components of the PeopleSoft Pure Internet Architecture. The redeployment process updates all of the web components of the PeopleSoft Pure Internet Architecture, without modifying the configuration files or scripts that belong to the Oracle WebLogic server domain.

- REBUILD_DOMAIN

This option affects Oracle WebLogic Server domain configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to completely remove an existing Oracle WebLogic domain and deploy the PeopleSoft Pure Internet Architecture components to create the newly specified PeopleSoft site.

Warning! Re-creating an existing domain will delete everything previously installed into that domain.

- ADD_SITE

This option is relevant only to the PeopleSoft PORTAL web application, and does not modify or revert any other configuration settings. Select this option to install only the necessary files for defining an additional PeopleSoft site onto an existing Oracle WebLogic configuration. The new site will be accessed using its name in the URL. A site named "CRM" would be accessed using a URL similar to http://mywebserver_machine/CRM. To reset or re-create an existing PeopleSoft site, simply enter that site's name as the site to create. On your web server, a PeopleSoft site is comprised of the following directories within the PORTAL web application:

<WEBLOGIC_DOMAIN>\applications\peoplesoft\PORTAL\<site>*

<WEBLOGIC_DOMAIN>\applications\peoplesoft\PORTAL\WEB-INF\psftdocs\<site>*

- ADD_PSAPP_EXT

This option is solely for use with PeopleSoft applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see if this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

- For the DOMAIN_TYPE parameter, enter NEW_DOMAIN to create a new domain or EXISTING_DOMAIN to modify an existing domain.

DOMAIN_TYPE=NEW_DOMAIN

- Specify the installation location for the PeopleSoft application software, PS_APP_HOME.

Specify the PS_APP_HOME location only when you are installing extensions for a PeopleSoft application. If you are not installing PeopleSoft application extensions, do not remove the comment character. The silent

installer can detect any deployable application extensions present in the PS_APP_HOME.

```
# PS_APP_HOME=<Specify PS_APP_HOME location>
```

- Enter one of the following parameters for INSTALL_TYPE to specify whether the installation is a single server, multi-server, or distributed server installation.

```
INSTALL_TYPE=SINGLE_SERVER_INSTALLATION
```

- SINGLE_SERVER_INSTALLATION

The single server domain configuration contains one server named PIA, and the entire PeopleSoft application is deployed to it. This configuration is intended for single user or very small scale, non-production environments.

- MULTI_SERVER_INSTALLATION

The multi-server domain configuration contains seven unique server definitions, an Oracle WebLogic cluster, and the PeopleSoft application split across multiple servers. This configuration is intended for a production environment.

- DISTRIBUTED_SERVER_INSTALLATION

The distributed server option is an extension of the Multi-Server Domain selection and installs the necessary files to boot a managed server.

This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

- The PeopleSoft web site name.

Warning! The site name can include underscores (_), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my_site_3 or my_newwin_site).

```
WEBSITE_NAME=<Specify web site name>
```

- Use the optional PSSERVER parameter to enable Jolt failover and load balancing.

For information on the optional PSSERVER parameter, see the information on configuring Jolt failover and load balancing in the *PeopleTools: System and Server Administration* production documentation.

```
# To enable jolt failover and load balancing, provide a list
# of application server domains in the format of; PSSERVER=AppSrvr:⇒
JSLport,...
# For example: PSSERVER=SERVER1:9000,SERVER2:9010,SERVER3:9020
# PSSERVER is optional, but if set will have precedence
# over APPSERVER_NAME & JSL_PORT.
PSSERVER=
```

- Specify the application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, and the Authentication Token Domain (optional).

```
# AppServer Name
```

```
APPSERVER_NAME=<Specify Application Server name e.g. HOSTNAME.DOMAIN⇒
NAME>
```

```
# Appserver JSL Port
JSL_PORT=9020
```

```
# HTTP Port
HTTP_PORT=8060
```

```
# HTTPS Port
HTTPS_PORT=4433
```

```
# Authentication Domain (optional)
AUTH_DOMAIN=
```

- APPSERVER_NAME — the name of your application server
- JSL_PORT — the JSL port number you specified when setting up your application server.
- HTTP_PORT — the port to access the software in a browser using HTTP.
- HTTPS_PORT — the port to access the software in a browser using HTTPS.
- AUTH_DOMAIN

This is optional. The value you enter for Authentication Token Domain must match the value you specify when configuring your application server, as described earlier in this book. In addition, certain installation configurations require that you specify an authentication domain.

If you enter a value for Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName/ps/signon.html`. If you do enter a value for the authentication domain (for example, `.myCompany.com`), the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName.myCompany.com/ps/signon.html`. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example `http://MachineName:8080/ps/signon.html` if there is no authentication domain, or `http://MachineName.myCompany.com:8080/ps/signon.html` if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

See *Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation*.

- Web profile name and password

Enter a Web Profile Name, and enter the password two times. The example below shows the default web profile name, PROD, and default user ID, PTWEBSEVER. The web profile name will be used to configure this web site. You can specify one of the other delivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, PTWEBSEVER, be sure to review the information on web profile configuration and security in the *PeopleTools: Portal Technology* product documentation.

```
# Web Profile Name Possible Values are "DEV", "TEST", "PROD", "KIOSK"
WEB_PROF_NAME=PROD
```

```
# Web Profile password for User "PTWEBSEVER"
WEB_PROF_PWD=<Specify password>
```

- Enter the Integration Gateway user name and password.

The default user name is administrator.

See *PeopleTools: Integration Broker Administration*.

```
# Integration Gateway user profile.
IGW_USERID=administrator
IGW_PWD=<Specify password>
```

- Enter the Integration Gateway keystore password.

```
# KEYSTORE password for Integration Gateway
```

```
KEYSTORE_PWD=<Specify password>
```

- AppServer Domain Connection password (optional).

If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank as shown in this example. This password will be propagated to the Integration Gateway. For more information about Application Server domain configuration and setting domain parameters, see the product documentation *PeopleTools: System and Server Administration*.

```
# AppServer connection user profile
APPSRVR_CONN_PWD=
```

- The root directory for the Report Repository

Make sure that the report repository directory is shared. You must have write access to the Report Repository directory.

Note. In setting up the Process Scheduler to transfer reports, if you choose the FTP transfer protocol, use the same directory for the Home Directory as you use here for the report repository.

See *PeopleTools: Portal Technology*.

See "Setting Up Process Scheduler on Windows," Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository.

```
# Directory path for reports
REPORTS_DIR=<Specify Reports storage location>
```

- If you want to deploy additional PeopleSoft application packages, remove the comment character (#) and enter the PS_APP_HOME path.

Remove the comment character in front of the desired the package.

```
#For Deploying additional Application packages give the path of PS_APP_
HOME and name of the packages.
#PS_APP_HOME=<Specify PS_APP_HOME location>
#APP Package to deploy: to deploy uncomment the line
#APP_PKG=CRM PeopleSoft CTI Integration
#APP_PKG=CRM PeopleSoft Order Capture
#APP_PKG=CRM PeopleSoft Order Capture Self Service
#APP_PKG=CRM PeopleSoft PSFT CRM PIM Server Sync
```

Task 16-1-2: Running the Silent Mode Installation

Use the response file that you modified for your configuration. Substitute the location where you saved the response file for *<path_to_response_file>* in the following procedures.

To install the PeopleSoft Pure Internet Architecture in silent mode on Microsoft Windows:

1. In a command prompt, go to *PS_HOME\setup\PsmPPIAInstall*.
2. Run the following command, using forward slashes (/) to specify the path:

```
setup.bat -i silent -DRES_FILE_PATH=<path_to_response_file>
```

For example:

```
setup.bat -i silent -DRES_FILE_PATH=C:/psft/ps_home8.61/setup/PsmPPIAInstall/resp_file.txt
```


To install the PeopleSoft Pure Internet Architecture in silent mode on UNIX:

1. Go to `PS_HOME/setup/PsMpPIAInstall`.

2. Run the following command, using forward slashes (/) to specify the path:

```
setup.sh -i silent -DRES_FILE_PATH=<path_to_response_file>
```

For example:

```
setup.sh -i silent -DRES_FILE_PATH=/opt/psft/ps_home8.61/setup/PsMpPIAInstall/resp_file.txt
```

Task 16-2: Configuring the SSL/TLS Port for JSL

Supply the SSL/TLS port for JSL in the configuration.properties file for the web server.

The default Keystore file, in PKCS12 format, used for the SSL/TLS configuration for JSL ports is located in `<PS_CFG_HOME>\webserv\<DOMAIN_NAME>\piaconfig\keystore\pskey`. If you change the Keystore password in this file, you must also provide the password in the PIA configuration.properties file at `<PS_CFG_HOME>\webserv\<DOMAIN_NAME>\application\peoplesoft\PORTAL.war\WEB-INF\psftdoc\ps`.

1. Using a text editor, open the configuration.properties file in the web server deployment folder located here:
`<PS_CFG_HOME>\webserv\<DOMAIN_NAME>\application\peoplesoft\PORTAL.war\WEB-INF\psftdoc\ps`.

2. Locate the psserver section and enter the application server name and the SSL/TLS port.

Enter the SSL/TLS port that you specified for the JSL SSL Port when setting up the application server domain.

See *Creating, Configuring, and Starting an Initial Application Server Domain*.

```
psserver=<machine_name>:<SSL_port_for_JSL>
```

3. Locate the section Keystore password for ssl connection.

If you reset the SSL/TLS Java Keystore password, enter it here. Otherwise, accept the default value. The default Java Keystore file is located in `<PS_CFG_HOME>\webserv\<DOMAIN_NAME>\piaconfig\keystore\pskey`.

```
#Keystore password for ssl connection
KeyStorePwd=={V1.1}encrypted password==
```

4. Save and close the file.

See Also

PeopleTools: System and Server Administration, "Implementing WebLogic SSL Keys and Certifications"

PeopleTools: Security Administration, "Working with SSL/TLS and Digital Certificates"

Task 16-3: Testing and Administering the PeopleSoft Pure Internet Architecture Installation

This section discusses:

- Verifying the PeopleSoft Pure Internet Architecture Installation
- Starting and Stopping Oracle WebLogic
- Using PSADMIN to Start and Stop Web Servers
- Accessing the PeopleSoft Signon

Verifying the PeopleSoft Pure Internet Architecture Installation

After installing the PeopleSoft Pure Internet Architecture, you should make sure that your configuration is functional. You can test this by signing on to PeopleSoft, navigating within the menu structure, and accessing pages. (Make sure the application server is configured and booted.) This section includes procedures to start and stop the Oracle WebLogic web server whenever necessary.

Task 16-3-1: Starting and Stopping Oracle WebLogic

When using the Oracle WebLogic web server, you need to sign on to Oracle WebLogic before using these commands. Use the following commands in the Oracle WebLogic domain directory.

Note. Starting from Oracle WebLogic 9.2 and later releases, all the Life-cycle management scripts and other batch scripts for the PIA server on Oracle WebLogic are located in `<PIA_HOME>\webserver\<domain_name>\bin` folder.

- To start Oracle WebLogic Server as a foreground process on a single server, use the following commands:

On Microsoft Windows:

```
startPIA.cmd
```

On UNIX:

```
startPIA.sh
```

- To start Oracle WebLogic Server as a foreground process on multiple-servers or distributed servers, use the following commands:

1. Execute the following command:

On Microsoft Windows:

```
startWebLogicAdmin.cmd
```

On UNIX:

```
startWebLogicAdmin.sh
```

2. Then execute:

On Microsoft Windows:

```
startManagedWebLogic.cmd ManagedServerName
```

On UNIX:

```
startManagedWebLogic.sh ManagedServerName
```

- To stop the server, use the following commands:

- Single Server on Microsoft Windows:

```
stopPIA.cmd
```

Single Server on UNIX:

```
stopPIA.sh
```

- Multiple Servers or Distributed Servers on Microsoft Windows:

```
stopWebLogic.cmd ManagedServerName
```

Single Server on UNIX:

```
stopWebLogic.sh ManagedServerName
```

For more information on working with Oracle WebLogic multiple servers or distributed servers, see the *PeopleTools: System and Server Administration* product documentation.

Note. For more information on working with Oracle WebLogic multiple or distributed servers, search My Oracle Support.

Task 16-3-2: Using PSADMIN to Start and Stop Web Servers

In addition to the methods given in the previous sections for starting and stopping Oracle WebLogic web servers, you can use PSADMIN to administer a web server domain.

See *PeopleTools: System and Server Administration*.

To start and stop web servers:

1. Specify 4 for Web (PIA) Server.

The location of Config Home is the current working directory. The PSADMIN utility determines the Config Home directory by checking for the PS_CFG_HOME environment variable. If that is not set, it checks for the presence of domains in the default PS_CFG_HOME location. If none exists, it uses the PS_HOME location from which it was launched.

See "Preparing for Installation," Defining Installation Locations.

2. Select 1 for Administer a domain.

The PSADMIN utility determines the PIA Home location displayed here by first checking for a PIA_HOME environment variable. If none is set, it checks for the PS_CFG_HOME environment variable. If neither is set, it uses the default PS_CFG_HOME directory.

3. Select the domain you want to administer by entering the appropriate number.

```
-----
PeopleSoft PIA Domain Administration - Choose a Domain
-----
1) psftTST
2) peoplesoft

q) Quit
```

Command to execute: 2

4. To start a web server domain, enter 1, Boot this domain.

```
Starting the domain.....
...
Verifying domain status..
The domain has started.
```

5. To stop a web server domain, select 2, Shutdown this domain.

```
Stopping the domain.....
```

```
.....
```

```
Verifying domain status.....
```

```
The domain has stopped.
```

6. Select 1 to install a service, or 2 to remove it.

This command invokes the installNTservice script, and creates a service named *WebLogicDomain-WebLogicServer*.

```
-----  
Windows Service Setup  
-----
```

```
PIA Home:      C:\psft_websrv
```

```
PIA Domain:    peoplesoft
```

```
Domain status: started
```

```
1) Install Service
```

```
2) Uninstall Service
```

```
q) Quit
```

Command to execute:

Task 16-3-3: Accessing the PeopleSoft Signon

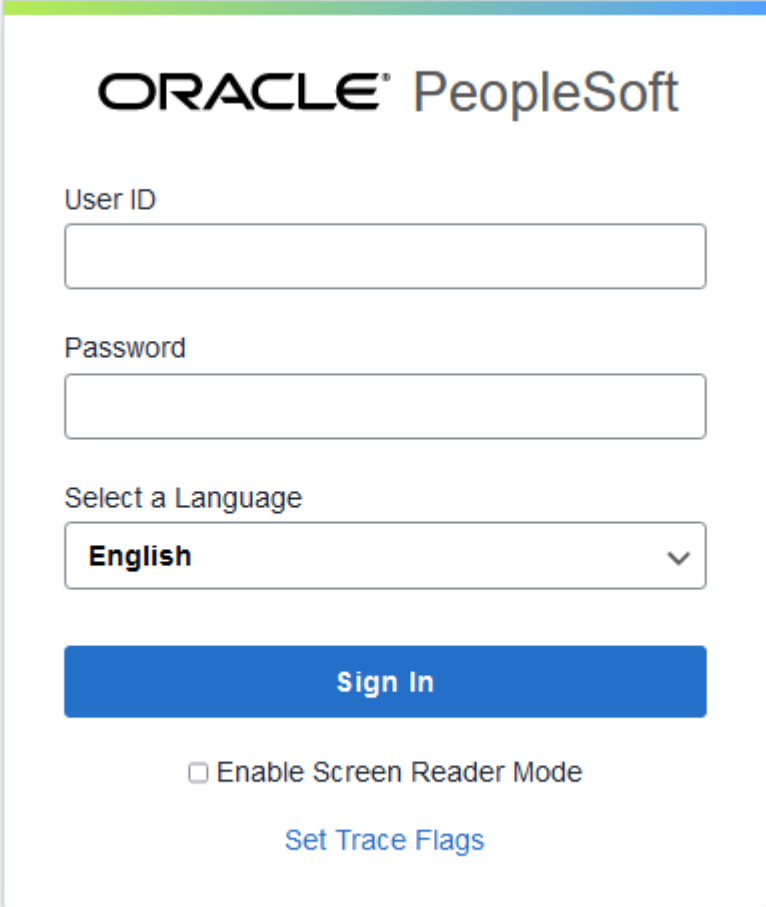
To access the PeopleSoft signon:

1. Open your web browser.

2. Enter the name of the site you want to access—for example (the default value for `<site_name>` is `ps`):

`http://<machine_name>:<http_port>/<site_name>/signon.html`

This will take you to the sign-in window corresponding to your browser's language preference, as shown in this example:



The image shows a web browser window displaying the Oracle PeopleSoft sign-in page. The page has a white background with a blue header bar. The Oracle logo is at the top left, followed by the text "PeopleSoft". Below the logo, there are three input fields: "User ID", "Password", and "Select a Language". The "Select a Language" dropdown menu is open, showing "English" as the selected option. Below the input fields is a blue "Sign In" button. At the bottom of the page, there is a checkbox labeled "Enable Screen Reader Mode" and a link labeled "Set Trace Flags". The footer of the page contains the text "Copyright © 2000, 2021, Oracle and/or its affiliates."

Oracle PeopleSoft Enterprise Sign in window

Note. If you do not see the signon screen, check that you supplied all the correct variables and that your application server and the database server are running.

3. Sign in to the PeopleSoft system by entering a valid user ID and password.

The user ID and password are case sensitive.

Note. The user ID and password were set during the database configuration and also used to boot the application server.

The PeopleSoft PeopleTools and PeopleSoft applications include various default user IDs. For information on using the user IDs delivered with your PeopleSoft application demo database, see the application-specific installation instructions. For information on using and securing PeopleSoft PeopleTools default user IDs, see the information on administering user profiles in the *PeopleTools: Security Administration* product documentation.

Task 16-4: Completing Post-Installation Steps

This section discusses:

- Updating the Installation Table
- Setting Options for Multilingual Databases
- Updating PeopleTools Options
- Updating Time Zone Information
- Updating Database Information
- Building a New Encryption Key and Re-encrypting Passwords
- Installing the fontconfig Package for Download to Excel

Task 16-4-1: Updating the Installation Table

After you complete the installation process, creating the database, installing the Application Server, and installing the PeopleSoft Pure Internet Architecture, you must complete this additional step. This post-installation step ensures that only the products you are entitled to use are active in the installation. The location of the installation table in the PeopleSoft system varies depending upon the PeopleSoft application that you installed.

Note. For information on the products you are entitled to use, contact your Oracle Support representative.

1. Sign on to the PeopleSoft system in a browser.
2. Select Set Up *Application_name* (where *Application_name* is the PeopleSoft application you installed), Install, Installation Table.
3. Select the Products tab.
4. Clear the check boxes for the products that you are not entitled to use.

Task 16-4-2: Setting Options for Multilingual Databases

Setting the Data Field Length Checking Option

The value to specify data field length checking must be set correctly in order for PeopleSoft applications to perform correctly in a browser. Use one of these methods to set the data field length checking option:

- Select PeopleTools > Utilities > Administration > PeopleTools Options, and select the Data Field Length Checking option from the drop-down list.
 - If your database uses the Shift-JIS character set for Japanese, select MBCS.
 - For all other databases, verify that the option is set to Others, the default setting.
- Alternatively, use the SQL tool for your database platform to modify the DBLENGTHTYPE parameter in the PSOPTIONS table.

- If your database uses the Shift-JIS character set for Japanese, enter M.
- For all other databases, verify that the option is set to N, the default setting.

See *PeopleTools: Global Technology*, "Setting Data Field Length Checking."

See *PeopleTools: Global Technology*, "Selecting Character Sets."

Setting the Unicode Enabled Option

If you are running a Unicode database, verify that the UNICODE_ENABLED parameter in the PSSTATUS table is set correctly. For example:

- For non-Unicode databases, including those using the Shift-JIS character set for Japanese, set UNICODE_ENABLED=0.
- For Unicode databases, set UNICODE_ENABLED=1.

See the information on converting to Unicode in the *PeopleTools: Global Technology* product documentation.

Task 16-4-3: Updating PeopleTools Options

You can set the following options on the PeopleTools Options page:

- Multi-Currency — Select this check box if you plan to use currency conversion.
See *PeopleTools: Global Technology*, "Using System-Wide Multicurrency Settings."
- Base Time Zone — Enter a value for the base time zone for your PeopleTools database.
See *PeopleTools: Global Technology*, "Setting the Base Time Zone."
- Sort Order Option — If you specified a non-binary sort order for your database, choose the Sort Order Option that most closely approximates your database sort order.
See *PeopleTools: Global Technology*, "Setting the Sort Order."

Task 16-4-4: Updating Time Zone Information

Additional steps may be required to configure your time zone after you complete the installation.

See *PeopleTools: Global Technology*, "Maintaining Time Zones."

Task 16-4-5: Updating Database Information

The database information updated in this procedure is used by the PeopleSoft software update tools to identify your PeopleSoft database when searching for updates. These steps should be followed for all additional databases that you create to enable the accurate identification of your databases.

1. Sign on to your PeopleSoft database.
2. Navigate to PeopleTools > Utilities > Administration > PeopleTools Options.
3. Specify long and short names for your environment. For example:
 - Environment Long Name — Customer HR Demo Database
 - Environment Short Name — HR Demo DB
4. Select a system type from the drop-down list. For example, Demo Database.
5. Save your changes.

Task 16-4-6: Building a New Encryption Key and Re-encrypting Passwords

The PeopleTools installation includes a default encryption key (psvault), which is used to encrypt the passwords that you enter during the installation. For security reasons, create a new key after you complete the installation and use the new key to re-encrypt passwords included in your PeopleSoft environment files.

1. Use the PSCipher utility to build a new key.

See *PeopleTools: Security Administration*, "Generating a Unique Encryption Key."

For example, run the following command from `<PIA_HOME>/webserv/<DOMAIN_NAME>/piabin`:

Microsoft Windows

```
pscipher.bat -buildkey
```

```
Your environment has been set.
```

```
A new key of version {V2.2} is generated successfully
```

UNIX

```
./PSCipher.sh -buildkey
```

```
Your environment has been set.
```

```
A new key of version {V2.2} is generated successfully
```

2. Use the new key from step 1 to re-encrypt passwords that you supply as plain text.

See *PeopleTools: Security Administration*, "Using the PSCipher Utility."

3. Replace the existing encrypted values for the passwords in web server files with the newly created encrypted passwords.

Ensure that the password values begin with {V2.2}, which indicates the AES implementation. This table lists web server files and passwords to check.

See *PeopleTools: Security Administration*, "Understanding the Advanced Encryption Standard (AES) Implementation."

Location	File	Examples of Password Text
<PIA_HOME>\webserv\ <DOMAIN_NAME>\applications\peoplesoft\PSIGW.war\ WEB-INF	integrationGateway.properties	- ig.isc.NODE_NAME.password={V2.2}XXXXXX - ig.isc.NODE_NAME.DomainConnectionPwd={V2.2}XXXXXX - Others as needed. There are several sections including passwords. Be sure to update all that apply to your environment.
<PIA_HOME>\webserv\ <DOMAIN_NAME>\applications\peoplesoft\PSIGW.war\ WEB-INF	gatewayUserProfile.xml	<password>{V2.2}XXXXXX</password>
<PIA_HOME>\webserv\ <DOMAIN_NAME>\applications\peoplesoft\PORTAL.war\ WEB-INF\psftdocs\<SITE_NAME>	configuration.properties	- KeyStorePwd={V2.2}XXXXXX - DomainConnectionPwd={V2.2}XXXXXX - WebUserId={V2.2}XXXXXX - WebPassword={V2.2}XXXXXX

4. After building the new key, copy psvault from the web server location to the application server location.

Copy from <PIA_HOME>\webserv\<DOMAIN_NAME>\piaconfig\properties.

Copy to <PS_HOME>\secvault.

Task 16-4-7: Installing the fontconfig Package for Download to Excel

The fontconfig package is required for the download to Excel feature, which downloads query results or data from a grid to a Microsoft Excel spreadsheet. The package is available in *PS_HOME/setup/fontconfig*. This applies to installations on Linux.

To install the fontconfig package:

1. If necessary, sign out of PIA.
2. In a terminal window, log in to the PeopleSoft environment as the root user.
3. Enter this command:

```
yum info fontconfig
```

If the package is installed in the environment, the command lists it. If it is not present, the command lists the repository where it is available.

4. If the package is not installed, as the root user, enter this command to install it from *PS_HOME/setup*:

```
yum install fontconfig
```

5. Sign in to PIA and try the download to Excel again.

Note. Restarting the Application Server should not be necessary.

If you are still unable to use download to Excel, check to be sure the machine can access the Internet.

See Also

PeopleTools: Applications User's Guide, "Navigating Through Data"

PeopleTools: Query, "Downloading Queries"

Chapter 17A

Setting Up Process Scheduler on Windows

This chapter discusses:

- Prerequisites
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Environment Variables
- Setting Up Process Scheduler Server Agent
- Starting Process Scheduler as a Windows Service (Optional)
- Configuring the Process Scheduler for Microsoft Word (Optional)
- Installing Products for PS/nVision

Prerequisites

Before setting up your Process Scheduler, you must:

- Install Tuxedo.
See "Installing Additional Components."
- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).
See "Preparing for Installation."
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Set up your COBOL batch environment if you need to run COBOL processes through Process Scheduler. If the PeopleSoft modules purchased do not contain any COBOL modules, the COBOL run time libraries are not required. Also, COBOL is not required for applications that contain no COBOL programs. Consult My Oracle Support for the details on whether your application requires COBOL.
See "Preparing for Installation," Planning Your Initial Configuration.
- Install the Microsoft Office products Microsoft Word and Microsoft Excel.
- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.

In the current PeopleTools release, the configuration and log files for Process Scheduler server domains reside in *PS_CFG_HOME*. If you do not set a *PS_CFG_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

%USERPROFILE%\psft\pt\<peopletools_version>

See "Preparing for Installation," Defining Installation Locations.

See the product documentation *PeopleTools: System and Server Administration* for more information on the PS_CFG_HOME environment variable and working with server domain configuration.

See Also

PeopleTools: Process Scheduler

My Oracle Support, Certifications

Task 17A-1: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Changing User Account to Start ORACLE ProcMGR V22.1.0.0.0
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly both in Microsoft Windows and within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

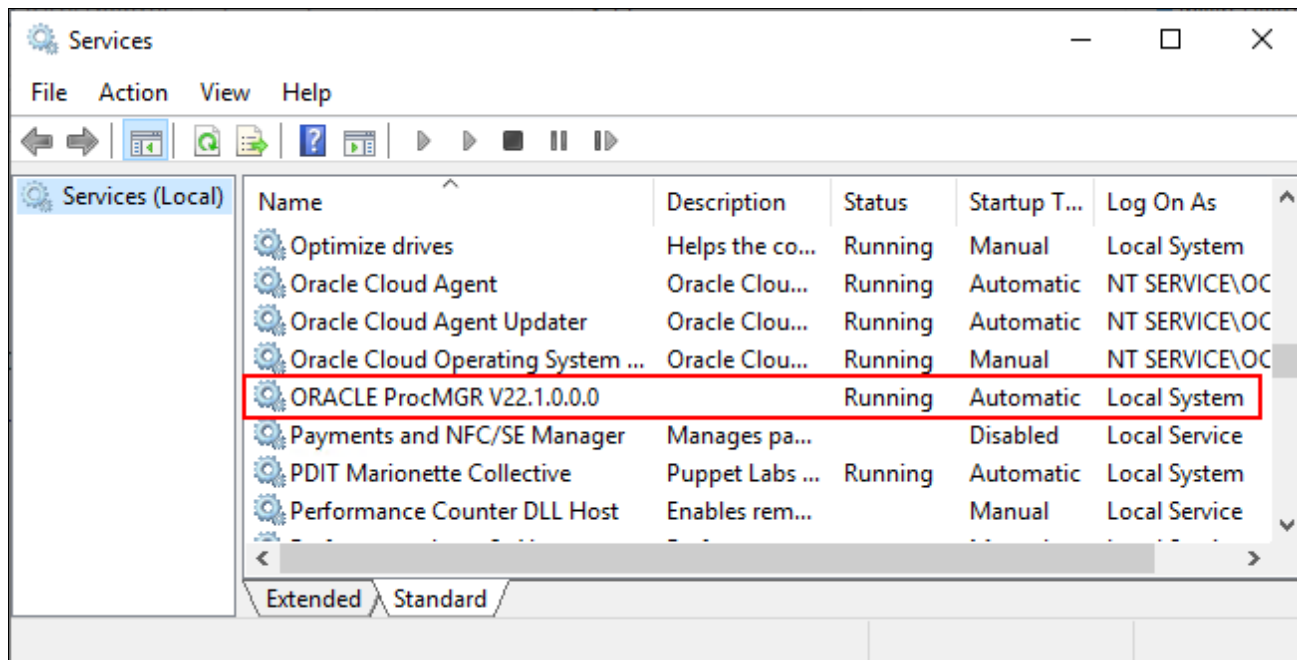
In the next section you set up ORACLE ProcMGR V22.1.0.0.0 with a network user ID. When you install Oracle Tuxedo, the ORACLE ProcMGR V22.1.0.0.0 service is set up by default to be started by local system account—a user account that does not have access to the Windows network. If the Process Scheduler server or processes initiated through Process Scheduler will be using a network printer, accessing files from a network drive, or using Microsoft Windows utilities such as XCOPY that may access UNC paths, you need to change the user account used to start ORACLE ProcMGR V22.1.0.0.0 with a network user account.

Task 17A-1-1: Changing User Account to Start ORACLE ProcMGR V22.1.0.0.0

To change User Account to start ORACLE ProcMGR V22.1.0.0.0:

1. Launch the Services dialog box; for example, select Administrative Tools, Services.

In the Services dialog box, find the service labeled *ORACLE ProcMGR V22.1.0.0.0*. This service is installed automatically when you install Tuxedo, and is highlighted in this example.



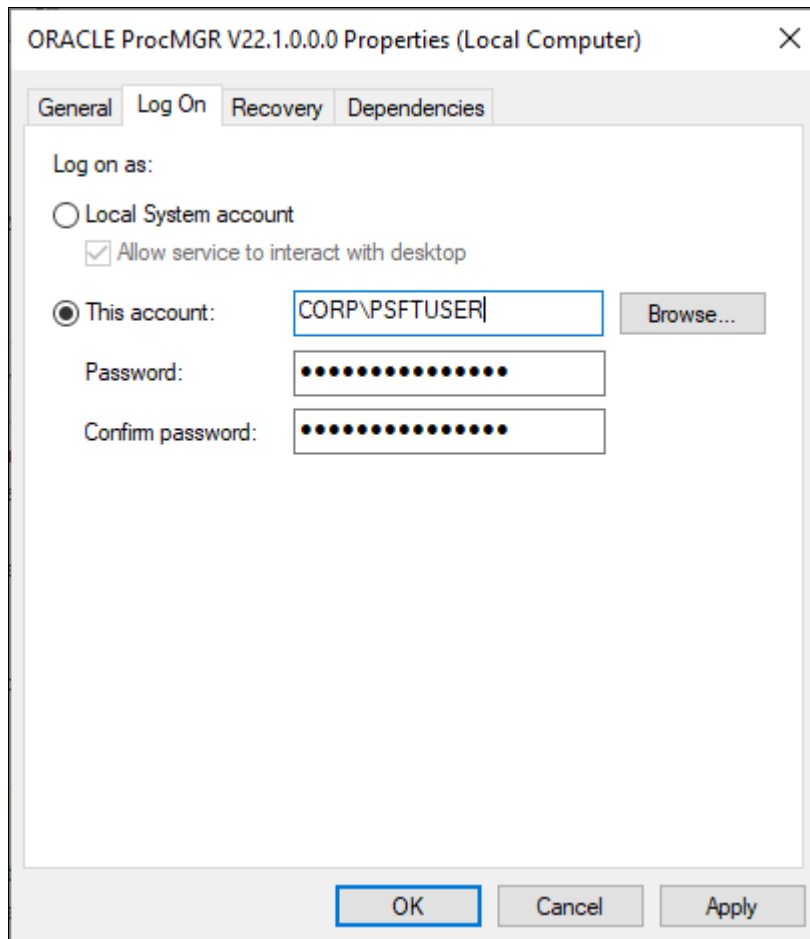
Microsoft Windows Services dialog box with ORACLE ProcMGR service highlighted

2. If the Stop button is enabled, click it to stop the current ORACLE ProcMGR V22.1.0.0.0 process.
 - a. Click Yes when a message informs you of the status change.
 - b. Double-click ORACLE ProcMGR V22.1.0.0.0.

The Properties dialog box appears.

3. Select the option This account on the Log On tab.

Enter an account name and password. In this example, the account name is CORP\PSFTUSER.

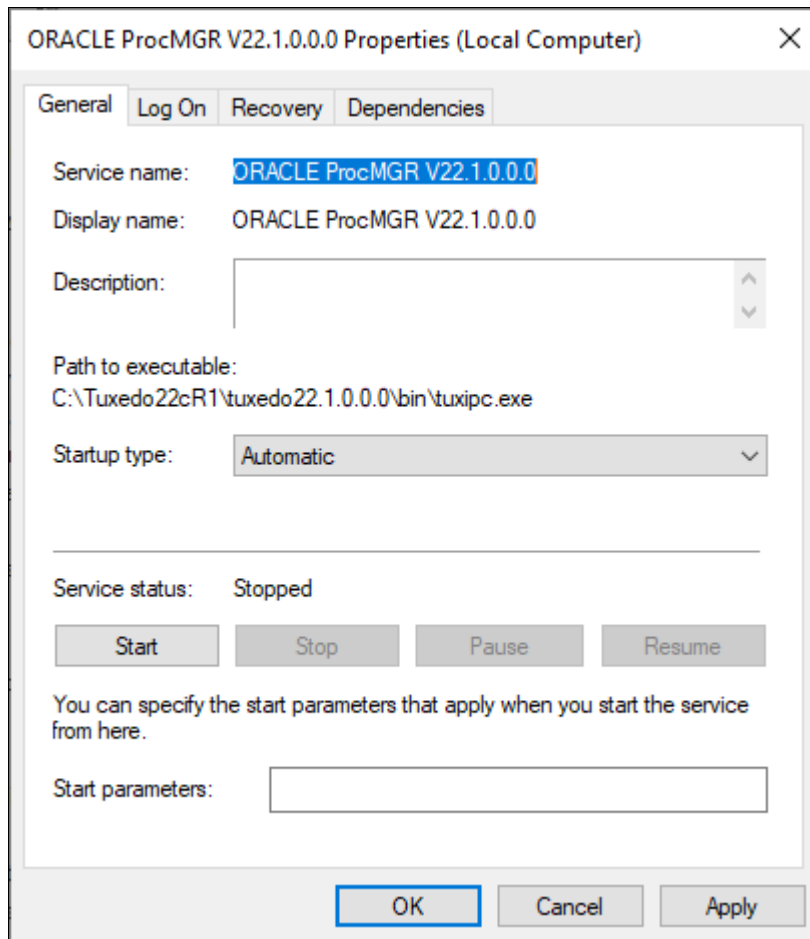


ORACLE ProcMGR V22.1.0.0.0 Properties dialog box: Log On tab

Note. When you configure your Oracle Tuxedo server as outlined in the chapter, "Configuring the Application Server on Windows," the user ID designated to be the Application Server Administrator must have read/write permissions to the PeopleSoft file directory and read permission to the %TUXDIR% directory, such as C:\oracle\tuxedo22.1.0.0.0.

4. Select the General tab.

Make sure that Startup Type is set to Automatic, as shown in this example, and click OK.



ORACLE ProcMGR V22.1.0.0.0 Properties dialog box: General tab

5. Click Start.

A message in the Properties dialog box will indicate the "Started" status. You also see the status in the Services dialog box. Click OK to close the dialog box.

Task 17A-1-2: Granting Process Scheduler Administrative Rights

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools > Security > User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.

- Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.

This example shows the Roles page with the ProcessSchedulerAdmin role.

User Profiles

General | ID | **Roles** | Workflow | Audit | Links | User ID Queries

User ID QEDMO

Description QE User

Dynamic Role Rule

Execute on Server Process Monitor Service Monitor

Test Rule(s) Refresh Execute Rule(s)

User Roles Personalize | Find | View All | First 11-20 of 24 Last

*Role Name	Description	Dynamic	View Definition
Portal Administrator	Portal Administrator	☐ Route Control	View Definition
Portal Manager	Portal Manager	☐ Route Control	View Definition
ProcessSchedulerAdmin	Process Scheduler Admin	☐ Route Control	View Definition
QE Role	QE Role	☐ Route Control	View Definition
QEDMO_Diagnostics	Role for DFW	☐ Route Control	View Definition
Search Administrator	Search Administrator	☐ Route Control	View Definition
Search Developer	Search Developer	☐ Route Control	View Definition
Search Server	Search Server	☐ Route Control	View Definition
XMLP_ADMIN	BIP Administrator Role	☐ Route Control	View Definition
XMLP_ANALYZER_EXC	BIP Excel Analyzer Role	☐ Route Control	View Definition

Save Return to Search Previous in List Next in List Add Update/Display

General | ID | **Roles** | Workflow | Audit | Links | User ID Queries

User Profiles page: Roles tab

- Repeat the instructions in step 4 to add the role *ReportDistAdmin*.

This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.

- Click Save to save your changes.
- Select the General tab and make a note of the Permission List name assigned to the Process Profile field.
- Select PeopleTools > Security > Permissions & Roles > Permission Lists.
- In the Search dialog, enter the Permission List you noted in step 7.
- Select the Can Start Application Server check box.
- Click Save to save your changes.

Task 17A-2: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution
- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol
- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS_CDM_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of Posting signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name>\<date yyyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is Web/Window, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

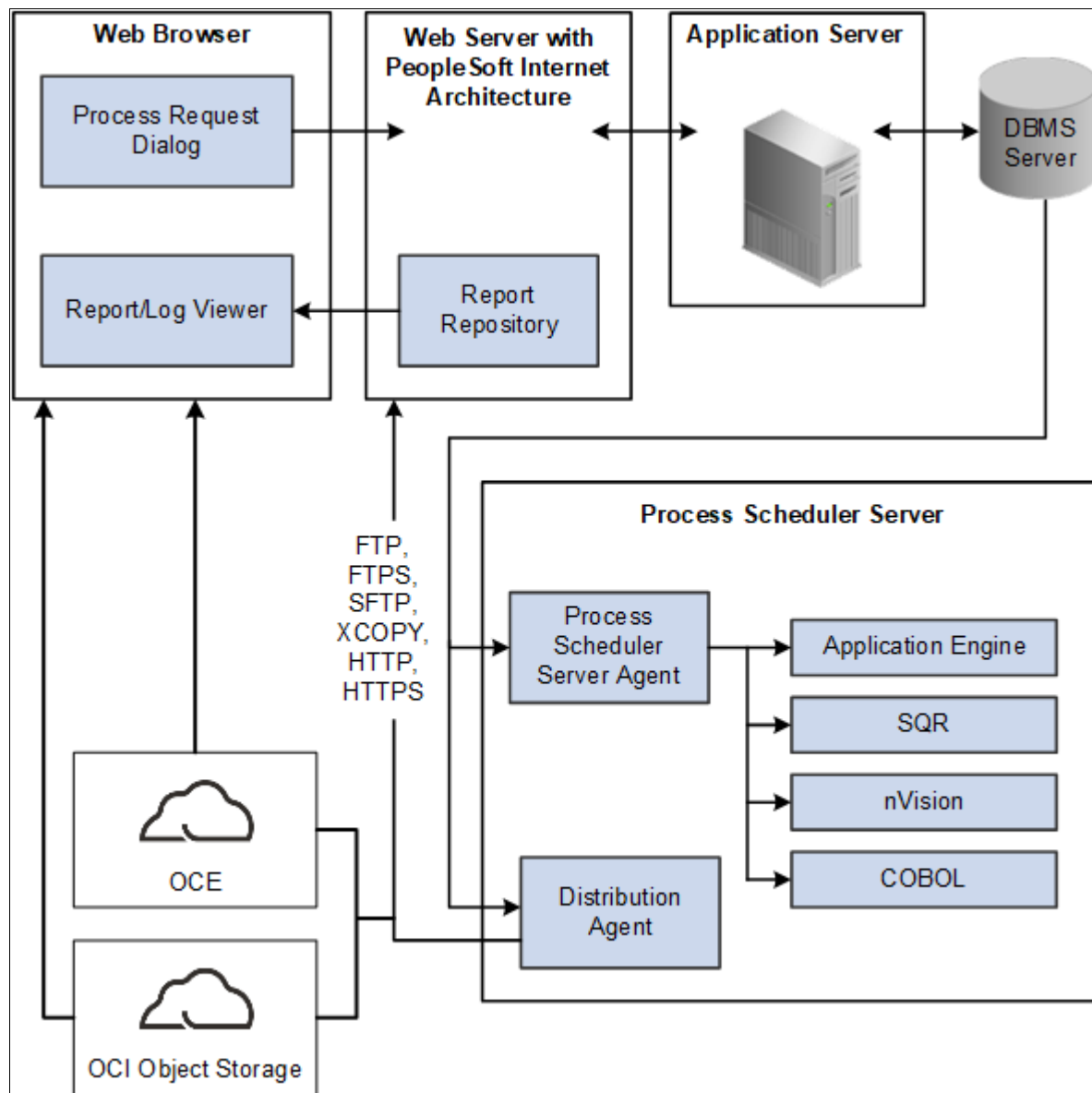
The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

- The web browser gives access to the Process Request dialog and the Report or Log Viewer.

- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Report Repository.

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP/FTPS, XCOPY, HTTP/HTTPS, or SFTP.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security documentation.

See *PeopleTools: Security Administration*.

Task 17A-2-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as PIA, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PIA, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter `http://<machineName>.peoplesoft.com/<site_name>/signon.html` instead of `http://<machineName>/<site_name>/signon.html`.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

See the information on implementing single signon in the *PeopleTools: Security Administration* product documentation.

- Set up single signon with a password, like this:
 - Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
 - Click Search and then select the node marked as Default Local Node.
 - Select *Password* for the Authentication Option.
 - Enter a password of your choice.
 - Enter the password again in the Confirm Password field.
 - Enter the user ID for which you are setting up single signon in the Default User ID field.
 - Save the Node Definition.
 - Sign out from the PeopleSoft application.
 - Reboot your application server.

See Also

PeopleTools: Security Administration

Task 17A-2-2: Determining the Transfer Protocol

We recommend using HTTP as your transfer protocol.

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. The following table lists the allowed transfer protocol based on the Process Scheduler and web server operating systems.

Process Scheduler Operating System	Web Server Operating System	Transfer Protocol
Microsoft Windows	Microsoft Windows	• XCOPY • FTP/FTPS • SFTP • HTTP/HTTPS Note. If FTP information is not specified, Process Scheduler will perform an XCOPY.
Microsoft Windows	UNIX	• FTP/FTPS • SFTP • HTTP/HTTPS
UNIX	Any	• FTP/FTPS • SFTP • HTTP/HTTPS

Note. If you are using FTP/FTPS or SFTP, the corresponding service must be set up in your web server.

Note. JRE is installed automatically on your Process Scheduler server.

Task 17A-2-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." After a node is defined for the Process Scheduler server, in the next cycle the Process Scheduler server checks the state of the system, and the Distribution Agent dynamically sets up its environment.

Task 17A-2-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use XCOPY
- Defining the Report Node to Use FTP
- Defining the Report Node to Use FTPS
- Defining the Report Node to Use SFTP
- Defining the Report Node for Cloud Repositories

Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools: Portal Technology*, "Configuring Web Profiles."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash ("/") in both cases:

- *Microsoft Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<user_home>/PeopleSoft Internet Architecture/psreports

For <user_home> substitute the home directory for the current user.

Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select the Add a New Value link and enter the Report node name.

3. On the Report Node Definition page, select HTTP or HTTPS from the Protocol drop-down list.

Select the HTTP option if you are *not* using SSL. Select the HTTPS option if you are using SSL. The pages for HTTP and HTTPS have the same fields. These examples show HTTP.

Note that if you are using SSL you need to have Client Certificates installed on your web server.

The screenshot shows the 'Report Node Definition' page. At the top right are links for 'New Window', 'Help', and 'Personalize Page'. The main title is 'Report Node Definition'. Below it, the 'Node Name' is set to 'HTTP' and the '*Protocol' is set to 'HTTP' in a dropdown menu. A 'Validate' button is to the right. The 'Distribution Node Details' section contains a 'URLID' field with the value 'http://<machine_name>:<port_number>/psreports/<site_name>', a 'Description' field, and an 'Operating System' dropdown set to 'Windows'. The 'Login Details' section has 'Login ID', 'Password', and 'Confirm Password' fields. The 'URL Details' section has 'URI Host' set to '<machine_name>', 'URI Port' set to '80', and 'URI Resource' set to 'SchedulerTransfer/<site_name>'. At the bottom are buttons for 'Save', 'Return to Search', 'Notify', and 'Refresh'.

Report Node Definition page for the HTTP protocol

4. Enter the following information in the Distribution Node Details area:

- **URLID:** Enter the URL of the web server using the following format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace `<machine_name>` with the name of your machine. Use the fully qualified host name for your web server. If you are using an HTTP or HTTPS port other than the defaults, you need to specify the port number.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

- **Description:** Enter a description of the server (optional).
- **Operating System:** Select the web server operating system, Windows or UNIX.

5. Enter the following information in the Login Details area:

- **Login ID:** Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
- **Password and Confirm Password:** Enter the password, and confirm it, for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the

Web Administrator.

Note. The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools: Security Administration* product documentation.

6. Enter the following information in the URI Details area:

- **URI Host:** Enter the machine name for the report repository.

Note. In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

- **URI Port:** Enter the port number, which must match the port number of your web server (defaults are HTTP = 80, HTTPS = 443). If you change a port number you will lose the default values for both protocols.
- **URI Resource:** Enter SchedulerTransfer/<site name>.

7. Click Save to save your entries.

8. Click Validate to confirm that your entries are complete and correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

9. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node to Use XCOPY

Both the Process Scheduler machine and the Report Repository machine must be Microsoft Windows machines for XCOPY to be used.

To define the report node to use XCOPY:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select XCOPY from the Protocol drop-down list.

Report Node Definition

Node Name: XCOPY

*Protocol: XCOPY [Validate]

Distribution Node Details

URLID: http://<machine_name>:<port_number>/psreports/<site_name>

Description:

Operating System: Windows [Network Path: \\<machine_name>\psreports]

[Save] [Notify] [Refresh]

Report Node Definition page for the XCOPY protocol

- Enter the following information in the Distribution Node Details area:

- URLID:** Enter the URL of the web server using this format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. Replace *<site name>* with the directory where you installed the PIA files.

If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- Description:** Enter an optional description for the node.
- Network Path:** Enter the path that points to your Report Repository share, using this format (where *<machine_name>* refers to the web server machine):

`\\<machine_name>\psreports`

Make sure that this directory is shared with the login accounts used to start Process Scheduler. Use UNC format instead of mapped drive format.

- Select Save to save your entries.
 - Click Validate to confirm that your entries are correct.
- The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
- To add additional report nodes, select Add to return to the Search page.

Defining the Report Node to Use FTP

If you use the FTP report node protocol, note that:

- If your FTP server is a Microsoft Windows server, you may have to set up the FTP service.
- The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be completed, it is critical that the value entered in

the URL is accurate. Verify that the machine name, port number, and site number that you specify are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. On the Report Node Definition page, select FTP from the Protocol drop-down list.

Report Node Definition

New Window | Help | Personalize Page |

Node Name FTP

***Protocol** FTP Validate

Distribution Node Details

URLID http://<machine_name>:<port_number>/psreports/<site_name>

Description FTP sample

Operating System Windows **Network Path**

Login Details

Login ID <user_id>

Password **Confirm Password**

File Transfer Details

Home Directory \\<machine_name>\psreports

FTP Address <machine_name> **SSL Mode** EXPLICIT

Connection Properties

Property Name	Property Value		

▼ Password Encryption

Password **Confirm Password**

Encrypt **Encrypted Password**

Save Return to Search Notify Refresh

Report Node Definition page for the FTP protocol

4. In the Distribution Node Details area, enter the following information:
 - **URLID:** Enter the URL of the web server using this format:
http://<machine_name>:<port_number>/psreports/<site_name>

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- *Description:* Enter a description of the server (optional).
 - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
 - *Network Path:* This information is not required for the FTP protocol
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
 - *Password and Confirm Password:* Enter the password, and enter it a second time, for the FTP User ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to `ReportRepositoryPath` in `configuration.properties`. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for `ReportRepositoryPath` in `configuration.properties`.
- For Microsoft Windows operating systems, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in `c:\psreports\`—because you are using the FTP protocol to interpret this parameter.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. If you need to specify additional properties, use the Connection Properties area. Specifying the Connection Properties is optional.

Click the lookup button (magnifying glass) and select one of the properties in the following table. Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to Y. The default FTP connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name. You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
ENABLEEPRPRT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPRT is set to N, then the system will use a PORT (IPv4) Active Mode connection. By default, ENABLEEPRPRT is Y, if Active Mode is set to Y.
EXTENDEDPASSIVEMODE	0: Disable EPSV 1: Enable EPSV This property enables you to control whether extended passive mode (EPSV) will be used by FTP. EPSV is used by default. That is, by default, this value is considered to be 1. If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) path.
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
USER	Specify the FTP User ID used for authentication when accessing the FTP site.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
 - a. In the Password field, enter a password.
 - b. In the Confirm Password field, enter the password again.
 - c. Click Encrypt.
The encrypted password is displayed in the Encrypted Password field.
 - d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.
The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
11. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node to Use FTPS

To define the report node to use FTPS:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

3. On the Report Node Definition page, select FTPS from the Protocol drop-down list.

Report Node Definition

Node Name: FTPS

*Protocol: Validate

Distribution Node Details

URLID:

Description:

Operating System: Network Path:

Login Details

Login ID:

Password: Confirm Password:

File Transfer Details

Home Directory:

FTP Address: SSL Mode:

Connection Properties

Property Name	Property Value

▼ Password Encryption

Password 	Confirm Password
Encrypt	Encrypted Password

Save Notify Refresh

Report Node Definition page for the FTPS protocol

4. In the Distribution Node Details area, enter the following information:

- **URLID:** Enter the URL of the web server using this format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to ps for the first installation.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- *Description:* Enter a description of the server (optional).
 - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
 - *Network Path:* This information is not required for the FTPS protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
 - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
- For Microsoft Windows operating systems, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in c:\psreports\—because you are using the FTP protocol to interpret this parameter.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
 - *SSL Mode:* Select Explicit or Implicit from the drop-down list.

These are two separate methods developed to invoke the client security for use with FTP clients. With the explicit mode, FTPS-aware clients can invoke security with an FTPS-aware server without breaking overall FTP functionality with non-FTPS-aware clients. The implicit method requires that all clients of the FTPS server be aware that SSL is to be used on the session, and thus is incompatible with non-FTPS-aware clients.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table:

Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to Y. The default FTPS connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name. You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
CERTALIAS	Certificate Alias: The Certificate Alias must be an alias name of a certificate stored in the database (using the PeopleSoft PeopleTools Digital Certificates page). Note. Currently, only PEM certificates are supported for FTPS.
ENABLEEPRPRT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPRT is set to N, then the system will use a PORT (IPv4) Active Mode connection. By default, ENABLEEPRPRT is Y, if Active Mode is set to Y.
EXTENDEDPASSIVEMODE	0: Disable EPSV 1: Enable EPSV This property enables you to control whether extended passive mode (EPSV) will be used by FTP. EPSV is used by default. That is, by default, this value is considered to be 1. If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) user.

Property Name	Property Value
KEYSTOREPASSWORD	This property is required for FTPS and HTTPS repositories. For attachments transferred from the PeopleSoft system to the FTPS or HTTPS repository, the system retrieves the key pair for the client certificate from the digital certificate store and writes the pair to a file in PKCS12 format with password protection. The value of this property will be used as the password for the PKCS12 file. The PKCS12 file enables connection and file transfer, and it exists only temporarily in <PS_SERVDIR>\files\<CERT ALIAS NAME> for the duration of the file transfer. The system deletes the file after the file transfer transaction. Note. If the system fails to delete the certificate alias file, a message will be written to the application server log. The maximum number of files that can exist at any time is equal to the total number of FTPS and HTTPS URL identifiers defined in the system. For information on setting the PS_SERVDIR environment variable, see the <i>PeopleTools: Integration Broker</i> product documentation.
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
SSLUAGELEVEL	• <i>0 - No SSL:</i> No SSL will be used. • <i>1 - Try SSL:</i> Try using SSL, but proceed as normal otherwise. • <i>2 - Control:</i> Require SSL for the control connection. • <i>3 - SSL Only:</i> (Default) Require SSL for all communication.
USER	Specify the FTP User ID used for authentication when accessing the FTP site.
VERIFYHOST	• <i>0:</i> Do not verify the server for host name. • <i>1:</i> Check if there exists any value in the common name field in the server certificate. This check does not verify if it matches with what the client specifies. • <i>2:</i> (Default) Check for a match with the host name in the URL with the common name or Subject Alternate field in the server certificate.
VERIFYPEER	• <i>False:</i> Do not verify the peer. • <i>True:</i> (Default) Verify the peer by authenticating the certificate sent by the server.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:

- a. In the Password field, enter a password.
- b. In the Confirm Password field, enter the password again.
- c. Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
 10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node to Use SFTP

To define the report node to use SFTP:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select SFTP from the Protocol drop-down list.

Report Node Definition

Node Name: SFTP

*Protocol: SFTP Validate

Distribution Node Details

URLID: `http://<machine_name>:<port_number>/psreports/<site_name>`

Description: SFTP sample

Operating System: Windows

Login Details

Login ID: `<user_id>`

Password: `.....` Confirm Password: `.....`

File Transfer Details

Home Directory: `\\<machine_name>\psreports`

FTP Address: `<machine_name>`

Connection Properties

Property Name	Property Value

Password Encryption

Password: Confirm Password:

Encrypt Encrypted Password:

Save Notify Refresh

Report Node Definition page for the SFTP protocol

- In the Distribution Node Details area, enter the following information:

- URLID:** Enter the URL of the web server using this format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace `<machine name>` with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable `<site name>` refers to the directory where you installed the PIA files; this will default to `ps` for the first installation.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- *Description:* Enter a description of the server (optional).
 - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
 - *Network Path:* This information is not required for the SFTP protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
 - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.

For Microsoft Windows operating systems, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in c:\psreports\—because you are using the FTP protocol to interpret this parameter.
 - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table.

Click the plus sign to add additional connection properties.

Property Name	Property Value
AUTHTYPE	Select one of the following the authentication types: <i>PUBLICKEY</i> <i>PASSWORD</i> <i>ANY</i>
PASSWORD	Specify the user password. You can enter the password in the Password Encryption box, click Encrypt, and then copy the encrypted value to the Password property.
PASSWORDKEY	Enter the password for the private key.
PRIVATEKEY	Select the private key.
PUBLICKEY	Select the public key.
SSHKEYALIAS	Select the SSH certificate saved to the database using the PeopleTools Security, Digital Certificates page (select PeopleTools > Security > Security Objects > Manage Digital Certificates). The SSH certificate added through the Digital Certificates page contains both the public and private key data, identified by the Alias column value on the Digital Certificates page. If using the SSHKEYALIAS URL property, the Property Value prompt displays only the list of SSH certificates that have been added to the Digital Certificates page. If you have added the SSH certificate using the Digital Certificates page, and you have assigned an SSH certificate to the SSHKEYALIAS URL property, the system ignores the PUBLICKEY and PRIVATEKEY properties, regardless of whether they refer to valid key files in the file system. If you provided a password (or passphrase) when generating your SSH certificate, specify that value using the PASSWORDKEY URL property. See <i>PeopleTools: Security Administration</i>, "Configuring Digital Certificates."
USER	Specify the user ID to be authenticated.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
- In the Password field, enter a password.
 - In the Confirm Password field, enter the password again.
 - Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
 10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node for Cloud Repositories

You can use the following cloud storage provider as repositories for your Process Scheduler reports.

- Oracle Cloud Infrastructure Object Storage service — an internet-scale, high-performance storage platform that offers reliable and cost-efficient data durability
See Overview of Object Storage, <https://docs.oracle.com/en-us/iaas/Content/Object/Concepts/objectstorageoverview.htm>.
- Oracle Content and Experience Cloud — a cloud-based content hub to drive omni-channel content management and accelerate experience delivery
See Oracle Content and Experience on the Oracle Help Center, <https://docs.oracle.com/en/cloud/paas/content-cloud/>.

See *PeopleTools: Process Scheduler*, "Defining Report Nodes."

Task 17A-2-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Select PeopleTools > Process Scheduler > Process Scheduler Servers.
2. Enter the Server Name (such as PSNT). The Server Definition page appears.

3. Select the Distribution tab.

The screenshot shows the 'Server Definition' page for 'PSNT' with the 'Distribution' tab selected. The page has a top navigation bar with links for 'New Window', 'Help', and 'Personalize Page'. Below this is a tabbed interface with 'Server Definition', 'Distribution', 'Operation', 'Notification', and 'Daemon' tabs. The 'Distribution' tab is active, showing a section titled 'Server Distribution Details'. This section contains four fields: 'Distribution Node Name' with a text input and a lookup button (magnifying glass icon), 'Maximum Transfer Retries' with a text input, 'Interval for Transfer Attempt' with a text input and a 'seconds' label, and 'Transfer System Files to Report Repository' with a checkbox. At the bottom of the form are five buttons: 'Save', 'Return to Search', 'Notify', 'Add', and 'Update/Display'. A breadcrumb trail at the very bottom reads 'Server Definition | Distribution | Operation | Notification | Daemon'.

Server Definition page for PSNT: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.
5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.
7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PIA to Report Repository, you need to set up single signon in order to avoid getting a prompt for a second signon.

Task 17A-2-6: Setting Up Sending and Receiving of Report Folders in the Report Manager

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools: Integration Broker*.

See *PeopleTools: Integration Broker Service Operations Monitor*.

Task 17A-3: Setting Environment Variables

To set the appropriate Tuxedo environment variables, carry out these steps. (If you have already set these variables on the machine you are using as your Process Scheduler Server, you can skip this task.)

See "Installing Oracle Tuxedo," Installing Oracle Tuxedo on Microsoft Windows.

To set the variables:

1. Choose Start, Settings, Control Panel.
2. Double-click the System icon.
3. Make sure that the NLSPATH environment variable is set.

NLSPATH does not need to be explicitly set since Oracle Tuxedo sets NLSPATH in its own registry tree. This value can be displayed using Control Panel, Tuxedo, on the Environment tab. However, the installation of certain products sets NLSPATH to a value that causes Oracle Tuxedo to fail. The solution is to either set NLSPATH=c:\tuxedo\locale\c, or to delete it entirely and let Oracle Tuxedo pick up the value from its registry tree.

Search the Oracle Tuxedo documentation for additional information on NLSPATH.

Task 17A-4: Setting Up Process Scheduler Server Agent

This section discusses:

- Understanding Process Scheduler Server Agent
- Creating and Configuring a Process Scheduler Server
- Reconfiguring a Process Scheduler Server
- Verifying the Process Scheduler Server Status

Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSNT	Microsoft Windows

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the *PeopleTools: Process Scheduler* product documentation.

Note. When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

Task 17A-4-1: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure a Process Scheduler server.

You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file `psprcs.cfg` located in the `PS_CFG_HOME\appserv\prcs\database name` directory. The following steps assume you are using PSADMIN to specify parameter settings.

Note. For Cube Builder users, if Essbase Server is installed on a different machine than the Process Scheduler, you must install Essbase Client 11.1.2.1 on the process scheduler server machine. You must also ensure that the `%ESSBASEPATH%` and `%ARBORPATH%` environmental variables are properly set in the Process Scheduler.

Note. If you use the configuration file `psprcs.cfg`, be aware that the section [Output Dest Exceptions] is written to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` that was used in older releases has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

To create and configure a Process Scheduler Server:

1. From `PS_HOME\appserv` on the batch server, type `psadmin`.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----
PS_CFG_HOME      C:\User\JSMITH\psft\pt\8.61
PS_HOME          C:\psft\pt\ps_home8.61
PS_APP_HOME      C:\psft\pt\hcm_app_home

1) Application Server
2) Process Scheduler
3) Web (PIA) Server
4) Switch Config Home
5) Service Setup
6) Replicate Config Home
7) Refresh Config Home
q) Quit
```

Command to execute (1-7 q):

2. Depending on your environment, you may see a message after the menu selection, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The `PS_CFG_HOME` that you are working with was used previously from a different `PS_HOME`. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this `PS_CFG_HOME`.
- You configured your environment such that `PS_CFG_HOME` is the same as `PS_HOME`. The first time you use PSADMIN to create a domain, it updates the `PS_CFG_HOME/peopletools.properties` file.

Continue with the next step.

3. Select 2 to access the Process Scheduler submenus.
4. Select 2 for Create a domain from the PeopleSoft Process Scheduler Administration menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
```

```
q) Quit
```

Command to execute (1-4, q) : **2**

5. Enter the name of the domain at the following prompt, such as HRDMO in this example, and press ENTER:

```
Please enter name of domain to create : HRDMO
```

6. After the system creates the domain, the Quick-configure menu appears:

```
-----
Quick-configure menu -- domain: HRDMO
-----
```

Features =====	Settings =====
1) App Engine Server : Yes	10) DBNAME : [HRDMO]
2) Master Scheduler : Yes	11) DBTYPE : [ORACLE]
3) Perf Collator : No	12) PrcsServer : [PSNT]
4) Domains Gateway : No	13) UserId : [PS]
5) Push Notifications: No	14) UserPswd : []
6) Real Time Indexing: Yes	15) ConnectID : [people]
	16) ConnectPswd: []
	17) Log/Output Dir: [%PS_SERVDIR%\log_⇒
output]	
	18) SQRBIN : [%PS_HOME%\bin\sqr\ORA⇒
\binw]	
	19) AddToPATH : [%WINDIR%;%WINDIR%⇒
\SYSTEM32]	
	20) DBBIN : [C:\<connectivity⇒
directory>]	
	21) PHC Remote Admin Settings: []
 Actions =====	
7) Load config as shown	
8) Custom configuration	
9) Edit environment settings	
h) Help for this menu	
q) Return to previous menu	

HINT: Enter 10 to edit DBNAME, then 7 to load

Enter selection (1-20, h, or q):

7. If you need to modify any of these settings, enter the number next to the parameter name, type the new value, and press ENTER. This table lists the parameters and gives brief descriptions.

Parameter	Description
Master Scheduler	Select this option to enable the Master Scheduler Server (PSMSTPRC). The default is to enable the server. <i>See PeopleTools: Process Scheduler.</i>
App Engine	Select this option to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). The default is set to run AE using PSAESRV. <i>See PeopleTools: Process Scheduler.</i>
Perf Collator	Select this option to enable the PSPPMSSRV server process. <i>See PeopleTools: Performance Monitor, "Enabling the Required Elements on the Monitoring System."</i>
Domain Gateways	Select this option to enables inter domain communication, for example between Application Server and Process Scheduler domains. <i>See PeopleTools: Fluid User Interface Developer's Guide, "Configuring the System for Push Notifications."</i>
Push Notifications	Select this option to enables pushing server events from PeopleSoft PeopleTools server runtime, such as Application Server and Process Scheduler, to browser clients and other PeopleSoft PeopleTools server runtime components. <i>See PeopleTools: Fluid User Interface Developer's Guide, "Configuring the System for Push Notifications."</i>
Real Time Indexing	Select this option to enable the process for Real Time Indexing (PSRTISRV). With real-time indexing, data is indexed as it is added, updated, or deleted to ensure up-to-date data in PeopleSoft Search. The default is to enable real-time indexing. <i>See PeopleTools: Search Technology.</i> <i>See PeopleTools: Process Scheduler, "Editing the PeopleSoft Process Scheduler Configuration File"</i>
Load config as shown	Load the selections you made in the Quick Configure menu.
Custom configuration	Make custom selections in PSADMIN, using options that are not available in the Quick Configure menu.
Edit environment settings	Edit, add, remove, comment out, and review domain-level environment variables.

Parameter	Description
DBNAME	Specify the database name that is associated with a PeopleSoft Process Scheduler Server Agent, such as HRDMO, FSDMO, CSDMO, and so on.
DBTYPE	Specify the database type: ORACLE.
PrCsServer	Specify the process server name. This must match the name defined in the Server Definition table, such as <i>PSNT</i> or <i>PSUNX</i> .
UserId	Enter the user ID, such as VP1 or PS.
UserPswd	Enter the password for the user ID, as you specified during the database configuration. The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
ConnectID	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password, as you specified during the database configuration. This value is required. The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
Log/Output Dir	Specify the directory in which files that are generated by the program are written. When PeopleSoft Process Scheduler initiates a process request, it creates a subdirectory in the format <Process Type ID>_<Program Name>_<Process Instance> that contains the generated files. For instance, the SQR program XRFFWIN that ran with process instance 20 has all reports, trace, and log files in the subdirectory SQR_XRFFWIN_20. It is also the optional directory used with the Output Destination field when scheduling a request. This variable (%%OutputDirectory%%) can be used in the File/Printer field of the Process Scheduler Request dialog box.
SQRBIN	Enter the path to the SQR executables.
AddToPATH	(Optional for Tuxedo) Specify an additional directory that is appended to the PATH environment variable. Add the paths to the 64-bit connectivity software. For example: C:\psft\db\oracle-server\19.3.0.0\BIN Note. If the PATH environment variable contains the path for the 64-bit connectivity software, then you do not need to change the setting for AddToPATH.

Parameter	Description
DBBIN	Enter the path to the database drivers; that is, your connectivity software. For an Oracle installation, this should indicate the 64-bit connectivity software, for example: C:\psft\db\oracle-server\19.3.0\BIN.
PHC Remote Admin Settings	Use this setting to enable embedded JMX Agents for use with PeopleSoft Health Center (PHC). The setting is enabled by default. Enter <i>1</i> to enable, and <i>0</i> to disable. Note. If you do not disable the setting and you do not supply any information, you see a message when you configure the Process Scheduler domain, such as "Enable PS JMX is not 0, but some of PS JMX parameters (userId, userPwd) are empty. PHC will not be able to work." When you enter <i>1</i> to enable Remote Administration, you must supply the port, user ID, and password. You may also set up SSL. You see prompts for: - Remote Administration Port - Remote Administration UserID - Remote Administration Password - Remote Administration SSL Enabled Enter <i>1</i> to enable SSL for JMX agents, or <i>0</i> to disable it. You see prompts for other SSL parameters. The default is 0, disabled. - Remote Administration SSL Keystore — Specify the keystore location. - Remote Administration SSL Keystore Password - Remote Administration SSL Keystore Type — Specify PKCS12 or JKS. - Remote Administration SSL Truststore — Specify the truststore location. - Remote Administration SSL Truststore Password - Remote Administration SSL Truststore Type — Specify PKCS12 or JKS.

For descriptions of the PSADMIN options that do not appear in the Quick-configure menu, see the information on using PSADMIN in the *PeopleTools: Process Scheduler* product documentation. For a basic installation, in most cases you can accept the defaults.

- When you have updated the settings as needed, choose *5, Load config as shown*, from the Quick-Configure menu to save your settings to the Process Scheduler configuration file, pstuxcfg.
- To start Process Scheduler, choose *1*, for Administer Domain.
- On the PeopleSoft Process Scheduler Administration menu, choose *1* for Boot this domain.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
Domain Name: HRDMO
```

```
1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit
```

```
Command to execute (1-7, q) :
```

11. Choose 1, Boot (Serial Boot), or 2, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

12. If you want to stop Process Scheduler Server, from the PeopleSoft Domain Administration menu, choose 2, for Domain Shutdown menu, and then enter the number corresponding to the name of the appropriate database.

Note. If you see the following message, then the server is already down:

```
Command to execute (1-2, q) [q]: 1 Loading command line administration
utility ... tmadmin - Copyright (c) 2007-2008, Oracle. Portions *
Copyright 1986-1997 RSA Data Security, Inc. All Rights Reserved.
Distributed under license by Oracle. Tuxedo is a registered trademark. No
bulletin board exists. Entering boot mode. > TMADMIN_CAT:111: ERROR: No
such command.
```

Task 17A-4-2: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. Alternatively, you can use PSADMIN as described in this section. Feel free to skip this procedure if you have already created and configured your Process Scheduler Server using the Quick-configure menu and want to move forward with your installation.

Note. If you want to configure the Process Scheduler Server while it is running, you need to stop and restart the server to load the new settings.

To reconfigure a Process Scheduler Server:

1. Go to *PS_HOME*\appserv and enter:
psadmin
2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS_CFG_HOME*/peopletools.properties file with the current *PS_HOME* location:

```

*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****

```

This indicates that one of these situations exists:

- The *PS_CFG_HOME* that you are working with was used previously from a different *PS_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS_CFG_HOME*.
- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME/peopletools.properties* file. Continue with the next step.

3. Select 2 for Process Scheduler in the PeopleSoft Server Administration menu.
4. In the PeopleSoft Process Scheduler Administration menu, select 1 for Administer a domain.
5. Select the database for which the Process Scheduler needs to be configured.
6. You see the following prompt:

Do you want to change any config values (y/n)? [n]:

Specify y to start an interactive dialog that lets you examine or change parameter values.

7. Specify the configuration parameters one by one.

Configuration parameters are grouped into sections. At each section, you are asked whether to change any parameters—for example:

Values for config section - Startup

```

DBName=
DBType=
UserId=
UserPswd=
ConnectId=
ConnectPswd=
ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=

```

Do you want to change any values (y/n)? [n]:

- Specify y to change any parameter values for the current section. You are prompted for each parameter value. Either specify a new value or press ENTER to accept the default. After you press ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- The parameters StandbyDBName, StandbyDBType, StandbyUserID, and StandbyUserPswd are used for a standby database in an Oracle database environment.

See the information on implementing Oracle Active Data Guard in the *PeopleTools: Data Management*, product documentation.

- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- If you do not want to change any values, specify *n* and you are prompted for the next configuration section.

8. After you have selected all your parameters, you see this message:

```
You will need to shut down and start up the server to read the new⇒
settings.
```

For descriptions of the Process Scheduler options in the PSADMIN, see the *PeopleTools: Process Scheduler* product documentation. In most cases you can accept the defaults.

Task 17A-4-3: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose option 3, for Domain status menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
Domain Name: HRDMO
```

```
1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit
```

```
Command to execute (1-7, q) : 3
```

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

For example:

```
Database list:
```

```
1) HRDMO
```

```
Select item number to start: 1
```

```
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008 Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.
```

```
> Prog Name      Queue Name  Grp Name      ID RqDone Load Done Current⇒
```

```

Service
-----
-----
-----
-- -----
----->
-----
BBL.exe          46845      PSSERVER+    0      9      450 ( IDLE )
PSMONITORSRV.e  MONITOR    MONITOR      1      0      0 ( IDLE )
PSAESRV.exe     00101.00001 AESRV        1      0      0 ( IDLE )
PSAESRV.exe     00101.00002 AESRV        2      0      0 ( IDLE )
PSAESRV.exe     00101.00003 AESRV        3      0      0 ( IDLE )
PSPRCSRV.exe    SCHEDQ     BASE         101    0      0 ( IDLE )
PSMSTPRC.exe    MSTRSCHQ   BASE         102    0      0 ( IDLE )
PSDSTSRV.exe    DSTQ       BASE         103    0      0 ( IDLE )
PSRTISRV.exe    00030.00030 RTI          30     0      0 ( IDLE )
>

```

You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools > Process Scheduler > Process Monitor, and select *Server List*.

If the user has the process security rights to update the server status, the *Refresh* button can be used to refresh the screen, too.

See [Setting Up Process Scheduler Security](#).

This example of the Server List page shows two Process Scheduler servers with status Down, and one with status Running.

Process List	Server List

Refresh

Server	Hostname	Last Update Date/Time	Dist Node	Master	CPU (%)	Memory (%)	Active	Status	Details
PRCS3036	SERVER01	03/13/2023 10:38:28AM	PRCS3036	N	46	71	0	Running	Details
PSNT	SERVER02	01/23/2018 4:37:18PM		N	3	31	0	Down	Details
PSUNX	SERVER03	02/15/2023 5:28:09PM	HTTPS	N	31	39	0	Down	Details

Process Monitor page: Server List tab

Task 17A-5: Starting Process Scheduler as a Windows Service (Optional)

You can start the Process Scheduler server as a Windows service. This means that administrators do not need to manually boot each Process Scheduler server that runs on a Microsoft Windows machine. Instead, each time you boot the Microsoft Windows server where the Process Scheduler server resides, the Process Scheduler Server will boot automatically. You can also still manually boot Process Scheduler Servers on your Microsoft Windows server.

Note. If you have set up TUXDIR and TEMP as new SYSTEM variables, you need to reboot your machine before any Windows services will pick up the value of these environment variables.

Note. You can also set up application servers and search servers as a Windows service using the instructions provided here.

The following directions assume that the Process Scheduler is already configured on the Microsoft Windows server.

To set up the Windows Service for a Process Scheduler Server:

1. Open the System utility within the Control Panel, and set the variables, listed with a brief explanation in the following table, in the System Variables section of the Environment tab.

Note. Even if the following variables are in the User Variables section, they must also be in the System Variables section because the Windows service will be started under the System Account.

Variable	Value
TEMP	Specify the location of the TEMP directory on the Windows server, as in C:\TEMP.
TUXDIR	Specify the location of the Tuxedo directory on the Windows server, as in C:\tuxedo.

2. Reboot the Windows computer if any changes or additions were made for the system variables.
3. Run the PeopleSoft PSADMIN utility (psadmin.exe in the *PS_HOME*\appserv directory), and press ENTER.
4. Select 5 for Service Setup from the PeopleSoft Server Administration menu.

```

-----
PeopleSoft Server Administration
-----
PS_CFG_HOME           C:\Users\JSMITH\psftuser\psft\pt\8.61
PS_HOME               C:\psft\pt\ps_home8.61
PS_APP_HOME           C:\psft\pt\hcm_app_home

1) Application Server
2) Process Scheduler
3) Web (PIA) Server
4) Switch Config Home
5) Service Setup
6) Replicate Config Home
7) Refresh Config Home
q) Quit

```

Command to execute (1-7, q): **6**

5. Select 1 from the PeopleSoft Services Administration menu.

```

-----
PeopleSoft Services Administration
-----
1) Configure Windows Service
2) Install Windows Service
3) Delete Windows Service
4) Edit Service Configuration File
q) Quit

```

Command to execute (1-4, q) : **1**

When asked if you want to change configuration values, enter *y*.

6. Enter the name of the Process Scheduler databases that you intend to include as part of the Windows service.

Values for config section - NT Services

```
Service Start Delay=60
Application Server Domains=HRDMO
Process Scheduler Databases=HRDMO
Search Server Domains=HRDMO
```

Do you want to change any values (y/n)? [n]:

If you specify more than one Process Scheduler database, separate each entry with a comma.

Note. You can use PSADMIN to set up Process Scheduler Servers, application servers, or search servers as a Windows service. The Windows Service psntrsv.exe automatically starts application servers, Process Scheduler servers, and search servers that reside on the same Microsoft Windows machine. Occasionally, psntrsv.exe would attempt to initiate a connection between an application server, Process Scheduler server, or search server and a database on the same machine that was not ready to receive requests. As a result the connection would fail. When you set up these servers as a Windows Service, you can specify a Service Start Delay, in seconds, that elapses before a service attempts to start any application server domains, Process Scheduler servers, or search servers. This allows the RDBMS to boot and become available to accept requests. The default setting for the Service Start Delay parameter is 60 seconds.

Note. The NT Services section of the PSADMIN modifies the psntrsv.cfg file located in the *PS_CFG_HOME\appserv* directory. You can edit this file manually by selecting *4, Edit Service Configuration File* from the PeopleSoft Services Administration menu. If you edit it, you need to delete and then install the service again.

7. Select option 2 from the PeopleSoft Services Administration menu.

```
-----
PeopleSoft Services Administration
-----
1) Configure Windows Service
2) Install Windows Service
3) Delete Windows Service
4) Edit Service Configuration File
q) Quit
```

Command to execute (1-4, q) : **2**

8. Return to the Control Panel, choose *Administrative Tools*, and launch the Services utility.
9. On the Services dialog, scroll to find the entry that adheres to the following naming convention, and select it:

PeopleSoft <PS_CFG_HOME>

For example:

PeopleSoft C:\Users\JSMITH\psftuser\psft\pt\8.61

Note. The default Startup mode is Manual.

10. Click *Startup*.

11. On the Service dialog in the Startup Type group, select *Automatic*, and in the Log On As group, select *Local System Account*. Then click OK.

Note. The *Log On As* setting needs to reflect that which you set for your ORACLE ProcMGR V22.1.0.0.0 and Tlisten processes. Oracle recommends that you set these services to *Local System Account* when you install Tuxedo. The *Log On As* value only affects the application server because Process Scheduler runs independently from Tuxedo. See the chapter "Installing Additional Components" for more information on installing Tuxedo, and refer to the chapter "Configuring the Application Server on Windows" for the details on configuring the application server.

12. On the Services dialog, make sure the PeopleSoft service is selected, and click Start.
13. Use the Process Monitor to verify that the Process Scheduler Server is running. You can also use Task Manager to verify that the executables involved with the service are running.

For the Process Scheduler, make sure that the `psprcsrv.exe` is running. If you have customized the name of `psprcsrv.exe`, make sure the appropriate executable is running.

Task 17A-6: Configuring the Process Scheduler for Microsoft Word (Optional)

This section discusses:

- Configuring Process Scheduler
- Executing Winword on Mapped Drive

Task 17A-6-1: Configuring Process Scheduler

Some applications process documents using Microsoft Word. Here is how to configure Microsoft Word to work with the Process Scheduler.

Note. Microsoft Word must already be installed on the server; it is not included with the PeopleSoft PeopleTools install.

To configure Process Scheduler for Microsoft Word:

1. Log in to the PeopleSoft application in a browser and select PeopleTools > Process Scheduler > Process Scheduler Processes.
2. Search for Process Type *Winword* and select a process.

- On the Process Definition page, select Override Options, as shown in this example.

Process Scheduler Processes

Process Definition | Process Definition Options | **Override Options** | Destination | ▶

Process Type Winword
Name WORDSAMP

Override Options

Parameters

*Parameter List: Append ▼

*Command Line: None ▼

*Working Directory: None ▼

Save Return to Search Notify Add Update/Display

Process Definition page: Override Options

- In the Parameter List field, enter %%PS_HOME%%\WINWORD\WORDSAMP.DOCX/mWORDSAMP and save.
- Locate the Process Scheduler configuration file psprcs.cfg in *PS_CFG_HOME*\appserv\prcs*<database_name>* directory and open it for editing.
- In the [Process Scheduler] section, edit the WINWORD entry so that it points to the directory where winword.exe is installed—for example, "WINWORD=C:\Program Files\Microsoft Office\OFFICE 12" (include the quotes in the entry).
- If spaces exist in the WINWORD path in the Process Scheduler configuration file (psprcs.cfg), Microsoft Word reports will fail. You will need to modify the Process Type Definition and add quotes around the entry in the Command Line field, for example " %%WINWORD%%\winword.exe".
- Change the Microsoft Word macro security to allow macros to be run.
Start Microsoft Word and select Tools, Macro, Security. Select the *Low* security setting and click OK.
- If you are running on Microsoft Windows, modify your macros to include the following line:
`Application.AutomationSecurity=msoAutomationSecurityLow`
You can see an example by viewing the macros in *PS_HOME*\winword\Wordsamp.doc.
- Make sure that all the servers (that is, Application Server and Process Scheduler servers) are running in the context of the logged-in user, as WinWord is executed in the same context.

Task 17A-6-2: Executing Winword on Mapped Drive

If you encounter a problem in executing the WinWord process on a mapped drive, there are a couple of solutions to try. If the first solution does not work, try the second one. Try the following workaround suggestions in the order given.

To perform the first workaround:

- Copy the file WORDSAMP.dotm from *PS_HOME*\WINWORD\.

2. Locate the WinWord templates folder and place the file WORDSAMP.dotm there.

In general, you can find the templates folder under the logged-in user's directory. For example, for user psftuser, this would be:

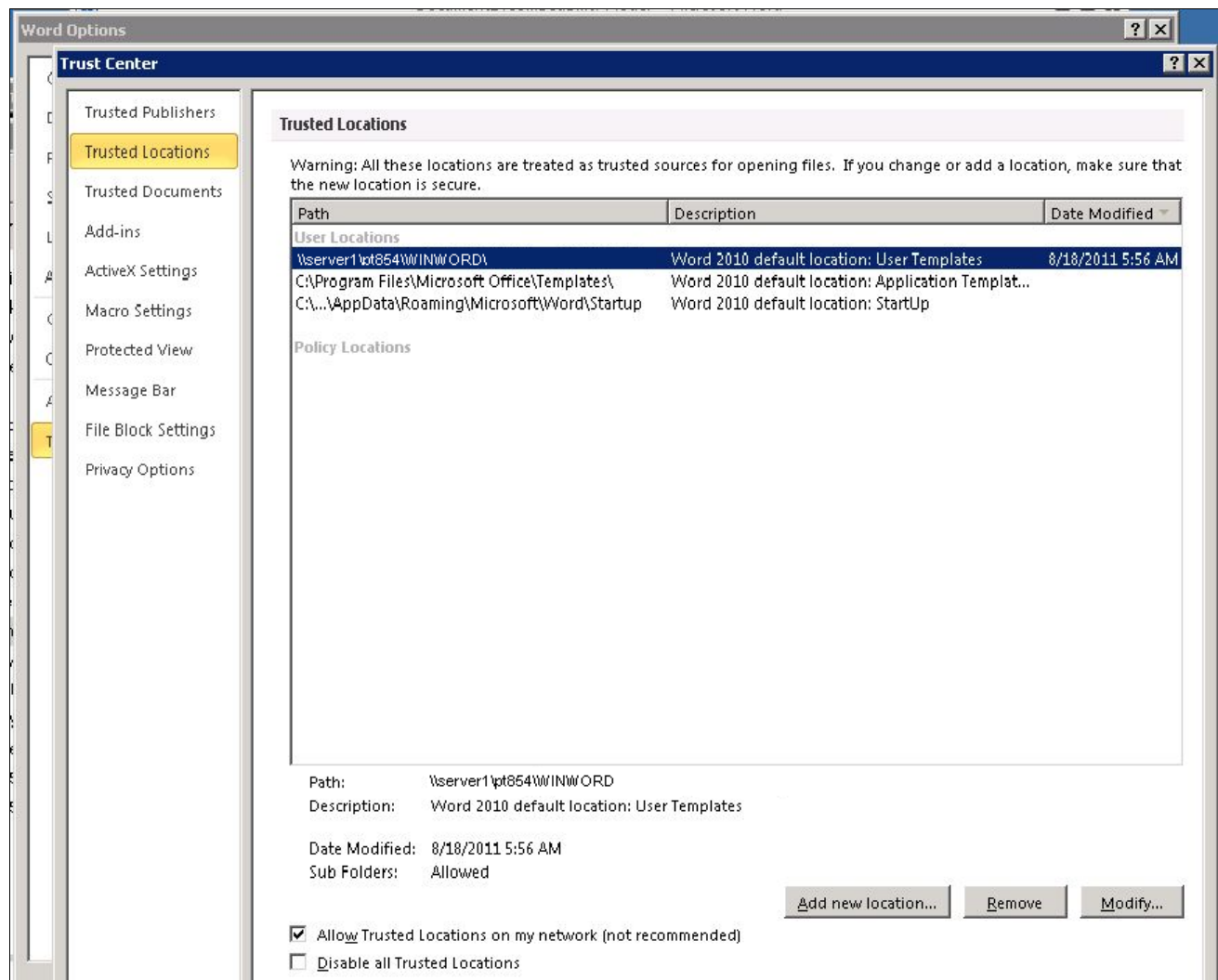
C:\Users\psftuser\Microsoft\Templates

3. Open the WinWord.docx file under *PS_HOME*\WINWORD folder and verify macro is present.
4. Sign in to the PeopleSoft application to execute the WinWord process and verify its status in Process Monitor.

To perform the second workaround:

1. In Microsoft Word, click the Microsoft Office button, and click Word Options.
2. Select Trust Center, and then click Trust Center Settings, Trusted Locations.
3. Select the check box for Allow Trusted Locations on my network, and clear the check box Disable all Trusted Locations.

4. Create a new trusted location with path pointing to the *PS_HOME\WINWORD* folder on your mapped drive. In this example, the trusted location is *\\server1\pt854\WINWORD*:



Microsoft Word Trusted Locations window

Task 17A-7: Installing Products for PS/nVision

This section discusses:

- Understanding the PS/nVision Setup
- Installing Products for PS/nVision in Excel Automation Mode

Understanding the PS/nVision Setup

PS/nVision can operate in the following three modes for PS/nVision:

- OpenXML mode
OpenXML is the default mode for PeopleSoft PeopleTools.

- Excel automation mode
- Cross-platform mode

Cross Platform is the only supported mode on the UNIX platforms that are certified for executing PS/nVision Reports on the web.

See "Setting Up Process Scheduler on UNIX," Using PS/nVision in Cross-Platform Mode on UNIX.

The different modes of executing PS/nVision are enabled by setting the UseExcelAutomation parameter in the Process Scheduler configuration file (psprcs.cfg) as follows:

- 0 - OpenXML mode
- 1 - Excel Automation mode
- 2 - Cross Platform mode

See Also

PeopleTools: PS/nVision

PeopleTools: Process Scheduler

Task 17A-7-1: Installing Products for PS/nVision in Excel Automation Mode

To set up PS/nVision in Excel automation mode:

- For all batch servers, install 64-bit Microsoft Excel on the batch server.

See My Oracle Support, Certifications, for PeopleSoft PeopleTools, to find the versions of Microsoft Excel that are supported for the current release.

Note. The 32-bit version of Microsoft Excel should not be installed on the machine where PS/nVision needs to run in Excel Automation Mode, as that would cause issues with running PS/nVision with 64-bit Microsoft Excel.

- If the batch server is on a 64-bit Microsoft Windows machine, create an empty "Desktop" folder with this path:

C:\Windows\System32\config\systemprofile\Desktop

Chapter 17B

Setting Up Process Scheduler on UNIX

This chapter discusses:

- Prerequisites
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Up Process Scheduler Server Agent

Prerequisites

If your database runs on UNIX, you need to set up a Microsoft Windows batch environment on a Microsoft Windows application server or on a dedicated Microsoft Windows workstation for Microsoft Windows-specific batch processes, such as nVision reports, Cube Builder, or Microsoft Word. These processes are Microsoft Windows-specific applications that cannot be executed by the Process Scheduler on UNIX.

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

Before setting up your Process Scheduler, you must:

- Install Tuxedo.
See "Installing Additional Components."
- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).
See "Preparing for Installation."
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Set up your COBOL batch environment if you need to run COBOL processes through Process Scheduler. If the PeopleSoft modules purchased do not contain any COBOL modules, the COBOL run time libraries are not required. Also, COBOL is not required for applications that contain no COBOL programs. Consult My Oracle Support for the details on whether your application requires COBOL.
See "Preparing for Installation," Planning Your Initial Configuration.
- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.

In the current PeopleTools release, the configuration and log files for Process Scheduler server domains reside in *PS_CFG_HOME*. If you do not set a *PS_CFG_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

`$HOME/psft/pt/<peopletools_version>`

See "Preparing for Installation," Defining Installation Locations.

See the product documentation *PeopleTools: System and Server Administration* for more information on the *PS_CFG_HOME* environment variable and working with server domain configuration.

See Also

PeopleTools: Process Scheduler

My Oracle Support, Certifications

Task 17B-1: Setting Up Process Scheduler Security

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

Understanding Process Scheduler Security

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

Task 17B-1-1: Granting Process Scheduler Administrative Rights

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools > Security > User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.

- Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.

This example shows the Roles page with the ProcessSchedulerAdmin role.

User Profiles

General | ID | **Roles** | Workflow | Audit | Links | User ID Queries

User ID QEDMO

Description QE User

Dynamic Role Rule

Execute on Server Process Monitor Service Monitor

Test Rule(s) Refresh Execute Rule(s)

User Roles Personalize | Find | View All | First 11-20 of 24 Last

*Role Name	Description	Dynamic	View Definition
Portal Administrator	Portal Administrator	☐ Route Control	View Definition
Portal Manager	Portal Manager	☐ Route Control	View Definition
ProcessSchedulerAdmin	Process Scheduler Admin	☐ Route Control	View Definition
QE Role	QE Role	☐ Route Control	View Definition
QEDMO_Diagnostics	Role for DFW	☐ Route Control	View Definition
Search Administrator	Search Administrator	☐ Route Control	View Definition
Search Developer	Search Developer	☐ Route Control	View Definition
Search Server	Search Server	☐ Route Control	View Definition
XMLP_ADMIN	BIP Administrator Role	☐ Route Control	View Definition
XMLP_ANALYZER_EXC	BIP Excel Analyzer Role	☐ Route Control	View Definition

Save Return to Search Previous in List Next in List Add Update/Display

General | ID | **Roles** | Workflow | Audit | Links | User ID Queries

User Profiles page: Roles tab

- Repeat the instructions in step 4 to add the role *ReportDistAdmin*.

This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.

- Click Save to save your changes.
- Select the General tab and make a note of the Permission List name assigned to the Process Profile field.
- Select PeopleTools > Security > Permissions & Roles > Permission Lists.
- In the Search dialog, enter the Permission List you noted in step 7.
- Select the Can Start Application Server check box.
- Click Save to save your changes.

Task 17B-2: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution
- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol
- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS_CDM_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of Posting signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name>\<date yyyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is Web/Window, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

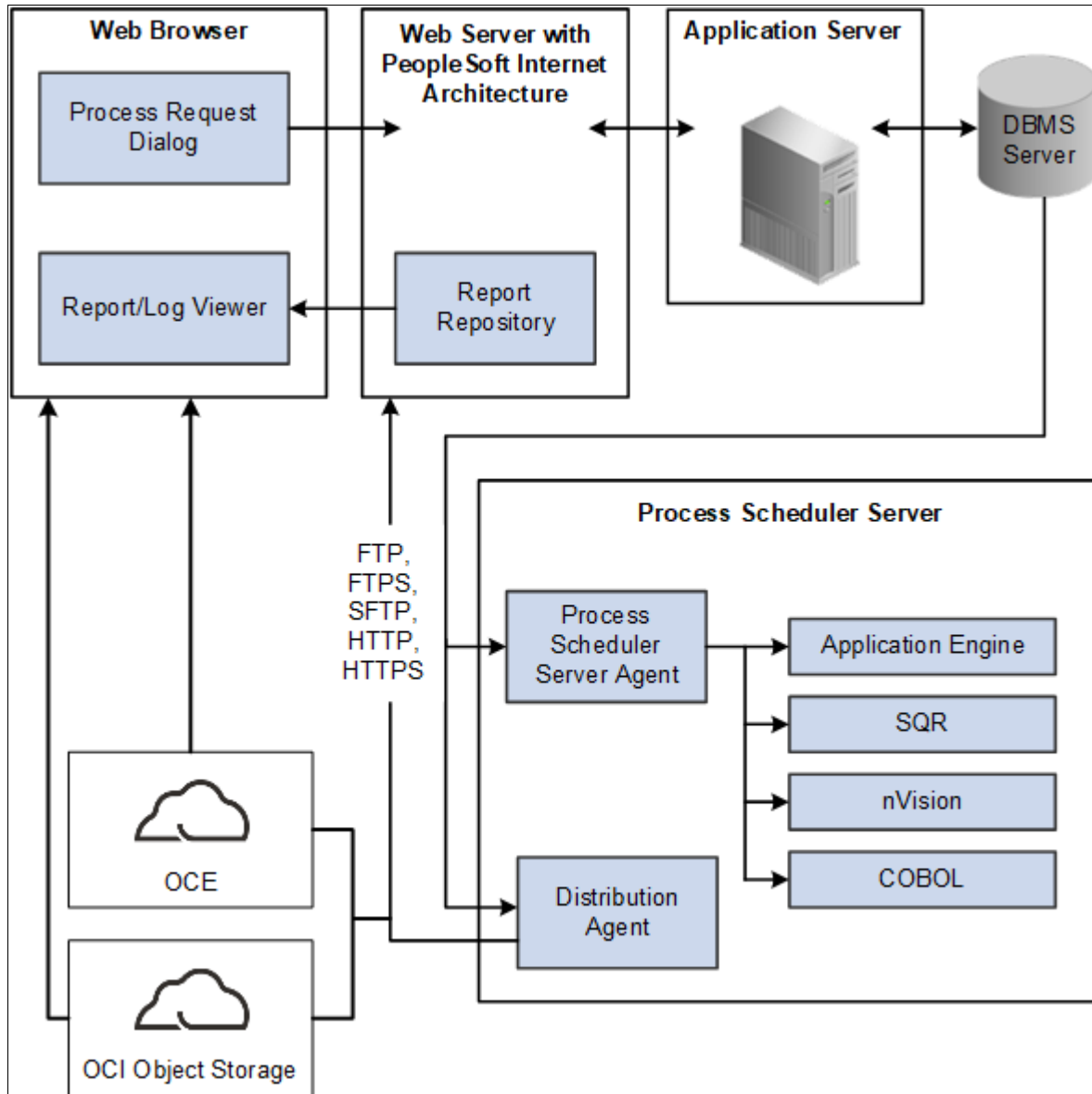
The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

- The web browser gives access to the Process Request dialog and the Report or Log Viewer.

- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

Note. The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Report Repository.

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP/FTPS, HTTP/HTTPS, or SFTP.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security documentation.

See *PeopleTools: Security Administration*.

Beginning with PeopleSoft PeopleTools 8.53, you can use Oracle Database File System (DBFS) for your Report Repository.

See *PeopleTools: Data Management*, "Implementing the Oracle Database File System."

Task 17B-2-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as PIA, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PIA, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter `http://<machineName>.peoplesoft.com/<site_name>/signon.html` instead of `http://<machineName>/<site_name>/signon.html`.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

See the information on implementing single signon in the *PeopleTools: Security Administration* product documentation.

- Set up single signon with a password, like this:
 - Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
 - Click Search and then select the node marked as Default Local Node.
 - Select *Password* for the Authentication Option.
 - Enter a password of your choice.
 - Enter the password again in the Confirm Password field.
 - Enter the user ID for which you are setting up single signon in the Default User ID field.
 - Save the Node Definition.
 - Sign out from the PeopleSoft application.
 - Reboot your application server.

See Also

PeopleTools: Security Administration

Task 17B-2-2: Determining the Transfer Protocol

We recommend using HTTP as your transfer protocol.

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. The following table lists the allowed transfer protocol based on the Process Scheduler and web server operating systems.

Process Scheduler Operating System	Web Server Operating System	Transfer Protocol
Microsoft Windows	Microsoft Windows	• XCOPY • FTP/FTPS • SFTP • HTTP/HTTPS Note. If FTP information is not specified, Process Scheduler will perform an XCOPY.
Microsoft Windows	UNIX	• FTP/FTPS • SFTP • HTTP/HTTPS
UNIX	Any	• FTP/FTPS • SFTP • HTTP/HTTPS

Note. If you are using FTP/FTPS or SFTP, the corresponding daemon must be set up in your web server.

Note. JRE is installed automatically on your Process Scheduler server.

Task 17B-2-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." After a node is defined for the Process Scheduler server, in the next cycle the Process Scheduler server checks the state of the system, and the Distribution Agent dynamically sets up its environment.

Task 17B-2-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use FTP
- Defining the Report Node to Use FTPS
- Defining the Report Node to Use SFTP
- Defining the Report Node for Cloud Repositories

Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools: Portal Technology*, "Configuring Web Profiles."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash ("/") in both cases:

- *Microsoft Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<user_home>/PeopleSoft Internet Architecture/psreports

For <user_home> substitute the home directory for the current user.

Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select the Add a New Value link and enter the Report node name.

- On the Report Node Definition page, select HTTP or HTTPS from the Protocol drop-down list.

Select the HTTP option if you are *not* using SSL. Select the HTTPS option if you are using SSL. The pages for HTTP and HTTPS have the same fields. These examples show HTTP.

Note that if you are using SSL you need to have Client Certificates installed on your web server.

Report Node Definition page for the HTTP protocol

- Enter the following information in the Distribution Node Details area:

- URLID:** Enter the URL of the web server using the following format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace `<machine_name>` with the name of your machine. Use the fully qualified host name for your web server. If you are using an HTTP or HTTPS port other than the defaults, you need to specify the port number.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

- Description:** Enter a description of the server (optional).
- Operating System:** Select the web server operating system, Windows or UNIX.

- Enter the following information in the Login Details area:

- Login ID:** Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
- Password and Confirm Password:** Enter the password, and confirm it, for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the

Web Administrator.

Note. The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools: Security Administration* product documentation.

6. Enter the following information in the URI Details area:

- **URI Host:** Enter the machine name for the report repository.

Note. In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

- **URI Port:** Enter the port number, which must match the port number of your web server (defaults are HTTP = 80, HTTPS = 443). If you change a port number you will lose the default values for both protocols.
- **URI Resource:** Enter SchedulerTransfer/<site name>.

7. Click Save to save your entries.

8. Click Validate to confirm that your entries are complete and correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

9. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node to Use FTP

If you use the FTP report node protocol, note that:

- If your FTP server is a Microsoft Windows server, you may have to set up the FTP service.
- The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be completed, it is critical that the value entered in the URL is accurate. Verify that the machine name, port number, and site number that you specify are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

3. On the Report Node Definition page, select FTP from the Protocol drop-down list.

Report Node Definition

Node Name: FTP

*Protocol: FTP Validate

Distribution Node Details

URLID: `http://<machine_name>:<port_number>/psreports/<site_name>`

Description: FTP sample

Operating System: UNIX

Login Details

Login ID: <user_id>

Password: Confirm Password:

File Transfer Details

Home Directory: /home/psreports

FTP Address: <machine_name> SSL Mode: EXPLICIT

Connection Properties

Property Name	Property Value

Password Encryption

Password: Confirm Password:

Encrypt Encrypted Password:

Save Return to Search Notify Refresh

Report Node Definition page for the FTP protocol

4. In the Distribution Node Details area, enter the following information:

- **URLID:** Enter the URL of the web server using this format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to ps for the first installation.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- *Description:* Enter a description of the server (optional).
 - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
 - *Network Path:* This information is not required for the FTP protocol
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
 - *Password and Confirm Password:* Enter the password, and enter it a second time, for the FTP User ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
For UNIX, the default directory is <user_home>/PeopleSoft Internet Architecture/psreports/.
 - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. If you need to specify additional properties, use the Connection Properties area. Specifying the Connection Properties is optional.

Click the lookup button (magnifying glass) and select one of the properties in the following table. Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to Y. The default FTP connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name. You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
ENABLEEPRPRT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPRT is set to N, then the system will use a PORT (IPv4) Active Mode connection. By default, ENABLEEPRPRT is Y, if Active Mode is set to Y.
EXTENDEDPASSIVEMODE	0: Disable EPSV 1: Enable EPSV This property enables you to control whether extended passive mode (EPSV) will be used by FTP. EPSV is used by default. That is, by default, this value is considered to be 1. If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) path.
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
USER	Specify the FTP User ID used for authentication when accessing the FTP site.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
 - a. In the Password field, enter a password.
 - b. In the Confirm Password field, enter the password again.
 - c. Click Encrypt.
The encrypted password is displayed in the Encrypted Password field.
 - d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.
The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
11. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node to Use FTPS

To define the report node to use FTPS:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

3. On the Report Node Definition page, select FTPS from the Protocol drop-down list.

Report Node Definition

Node Name: FTPS

*Protocol: Validate

Distribution Node Details

URLID:

Description:

Operating System: Network Path:

Login Details

Login ID:

Password: Confirm Password:

File Transfer Details

Home Directory:

FTP Address: SSL Mode:

Connection Properties

Property Name	Property Value

▼ Password Encryption

Password: Confirm Password:

Encrypt Encrypted Password:

Save Notify Refresh

Report Node Definition page for the FTPS protocol

4. In the Distribution Node Details area, enter the following information:

- **URLID:** Enter the URL of the web server using this format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- *Description:* Enter a description of the server (optional).
 - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
 - *Network Path:* This information is not required for the FTPS protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
 - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
For UNIX, the default directory is <user_home>/PeopleSoft Internet Architecture/psreports/.
 - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
 - *SSL Mode:* Select Explicit or Implicit from the drop-down list.
- These are two separate methods developed to invoke the client security for use with FTP clients. With the explicit mode, FTPS-aware clients can invoke security with an FTPS-aware server without breaking overall FTP functionality with non-FTPS-aware clients. The implicit method requires that all clients of the FTPS server be aware that SSL is to be used on the session, and thus is incompatible with non-FTPS-aware clients.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table:

Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to Y. The default FTPS connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name. You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
CERTALIAS	Certificate Alias: The Certificate Alias must be an alias name of a certificate stored in the database (using the PeopleSoft PeopleTools Digital Certificates page). Note. Currently, only PEM certificates are supported for FTPS.
ENABLEEPRPRT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPRT is set to N, then the system will use a PORT (IPv4) Active Mode connection. By default, ENABLEEPRPRT is Y, if Active Mode is set to Y.
EXTENDEDPASSIVEMODE	0: Disable EPSV 1: Enable EPSV This property enables you to control whether extended passive mode (EPSV) will be used by FTP. EPSV is used by default. That is, by default, this value is considered to be 1. If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) user.

Property Name	Property Value
KEYSTOREPASSWORD	This property is required for FTPS and HTTPS repositories. For attachments transferred from the PeopleSoft system to the FTPS or HTTPS repository, the system retrieves the key pair for the client certificate from the digital certificate store and writes the pair to a file in PKCS12 format with password protection. The value of this property will be used as the password for the PKCS12 file. The PKCS12 file enables connection and file transfer, and it exists only temporarily in <PS_SERVDIR>\files\<CERT ALIAS NAME> for the duration of the file transfer. The system deletes the file after the file transfer transaction. Note. If the system fails to delete the certificate alias file, a message will be written to the application server log. The maximum number of files that can exist at any time is equal to the total number of FTPS and HTTPS URL identifiers defined in the system. For information on setting the PS_SERVDIR environment variable, see the <i>PeopleTools: Integration Broker</i> product documentation.
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
SSLUAGELEVEL	0 - <i>No SSL</i>: No SSL will be used. 1 - <i>Try SSL</i>: Try using SSL, but proceed as normal otherwise. 2 - <i>Control</i>: Require SSL for the control connection. 3 - <i>SSL Only</i>: (Default) Require SSL for all communication.
USER	Specify the FTP User ID used for authentication when accessing the FTP site.
VERIFYHOST	0: Do not verify the server for host name. 1: Check if there exists any value in the common name field in the server certificate. This check does not verify if it matches with what the client specifies. 2: (Default) Check for a match with the host name in the URL with the common name or Subject Alternate field in the server certificate.
VERIFYPEER	<i>False</i>: Do not verify the peer. <i>True</i>: (Default) Verify the peer by authenticating the certificate sent by the server.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:

- a. In the Password field, enter a password.
- b. In the Confirm Password field, enter the password again.
- c. Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
 10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node to Use SFTP

To define the report node to use SFTP:

1. Select PeopleTools > Process Scheduler > Process Scheduler Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

3. On the Report Node Definition page, select SFTP from the Protocol drop-down list.

The screenshot shows the 'Report Node Definition' page for the SFTP protocol. At the top right, there are links for 'New Window', 'Help', and 'Personalize Page'. The main title is 'Report Node Definition'.

Node Name: SFTP

***Protocol:** SFTP (selected from a dropdown menu)

Validate: (button)

Distribution Node Details:

- URLID:** http://<machine_name>:<port_number>/psreports/<site_name>
- Description:** SFTP sample
- Operating System:** UNIX (selected from a dropdown menu)

Login Details:

- Login ID:** <user_id>
- Password:** (masked with dots)
- Confirm Password:** (masked with dots)

File Transfer Details:

- Home Directory:** /home/psreports
- FTP Address:** <machine_name>

Connection Properties:

Property Name	Property Value

Password Encryption:

- Password:** (input field)
- Confirm Password:** (input field)
- Encrypt:** (button)
- Encrypted Password:** (input field)

At the bottom, there are buttons for 'Save', 'Notify', and 'Refresh'.

Report Node Definition page for the SFTP protocol

4. In the Distribution Node Details area, enter the following information:

- URLID:** Enter the URL of the web server using this format:

http://<machine_name>:<port_number>/psreports/<site_name>

Replace <machine name> with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable <site name> refers to the directory where you installed the PIA files; this will default to ps for the first installation.

Note. If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

Note. If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- *Description:* Enter a description of the server (optional).
 - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
 - *Network Path:* This information is not required for the SFTP protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
 - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
For UNIX, the default directory is <user_home>/PeopleSoft Internet Architecture/psreports/.
 - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table.

Click the plus sign to add additional connection properties.

Property Name	Property Value
AUTHTYPE	Select one of the following the authentication types: <i>PUBLICKEY</i> <i>PASSWORD</i> <i>ANY</i>
PASSWORD	Specify the user password. You can enter the password in the Password Encryption box, click Encrypt, and then copy the encrypted value to the Password property.
PASSWORDKEY	Enter the password for the private key.
PRIVATEKEY	Select the private key.
PUBLICKEY	Select the public key.
SSHKEYALIAS	Select the SSH certificate saved to the database using the PeopleTools Security, Digital Certificates page (select PeopleTools > Security > Security Objects > Manage Digital Certificates). The SSH certificate added through the Digital Certificates page contains both the public and private key data, identified by the Alias column value on the Digital Certificates page. If using the SSHKEYALIAS URL property, the Property Value prompt displays only the list of SSH certificates that have been added to the Digital Certificates page. If you have added the SSH certificate using the Digital Certificates page, and you have assigned an SSH certificate to the SSHKEYALIAS URL property, the system ignores the PUBLICKEY and PRIVATEKEY properties, regardless of whether they refer to valid key files in the file system. If you provided a password (or passphrase) when generating your SSH certificate, specify that value using the PASSWORDKEY URL property. See <i>PeopleTools: Security Administration</i>, "Configuring Digital Certificates."
USER	Specify the user ID to be authenticated.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
- In the Password field, enter a password.
 - In the Confirm Password field, enter the password again.
 - Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
 10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

Defining the Report Node for Cloud Repositories

You can use the following cloud storage provider as repositories for your Process Scheduler reports.

- Oracle Cloud Infrastructure Object Storage service — an internet-scale, high-performance storage platform that offers reliable and cost-efficient data durability
See Overview of Object Storage, <https://docs.oracle.com/en-us/iaas/Content/Object/Concepts/objectstorageoverview.htm>.
- Oracle Content and Experience Cloud — a cloud-based content hub to drive omni-channel content management and accelerate experience delivery
See Oracle Content and Experience on the Oracle Help Center, <https://docs.oracle.com/en/cloud/paas/content-cloud/>.

See *PeopleTools: Process Scheduler*, "Defining Report Nodes."

Task 17B-2-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Select PeopleTools > Process Scheduler > Process Scheduler Servers.
2. Enter the Server Name (such as PSUNIX). The Server Definition page appears.

3. Select the Distribution tab.

The screenshot shows the 'Server Definition' page for 'PSUNX' with the 'Distribution' tab selected. The page has a top navigation bar with links: 'New Window', 'Help', 'Personalize Page', and a window icon. Below this is a sub-navigation bar with tabs: 'Server Definition', 'Distribution' (selected), 'Operation', 'Notification', and 'Daemon'. The main content area is titled 'Server Distribution Details' and contains the following fields:

- Server Name:** PSUNX
- Distribution Node Name:** A text input field with a magnifying glass icon to its right.
- Maximum Transfer Retries:** A text input field.
- Interval for Transfer Attempt:** A text input field followed by the text 'seconds'.
- Transfer System Files to Report Repository:** A checkbox.

At the bottom of the form are five buttons: 'Save', 'Return to Search', 'Notify', 'Add', and 'Update/Display'. Below the buttons is a sub-navigation bar with links: 'Server Definition', 'Distribution' (selected), 'Operation', 'Notification', and 'Daemon'.

Server Definition page for PSUNX: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.
5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.
7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PIA to Report Repository, you need to set up single signon in order to avoid getting a prompt for a second signon.

Task 17B-2-6: Setting Up Sending and Receiving of Report Folders in the Report Manager

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools: Integration Broker*.

See *PeopleTools: Integration Broker Service Operations Monitor*.

Task 17B-3: Setting Up Process Scheduler Server Agent

This section discusses:

- Understanding Process Scheduler Server Agent
- Changing the Default Operating System
- Setting Up Your Environment
- Creating and Configuring a Process Scheduler Server
- Reconfiguring a Process Scheduler Server
- Verifying the Process Scheduler Server Status

Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSUNIX	UNIX

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the *PeopleTools: Process Scheduler* product documentation.

Note. When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

Task 17B-3-1: Changing the Default Operating System

By default, Process Scheduler is set up to run a process request from a Process Scheduler Server Agent started in a Microsoft Windows server when the value of the *ServerName* field in the Process Request Dialog page is left blank. If you plan to run all processes other than Microsoft Windows-based programs (such as nVision) from UNIX, you must change the default operating system.

Note. If you do not change the default operating system from Windows to UNIX and you do not plan to set up a Process Scheduler Server Agent in Microsoft Windows, process requests that are created will be directed to a Microsoft Windows-based operating system and will remain in the "Queued" status.

To change the default operating system for process requests that were not assigned a Process Scheduler Server Name:

1. Select PeopleTools > Process Scheduler > Process Scheduler Settings.
2. Under *Primary Operating System*, choose *UNIX* from the drop-down list.
3. Click on the *System Purge Options* tab. Enter the date for the next purge of process requests in the *Next Purge Date* field.
4. Enter the time for the next purge of process requests in the *Next Purge Time* field. The default time is 12:00:00AM.

5. Enter a *Recurrence* if you want to set a regular purging basis.
6. Choose *Save*.

Task 17B-3-2: Setting Up Your Environment

Telnet to your UNIX system. Log in and ensure the following environment variables are set appropriately:

Note. The environment variables for Tuxedo must be set explicitly; they are not set by running `psconfig.sh`. These can be also set using the `.profile` file in the user's home directory.

- `$TUXDIR` must be set to the correct Oracle Tuxedo installation directory; for example:
`TUXDIR=/home/user/Oracle/tuxedo22cR1; export TUXDIR`
- `$TUXDIR/lib` must be prepended to `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH`, whichever is appropriate for your platform; for example:
`LD_LIBRARY_PATH=$TUXDIR/lib:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH`
- `$TUXDIR/bin` must be prepended to `PATH`; for example:
`PATH=$TUXDIR/bin:$PATH; export PATH`

Alternatively, make sure the following environment variables are set in the profile file in the user's home directory:

If your application does not contain COBOL programs, you do not need to set the `$COBDIR` environment variables.

See "Preparing for Installation," Installing Supporting Applications.

- `$ORACLE_HOME` must point to the correct Oracle installation; for example:
`ORACLE_HOME=/products/oracle/19.3.0;export ORACLE_HOME`
- `$ORACLE_HOME/bin` must be added to `PATH`; for example:
`PATH=$PATH:$ORACLE_HOME/bin;export PATH`
- `$ORACLE_HOME/lib` must be appended to `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH`, whichever is appropriate for your platform.
- `$ORACLE_SID` must be set to the correct Oracle instance; for example:
`ORACLE_SID=hdmo;export ORACLE_SID`
- `$COBDIR` must be set to the Micro Focus Visual COBOL installation; for example:
`COBDIR=/cobol/products/visualcobol_devhub6.0;export COBDIR`
- `$COBDIR/lib` must be appended to `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH`, whichever is appropriate for your platform.
`LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$COBDIR/lib; export LD_LIBRARY_PATH`
`LIBPATH=$LIBPATH:$COBDIR/lib; export LIBPATH`
`SHLIB_PATH=$SHLIB_PATH:$COBDIR/lib; export SHLIB_PATH`
- `$COBDIR/bin` must be appended to the `PATH`; for example:
`PATH=$PATH:$COBDIR/bin;export PATH`

To set the required PeopleSoft environment variables, run `psconfig.sh`. Go to the `PS_HOME` directory and enter the following command:

```
. ./psconfig.sh
```

Note. After running `psconfig.sh`, you can invoke the PSADMIN utility from any location.

Task 17B-3-3: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure a Process Scheduler server.

You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file `psprcs.cfg` located in the `PS_CFG_HOME/appserv/prcs/database name` directory. The following steps assume you are using PSADMIN to specify parameter settings.

Note. If you use the configuration file `psprcs.cfg`, be aware that the section [Output Dest Exceptions] is written to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` that was used in older releases has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

To create and configure a Process Scheduler Server:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----
PS_CFG_HOME           /home/JSMITH/psft/pt/8.61
PS_HOME               /opt/psft/pt/ps_home8.61
PS_APP_HOME           /opt/psft/pt/hcm_app_home

1) Application Server
2) Process Scheduler
3) Web (PIA) Server
4) Switch Config Home
5) Service Setup
6) Replicate Config Home
7) Refresh Config Home
q) Quit
```

Command to execute (1-7 q):

2. Depending on your environment, you may see a message after the menu selection, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS_CFG_HOME* that you are working with was used previously from a different *PS_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS_CFG_HOME*.
- You configured your environment such that *PS_CFG_HOME* is the same as *PS_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS_CFG_HOME/peopletools.properties* file. Continue with the next step.

3. Select 2 to access the Process Scheduler submenus.
4. Select 2 for Create a domain from the PeopleSoft Process Scheduler Administration menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
```

```
q) Quit
```

Command to execute (1-4, q) : **2**

5. Enter the name of the domain at the following prompt, such as HRDMO in this example, and press ENTER:

```
Please enter name of domain to create : HRDMO
```

6. After the system creates the domain, the Quick-configure menu appears:

```
-----
Quick-configure menu -- domain: HRDMO
-----
```

Features =====	Settings =====
1) App Engine Server : Yes	10) DBNAME : [HRDMO]
2) Master Scheduler : Yes	11) DBTYPE : [ORACLE]
3) Perf Collator : No	12) PrcsServer : [PSUNIX]
4) Domains Gateway : No	13) UserId : [QEDMO]
5) Push Notifications: No	14) UserPswd : []
6) Real Time Indexing: Yes	15) ConnectID : [people]
	16) ConnectPswd: []
	17) Log/Output Dir: [\$PS_SERVDIR/log_⇒
output]	
	18) SQRBIN : [\$PS_HOME/bin/sqr/ORA⇒
/bin]	
	19) AddToPATH : [\$PS_HOME/cblbin]
	20) PHC Remote Admin Settings: []

```

      Actions
      =====
7) Load config as shown
8) Custom configuration
9) Edit environment settings
h) Help for this menu
```

q) Return to previous menu

HINT: Enter 10 to edit DBNAME, then 7 to load

Enter selection (1-18, h, or q):

7. If you need to modify any of these settings, enter the number next to the parameter name, type the new value, and press ENTER. This table lists the parameters and gives brief descriptions.

Parameter	Description
Master Scheduler	Select this option to enable the Master Scheduler Server (PSMSTPRC). The default is to enable the server. <i>See PeopleTools: Process Scheduler.</i>
App Engine	Select this option to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). The default is set to run AE using PSAESRV. <i>See PeopleTools: Process Scheduler.</i>
Perf Collator	Select this option to enable the PSPPMSSRV server process. <i>See PeopleTools: Performance Monitor, "Enabling the Required Elements on the Monitoring System."</i>
Domain Gateways	Select this option to enables inter domain communication, for example between Application Server and Process Scheduler domains. <i>See PeopleTools: Fluid User Interface Developer's Guide, "Configuring the System for Push Notifications."</i>
Push Notifications	Select this option to enables pushing server events from PeopleSoft PeopleTools server runtime, such as Application Server and Process Scheduler, to browser clients and other PeopleSoft PeopleTools server runtime components. <i>See PeopleTools: Fluid User Interface Developer's Guide, "Configuring the System for Push Notifications."</i>
Real Time Indexing	Select this option to enable the process for Real Time Indexing (PSRTISRV). With real-time indexing, data is indexed as it is added, updated, or deleted to ensure up-to-date data in PeopleSoft Search. The default is to enable real-time indexing. <i>See PeopleTools: Search Technology.</i> <i>See PeopleTools: Process Scheduler, "Editing the PeopleSoft Process Scheduler Configuration File"</i>
Load config as shown	Load the selections you made in the Quick Configure menu.
Custom configuration	Make custom selections in PSADMIN, using options that are not available in the Quick Configure menu.
Edit environment settings	Edit, add, remove, comment out, and review domain-level environment variables.

Parameter	Description
DBNAME	Specify the database name that is associated with a PeopleSoft Process Scheduler Server Agent, such as HRDMO, FSDMO, CSDMO, and so on.
DBTYPE	Specify the database type: ORACLE.
PrCsServer	Specify the process server name. This must match the name defined in the Server Definition table, such as <i>PSNT</i> or <i>PSUNIX</i> .
UserId	Enter the user ID, such as VP1 or PS.
UserPswd	Enter the password for the user ID, as you specified during the database configuration. The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
ConnectID	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password, as you specified during the database configuration. This value is required. The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
Log/Output Dir	Specify the directory in which files that are generated by the program are written. When PeopleSoft Process Scheduler initiates a process request, it creates a subdirectory in the format <Process Type ID>_<Program Name>_<Process Instance> that contains the generated files. For instance, the SQR program XRFWIN that ran with process instance 20 has all reports, trace, and log files in the subdirectory SQR_XRFWIN_20. It is also the optional directory used with the Output Destination field when scheduling a request. This variable (%%OutputDirectory%%) can be used in the File/Printer field of the Process Scheduler Request dialog box.
SQRBIN	Enter the path to the SQR executables.
AddToPATH	(Optional for Tuxedo) Specify an additional directory that is appended to the PATH environment variable.

Parameter	Description
PHC Remote Admin Settings	Use this setting to enable embedded JMX Agents for use with PeopleSoft Health Center (PHC). The setting is enabled by default. Enter <i>1</i> to enable, and <i>0</i> to disable. Note. If you do not disable the setting and you do not supply any information, you see a message when you configure the Process Scheduler domain, such as "Enable PS JMX is not 0, but some of PS JMX parameters (userId, userPwd) are empty. PHC will not be able to work." When you enter <i>1</i> to enable Remote Administration, you must supply the port, user ID, and password. You may also set up SSL. You see prompts for: - Remote Administration Port - Remote Administration UserID - Remote Administration Password - Remote Administration SSL Enabled Enter <i>1</i> to enable SSL for JMX agents, or <i>0</i> to disable it. You see prompts for other SSL parameters. The default is 0, disabled. - Remote Administration SSL Keystore — Specify the keystore location. - Remote Administration SSL Keystore Password - Remote Administration SSL Keystore Type — Specify PKCS12 or JKS. - Remote Administration SSL Truststore — Specify the truststore location. - Remote Administration SSL Truststore Password - Remote Administration SSL Truststore Type — Specify PKCS12 or JKS.

For descriptions of the PSADMIN options that do not appear in the Quick-configure menu, see the information on using PSADMIN in the *PeopleTools: Process Scheduler* product documentation. For a basic installation, in most cases you can accept the defaults.

- When you have updated the settings as needed, choose *5, Load config as shown*, from the Quick-Configure menu to save your settings to the Process Scheduler configuration file, pstuxcfg.
- To start Process Scheduler, choose *1*, for Administer Domain.
- On the PeopleSoft Process Scheduler Administration menu, choose *1* for Boot this domain.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
Domain Name: HRDMO
```


- 1) Boot this domain
- 2) Domain shutdown menu
- 3) Domain status menu
- 4) Configure this domain
- 5) TUXEDO command line (tmadmin)
- 6) Edit configuration/log files menu
- 7) Clean IPC resources of this domain
- q) Quit

Command to execute (1-7, q) :

11. Choose 1, Boot (Serial Boot), or 2, Parallel Boot, from the PeopleSoft Domain Boot Menu.

Note. The messages you see and the number of processes started will depend on the options you chose during configuration.

12. If you want to stop Process Scheduler Server, from the PeopleSoft Domain Administration menu, choose 2, for Domain Shutdown menu, and then enter the number corresponding to the name of the appropriate database.

Note. If you see the following message, then the server is already down:

```
Command to execute (1-2, q) [q]: 1 Loading command line administration
utility ... tmadmin - Copyright (c) 2007-2008, Oracle. Portions *
Copyright 1986-1997 RSA Data Security, Inc. All Rights Reserved.
Distributed under license by Oracle. Tuxedo is a registered trademark. No
bulletin board exists. Entering boot mode. > TMADMIN_CAT:111: ERROR: No
such command.
```

Task 17B-3-4: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. Alternatively, you can use PSADMIN as described in this section. Feel free to skip this procedure if you have already created and configured your Process Scheduler Server using the Quick-configure menu and want to move forward with your installation.

Note. If you want to configure the Process Scheduler Server while it is running, you need to stop and restart the server to load the new settings.

To reconfigure a Process Scheduler Server:

1. Run the command:
- ```
psadmin
```
2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS\_CFG\_HOME*/peopletools.properties file with the current *PS\_HOME* location:

```

PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
```

\*\*\*\*\*

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
- You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.

3. Select 2 for Process Scheduler in the PeopleSoft Server Administration menu.
4. In the PeopleSoft Process Scheduler Administration menu, select 1 for Administer a domain.
5. Select the database for which the Process Scheduler needs to be configured.
6. You see the following prompt:

Do you want to change any config values (y/n)? [n]:

Specify y to start an interactive dialog that lets you examine or change parameter values.

7. Specify the configuration parameters one by one.

Configuration parameters are grouped into sections. At each section, you are asked whether to change any parameters—for example:

Values for config section - Startup

```
DBName=
DBType=
UserId=
UserPswd=
ConnectId=
ConnectPswd=
ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=
```

Do you want to change any values (y/n)? [n]:

- Specify y to change any parameter values for the current section. You are prompted for each parameter value. Either specify a new value or press ENTER to accept the default. After you press ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- The parameters StandbyDBName, StandbyDBType, StandbyUserID, and StandbyUserPswd are used for a standby database in an Oracle database environment.  
See the information on implementing Oracle Active Data Guard in the *PeopleTools: Data Management*, product documentation.
- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- If you do not want to change any values, specify n and you are prompted for the next configuration section.

8. After you have selected all your parameters, you see this message:

You will need to shut down and start up the server to read the new⇒ settings.

For descriptions of the Process Scheduler options in the PSADMIN, see the *PeopleTools: Process Scheduler* product documentation. In most cases you can accept the defaults.

**Task 17B-3-5: Verifying the Process Scheduler Server Status**

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

- 1. From the PeopleSoft Process Scheduler Administration menu, choose option 3, for Domain status menu.

```

PeopleSoft Process Scheduler Administration

Domain Name: HRDMO

1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit

Command to execute (1-7, q) : 3
```

- 2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

For example:

Database list:

- 1) HRDMO

Select item number to start: 1

Loading command line administration utility ...  
tmadmin - Copyright (c) 2007-2008 Oracle.  
Portions \* Copyright 1986-1997 RSA Data Security, Inc.  
All Rights Reserved.  
Distributed under license by Oracle.  
Tuxedo is a registered trademark.

| > Prog Name  | Queue Name | Grp Name | ID | RqDone | Load  | Done     | Current⇒ |
|--------------|------------|----------|----|--------|-------|----------|----------|
| Service      |            |          |    |        |       |          |          |
| -----        | -----      | -----    | -- | -----  | ----- | -----    | -----→   |
| ----         |            |          |    |        |       |          |          |
| DDL          | 46845      | pt-ibm20 | 0  | 9      | 450   | ( IDLE ) |          |
| PSMONITORSRV | MONITOR    | MONITOR  | 1  | 0      | 0     | ( IDLE ) |          |

```

PSAESRV 00101.00001 AESRV 1 0 0 (IDLE)
PSAESRV 00101.00002 AESRV 2 0 0 (IDLE)
PSAESRV 00101.00003 AESRV 3 0 0 (IDLE)
PSPRCSRV SCHEDQ BASE 101 0 0 (IDLE)
PSMSTPRC MSTRSCHQ BASE 102 0 0 (IDLE)
PSDSTSRV DSTQ BASE 103 0 0 (IDLE)
PSRTISRV.exe 00030.00030 RTI 30 0 0 (IDLE)
>

```

---

**Note.** You can also do this using the following command line argument:

```
psadmin -p status -d <DBNAME>
```

---

**Note.** You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

---

## Chapter 18

# Installing PeopleSoft Change Assistant

This chapter discusses:

- Understanding PeopleSoft Change Assistant
- Using the Change Assistant Setup Script to Install, Upgrade, or Uninstall
- Configuring and Using PeopleSoft Change Assistant
- Validating Change Assistant Settings

## Understanding PeopleSoft Change Assistant

---

Oracle's PeopleSoft Change Assistant is a standalone tool, provided with PeopleSoft PeopleTools, that enables you to assemble and organize the steps necessary to apply patches and fixes for maintenance updates as well as perform PeopleSoft upgrades. You use different modes of Change Assistant to carry out maintenance both for PeopleSoft applications using the PeopleSoft Update Manager, and those using the classic patching method.

To take advantage of all of the Change Assistant features, you must install on a Microsoft Windows-based operating system. On Linux, you can use a command-line version of Change Assistant, and run in Update Manager mode only.

When you run the setup script for the PeopleTools Client DPK, you can choose to install Change Assistant as part of the client installation. If you need to install, upgrade, or remove Change Assistant independently of the PeopleTools Client DPK deployment, use the instructions in this chapter.

See "Deploying the PeopleTools Client DPK."

For the current PeopleSoft PeopleTools release, the Change Assistant installation includes the following features:

- You can run the setup.bat script located in *PS\_HOME\setup\PsCA* to install, update, or remove Change Assistant.

The *PS\_HOME\setup\PsCA* directory includes setup.bat and a sample response file, resp\_file.txt. The *PS\_HOME\setup\PsCA* folder is available in both the PeopleTools Client DPK deployment and PeopleTools DPK server deployments.

---

**Note.** The *PS\_HOME\setup\PsCA* directory includes scripts and files that are reserved for use by the software. You can ignore these files, including silentInstall.bat and CA-silentInstall-response-file.txt.

---

- You must run from *PS\_HOME\setup\PsCA*.

Do not copy the PsCA folder alone to another location and try to install.

- You can specify the installation location on the command line, in response to the script prompts, or in a text file.

If you do not supply the installation location, the script prompts you for the necessary information. To upgrade or remove an existing installation, you run the script with no options, and the script prompts you for the necessary information.

- You can install multiple instances of Change Assistant from the current release on one physical machine.

---

**Note.** Multiple instances of Change Assistant can run in parallel on the same machine. However, when configuring Change Assistant, for example to set up update or upgrade jobs, you cannot run multiple instances against the same target database. That is, you cannot specify the same target database on different Change Assistant instances.

---

See *PeopleTools: Change Assistant and Update Manager*, "Running Multiple Instances of Change Assistant."

---

- You must remove installations of Change Assistant from PeopleSoft PeopleTools 8.55 or earlier before installing from the current release. Change Assistant from PeopleSoft PeopleTools 8.61 cannot coexist with that from earlier releases.
- You must install each Change Assistant instance in a separate installation location.
- You can remove or upgrade each Change Assistant instance separately.
- When you remove an installation instance, you have the option to save the existing configuration information in a group of files gathered in a zip archive. You can configure Change Assistant at a later time by importing the zip file.

For more information on using Change Assistant for updates and for software upgrades, see the PeopleSoft product documentation.

## See Also

*PeopleTools: Change Assistant and Update Manager*

*PeopleTools: Application Designer Lifecycle Management Guide*

## Task 18-1: Using the Change Assistant Setup Script to Install, Upgrade, or Uninstall

---

This section discusses:

- Running the Change Assistant Setup Script with Command-Line Parameters
- Running the Change Assistant Setup Script with a Response File
- Running the Change Assistant Setup Script Interactively to Install
- Running the Change Assistant Setup Script Interactively to Upgrade
- Running the Change Assistant Setup Script Interactively to Uninstall
- Using Change Assistant on Linux

## Task 18-1-1: Running the Change Assistant Setup Script with Command-Line Parameters

You can use the following command-line parameters with the Change Assistant setup script.

| Command-line Parameter                        | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>-p &lt;installation_path&gt;</code>     | Supply the full path for the Change Assistant installation location.<br><br>If the location includes spaces, surround it with double quotes, such as "C:\PS\Change Assistant".                                                                                                                                                                                                |
| <code>-t &lt;action_type&gt;</code>           | Use one of the following value for <action_type>. <ul style="list-style-type: none"> <li>NEW or new<br/>Create a new Change Assistant instance.</li> <li>UPGRADE or upgrade<br/>Upgrade an existing instance that was installed from the current PeopleSoft PeopleTools release.</li> <li>UNINSTALL or uninstall<br/>Remove an existing Change Assistant instance.</li> </ul> |
| <code>-bkp &lt;backup or no backup&gt;</code> | Use one of these values: <ul style="list-style-type: none"> <li>BACKUP or backup<br/>Create a zip file containing files with configuration information. The backup file, changeassistantcfbak.zip, is saved in the installation location.</li> <li>NOBACKUP or nobackup<br/>Do not create a backup file with the configuration information.</li> </ul>                        |
| <code>-lp &lt;log_file_location&gt;</code>    | Specify the full path where you want the log file to be saved.                                                                                                                                                                                                                                                                                                                |

To use the Change Assistant setup script with command-line options:

- Open a command prompt and change directory to `PS_HOME\setup\PsCA`.
- Enter the following command to specify the installation location for a new installation.  
For <installation\_path>, supply the full path to the location where you want to install Change Assistant.  

```
setup.bat -p <installation_path> -t new
```

For example:  

```
setup.bat -p "C:\PS\Change Assistant" -t new
```
- If you want to specify the installation location and a location for the log file, enter the following command.  
For <installation\_path>, supply the full path to the location where you want to install Change Assistant. For <log\_file\_location>, supply the full path to the location for the installation log file.  

```
setup.bat -p <installation_path> -lp <log_file_location> -t new
```

4. If you want to upgrade an existing installation, enter the following command:

```
setup.bat -t upgrade
```

5. If you want to remove an existing installation, and save a backup, enter the following command:

```
setup.bat -t uninstall -bkp backup
```

## See Also

Using Change Assistant on Linux

## Task 18-1-2: Running the Change Assistant Setup Script with a Response File

To use the Change Assistant setup script with the installation location in a text file:

1. Open the sample response file *PS\_HOME\setup\PsCA\resp\_file.txt* for editing, for example in Notepad.
2. Modify the parameter `INSTALL_PATH="C:\PS\Change Assistant"` to specify the desired installation path.

If the installation location includes spaces, enclose it in double quotes. Save the file.

3. Open a command prompt and change directory to *PS\_HOME\setup\PsCA*.
4. Run this command:

```
setup.bat -f resp_file.txt
```

## Task 18-1-3: Running the Change Assistant Setup Script Interactively to Install

To use the Change Assistant setup script interactively, run without supplying parameters.

1. Open a command prompt and change directory to *PS\_HOME\setup\PsCA*.
2. Run the script with no parameters.

```
setup.bat
```

The script checks for a response file and old installations, then prompts you for the necessary information.

3. Enter *1* for New Installation:

```

PeopleSoft Change Assistant

1) New Installation
2) Maintain or Update
q) Quit
Command to execute (1-2, q):1
```

4. Enter an installation location, or accept the default, *C:\PS\Change Assistant*.

```
PeopleSoft will install Change Assistant to the following directory .
Destination Folder [C:\PS\Change Assistant] :
```

5. Wait until the script completes.



```
PeopleSoft Change Assistant Successfully Installed in C:\PS\Change⇒
Assistant
```

## Task 18-1-4: Running the Change Assistant Setup Script Interactively to Upgrade

Run the setup script with no parameters to upgrade an existing Change Assistant installation. You can only upgrade an existing Change Assistant instance that was installed from the same, current PeopleTools release. For example, upgrade Change Assistant based on PeopleTools 8.61.09 to Change Assistant based on PeopleTools 8.61.12.

1. Open a command prompt, and change directory to *PS\_HOME\setup\PsCA*.

2. Run the script with no parameters:

```
setup.bat
```

3. Enter 2 for Maintain or Update.

```

PeopleSoft Change Assistant

1) New Installation
2) Maintain or Update
q) Quit
Command to execute (1-2, q):2
```

4. Select the instance of Change Assistant to update.

```
Please select the instance of Change Assistant :
1) Change Assistant 1 8.61.03 C:\Program Files\Change Assistant 2
2) Change Assistant 2 8.61.04 C:\Program Files\PeopleSoft\Change⇒
Assistant
3) Change Assistant 3 8.61.09 C:\PS\Change Assistant
q)Quit
Command to execute (1-3, q): 3
Selected
Change Assistant 3 8.61.09 C:\PS\Change Assistant
```

5. Enter 1 to update to the current PeopleTools patch release.

```
Please select the activity :
1) Upgrade Selected Instance
2) Uninstall Selected Instance
q)Quit
Command to execute (1-3, q):1
Selected
Change Assistant 3 8.61.09 C:\PS\Change Assistant
```

6. Enter 1 to upgrade without saving a configuration file.

Alternatively, if you want to retain a configuration file, enter 2 to create a zip file containing files with configuration information. The backup file, *changeassistantcfbak.zip*, is saved in the installation location.

```
Please select the activity :
1)Without Retaining existing configuration
```

```

2) Retaining existing configuration
q) Quit
Command to execute (1-3, q): 1

```

## Task 18-1-5: Running the Change Assistant Setup Script Interactively to Uninstall

Run the setup script with no parameters to remove an existing Change Assistant installation.

1. Open a command prompt, and change directory to *PS\_HOME\setup\PsCA*.

2. Run the script with no parameters:

```
setup.bat
```

3. Enter 2 for Maintain or Update.

```

PeopleSoft Change Assistant

1) New Installation
2) Maintain or Update
q) Quit
Command to execute (1-2, q): 2

```

4. Select the instance of Change Assistant to remove.

```

Please select the instance of Change Assistant :
1) Change Assistant 1 8.61.03 C:\Program Files\Change Assistant 2
2) Change Assistant 2 8.61.04 C:\Program Files\PeopleSoft\Change=>
 Assistant
3) Change Assistant 3 8.61.12 C:\PS\Change Assistant

q) Quit
Command to execute (1-3, q): 2
Selected
Change Assistant 3 8.61.04 C:\PS\Change Assistant

```

5. Enter 2 to remove the selected instance.

```

Please select the activity :
1) Upgrade Selected Instance
2) Uninstall Selected Instance
q) Quit
Command to execute (1-3, q): 2
Selected
Change Assistant 3 8.61.04 C:\PS\Change Assistant

```

6. Enter 1 to uninstall without saving a configuration file.

Alternatively, if you want to retain a configuration file, enter 2 to create a zip file containing files with configuration information. The backup file, *changeassistantcfgbak.zip*, is saved in the installation location.

```

Please select the activity :
1) Without Retaining existing configuration
2) Retaining existing configuration
q) Quit

```

Command to execute (1-3, q):1

## Task 18-1-6: Using Change Assistant on Linux

You can use a command-line version of Change Assistant on Linux for Update Manager mode only. Change Assistant on Linux can not be used for target databases that are below PeopleTools 8.55.16.

To install Change Assistant on Linux:

1. In a terminal window, change directory to *PS\_HOME/setup/PsCA*.
2. Verify that you are running as a user with permission for the files in PsCA.  
For example, if your installation includes the default Linux users set up by the DPK, run as the *psadm1* user.  
See *Using the PeopleSoft Installation*.
3. Run the setup script and specify the installation directory.  

```
$./setup.sh -p /dsl/changeassistant -t new
```
4. Go to the installation directory, and run Change Assistant in Update Manager mode using the command-line options in the Change Assistant product documentation.  
See *PeopleTools: Change Assistant and Update Manager*, "Running Change Assistant Job from the Command Line."

## Task 18-2: Configuring and Using PeopleSoft Change Assistant

This section discusses:

- Verifying the Path Variable
- Specifying Options
- Scanning the Workstation
- Exporting Jobs to XML, HTML, or Microsoft Excel Format

### Task 18-2-1: Verifying the Path Variable

After installing PeopleSoft Change Assistant, verify that the following values are the first entries in the PATH environment variable:

- *PS\_HOME\bin\client\winx86*
- *PS\_HOME\jre\bin*

See *PeopleTools: Change Assistant and Update Manager*, "Setting Up Change Assistant."

### Task 18-2-2: Specifying Options

You can configure PeopleSoft Change Assistant modes to carry out updates, upgrades, work with upgrade templates, or access PeopleSoft Update Manager. The mode selection determines which menu options you see when you use PeopleSoft Change Assistant.

## See Also

*PeopleTools: Change Assistant and Update Manager*

PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2

## Task 18-2-3: Scanning the Workstation

The first time you use PeopleSoft Change Assistant, it automatically scans your workstation for applications that it will use in order to automate the steps. For example, it automatically finds the SQL Query tool and uses it to run SQL commands or scripts.

If you add a new application or update an existing application, PeopleSoft Change Assistant must perform a scan of the system in order to discover the changes. To perform this scan, select Tools, Scan Configuration.

## Task 18-2-4: Exporting Jobs to XML, HTML, or Microsoft Excel Format

Change Assistant allows users to export jobs to XML, HTML, or Microsoft Excel file formats. Do this by selecting File, Export Job in Change Assistant. Then, enter the desired exported filename and select the desired file type format.

## Task 18-3: Validating Change Assistant Settings

---

After you have set up and configured PeopleSoft Change Assistant and the Environment Management components, you should validate your PeopleSoft Change Assistant and environment settings.

PeopleSoft Change Assistant validates settings by:

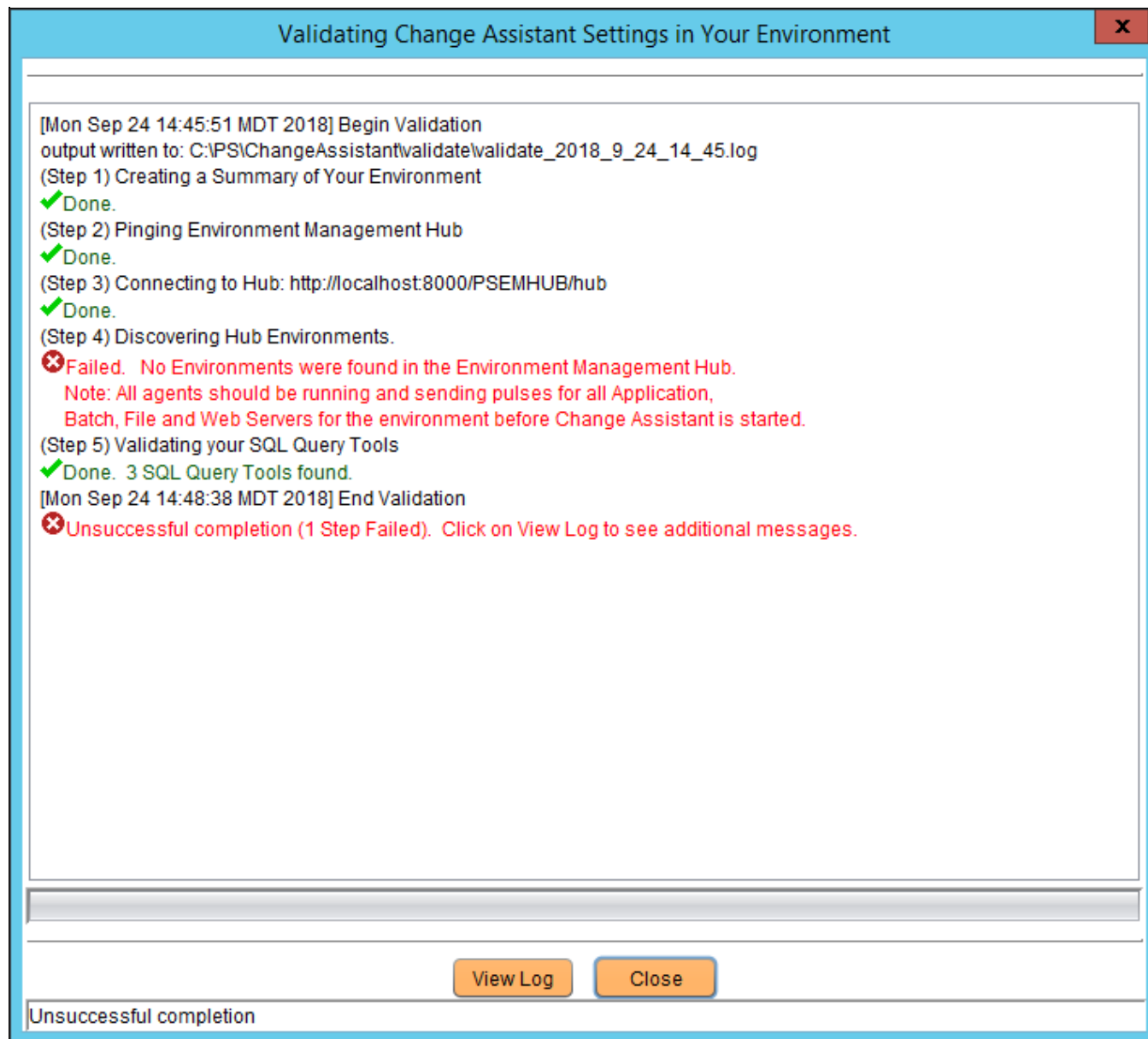
- Locating valid SQL query tools required to run SQL scripts.
- Testing the Environment Management hub and ensuring that PeopleSoft Change Assistant can communicate with it.
- Testing My Oracle Support and ensuring that PeopleSoft Change Assistant can communicate with it.

PeopleSoft Change Assistant sends a ping to My Oracle Support and then tests the connection. In order for the validation to succeed, the machine where you have PeopleSoft Change Assistant installed must have the ping feature enabled.

You can also print a summary of your environment, which can facilitate the diagnosis of problems by Oracle Software Support.

To validate your environment, select Tools, Options, Validate. Click Start Validation.

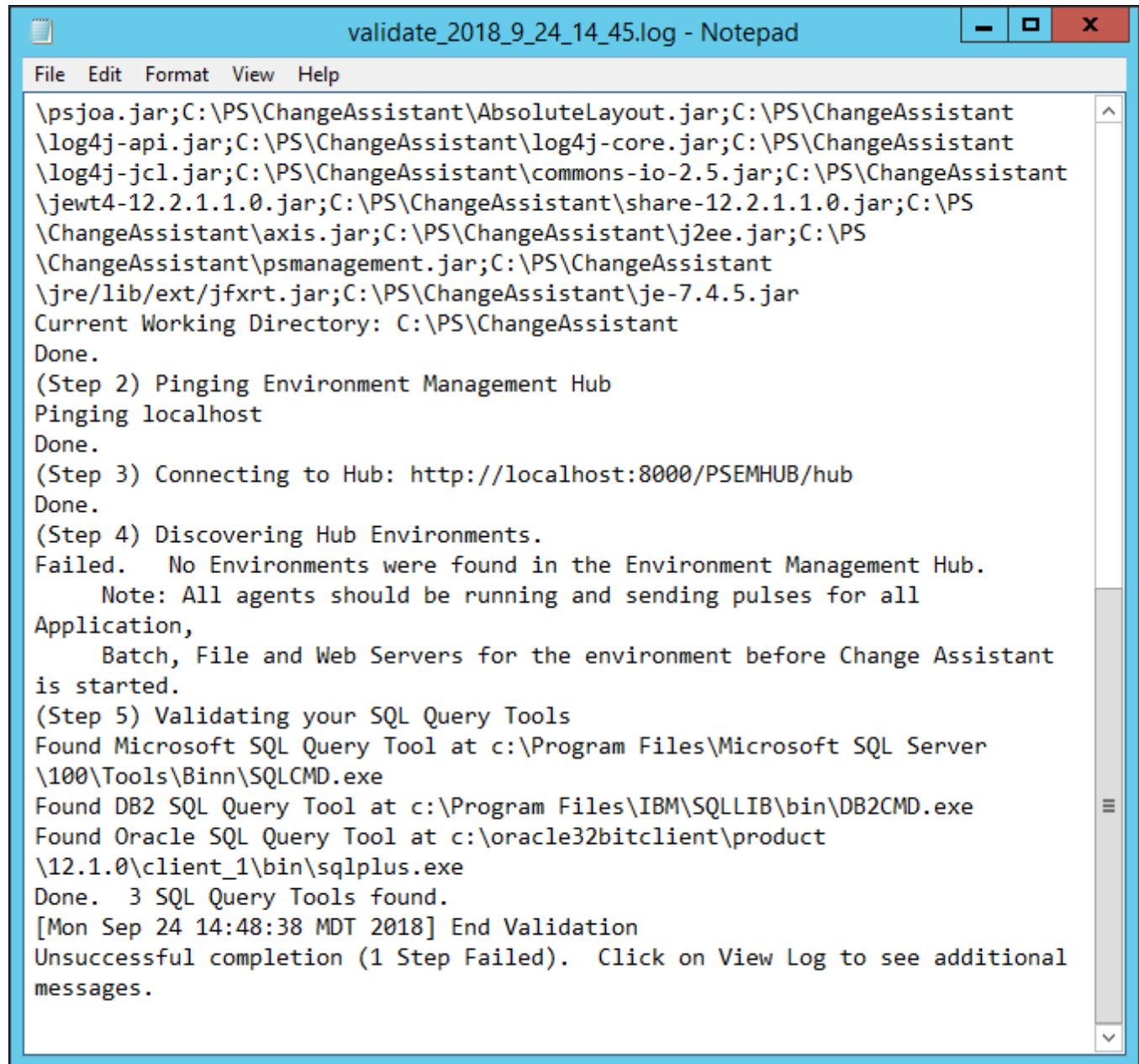
If any of the steps were unable to complete successfully, open the log file to determine the cause. This example shows a summary with both successful messages ("Done") and unsuccessful ("Failed" or "Unsuccessful completion"):



Validating Change Assistant Settings in Your Environment

**Note.** If you use proxy servers, the system will ping those and prompt for proxy server user ID and password. In this case, the validation step numbers would be different from the example.

To review the log file, click the View Log button at the bottom of the screen. This example shows the first several lines of a log file:



```
validate_2018_9_24_14_45.log - Notepad
File Edit Format View Help
\psjoa.jar;C:\PS\ChangeAssistant\AbsoluteLayout.jar;C:\PS\ChangeAssistant
\log4j-api.jar;C:\PS\ChangeAssistant\log4j-core.jar;C:\PS\ChangeAssistant
\log4j-jcl.jar;C:\PS\ChangeAssistant\commons-io-2.5.jar;C:\PS\ChangeAssistant
\jwt4-12.2.1.1.0.jar;C:\PS\ChangeAssistant\share-12.2.1.1.0.jar;C:\PS
\ChangeAssistant\axis.jar;C:\PS\ChangeAssistant\j2ee.jar;C:\PS
\ChangeAssistant\psmanagement.jar;C:\PS\ChangeAssistant
\jre\lib\ext\jfxrt.jar;C:\PS\ChangeAssistant\je-7.4.5.jar
Current Working Directory: C:\PS\ChangeAssistant
Done.
(Step 2) Pinging Environment Management Hub
Pinging localhost
Done.
(Step 3) Connecting to Hub: http://localhost:8000/PSEMHUB/hub
Done.
(Step 4) Discovering Hub Environments.
Failed. No Environments were found in the Environment Management Hub.
Note: All agents should be running and sending pulses for all
Application,
Batch, File and Web Servers for the environment before Change Assistant
is started.
(Step 5) Validating your SQL Query Tools
Found Microsoft SQL Query Tool at c:\Program Files\Microsoft SQL Server
\100\Tools\Binn\SQLCMD.exe
Found DB2 SQL Query Tool at c:\Program Files\IBM\SQLLIB\bin\DB2CMD.exe
Found Oracle SQL Query Tool at c:\oracle32bitclient\product
\12.1.0\client_1\bin\sqlplus.exe
Done. 3 SQL Query Tools found.
[Mon Sep 24 14:48:38 MDT 2018] End Validation
Unsuccessful completion (1 Step Failed). Click on View Log to see additional
messages.
```

Change Assistant Validation log

## Chapter 19

# Installing PeopleSoft Change Impact Analyzer

This chapter discusses:

- Understanding PeopleSoft Change Impact Analyzer
- Using the PeopleSoft Change Impact Analyzer Script to Install or Uninstall

## Understanding PeopleSoft Change Impact Analyzer

---

Oracle's PeopleSoft Change Impact Analyzer is a tool you can use to evaluate the effect of changes you make on your installation. PeopleSoft Change Impact Analyzer can help you monitor the impact a Change Package has on your system, as well as monitor the impact from other changes such as customizations.

Ensure that your system meets the following requirements before you begin this installation:

- PeopleSoft Change Impact Analyzer runs on Microsoft Windows platforms. For database platforms that do not run on Microsoft Windows, install PeopleSoft Change Impact Analyzer on the Windows client.
- When you run the setup script for the PeopleTools Client DPK, you can choose to install PeopleSoft Change Impact Analyzer as part of the client installation. If you need to install, upgrade, or remove Change Assistant independently of the PeopleTools Client DPK deployment, use the instructions in this chapter.

See "Deploying the PeopleTools Client DPK."

- You can run the setup.bat script located in *PS\_HOME*\setup\PsCIA to install or remove Change Impact Analyzer.

The *PS\_HOME*/setup/PsCIA directory includes setup.bat and a sample response file, resp\_file.txt. You modify the response file to correspond to your installation requirement.

The *PS\_HOME*/setup/PsCIA folder is available in both the PeopleTools Client DPK deployment and PeopleTools DPK server deployments.

---

**Note.** The *PS\_HOME*\setup\PsCIA directory includes scripts and files that are reserved for use by the software. You can ignore these files, including silentInstall.bat and CIA-silentInstall-response-file.txt.

---

- These instructions assume you have installed PeopleSoft PeopleTools on the machine on which you want to run PeopleSoft Change Impact Analyzer, and have completed the PeopleSoft Change Assistant installation.
- PeopleSoft Change Impact Analyzer uses Type 4 JDBC drivers by default. These drivers are automatically installed for you.

## See Also

*PeopleTools: Change Impact Analyzer*

## Task 19-1: Using the PeopleSoft Change Impact Analyzer Script to Install or Uninstall

---

This section discusses:

- Installing PeopleSoft Change Impact Analyzer
- Removing PeopleSoft Change Impact Analyzer

### Task 19-1-1: Installing PeopleSoft Change Impact Analyzer

To install, edit the response text file and then run the Change Impact Analyzer setup script.

1. Open the file *PS\_HOME*\setup\PscIA\resp\_file.txt for editing, for example in Notepad.
2. Modify the following items, and then save the file.

- Installation location

The default location is C:\Program Files\PeopleSoft\Change Impact Analyzer. You can install to any location.

```
INSTALL_PATH="C:\Program Files\PeopleSoft\Change Impact Analyzer"
```

- JDBC driver type

Specify Oracle.

```
JDBC_TYPE=ORACLE
```

- Path to JDBC driver

This information is not required for Oracle RDBMS, because the JDBC drivers are automatically installed.

```
DB_PATH=C:\jdbc_drivers
```

3. In a command prompt, go to *PS\_HOME*\setup\PscIA and run the following command.

```
setup.bat -f resp_file.txt
```

### Task 19-1-2: Removing PeopleSoft Change Impact Analyzer

To remove an existing installation of PeopleSoft Change Impact Analyzer::

1. Open a command prompt and change directory to *PS\_HOME*\setup\PscIA.
2. Enter the following command:

```
setup.bat -u U
```

---

**Note.** You may need to remove the Change Impact Analyzer shortcut on your desktop manually.

---



## Chapter 20

# Adding New Product Modules

### Task 20-1: Adding New Modules to PeopleSoft Installations

---

This task explains how to add new application modules to an existing PeopleSoft installation. Follow this procedure if, for example, you already installed HCM Benefits Administration and now you need to install Pension Administration.

When you add new application modules to an existing installation, you may overwrite files that were included as part of a patch or fixes, or customizations that you applied. For example, suppose you customize a report that is updated in a subsequent PeopleSoft release. If you install the update into your current working directory, your customized report will be overwritten with the newly installed, updated report.

The PeopleSoft system does not currently provide an automated way to notify you before overwriting customized modules or patch files. You can make preparations to protect important files from being overwritten. For your customized modules, you need to maintain a backup of any customizations. It is also a good idea to make a copy of your *PS\_HOME* directory before beginning this process, so that you can find and restore necessary patch files. Check My Oracle Support to identify any patches or fixes required for your installation.

See My Oracle Support, Patches & Updates.

To add new module(s) to PeopleSoft installations:

1. Back up the database, file server, application server, Process Scheduler Server, and web server components of your current system.
2. Install the PeopleSoft Application software on the file server.
3. Launch Data Mover in bootstrap mode by logging on with the access ID and password.

Data Mover is located in *PS\_HOME\bin\client\winx86\psdmt.exe*.

See Checking the Log Files and Troubleshooting, Running Data Mover, in the chapters on creating a database.

4. Select File, Database Setup and choose your database type in the resulting dialog.
5. Select Next and select add new product.
6. Select Finish and a Data Mover script will be generated in Data Mover.
7. Select File, Run script and your database updates are complete.
8. Install software to your batch server.

See the chapters on setting up Process Scheduler in this documentation.

9. Reapply all code customizations if needed.

---

**Note.** Remember to maintain backup copies of your customizations.

---

10. Compile and link COBOL.

See the chapters on installing and compiling COBOL in this documentation.

11. Verify that the appropriate Installation Records are selected.

If they are not checked, check them and save the page. To open the page, select Set Up <apptype>, Install, Installation Options, where <apptype> is CRM, Financials/Supply Chain Management, and so on. For example, Set Up CRM, Install, Installation Options. (For HCM the navigation is Set Up HCM, Install, Installation Table.)

12. Run the dddaudit and sysaudit SQR reports.

If you are swapping the base language, also run swpaudit.sqr.

See "Completing the Database Setup," Checking the Database.

13. Shut down all application servers.

14. Install software to your application server.

See the chapters on configuring the Application Server in this documentation.

15. Restart all required application servers.

16. Shut down all web servers.

17. Install software to your web server.

See the chapters on setting up the PeopleSoft Pure Internet Architecture in this documentation.

## Chapter 21

# Using PeopleSoft Online Help

This chapter discusses:

- Understanding PeopleSoft Online Help (PeopleBooks)
- Installing PeopleSoft Online Help Locally

## Understanding PeopleSoft Online Help (PeopleBooks)

The documentation for PeopleSoft PeopleTools and PeopleSoft software applications, formerly known as PeopleBooks, is now available in a dynamic, interactive, accessible HTML version, the hosted PeopleSoft Online Help Web site. The PeopleSoft Online Help documentation that is accessed with the Help link in the PeopleSoft navigation bar, and the Oracle's PeopleSoft Online Help on the Oracle Help Center, are developed for advanced users, administrators, and implementers of the application. End users should utilize embedded help for more specific help assistance.

PeopleSoft software applications will include translated embedded help. PeopleSoft documentation aligns with the other Oracle applications in focusing on embedded help. We offer very direct translated help at crucial spots within our application through our embedded help widgets. Additionally, we have a one-to-one mapping of application and help translations. This means that the software and embedded help translation footprint are identical, something we were never able to accomplish in the past.

The PeopleSoft Online Help is delivered for on-premises installations of PeopleSoft PeopleTools and every PeopleSoft application. You have several options for deploying PeopleSoft Online Help to benefit your organization.

- *Hosted PeopleSoft Online Help:* Use PeopleSoft Online Help over the Internet with the hosted content on the hosted PeopleSoft Online Help.

You can access the PeopleSoft online help from the PeopleSoft area on Oracle Help Center. Select PeopleTools or your PeopleSoft application from the menu on the left. Select your PeopleTools release or PeopleSoft application update image, and locate the section Online Help and PeopleBooks.

See Oracle Help Center, PeopleSoft, <https://docs.oracle.com/en/applications/peoplesoft/index.html>.

- *Context-sensitive help:* Configure PeopleSoft PeopleTools to call PeopleSoft Online Help as context-sensitive help from both Internet applications (that is, accessing PIA in a browser) and Microsoft Windows-based programs. For instance, when a user clicks the Help link in a browser or presses F1 in Windows, the appropriate documentation appears. You can set up context-sensitive help for both local installations and to access the hosted content on the PeopleSoft Online Help Web site.

---

**Note.** The F1 button accesses PeopleSoft Online Help only for the PeopleTools Development Environment (the Windows-based client). If you press F1 while using the portal, you invoke the help for your current browser. For context-sensitive help in the portal, users need to click the Help link to call PeopleSoft Online Help.

---

In the PeopleSoft Hosted Online Help, select the link *About This Help* from the navigation pane on the left to

find information on configuring context-sensitive help.

- *PDF format:* You can download a PDF version of PeopleSoft Online Help, organized in the traditional PeopleBooks format, from the PeopleSoft area on the Oracle Help Center.

Select PeopleTools or your PeopleSoft application from the menu on the left. Select your PeopleTools release or PeopleSoft application update image, and locate the section Online Help and PeopleBooks.

See Oracle Help Center, PeopleSoft, <https://docs.oracle.com/en/applications/peoplesoft/index.html>.

- *Local installation:* For on-premises environments, use the instructions in this section to install and configure PeopleSoft Online Help so you can deploy the documentation at your site. You can also install a search utility for full-text search.

See Installing PeopleSoft Online Help Locally.

## See Also

*PeopleTools: Applications User's Guide*, "Accessing Embedded Help"

*About This Help*, PeopleSoft Hosted Online Help, <https://docs.oracle.com/en/applications/peoplesoft/index.html>

## Task 21-1: Installing PeopleSoft Online Help Locally

---

This section discusses:

- Understanding the PeopleSoft Online Help Local Installation
- Prerequisites
- Obtaining the PeopleSoft Documentation Files from Oracle Software Delivery Cloud
- Installing the PeopleSoft Online Help on a Web Server
- Installing the PeopleSoft Online Help and the Search Utility
- Removing the PeopleSoft Online Help Deployment
- Setting Up Help for Multiple Product Lines on the Same Machine

### Understanding the PeopleSoft Online Help Local Installation

This section explains using the installation files for PeopleSoft Online Help and the search utility for a local installation. You can install the online help with an Oracle WebLogic web server to view the web site. You can also install a search utility based on OpenSearch, which enables full-text search.

### Prerequisites

Before installing the PeopleSoft online help:

- Obtain the installation file for the PeopleSoft Online Help from Oracle Software Delivery Cloud, as described in the next section.
- Install a supported web server and verify that it is up and running.

This task describes the steps for Oracle WebLogic on Microsoft Windows. Determine the URL, user name, and password for the Oracle WebLogic administration console.

You can find instructions for installing Oracle WebLogic elsewhere in "Installing Web Server Products."

---

**Note.** If you install Oracle WebLogic as part of the PeopleSoft DPK deployment, you can find the port number (pia\_http\_port) and user name (webserver\_admin\_user) in the psft\_configuration.yaml file. In this case, the default port is 8000 and the default name is system. You supply the password during the deployment.

---

- You have the option of using the search utility documented here to set up the PeopleSoft Online Help for full-text search on Linux and Microsoft Windows.

The "Search Utility for locally installed PeopleSoft Documentation" contains a customized version of OpenSearch for PeopleSoft Online Help that is independent of the OpenSearch that is used for the PeopleSoft search framework. The search utility is available on Oracle Software Delivery Cloud in the same delivery package as the PeopleSoft online help documentation. The downloaded zip file includes a text file with instructions.

---

**Note.** For the sake of brevity, this task refers to the "Search Utility for locally installed PeopleSoft Documentation" as the "search utility."

---

- The PeopleSoft Online Help installation requires Java 11.

## Task 21-1-1: Obtaining the PeopleSoft Documentation Files from Oracle Software Delivery Cloud

To obtain files for the PeopleSoft Online Help installation:

1. Sign in to Oracle Software Delivery Cloud.  
See Oracle Software Delivery Cloud, <https://edelivery.oracle.com>.
2. Search for the current PeopleSoft PeopleTools release.
3. In the search results, locate the PeopleSoft PeopleTools download package (DLP), and click it to add it to your download queue.
4. If you want to obtain the PeopleSoft Online Help installation files for a PeopleSoft application, search for the name of a specific PeopleSoft application product, and locate the download package.  
For example, for PeopleSoft Human Capital Management, enter and select PeopleSoft Enterprise Human Resources. For PeopleSoft Financials and Supply Chain Management, enter and select PeopleSoft Enterprise Financials.
5. Click Continue.
6. On the page listing your selections, locate and select the PeopleSoft PeopleTools or PeopleSoft application documentation files.  
Clear the check boxes for any software you do not want.
7. Read the license agreement, select the check box to acknowledge that you accept the agreement, and then click Continue.
8. On the file download window, select the links for the online help zip file and the search utility.
9. Download the zip files into a convenient local directory.

## Task 21-1-2: Installing the PeopleSoft Online Help on a Web Server

After you download the online help installation files, use these steps to view the PeopleSoft Online Help web site on your local system. If you want to set up the help with full-text search, skip this section and go to the section, Installing the PeopleSoft Online Help and the Search Utility.

To install the PeopleSoft Online Help with web server software:

1. Go to the directory where you downloaded the PeopleSoft Online Help installation zip file.
2. Extract the contents of the zip file.

The zip file contains a folder with a name based on the product line and release, such as pt861pbr1. The folder includes the following:

- buildindex.bat — batch file used on Microsoft Windows to create a context-sensitive help index for the online help for several products
- buildindex.sh — shell script file used on UNIX and Linux to create a context-sensitive help index for the online help for several products
- online-help.zip — the PeopleSoft Online Help content files
- psHelpIndexBuilder.jar — jar file that is invoked by buildindex.bat or buildindex.sh to generate a context-sensitive help index
- README.txt

3. Extract the contents of the online-help.zip file to your web server root.

The zip file includes a folder with the same name as that of the initial extracted file, such as pt861pbr1, which is referred to here as the *docroot*.

For example, if you installed the PeopleSoft Pure Internet Architecture (PIA) to *<PIA\_HOME>*, with PIA domain name *<domain\_name>*, the web server root directory is:

*<PIA\_HOME>/webserve/<domain\_name>/applications/peoplesoft/PORTAL.war*

4. To view PeopleSoft Online Help, open a browser and enter a URL with the following format:

*http://<weblogic\_server>:<weblogic\_port>/<docroot>/eng/<product\_line>/index.html.*

For example:

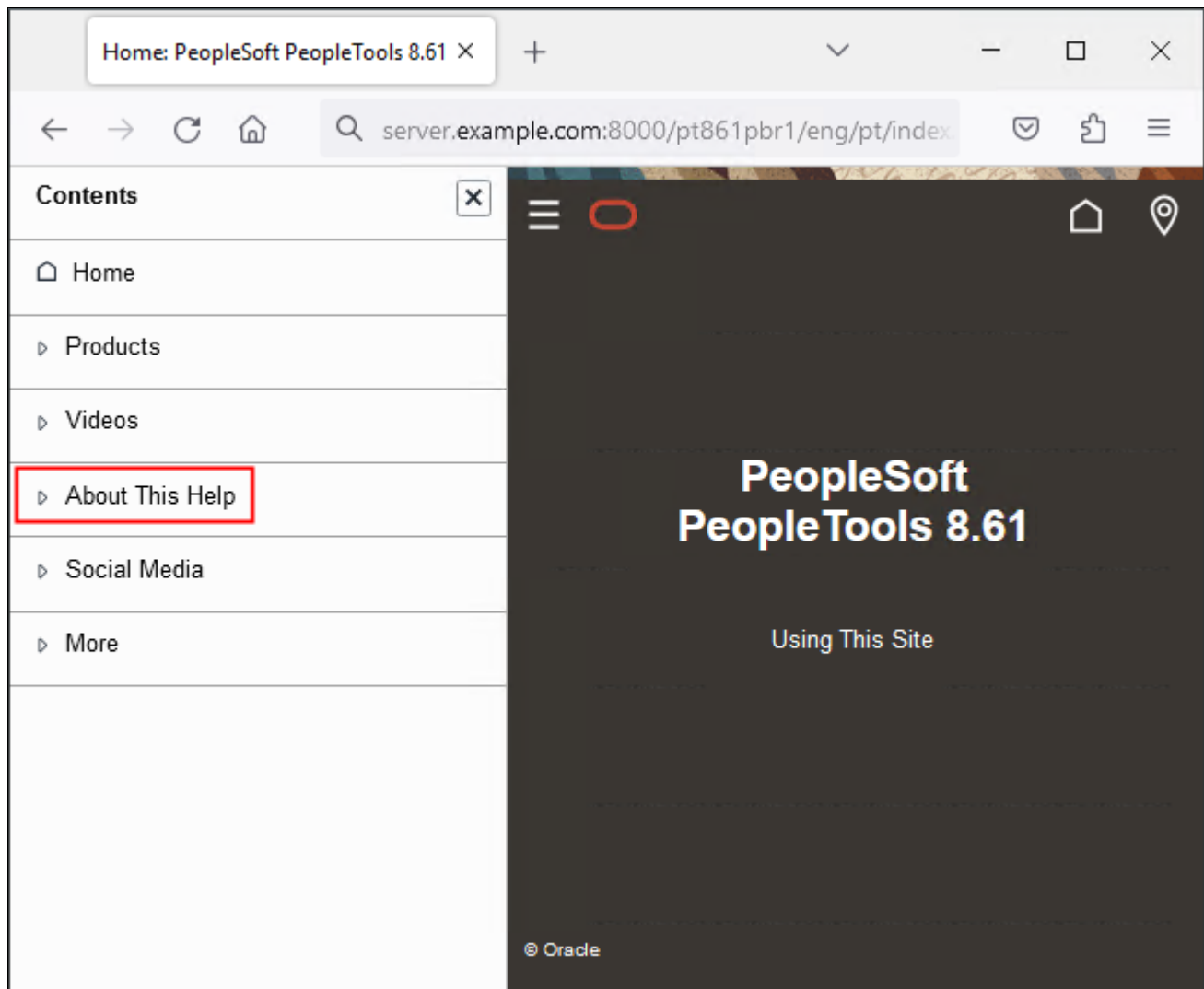
*http://server.example.com:8000/pt861pbr1/eng/pt/index.html*

The URL is comprised of these components:

- *<weblogic\_server>* — the fully-qualified machine name for the Oracle WebLogic server
- *<weblogic\_port>* — the port for the web root server
- *<docroot>* — the extracted PeopleSoft Online Help contents folder
- *<product\_line>* — an abbreviation for the product line, such as pt for PeopleSoft PeopleTools or hcm for PeopleSoft Human Capital Management

5. For information on the file structure of the downloaded online help and using the buildindex scripts, see About This Help.

From the PeopleSoft PeopleTools Online Help site, select About This Help from the Contents frame, and review the information on managing locally installed PeopleSoft Online Help.



PeopleSoft PeopleTools 8.61 Online Help home page

## Task 21-1-3: Installing the PeopleSoft Online Help and the Search Utility

### Setting Up the Search Utility

After you download the online help installation files and the search utility, use these steps to set up the PeopleSoft Online Help web site with the search utility. This task uses the PeopleSoft PeopleTools 8.61 online help as an example.

1. Go to the folder where you downloaded the PeopleSoft Online Help installation zip file.
2. Extract the contents of the zip file.

The zip file contains a folder with a name based on the product line and release, such as pt861pbr1. The folder

includes the following:

- buildindex.bat — batch file used on Microsoft Windows to create a context-sensitive help index for the online help for several products
- buildindex.sh — shell script file used on UNIX and Linux to create a context-sensitive help index for the online help for several products
- online-help.zip — the PeopleSoft Online Help content files
- psHelpIndexBuilder.jar — jar file that is invoked by buildindex.bat or buildindex.sh to generate a context-sensitive help index
- README.txt

3. Extract the contents of the online-help.zip file to a convenient folder.

The zip file includes a folder with the same name as that of the initial extracted file, such as pt861pbr1, which is referred to here as the *docroot*.

For the examples given in these instructions, the *docroot* folder, with the PeopleSoft Online Help file contents, resides under a higher-level folder, *doc\_global*. In these examples, *<doc\_global>\<docroot>* is C:\PeopleBooks\pt861pbr1.

4. Install and set up the search utility.

Follow the instructions in the INSTALL.txt file included with the search utility zip file to complete these steps:

- Set up OpenSearch for PeopleSoft Online Help.  
This documentation refers to the location where you extract the search utility zip file as *srch\_utility\_install*.
- Deploy OpenSearch for PeopleSoft Online help search page.
- After you complete the deployment, follow the instructions at the end of the script and in INSTALL.txt to copy the psossearch folder from the OpenSearch installation directory to the application root, which is *doc\_global* in these examples.
- If desired, follow the instructions in INSTALL.txt to create a service to manage OpenSearch on Microsoft Windows, or a daemon on Linux.

---

**Note.** Before creating the OpenSearch service on Microsoft Windows, close the cmd.exe window that is running opensearch.bat. Alternatively, stop it in the Services dialog box.

---

5. Create a folder WEB-INF under the *doc\_global* folder.
6. In the WEB-INF folder create a file named "web.xml" that has the following content:

```
<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE web-app PUBLIC

"-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"

"http://java.sun.com/j2ee/dtds/web-app_2_3.dtd">

<web-app>

</web-app>
```

This allows Oracle WebLogic to recognize the *doc\_global* folder as a valid deployment.



## Deploying in the Oracle WebLogic Administration Console

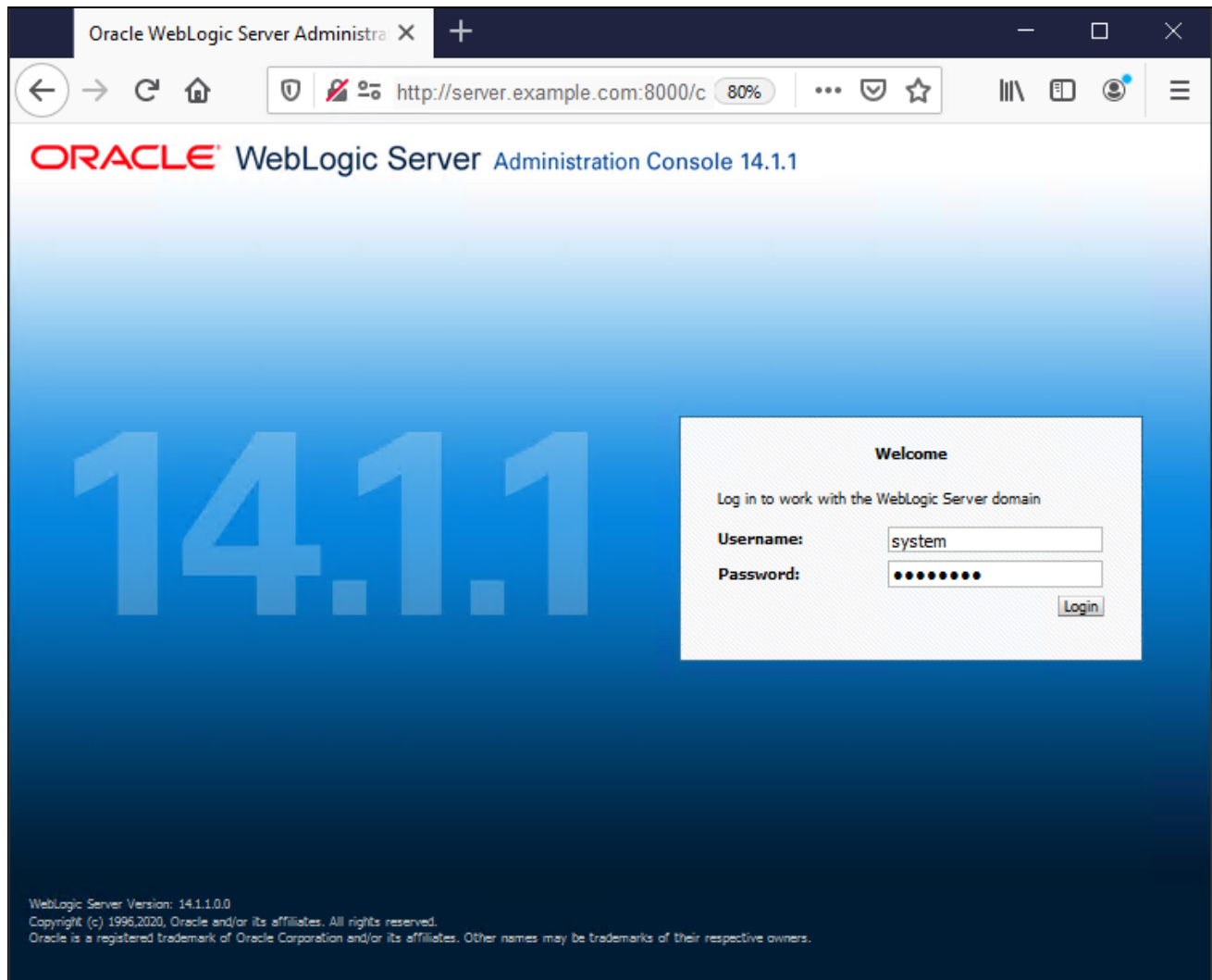
To deploy the online help in the Oracle WebLogic Administration console:

1. Open the Oracle WebLogic administration console by entering the following URL in a browser:

`http://<weblogic_server>:<weblogic_port>/console`

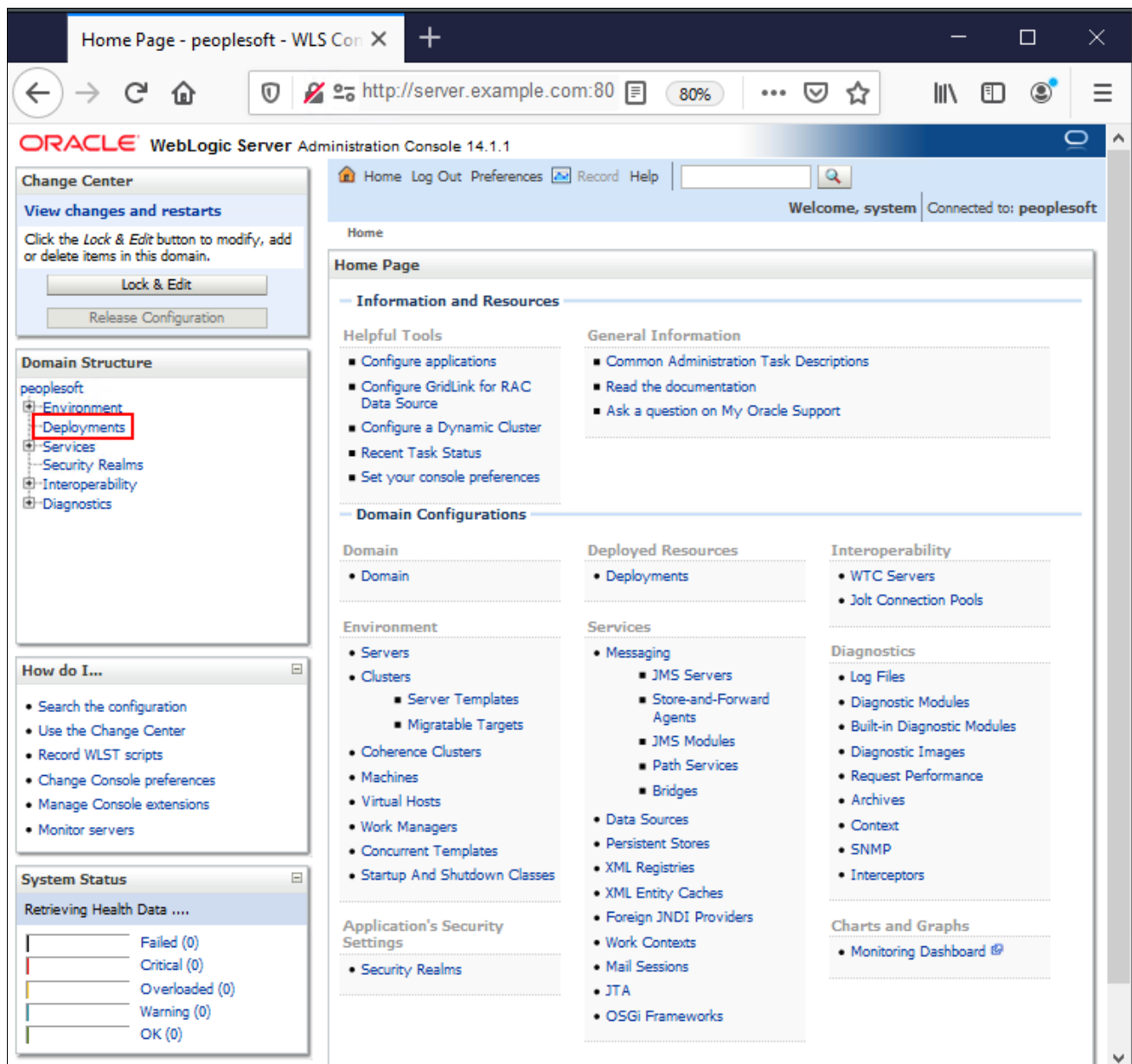
For example, `http://server.example.com:8000/console`

2. Log in using Oracle WebLogic administrator credentials.



Oracle WebLogic Server Administration Console 14.1.1

3. Select Deployments from the Domain Structure section on the left side of the window:



Oracle WebLogic Administration Console Home Page

- Click Install on the Deployments section of the Configuration tab under Summary of Deployments.  
If the Install button is not enabled, click Lock & Edit under Change Center on the left.

The screenshot shows the Oracle WebLogic Server Administration Console. The browser address bar indicates the URL is `http://server.example.com:80`. The console title is "ORACLE WebLogic Server Administration Console 14.1.1".

**Change Center:** The "View changes and restarts" section shows "No pending changes exist. Click the Release Configuration button to allow others to edit the domain." The "Lock & Edit" button is highlighted with a red box.

**Domain Structure:** The tree view shows the following structure:

- peoplesoft
  - Environment
  - Deployments**
  - Services
  - Security Realms
  - Interoperability
  - Diagnostics

**Summary of Deployments:** The "Configuration" tab is selected. The page displays the list of Java EE applications and standalone application modules installed to this domain. It includes instructions on how to update, delete, or install applications.

**Customize this table:** The "Deployments" section shows a table with the following data:

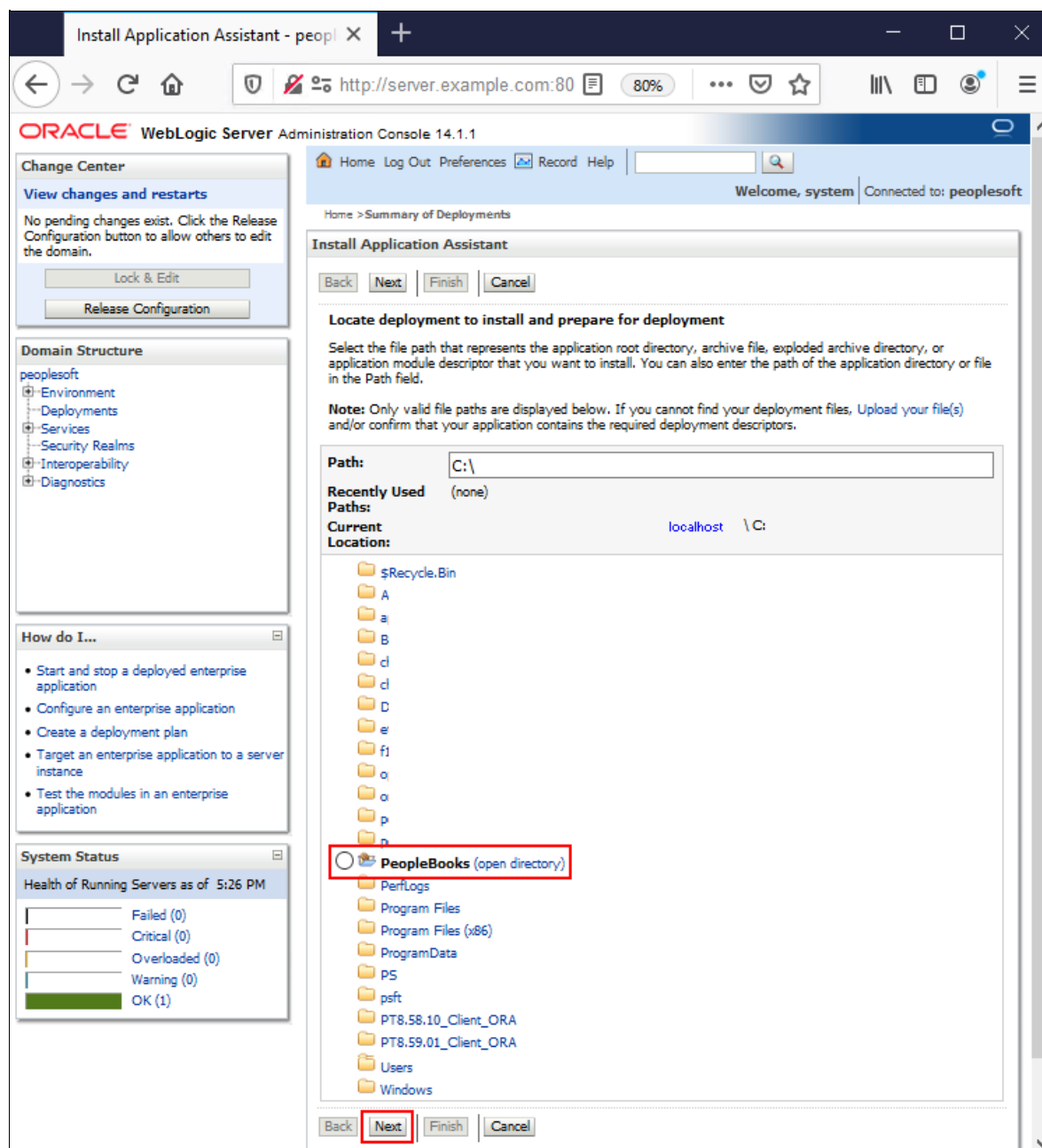
| <input type="checkbox"/> | Name               | State     | Health | Type                   | Targets | Deployment Order |
|--------------------------|--------------------|-----------|--------|------------------------|---------|------------------|
| <input type="checkbox"/> | HttpClusterServlet | Installed |        | Web Application        |         | 1                |
| <input type="checkbox"/> | HttpProxyServlet   | Installed |        | Web Application        |         | 1                |
| <input type="checkbox"/> | peoplesoft         | Active    | OK     | Enterprise Application | PIA     | 1                |

The "Install" button is highlighted with a red box. The table also includes "Update" and "Delete" buttons for each row.

Configuration tab on the Summary of Deployments page

5. If necessary, enter C:\ for the path.

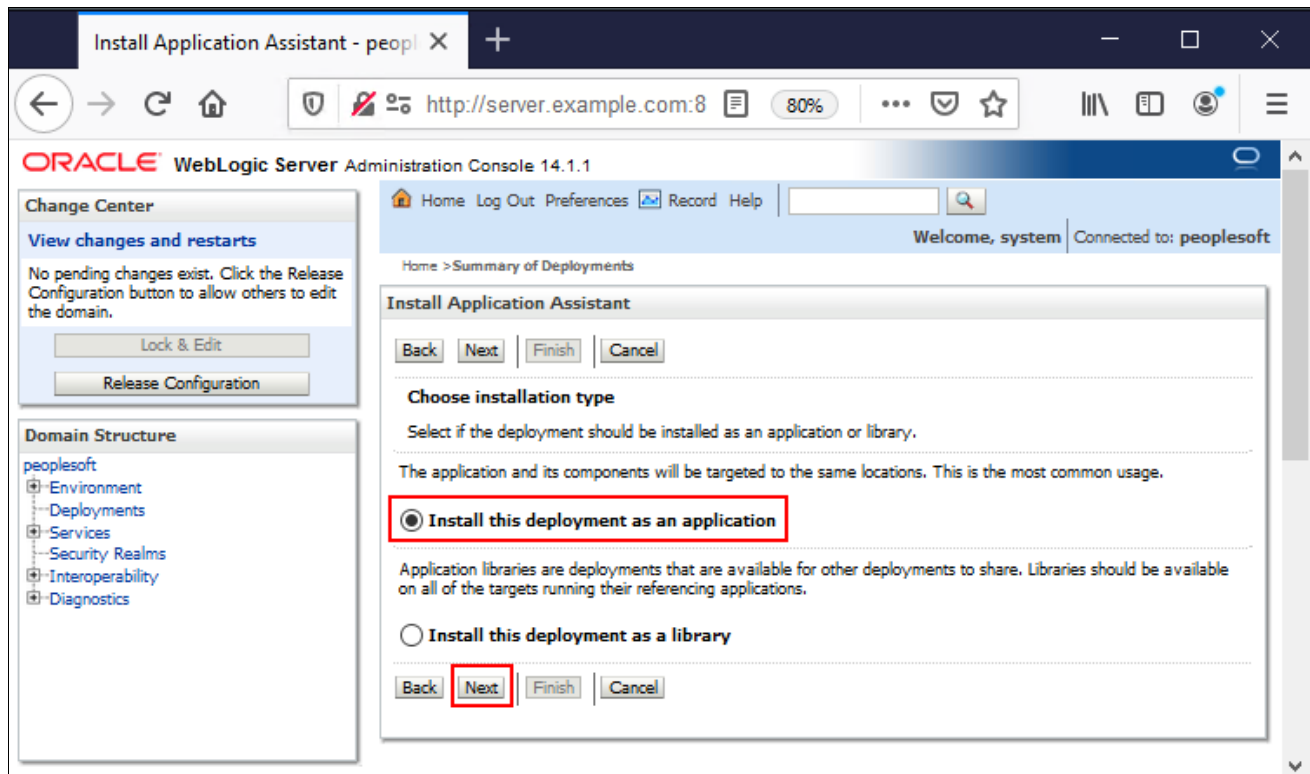
You see the computer directory structure. The entry for PeopleBooks in this example, which is the *doc\_global* location containing the online help files, includes a radio button indicating that this folder can be deployed as an application.



Locate deployment to install and prepare for deployment page

6. Select PeopleBooks (open directory) and then click Next.

7. On the Choose installation type page, select the option Install this deployment as an application.



Choose installation type and scope page

8. Accept the default entries on the Optional Settings page, and click Next.

The page includes sections General, Security, Source Accessibility, and Plan Source Accessibility. The name in the General section is used to compose the URL that you use to access the online help, referred to as here *help\_deployment\_name*.

The screenshot shows the Oracle WebLogic Server Administration Console 14.1.1. The browser address bar indicates the URL is `http://server.example.com:80`. The console interface includes a left-hand navigation pane with sections like 'Change Center', 'Domain Structure', and 'How do I...'. The main content area is titled 'Install Application Assistant' and contains the 'Optional Settings' section. The 'General' tab is selected, showing a form for 'What do you want to name this deployment?' with the text 'PeopleBooks' entered. The 'Security' section is also visible, with radio buttons for 'DD Only', 'Custom Roles', 'Custom Roles and Policies', and 'Advanced'. The 'Source Accessibility' section is partially visible at the bottom.

Top portion of the Optional Settings page

- Test the modules in an enterprise application

**System Status**  
 Health of Running Servers as of 5:29 PM  

|  |                |
|--|----------------|
|  | Failed (0)     |
|  | Critical (0)   |
|  | Overloaded (0) |
|  | Warning (0)    |
|  | OK (1)         |

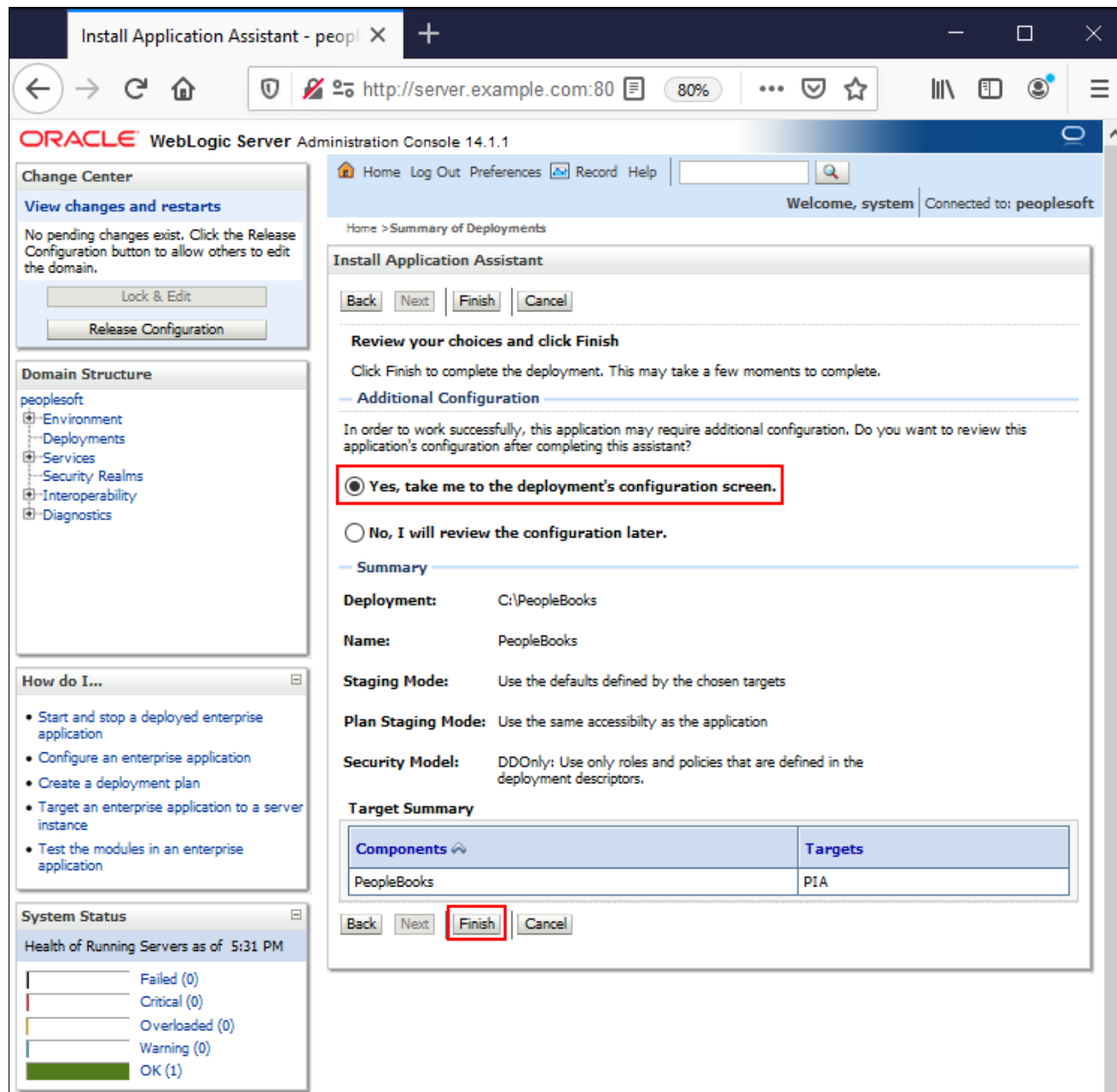
**Source Accessibility**  
 How should the source files be made accessible?  
☒ **Use the defaults defined by the deployment's targets**  
 Recommended selection.  
☐ **Copy this application onto every target for me**  
 During deployment, the files will be copied automatically to the Managed Servers to which the application is targeted.  
☐ **I will make the deployment accessible from the following location**  
 Location:   
 Provide the location from where all targets will access this application's files. This is often a shared directory. You must ensure the application files exist in this location and that each target can reach the location.

**Plan Source Accessibility**  
 How should the plan source files be made accessible?  
☒ **Use the same accessibility as the application**  
 Recommended selection.  
☐ **Copy this plan onto every target for me**  
 During deployment, the plan files will be copied automatically to the Managed Servers to which the application is targeted.  
☐ **Do not copy this plan to targets**  
 You must ensure the plan files exist in the shared location and that each target can reach the location.

Bottom portion of the Optional Settings page

9. On the Review your choices and click Finish page, select the option Yes, take me to the deployment's configuration screen.

Click Finish.

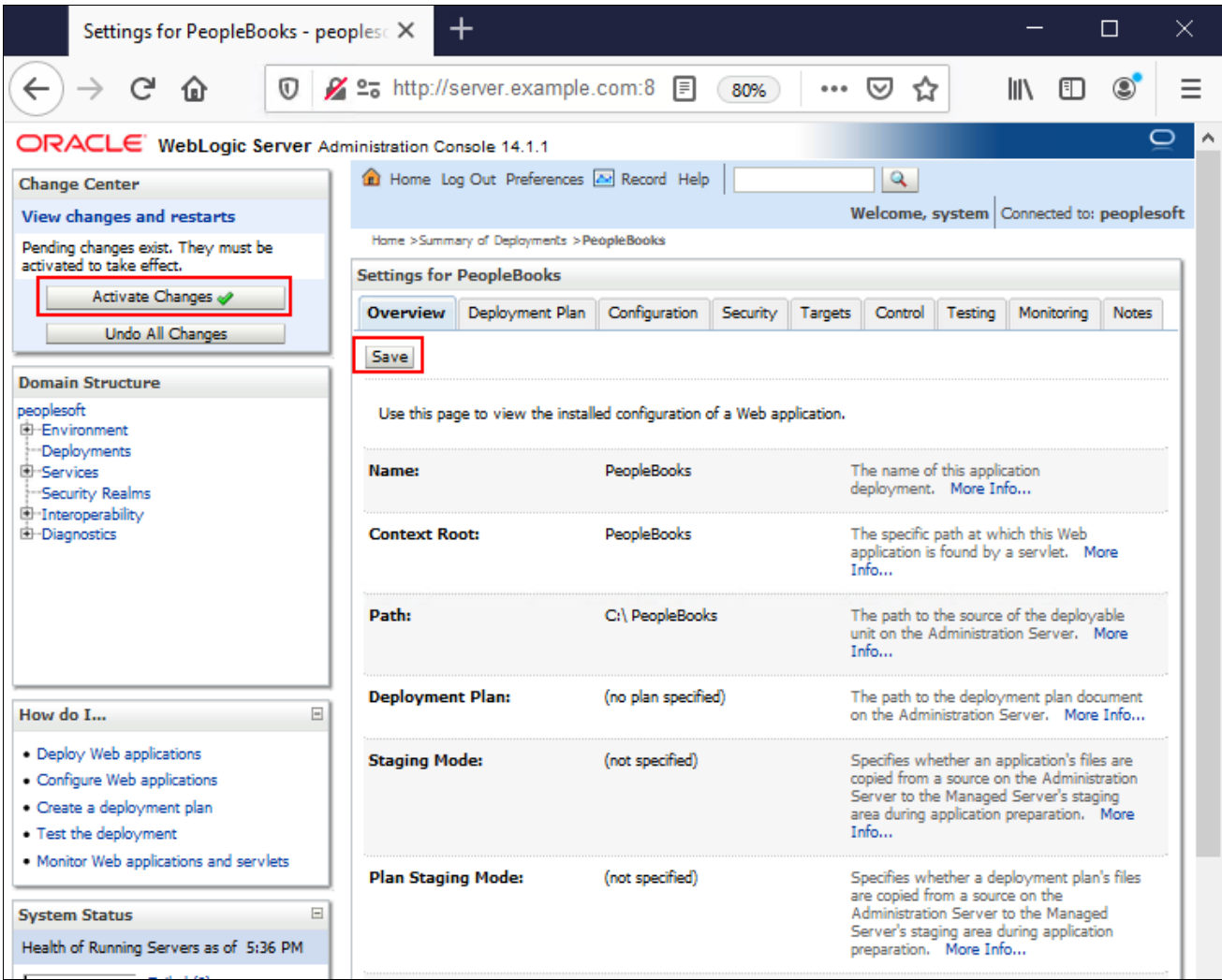


Review your choices and click Finish page



10. Click Save.

If necessary, click Activate Changes under Change Center on the left to save and Activate the deployment.



Top portion of Settings for PeopleBooks page

**System Status**

Health of Running Servers as of 5:36 PM

- Failed (0)
- Critical (0)
- Overloaded (0)
- Warning (0)
- OK (1)

are copied from a source on the Administration Server to the Managed Server's staging area during application preparation. [More Info...](#)

---

**Security Model:** DDOnly  
The security model specifies how this deployment should be secured. [More Info...](#)

---

**Deployment Order:**   
An integer value that indicates when this unit is deployed, relative to other deployable units on a server, during startup. [More Info...](#)

---

**Deployment Principal Name:**   
A string value that indicates the principal that should be used when deploying the file or archive during startup and shutdown. This principal will be used to set the current subject when calling out into application code for interfaces such as ApplicationLifecycleListener. If no principal name is specified, then the anonymous principal will be used. [More Info...](#)

---

[Save](#)

**Modules and Components**

Showing 1 to 1 of 1 Previous | Next

| Name              | Type            |
|-------------------|-----------------|
| [-] PeopleBooks   | Web Application |
| [-] REST Services |                 |
| None to display   |                 |
| [-] Web Services  |                 |
| None to display   |                 |

Showing 1 to 1 of 1 Previous | Next

WebLogic Server Version: 14.1.1.0.0  
 Copyright (c) 1996,2020, Oracle and/or its affiliates. All rights reserved.  
 Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Bottom portion of Settings for PeopleBooks page

11. After the deployment is activated, select Deployments from the Domain Structure frame on the left.
12. Select the Control tab in the Summary of Deployments section.

13. Select the check box for the deployment, and click Start.

Choose Servicing all requests from the Start menu. Click Yes on the window asking for confirmation.

The screenshot shows the Oracle WebLogic Server Administration Console 14.1.1. The 'Summary of Deployments' page is active, with the 'Control' tab selected. The 'PeopleBooks' application is highlighted in the table. The 'Start' button is highlighted, and a dropdown menu is open showing 'Servicing all requests'.

| Name               | State     | Health | Type                   | Targets |
|--------------------|-----------|--------|------------------------|---------|
| HttpClusterServlet | Installed |        | Web Application        |         |
| HttpProxyServlet   | Installed |        | Web Application        |         |
| PeopleBooks        | Prepared  | OK     | Web Application        | PIA     |
| peoplesoft         | Active    | OK     | Enterprise Application | PIA     |

Start deployment on Summary of Deployments page

14. Log out of the Oracle WebLogic Administration console.

15. To compose the URL that you use to access the online help, referred to in this section as *online help URL*, use this format:

`http://<weblogic_server>:<weblogic_port>/<help_deployment_name>/<docroot>/eng/<product_line>/index.html`

- `<weblogic_server>` — the fully-qualified machine name for the Oracle WebLogic server
- `<weblogic_port>` — the port for the Oracle WebLogic server

- *<help\_deployment\_name>* — the name in the General section on the Optional Settings page in the Oracle WebLogic Administration Console
- *<docroot>* — the extracted PeopleSoft Online Help contents folder
- *<product\_line>* — the product line abbreviation, such as pt for PeopleSoft PeopleTools, or hcm for PeopleSoft Human Capital Management.

## Crawling the Help Indexes

To crawl the online help site to list the help indexes:

1. In a command prompt, change directory to *srch\_utility\_install\pscrawler*.

For example, on Microsoft Windows, *C:\apps\PSOnlineHelpSearchUtilities\pscrawler*.

For example, on Linux, */opt/apps/PSOnlineHelpSearchUtilities/pscrawler*.

---

**Note.** Make sure that OpenSearch is running before running the next command.

---

2. Run the following command.

---

**Note.** If you see a prompt for *JAVA\_HOME* when you use the crawler script, enter the location installed by the search utility, such as *C:\apps\PSOnlineHelpSearchEngine\pt\opensearch-2.3.0\jdk* (Microsoft Windows) or */opt/apps/PSOnlineHelpSearchEngine/pt/opensearch-2.3.0/jdk* (Linux).

---

Crawling the online help site requires a few minutes.

```
crawler.<ext> <opensearch host> <opensearch port> index <online help>
URL>
```

For example, on Microsoft Windows:

```
crawler.bat hostname.example.com 9260 index http://hostname.example.com:⇒
8000/PeopleBooks/pt861pbr1/eng/pt/index.html
```

For example, on Linux:

```
./crawler.sh hostname.example.com 9260 index http:⇒
//hostname.example.com:8000/PeopleBooks/pt861pbr1/eng/pt/index.html
```

- Enter the fully qualified machine name for *<opensearch host>*.
  - Enter the search engine port for *<opensearch port>*.
  - Enter the *<online help URL>*, as described in the section Deploying in the Oracle WebLogic Administrator Console.
3. To list all indexes, run this command, and enter the fully qualified machine name for *<opensearch host>* and the search engine port for *<opensearch port>*.

```
crawler.<ext> <opensearch host> <opensearch port> display
```

For example, on Microsoft Windows:

```
crawler.bat hostname.example.com 9260 display
```

For example, on Linux:

```
./crawler.sh hostname.example.com 9260 display
```

## Accessing the Online Help and Online Help Search Console

To enable the search capability on the PeopleSoft Online Help pages, so that when you click the search icon the PeopleSoft Online Help Search Console appears:

1. Locate the common.js file and open it for editing.

The common.js file is located in `<doc_global>\<docroot>\js`, for example, `C:\PeopleBooks\pt861pbr1\js` on Microsoft Windows or `/opt/PeopleBooks/pt861pbr1/js` on Linux.

2. Edit the variables searchURL, searchOpt and queryTextParamName.

---

**Note.** The lines beginning with two slashes (//) in common.js are sample entries. Enter text as shown here.

---

For example:

```
var searchURL = "/PeopleBooks/psossearch/index.html";
var altHelpURL = "";
var searchOpt = "product=PeopleSoft PeopleTools 8.61";
var queryTextParamName = "query";
```

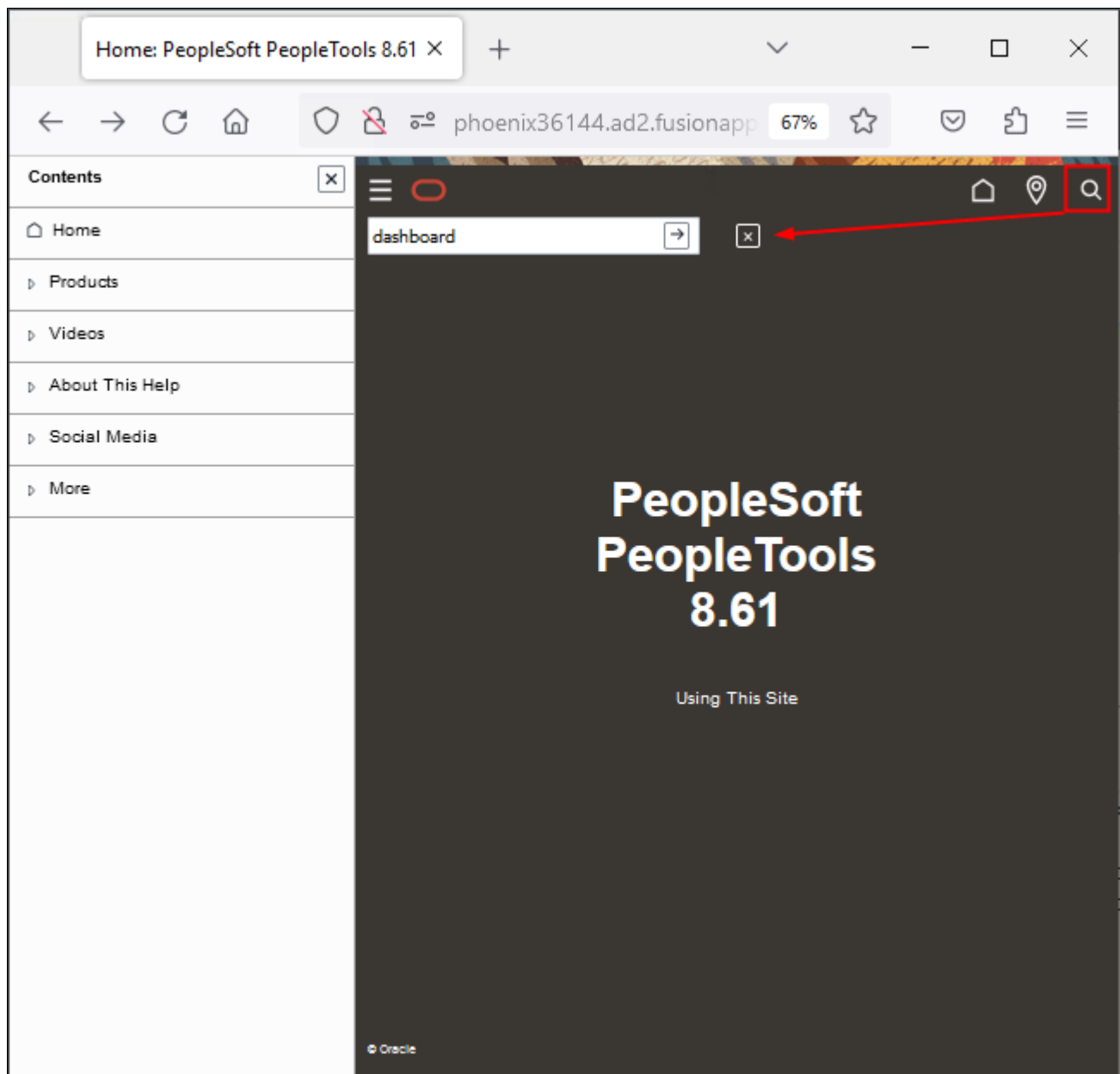
3. Save the file.
4. To access the PeopleSoft Online Help in a browser, enter the `<online help URL>`, as described in the section Deploying in the Oracle WebLogic Administration Console.

`http://<weblogic_server>:<weblogic_port>/<help_deployment_name>/<docroot>/eng/<product_line>/index.html`

For example, this URL displays the PeopleSoft PeopleTools 8.61 documentation home page:

`http://server.example.com:8000/PeopleBooks/pt861pbr1/eng/pt/index.html`

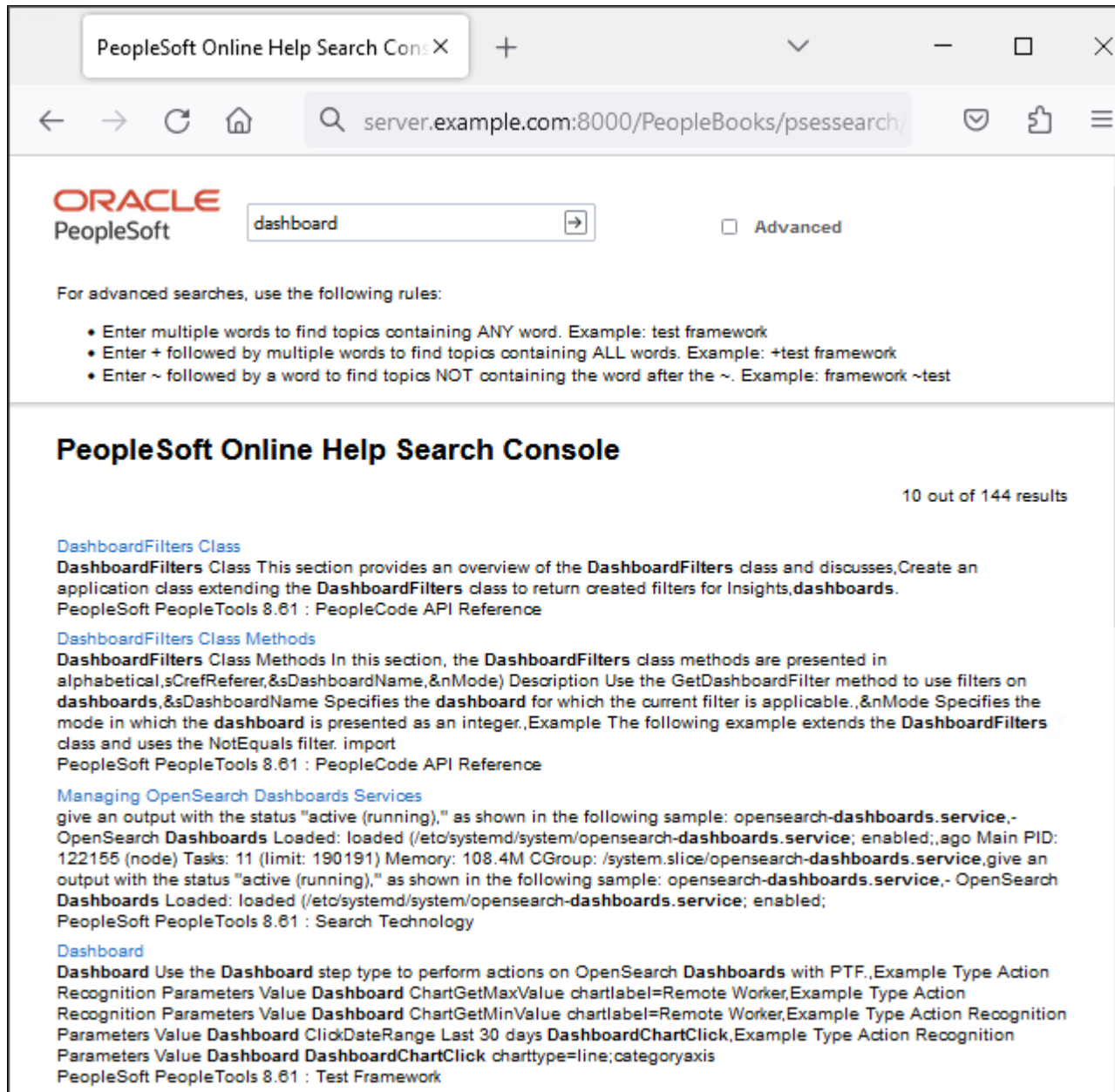
5. Click the search icon at the top right of the page and enter the search term.



PeopleSoft PeopleTools 8.61 Online Help home page with search icon

6. Select the search result links that appear in the PeopleSoft Online Help Search Console to view the help topics.

The search is case insensitive.



PeopleSoft Online Help Search Console

7. If you want to limit the search results, select the Advanced option and use these formats for the queries:

- Enter words separated by a space to find topics with either of the words.

For example, to find topics with either of the words test or framework, use the query "test framework". This is similar to the Boolean expression "test OR framework".

- Enter a plus sign (+) followed by two or more words to find topics with both the words.

For example, to find topics with both the words fluid and dashboard, use the query "+fluid dashboard". This is similar to the Boolean expression "fluid AND dashboard".

- Use a tilde (~) to exclude a word.

For example, to find topics that contain SQL but not SQR, use the query *"sql ~ sqr"*. This is similar to the Boolean expression *"sql NOT sqr"*.

For more information on using locally installed online help, see *About This Help*. From the PeopleSoft PeopleTools Online Help site, select *About This Help* from the Contents frame. Then select *Managing Locally Installed PeopleSoft Online Help, Enabling the Search Button and Field*.

## Resetting the Online Help Installation

In some cases you may want to reset the online help installation, for example if you change something and find you can no longer see the help. Here are steps to try to reset the installation:

1. In the Oracle WebLogic Administration console, stop and restart the deployment.
  - a. Select Deployments, then the Control tab.
  - b. Select the PeopleBooks item, then Stop, Force Stop Now.
  - c. Click Start, Servicing All Requests.
2. Stop and restart the OpenSearch service (on Microsoft Windows) or daemon (on Linux).
3. Crawl the indexes again.

## Task 21-1-4: Removing the PeopleSoft Online Help Deployment

Use this procedure if you need to remove the deployed PeopleSoft Online Help to redeploy or upgrade. You must first remove the deployment from the Oracle WebLogic Administration Console, and then remove the index in the search crawler.

1. If the PeopleSoft Online Help and the search console are open, close them.
2. Log in to the Oracle WebLogic Administration Console using Oracle WebLogic administrator credentials.
3. Select Deployments from the Domain Structure section on the left side of the window.



- Go to the Control page, select the check box beside the PeopleBooks deployment, and click Stop.  
Select Force Stop Now. Click Yes on the window asking you to confirm that you want to stop.

**Note.** Depending upon your Oracle WebLogic configuration, this step may not be necessary. You may need to click Lock & Edit to enable the Stop button.

The screenshot shows the Oracle WebLogic Server Administration Console 14.1.1. The main content area is titled 'Summary of Deployments' and has tabs for 'Configuration', 'Control', and 'Monitoring'. The 'Control' tab is active. Below the tabs, there is a description: 'This page displays the list of Java EE applications and standalone application modules installed to this domain. You can start and stop applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on this page.' Below this is a link 'Customize this table'.

The 'Deployments' section shows a table with the following data:

| Name                                            | State     | Health | Type                   | Targets |
|-------------------------------------------------|-----------|--------|------------------------|---------|
| <input type="checkbox"/> HttpClusterServlet     | Installed |        | Web Application        |         |
| <input type="checkbox"/> HttpProxyServlet       | Installed |        | Web Application        |         |
| <input checked="" type="checkbox"/> PeopleBooks | Active    | OK     | Web Application        | PIA     |
| <input type="checkbox"/> peoplesoft             | Active    | OK     | Enterprise Application | PIA     |

Below the table, there are 'Start' and 'Stop' buttons. The 'Stop' button is clicked, and a dropdown menu is shown with the following options:

- When work completes
- Force stop now** (highlighted with a red box)
- Stop, but continue servicing administration requests

Summary of Deployment, Control page

- Go to the Configuration page, select the check box beside the PeopleBooks deployment, and click Delete. Click Yes on the window asking you to confirm that you want to delete.

The screenshot shows the Oracle WebLogic Server Administration Console 14.1.1. The main content area is titled "Summary of Deployments" and has tabs for "Configuration", "Control", and "Monitoring". The "Configuration" tab is active. Below the tabs, there is a text area explaining that the page displays a list of Java EE applications and standalone application modules installed to the domain. It also provides instructions on how to update, delete, or install applications.

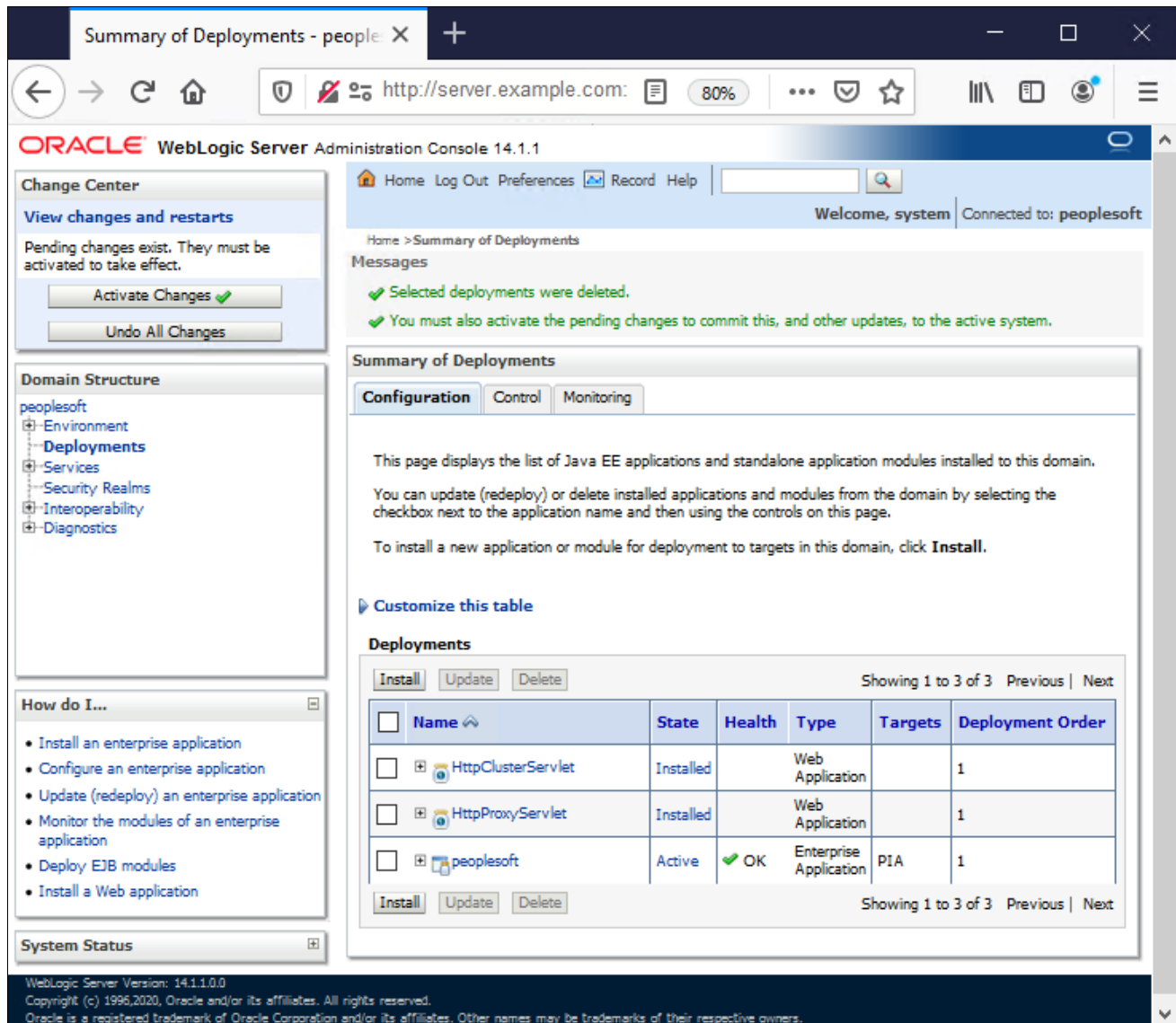
Below the text area is a section titled "Customize this table" which contains a table of deployments. The table has columns: Name, State, Health, Type, Targets, and Deployment Order. The table shows four deployments: HttpClusterServlet, HttpProxyServlet, PeopleBooks, and peoplesoft. The "PeopleBooks" deployment is selected with a checkmark in the first column. The "Delete" button is highlighted with a red box.

| <input type="checkbox"/>            | Name               | State     | Health | Type                   | Targets | Deployment Order |
|-------------------------------------|--------------------|-----------|--------|------------------------|---------|------------------|
| <input type="checkbox"/>            | HttpClusterServlet | Installed |        | Web Application        |         | 1                |
| <input type="checkbox"/>            | HttpProxyServlet   | Installed |        | Web Application        |         | 1                |
| <input checked="" type="checkbox"/> | PeopleBooks        | Prepared  | OK     | Web Application        | PIA     | 100              |
| <input type="checkbox"/>            | peoplesoft         | Active    | OK     | Enterprise Application | PIA     | 1                |

At the bottom of the table, there are buttons for "Install", "Update", and "Delete". The "Delete" button is highlighted with a red box.

Summary of Deployments, Configuration page

6. Wait until you see messages saying the deployment was removed.  
Verify that the deployment name, PeopleBooks in this example, does not appear in the Deployments section.



Summary of Deployments, Configuration page after PeopleBooks deployment was removed

7. Click Activate Changes under Change Center if necessary.
8. Log out of the Oracle WebLogic Administration Console.
9. Open a command prompt and change directory to the location where the search utility was installed; for example:

```
cd srch_utility_install\pscrawler
```

10. Run this command to remove the search index:

```
crawler.<ext> <opensearch host> <opensearch port> delete <product_line>
```

Enter the fully qualified machine name for *<opensearch host>*, the search engine port for *<opensearch port>*, and the PeopleSoft product name for *<product\_line>*.

For example, on Microsoft Windows:

```
crawler.bat server.example.com 9260 delete "PeopleSoft PeopleTools 8.61"
```

For example, on Linux:

```
./crawler.sh server.example.com 9260 delete "PeopleSoft PeopleTools⇒
8.61"
```

11. Wait until the process is complete, as indicated by "Deletion completed"

```
SUCCESS: Specified value was saved.
Checking for running OpenSearch instance
Starting deletion of product-PeopleSoft PeopleTools 8.61
Deletion completed
```

12. If you created a service on Microsoft Windows or a daemon on Linux for OpenSearch, follow the instructions in INSTALL.txt to remove it.

## Task 21-1-5: Setting Up Help for Multiple Product Lines on the Same Machine

Use these steps if you want to deploy multiple product line online help sites, such as PeopleSoft PeopleTools and Financials/Supply Chain Management (FSCM) on a single server, with the search utility.

This section assumes that you have set up a web server and the search utility as previously mentioned.

1. Extract the contents of the documentation library zip file for product line 1 (referred to as *docroot*, for example, pt861pbr1.zip) to the folder where the psossearch folder resides; *doc\_global*.  
In the examples earlier in this section *doc\_global* is C:\PeopleBooks (Microsoft Windows) or /opt/PeopleBooks (Linux).
2. Extract the contents of the documentation library zip file for product line 2 (for example, fscm92pbr50.zip) to the same folder where the product line 1 was extracted.
3. Repeat step 2 for other product lines as needed. The contents of the folder includes these folders (plus others depending upon your web server):

```
doc_global\fscm92pbr50
```

```
doc_global\psossearch
```

```
doc_global\pt861pbr1
```

```
doc_global\WEB-INF
```

4. Open a command prompt and change directory to the location where the search utility was installed; for example:

Microsoft Windows

```
cd srch_utility_install\pscrawler
```

Linux

```
cd srch_utility_install/pscrawler
```

5. Run this command for each product line:

```
crawler.<ext> <opensearch host> <opensearch port> index <online help>
URL>
```

For example, to crawl FSCM and PeopleTools on Microsoft Windows:

```
crawler.bat server.example.com 9260 index http://server.example.com⇒
/PeopleBooks/pt861pbr1/eng/pt/index.html
crawler.bat server.example.com 9260 index http://server.example.com⇒
/PeopleBooks/fscm92pbr50/eng/fscm/index.html
```

For example, to crawl FSCM and PeopleTools on Linux:

```
./crawler.sh server.example.com 9260 index http://server.example.com⇒
/PeopleBooks/pt861pbr1/eng/pt/index.html
./crawler.sh server.example.com 9260 index http://server.example.com⇒
/PeopleBooks/fscm92pbr50/eng/fscm/index.html
```

- Enter the fully qualified machine name for the online help web server *<opensearch host>*
  - Enter the search engine port for *<opensearch port>*.
  - The *<online help URL>* is the URL used to view the documentation home page.
6. For each product line, locate the common.js file and open it for editing.
- The common.js file is located in *<doc\_global>\<docroot>\js*, such as C:\PeopleBooks\pt861pbr1\js and C:\PeopleBooks\fscm92pbr50\js.
- On Linux, the common.js file is located in /opt/PeopleBookspt861pbr1/js and /opt/PeopleBooks/fscm92pbr50/js.
7. For all product lines, edit the variables searchURL, searchOpt and queryTextParamName.

---

**Note.** The lines beginning with two slashes (//) are sample entries.

---

For example, for product line 1, pt861pbr1:

```
var searchURL = "/PeopleBooks/psossearch/index.html"; // "http://host:⇒
port/search/query";
var altHelpURL = ""; // "https://docs.oracle.com/pls/topic/lookup?id=⇒
%CONTEXT_ID%&ctx=fscm92pbr46"
// "http://host/path/help.html?ContextID=%CONTEXT_⇒
ID%&LangCD=%Lang%"
var searchOpt = "product=PeopleSoft PeopleTools 8.61";
var queryTextParamName = "query";
```

For product line 2, fscm92pbr50:

```
var searchURL = "/PeopleBooks/psossearch/index.html"; // "http://host:⇒
port/search/query";
var altHelpURL = ""; // "https://docs.oracle.com/pls/topic/lookup?id=⇒
%CONTEXT_ID%&ctx=fscm92pbr50"
// "http://host/path/help.html?ContextID=%CONTEXT_⇒
ID%&LangCD=%Lang%"
var searchOpt = "product=PeopleSoft Financials and Supply Chain⇒
Management 9.2";
var queryTextParamName = "query";
```



## Chapter 22

# Installing Software for PS/nVision Drilldowns

This chapter discusses:

- Understanding PS/nVision DrillDown Add-ins
- Installing the DrillToPIA Add-In
- Installing the nVisionDrill Add-In
- Installing the nVisionDrill Add-Ins for Multi-Language Installations
- Setting Up PeopleSoft Integration Broker for Using Web Service Capability with nVision Drill Add-in

## Understanding PS/nVision DrillDown Add-ins

---

When you use PS/nVision to view reports, you can use the DrillDown feature to select a cell in your report and expand it according to criteria contained in a special DrillDown layout.

See *PeopleTools: PS/nVision*, "Using DrillDown."

To use the PS/nVision DrillDown feature with Microsoft Excel reports, you need to install one of the following add-ins, as described in this chapter:

---

**Note.** DrillToPIA and nVisionDrill VSTO add-ins do not coexist. You can use only one add-in at a time.

---

- DrillToPIA add-in
- nVisionDrill VSTO add-in (Visual Studio tools for Microsoft Office SE Runtime).

See *PeopleTools: PS/nVision*, "Understanding PS/nVision Reporting on the Web."

Here is the way the two drilldown add-ins work with the supported version of Microsoft Excel:

If the nVisionDrill VSTO add-in was installed, the nVisionDrill add-in runs and the nVisionDrill VSTO drilldown menu is available when Microsoft Excel opens.

Optionally, you can disable the nVisionDrill VSTO add-in and run the DrillToPIA add-in.

---

**Note.** To disable the nVisionDrill VSTO add-in and use the DrillToPIA add-in, access the Add-Ins dialog box and select the DrillToPIA check box. This selection replaces the nVisionDrill VSTO add-in with the DrillToPIA add-in, and the DrillToPIA drilldown menu appears until you reinstall the nVisionDrill VSTO add-in.

To reinstall the nVisionDrill VSTO, double-click the setup.exe file and select the Repair option.

---

## Task 22-1: Installing the DrillToPIA Add-In

---

This section discusses:

- Understanding Drilldown with DrillToPIA Add-in
- Installing the DrillToPIA Add-in on the Microsoft Excel Environment

### Understanding Drilldown with DrillToPIA Add-in

DrillDowns are run on the PS/nVision report server – like Report Requests and Report Books – and are accessible through Report Manager. You can also select to run the DrillDown using the output type of *Window*, which automatically delivers the results to a new browser window. A copy of the results will also be accessible through Report Manager.

You can drill down on individual cells within the report by selecting the cell and using Drill from the nVisionDrill menu for a Microsoft Excel report.

---

**Note.** A drilldown result report inherits the output format of its parent report. So, if the parent instance is in Excel format, then the drilldown result is in Excel format.

---

DrillDown in a web browser does not include the AutoDrill, Drill-to-Query, and Drill-to-Panel options.

### Task 22-1-1: Installing the DrillToPIA Add-in on the Microsoft Excel Environment

To drill down on Microsoft Excel reports, the Microsoft Visual Basic Application (VBA) add-in DrillToPIA.xla file needs to be installed on the Microsoft Excel environment. This file is stored in the *PS\_HOME*\Excel directory on the Application Server. Your System Administrator needs to distribute a copy of this file to all users who need to drill down on Microsoft Excel reports on the Web.

---

**Note.** If a non-English version of Microsoft Excel is used, translated versions of DrillToPIA.xla can be found in the *<PS\_HOME>\Excel\<Language>* directory on the Application Server.

---

In Apple Macintosh systems, PS/nVision DrillToPIA add-in launches Microsoft Internet Explorer for the drilldown page when drilling is performed on a Microsoft Excel report, regardless of the browser from which the original report is opened.

To install the add-in DrillToPIA.xla file into the Microsoft Excel environment:

1. Copy the *PS\_HOME*\Excel\DrillToPIA.xla file, and paste it into the Excel add-in directory.  
If Microsoft Office is installed in the directory *MS\_OFFICE*, the Excel add-ins directory is *MS\_OFFICE*\Office\Library.
2. Launch Microsoft Excel and select Tools, Add-ins from Excel toolbar.
3. Select the DrillToPIA option in the Add-ins dialog box.

The nVisionDrill menu appears in the Excel menu bar.

---

**Note.** To remove the add-in from the Excel menu, clear the DrillToPIA option from the Add-Ins dialog box.

---



## Task 22-2: Installing the nVisionDrill Add-In

---

This section discusses:

- Understanding PS/nVision DrillDown Using Web Services
- Understanding Security for DrillDown Using nVisionDrill VSTO Add-in
- Installing the nVisionDrill Add-in for Microsoft Excel

### Understanding PS/nVision DrillDown Using Web Services

For the current PeopleSoft PeopleTools release you are able to use the web service capability when drilling from summarized to detailed PS/nVision reports using the nVisionDrill VSTO add-in.

See My Oracle Support, Certifications, for the current PeopleSoft PeopleTools release, to find the versions of Microsoft Excel that are supported for the nVisionDrill VSTO add-in.

---

**Note.** During the installation for the nVisionDrill VSTO add-in, if there is a message that pre-requisites are not found, run PIARedist.exe and vstor\_redist.exe available in the *PS\_HOME\setup\nVisionDrill* folder.

---

In addition, take note of the following requirements:

- You must set up and configure Integration Broker to use the nVision Drilldown feature as a web service.  
See Setting Up Integration Broker for Using Web Service Capability with nVisionDrill Add-in.
- The web servers should be SSL enabled.  
This is because all the web service calls happen through secure channels.  
When you create the SSL-enabled web server domain, you need to provide the optional parameter Authentication Token Domain with the appropriate domain name.

---

**Note.** The new nVisionDrill VSTO add-in is mainly designed for remote standalone file drilldown (where the end user doesn't have access to the PeopleSoft Pure Internet Architecture system). For all other purposes and Web drilldown, the nVision users are still encouraged to use the DrillToPIA add-in.

---

### Understanding Security for DrillDown Using nVisionDrill VSTO Add-in

The nVisionDrill VSTO Add-in allows users to perform drilldown without having to access the PeopleSoft Pure Internet Architecture pages. This necessitates that the end users of nVisionDrill must sign in to the PeopleSoft system to be able to submit the drilldown process and access the subreports. The users of nVisionDrill VSTO add-in will be prompted to enter a user ID and password for the first time. This user ID and password are validated. If the users have access, they are taken to the menu with the list of DrillDown layouts for further drilldown operation.

When the users attempt another drilldown using the same parent report instance which is already open, the system does not prompt for the credentials, and the credentials of the first login are re-used. But for each new report instance or new drilldown report instance, the credentials must be entered again.

---

**Note.** All web service calls between the Microsoft Excel and PeopleSoft applications are SSL-enabled.

---

## Task 22-2-1: Installing the nVisionDrill Add-in for Microsoft Excel

To install the nVisionDrill VSTO add-in for Microsoft Excel:

1. Go to *PS\_HOME*\setup\nVisionDrill.
2. Run the nVisionDrillSetup.msi file.

If all required software items have been installed, the nVisionDrill add-in installation will run to success.

During the installation, if you see a message that pre-requisites are not found, run PIARedist.exe and vstor\_redist.exe available in the *PS\_HOME*\setup\nVisionDrill folder.

3. Ensure that the web server domain's SSL Root certificate is installed on the machine where the nVisionDrill VSTO add-in is installed.

The Root Certificate should be installed correctly on the default browser of the machine.

## Task 22-3: Installing the nVisionDrill Add-Ins for Multi-Language Installations

---

If you have a multi-language installation, first install NVisionDrillSetup.msi for English, as described above, and then install the NVisionDrillSetup\_xxx.msi for the desired languages, where the extension xxx is the three-letter language code.

See *PeopleTools: Global Technology*.

## Task 22-4: Setting Up PeopleSoft Integration Broker for Using Web Service Capability with nVision Drill Add-in

---

To set up Integration Broker for using web service capability with PS/nVisionDrill add-in:

1. Select PeopleTools > Integration Broker > Configuration > Integration Gateways.
2. Select the Integration Gateway ID for which the Local Gateway is enabled from the search results.

An enabled Local Gateway is marked as "Y" in the search results.

3. In the URL field, enter the following value, where <machine\_name> is the Web server machine name, including the domain name, and <port> is the HTTP port number of the PeopleSoft web server:

`http://<machine_name>:<port>/PSIGW/PeopleSoftListeningConnector`

This example shows the Integration Broker Gateways page with the URL

`http://webs07.dom1.com:8000/PSIGW/PeopleSoftListeningConnector`, where webs07.dom1.com is the combined machine name and domain name, and 8000 is the HTTP port:

**Gateways**

Gateway ID: LOCAL [Inbound Gateways](#)

☒ Local Gateway ☐ Load Balancer

URL:

[Gateway Setup Properties](#)

| Connectors |               |             |                                     | Personalize   Find      First 1-9 of 9 Last |  |
|------------|---------------|-------------|-------------------------------------|---------------------------------------------|--|
|            | *Connector ID | Description | *Connector Class Name               | Properties                                  |  |
| 1          | AS2TARGET     |             | AS2TargetConnector                  | <a href="#">Properties</a>                  |  |
| 2          | FILEOUTPUT    |             | SimpleFileTargetConnector           | <a href="#">Properties</a>                  |  |
| 3          | FTPTARGET     |             | FTPTargetConnector                  | <a href="#">Properties</a>                  |  |
| 4          | GETMAILTARGET |             | GetMailTargetConnector              | <a href="#">Properties</a>                  |  |
| 5          | HTTPTARGET    |             | HttpTargetConnector                 | <a href="#">Properties</a>                  |  |
| 6          | JMSTARGET     |             | JMSTargetConnector                  | <a href="#">Properties</a>                  |  |
| 7          | PSFT81TARGET  |             | ApplicationMessagingTargetConnector | <a href="#">Properties</a>                  |  |
| 8          | PSFTTARGET    |             | PeopleSoftTargetConnector           | <a href="#">Properties</a>                  |  |
| 9          | SMTPTARGET    |             | SMTPTargetConnector                 | <a href="#">Properties</a>                  |  |

Integration Broker Gateways page

4. Click Ping Gateway.

A message appears saying "Gateway URL has changed. Existing connector information will be cleared". Click OK on this message.

You should see a message with the status ACTIVE, indicating a successful connection. Close this message.

5. On the Gateways page, click the Load Gateway Connectors button to load the list of connectors, and then click Save.

If the ping is unsuccessful, check the Web server URL entered, and also make sure Pub/Sub servers are enabled in the Application Server configuration.

6. Select PeopleTools > Integration Broker > Service Operations Monitor > Administration > Domain Status.
7. Purge the unnecessary domains and enable the required domain.

You should be able to see at least three dispatchers under Dispatcher Status. This is required for running asynchronous requests through Integration Broker.

---

**Note.** PeopleSoft Integration Broker must process all nVision web service requests that are sent from nVisionDrill VSTO add-in, so the Local PeopleSoft Node of PeopleSoft Integration Broker gateway must include at least three dispatchers.

---

8. Select PeopleTools > Integration Broker > Configuration > Integration Gateways.

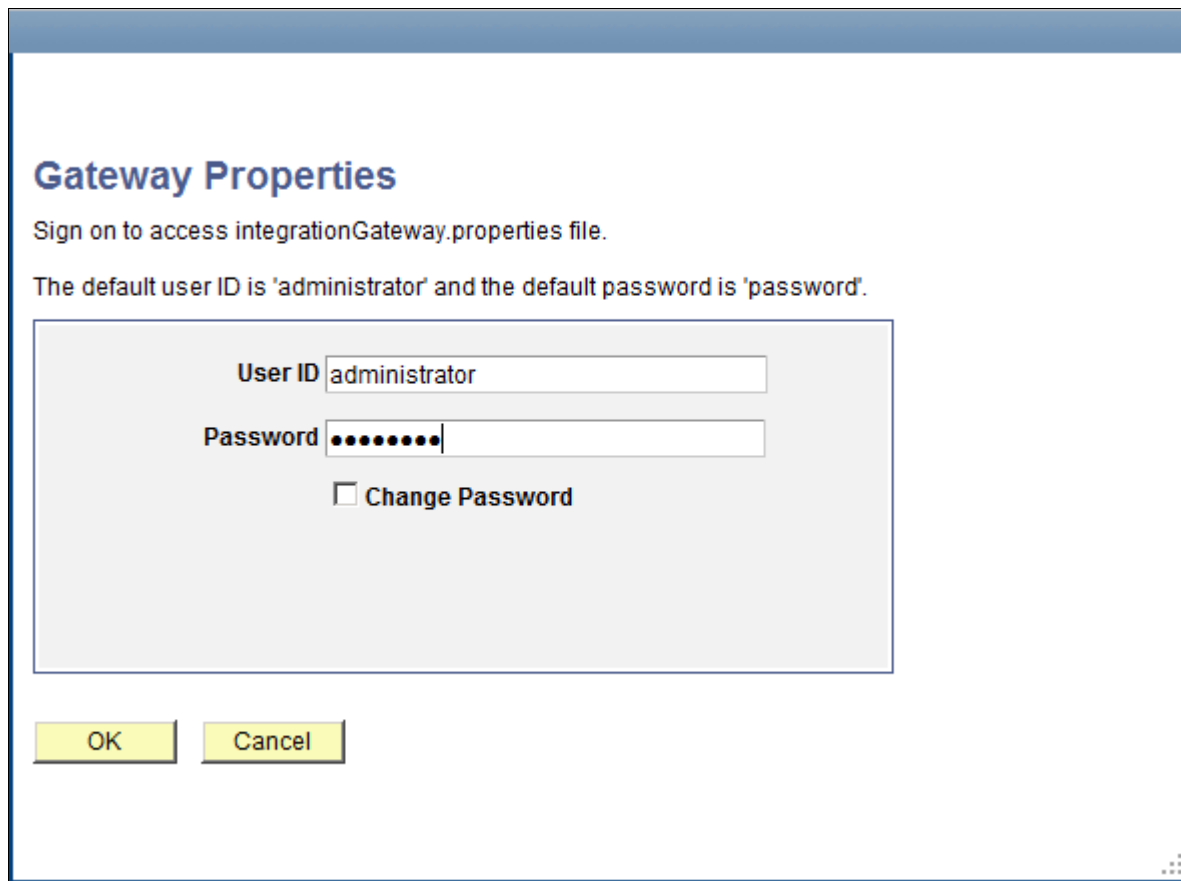
Select the same Integration Gateway ID that you chose in step 1.

9. On the Gateways page, select the link Gateway Setup Properties.

The Gateways Properties page appears.

10. Enter the Integration Gateway administrator user ID and password.

The default User ID is administrator, as shown in this example. Enter the password that you specified when setting up the PeopleSoft Pure Internet Architecture.



**Gateway Properties**

Sign on to access integrationGateway.properties file.

The default user ID is 'administrator' and the default password is 'password'.

User ID: administrator

Password: ●●●●●●●●

☐ Change Password

OK Cancel

Gateway Properties sign on page

## 11. Add a new node in the PeopleSoft Node Configuration page.

PeopleSoft Node Configuration page

Node Name: Enter the name of the active default node.

This example uses \$NODENAME.

To find the active default node, navigate to Integration Broker > Integration Setup > Node Definitions. Do a search, and choose the node for which the Local Node value is "1" and the Default Local Node value is "Y".

Enter the following values to complete the page:

---

**Note.** The following information can be retrieved by pressing CTRL+J on the PeopleSoft Node Configuration page.

---

- App Server URL: Enter the application server machine name and the Jolt port.
- User ID: Enter PeopleSoft user ID
- Password: Enter the password for the PeopleSoft user ID specified in the User ID field.
- Tools Release: Provide the exact PeopleSoft PeopleTools release that your application server is using.

## 12. Click Save.

## 13. Click Ping Node to be sure the node is accessible, and then exit.

See *PeopleTools: Integration Broker Administration*.



## Appendix A

# Deploying PeopleSoft DPKs in Containers

This appendix discusses:

- Understanding Container Support for PeopleSoft DPKs
- Prerequisites for Container Deployment
- Configuring the Linux VM for Container Deployment
- Building and Running the Container for Mid-tier Deployment (PeopleTools 8.61.03 to 8.61.05)
- Building Container Image and Installing Mid-tier Components (PeopleTools 8.61.06 and Later)
- Building and Running the Container for Search Components (PeopleTools 8.61.03 to 8.61.05)
- Building and Running the Container for Search Components (PeopleTools 8.61.06 and Later)
- Building and Running the Container for Full-tier Deployment (PeopleTools 8.61.03 to 8.61.05)
- Building and Running the Container for Full-tier Deployment (PeopleTools 8.61.06 and Later)
- Working With PeopleSoft Containers

## Understanding Container Support for PeopleSoft DPKs

---

You can deploy PeopleSoft environments based on PeopleTools 8.61 in containers. Containers have the advantage of isolating your environment, so that the VM or computer running it does not have to be changed. In addition, containers provide a standard environment, which aids in troubleshooting and support.

Support for containers depends upon the PeopleSoft PeopleTools patch, as follows:

- Support for deploying PeopleSoft environments in containers (mid-tier, full-tier PUM and full-tier FRESH) begins with PeopleSoft PeopleTools 8.61.03.
- Support for deploying Application Server, Process Scheduler, and web server (PIA) individually begins with PeopleSoft PeopleTools 8.61.06.

There are additional changes to the process and delivered files beginning with PeopleTools 8.61.06.

The container setup process makes use of the PeopleSoft DPKs, setup script, and silent installation files, along with a new API and container-specific scripts, to enable you to build Podman containers. The following deployments are currently supported:

- (PeopleTools 8.61.03 to 8.61.05) Mid-tier — Deploy an application server, Process Scheduler, and web server (PIA) that connects to an existing PeopleSoft application database.

You must deploy all three components in the container.

See *PeopleSoft PeopleTools 8.61 Deployment Packages Installation*, "Deploying PeopleSoft DPKs in Containers."

- (PeopleTools 8.61.06 and later) Mid-tier — Deploy an application server, Process Scheduler, and web server (PIA) that connects to an existing PeopleSoft application database.

You can deploy an application server, Process Scheduler, and web server (PIA) in separate containers.

See *PeopleSoft PeopleTools 8.61 Deployment Packages Installation*, "Deploying PeopleSoft DPKs in Containers."

- Search components — Deploy OpenSearch, OpenSearch Dashboards, and Logstash.

After building and running search containers, you have the option to run Automated Configuration Management (ACM) plug-ins to integrate OpenSearch with the PeopleSoft environment.

See *PeopleSoft PeopleTools 8.61 Deployment Packages Installation*, "Deploying PeopleSoft DPKs in Containers."

- Full-tier (PUM) — Deploy the PeopleSoft Update Images to create a PeopleSoft Update Manager (PUM) source for applying updates and fixes.

The full-tier installation sets up a PeopleSoft application database on Oracle Database Server, application server, Process Scheduler, and web server (PIA).

See *PeopleSoft Deployment Packages for Update Images Installation (PeopleSoft PeopleTools 8.61)*, "Deploying PeopleSoft DPKs in Containers."

- Full-tier (FRESH) — Deploy a full-tier PeopleSoft environment with the FRESH installation type.

See *PeopleSoft 9.2 Application Installation for Oracle (PeopleSoft PeopleTools 8.61)*, "Deploying PeopleSoft DPKs in Containers."

If you want to acquire updated components or CPUs for PeopleSoft environments deployed in containers, the recommended approach is to use the latest PeopleSoft DPKs to create new containers. This will create environments with the latest available CPUs for Oracle WebLogic, Oracle Tuxedo, Java, and Oracle Database Client. You can then create container images from the new containers.

Beginning with PeopleSoft PeopleTools 8.61.06, you can include the PT-INFRA DPK when setting up a new mid-tier environment in a container image. Be aware that the use of PT-INFRA DPK to apply CPUs on an existing container environment is not supported.

## Prerequisites for Container Deployment

---

Before beginning the deployment, you must fulfill the following requirements:

- Access to My Oracle Support to download the DPKs
- Access to Oracle Container Registry

The Oracle Linux 8 image for the installation will be downloaded from this location during the container build process.

See Oracle Container Registry, <https://container-registry.oracle.com>.

- An Oracle Linux VM

The Oracle Linux VM is the host for the container, and must be configured to use Podman as described in this documentation.

- Podman and podman-compose

Each user that builds and runs containers and the prebuilt container images must be able to run Podman and podman-compose. The task Configuring the Linux VM for Container Deployment includes steps to verify that Podman and podman-compose are available.

- A non-root user with sudo root permission

To configure the Linux VM, build and run containers, the user must be able to use the sudo command.



- The PeopleSoft container deployment supports these versions:
  - Oracle Linux Server release 8.7
  - Red Hat Enterprise Linux release 8.7 (Ootpa)
  - podman version 4.6.1
  - podman-compose version 1.0.6

## **Task A-1: Configuring the Linux VM for Container Deployment**

This section discusses:

- Setting Proxy Environment Variables
- Installing Podman
- Installing Podman-compose
- Setting Up Podman in Rootless Mode
- Setting Up the Storage Configuration File
- Setting Up the Container Configuration File
- Running Additional Setup Commands
- Verifying Podman
- Specifying systemctl Settings
- Setting Environment Variables
- Verifying Access to Oracle Container Registry

### **Task A-1-1: Setting Proxy Environment Variables**

Ensure that the following proxy-related environment variables are configured with the correct values for your environment.

```
export http_proxy=<proxy value>
export https_proxy=<proxy value>
export HTTP_PROXY=<proxy value>
export HTTPS_PROXY=<proxy value>
export no_proxy=<proxy value>
```

### **Task A-1-2: Installing Podman**

Run the following command to install Podman on the Linux VM.

```
sudo dnf module install container-tools:ol8
sudo dnf clean all
```

## Task A-1-3: Installing Podman-compose

Similarly to Podman, podman-compose supports the same command line options as docker-compose. It also supports reading docker-compose configuration files that are delivered with the PeopleSoft container files. This means that these configuration files can be interchangeable between docker-compose and podman-compose, typically without any modification.

1. Verify that the pip3 version is 9.x.x or greater.

```
pip3 --version
```

The expected output is:

```
pip 9.0.3 from /usr/lib/python3.6/site-packages (python 3.6)
```

2. Install Python3 and Pip3 if necessary.

```
sudo dnf module install python36
sudo dnf install python36-pip
sudo /sbin/alternatives --set python3 /usr/bin/python3.6
```

3. Install podman-compose.

```
pip3 install --user podman-compose
```

## Task A-1-4: Setting Up Podman in Rootless Mode

Run the following commands to authorize users and group IDs.

```
echo "${USER}:231072:65536" | sudo tee -a "/etc/subuid"
```

```
echo "${USER}:231072:65536" | sudo tee -a "/etc/subgid"
```

```
/usr/bin/systemctl --user daemon-reload
```

```
podman system migrate
```

## Task A-1-5: Setting Up the Storage Configuration File

The storage requirement for PeopleTools mid-tier containers is 15 GB or greater. The storage requirement for PeopleSoft Update Image container is 76 GB or greater.

Edit the file at /etc/containers/storage.conf to configure the system-wide storage. The default location \$HOME/.local/share/containers/storage defined in /etc/containers/storage.conf may not have sufficient storage space for containers.

The examples in this section use /scratch/podman-rs/storage as the Podman storage path and /scratch/podman-rs/storage/tmp as the default location for storing temporary container image content. The file /etc/containers/containers.conf includes instructions for changing the default storage location for Podman by modifying the TMPDIR environment variable.

Use these steps to set up the storage configuration file, storage.conf.

---

**Note.** Enter each command on a single line. Do not include the line-continuation arrow (⇒).

---

1. Create the storage directory.

```
mkdir -p "/scratch/podman-rs/storage"
```

2. Create a directory for temporary container image content.

```
mkdir -p "/scratch/podman-rs/storage/tmp"
```

3. Change the storage location to /scratch/podman-rs/storage.

```
sudo sed -i 's|driver = "overlay"|driver = "overlay2"|g' "/etc⇒
/containers/storage.conf"
```

```
sudo sed -i 's|# rootless_storage_path = "$HOME/.local/share/containers⇒
/storage"|rootless_storage_path = "/scratch/podman-rs/storage"|g' "/etc⇒
/containers/storage.conf"
```

## Task A-1-6: Setting Up the Container Configuration File

Use these steps to set up the container configuration file.

---

**Note.** Enter each command on a single line. Do not include the line-continuation arrow (⇒).

---

1. Copy the default container configuration file to a new file for your configuration.

```
sudo cp "/usr/share/containers/containers.conf" "/etc/containers"
```

2. Change the default networking for Podman to netavark.

```
sudo sed -i 's|network_backend = "cni"|network_backend = "netavark"|g'⇒
"/etc/containers/containers.conf"
```

3. Set the timeout.

```
sudo sed -i 's|#stop_timeout = 10|stop_timeout = 90|g' "/etc/containers⇒
/containers.conf"
```

4. Set the temporary directory.

```
sudo sed -i 's|# image_copy_tmp_dir="/var/tmp"|image_copy_tmp_dir⇒
"storage"|g' "/etc/containers/containers.conf"
```

## Task A-1-7: Running Additional Setup Commands

Run these other setup commands:

```
sudo loginctl enable-linger "$(whoami)"
```

```
sudo touch "/etc/containers/nodocker"
```

## Task A-1-8: Verifying Podman

To confirm that Podman works, enter this command:

```
podman run hello-world
```

Or run this command:

```
podman run quay.io/podman/hello
```

## See Also

Podman Documentation, <https://docs.podman.io/en/latest/>

Podman Installation Instructions, <https://podman.io/docs/installation>

Oracle Podman User's Guide, <https://docs.oracle.com/en/operating-systems/oracle-linux/podman/toc.htm>

Podman tutorial on GitHub, [https://github.com/containers/podman/blob/main/docs/tutorials/rootless\\_tutorial.md](https://github.com/containers/podman/blob/main/docs/tutorials/rootless_tutorial.md)

Podman Troubleshooting Guide on GitHub, <https://github.com/containers/podman/blob/main/troubleshooting.md>

## Task A-1-9: Specifying sysctl Settings

Modify the `/etc/sysctl.conf` file for the DPK deployment. The sysctl settings will be inherited by the containers.

```
sudo tee -a "/etc/sysctl.conf" <<EOF
sysctl setting for PeopleTools
kernel.msgmnb = 65538
kernel.msgmni = 1024
kernel.msgmax = 65536
kernel.shmmax = 68719476736
kernel.shmall = 4294967296
kernel.core_uses_pid = 1
net.ipv4.tcp_keepalive_time = 90
net.ipv4.tcp_timestamps = 1
net.ipv4.tcp_window_scaling = 1
net.ipv4.ip_local_port_range = 10000 65500
sysctl setting for PeopleTools search
vm.max_map_count=262144
net.core.somaxconn=1024
net.ipv4.ip_unprivileged_port_start = 80
EOF

sudo /usr/sbin/sysctl -p
```

## Task A-1-10: Setting Environment Variables

Proxy variables are used to pull an Oracle Linux image from Oracle Container Registry. Building PeopleTools container images using Podman is similar to Docker. These additional environment variables are required for proper functioning.

- This variable is required to support `HEALTHCHECK` specified in the Dockerfile:  
`export BUILDAH_FORMAT=docker`
- This variable is required while building the container image in rootless mode.  
`export BUILDAH_ISOLATION=chroot`

Run this command to add the necessary environment variables to the `.bash_profile` file for the user that will run the containers. Substitute the proxy values in your environment for each `<...>`.

```
tee -a ~/.bash_profile <<EOF
export http_proxy=<...>
```

```
export https_proxy=<...>
export HTTP_PROXY=<...>
export HTTPS_PROXY=<...>
export no_proxy=<...>
export BUILDDAH_FORMAT=docker
export BUILDDAH_ISOLATION=chroot
EOF
```

## Task A-1-11: Verifying Access to Oracle Container Registry

The user that will build and run the container should perform these steps to verify they can obtain the necessary images from Oracle Container Registry (OCR): This can be a non-root user.

1. Log in to Oracle Container Registry with Podman.

```
podman login container-registry.oracle.com
```

2. Test pulling an Oracle Linux 8 image.

```
podman pull container-registry.oracle.com/os/oraclelinux:8
```

## Task A-2: Building and Running the Container for Mid-tier Deployment (PeopleTools 8.61.03 to 8.61.05)

---

This section discusses:

- Using the DPKs to Install PS\_HOME
- Preparing to Deploy the PeopleTools Mid-tier Container
- Building and Running the PeopleTools Mid-tier Container
- Starting and Stopping the PeopleTools Mid-tier Container
- Removing the PeopleTools Mid-tier Container
- Creating a Prebuilt Container Image for PeopleTools Mid-tier
- Running the PeopleTools Mid-tier Prebuilt Container Image

### Task A-2-1: Using the DPKs to Install PS\_HOME

Follow the instructions in this documentation to obtain the PeopleSoft PeopleTools 8.61.02 and later DPKs and install *PS\_HOME*.

1. Obtain the four PeopleSoft PeopleTools DPKs.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Obtaining the PeopleSoft PeopleTools DPKs.

2. Install *PS\_HOME* on the Linux VM.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Running the DPK Setup Script to Install PS\_HOME Only.

3. Locate the containers directory.

The *PS\_HOME*/containers/OraclePeopleTools directory includes text instructions (README.md), shell scripts, and configuration files. You will use these files in the following sections to build and run containers.

The README.md files, which are located in different directories under the OraclePeopleTools directory, cover different phases of the deployment. They may be useful for experts and users who are experienced with containers and PeopleSoft environments.

---

**Note.** You can view the README.md and FAQ.md files in a text editor. The .md extension refers to the Markdown language used for GitHub documents.

---

This documentation uses < . > to refer to the location of the OraclePeopleTools directory that holds the container files in your environment. Substitute the correct path when running commands.

## Task A-2-2: Preparing to Deploy the PeopleTools Mid-tier Container

To prepare to deploy PeopleTools mid-tier:

1. Review the instructions in *PS\_HOME*/containers/OraclePeopleTools/README.md.
2. Copy the four PeopleSoft PeopleTools DPKs into *PS\_HOME*/containers/OraclePeopleTools/in/pt.

Don't unzip the files. The `cp -a` command retains the file attributes, such as the timestamp, during the copy operation.

```
cp -a "<DPK zipfiles>" "<../OraclePeopleTools/in/pt"
```

3. Open *PS\_HOME*/containers/OraclePeopleTools/in/pt/install.rsp for editing.

The install.rsp file is the silent installation response file. This file is called by the silent installation command, which is contained in install.file in the same ./in/pt directory.

This sample includes the required parameters. Supply the remaining values, such as the database name, users, and passwords. Use the response file sample in this documentation and modify it for your requirements.

See "Deploying the PeopleSoft PeopleTools Deployment Packages in Silent Mode," Reviewing the Response File Sample for Mid-tier Installation as a Non-Root User on Linux, AIX, or Solaris.

---

**Note.** Remove the completed install.rsp file after the container is up and running. The file includes plain text passwords, so do not save it. The file is not stored anywhere in the container.

---

```
env_type=midtier
db_platform=ORACLE
db_name=
db_service_name=
db_host=
db_port=1521
db_protocol=TCP
connect_id=
connect_pwd=
opr_id=
opr_pwd=
weblogic_admin_pwd=
webprofile_user_id=
webprofile_user_pwd=
gw_user_id=
domain_conn_pwd=
weblogic_admin_pwd=
gw_user_pwd=
gw_keystore_pwd=
psft_base_dir=/opt/oracle
```

```
user_home_dir=/home
```

4. Review the installation command in *PS\_HOME*/containers/OraclePeopleTools/in/pt/install.file, but do not make any changes.

The command deploys the DPK in silent installation mode with a customization file.

```
psft-dpk-setup.sh --silent --response_file=/in/pt/install.rsp -->
customization_file=/in/pt/psft_customizations.yaml
```

5. Review the information in *PS\_HOME*/containers/OraclePeopleTools/in/pt/psft\_customizations.yaml.

The psft\_customizations.yaml file includes the only DPK customizations that are supported for containers.

```
setup_share is not supported in containers
setup_share: false
```

```
setup_sysctl is not supported in containers
setup_sysctl: false
```

```
#
pia_host_name: "<Container host FQDN>"
pia_pserver_list: "<Container hostname or container_name>:9033"
```

- Update <Container host FQDN> with the fully qualified domain name for the web server (PIA) host.
- Update <Container hostname or container\_name>:9033 with the hostname from docker-compose.yaml. For example, if the container host name is mt.oraclevcn.com, enter `mt.oraclevcn.com:9033`.
- Do not change the `setup_share` and `setup_sysctl` parameters.

The parameter `setup_sysctl: false` specifies that the DPK setup will not overwrite Linux system parameters. The parameter `setup_share: false` specifies that the DPK setup does not create a share for access to the Linux VM.

6. Open *PS\_HOME*/containers/OraclePeopleTools/docker-compose.yaml for editing.

```
version: 1
services:
 mt:
 image: oracle/peopletools:861
 build:
 context: ./dockerfiles/pt
 dockerfile: Dockerfile
 format: docker
 args:
 hostname: mt.oraclevcn.com
 container_name: mt.oraclevcn.com
 network: net
 tty: true
 ports:
 - "${PORT_RMT_ADMIN:-10100}:10100"
 - "${PORT_RMT_ADMIN_RMI:-10101}:10101"
 - "${PORT_WSL:-7000}:7000"
 - "${PORT_WSL_SSL:-7010}:7010"
 - "${PORT_PIA:-8000}:8000"
 - "${PORT_PIA_SSL:-8001}:8001"
 environment:
 - DB_WAIT_TIMEOUT=1
```

```

volumes:
 - /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro

networks:
 net:
 name: ps-net
 driver: bridge

```

- For image enter the type of environment and release, such as peopletools:861.
- The default hostname is mt.oraclevcn.com, where .oraclevcn.com is the Auth Token Domain..

If your domain URL is portal.corp.com, enter mt.corp.com for the hostname and container\_name. The hostname must not contain any underscore ("\_").

- Verify that the volumes path is correct for your environment.

The syntax for the volumes definition is `<directory_on_host>:<directory_in_container>:<options>`. The default path, /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro, assumes that you accepted the default path /scratch/docker-images/OraclePeopleTools. This will map to in/pt in the container, and the volume will be read-only (ro). If you used a different location, update the path accordingly.

- Update DB\_WAIT\_TIMEOUT with the number of seconds to wait for the database.
- Ensure that the ports listed are not in use.

PORT\_PIA and PORT\_PIA\_SSL refer to the ports to access the PIA URL. PORT\_WSL and PORT\_WSL\_SSL refer to the workstation listener ports. PORT\_RMT\_ADMIN and PORT\_RMT\_ADMIN\_RMI refer to Remote Administration ports for JMX agents.

Each container must use different ports. The syntax of the port definition is `<port on host>:<port on container>`. To override the default port mapping, define a PORT\_\* environment variable, which will be used by the docker-compose-pum.yaml file. For example, to change the default PORT\_PIA to 9980 use this command:

```
export PORT_PIA=9980
```

Then the line `${PORT_PIA:-8000}:8000` will be translated as `9980:8000`. With this definition, when you use the PIA URL `http://server.example.com:8000/ps/signon.html`, the Linux host VM reads it as `http://server.example.com:9980/ps/signon.html`.

---

**Note.** "MY\_VAR=\${NEW\_VAR:-DefaultValue}" is a BASH shell syntax to override a default value and assign a new value to MY\_VAR.

---

## Task A-2-3: Building and Running the PeopleTools Mid-tier Container

To build and run the container:

1. Change directory to `PS_HOME/containers`.

```
cd PS_HOME/containers
```

2. Run this command:

```
podman-compose -f docker-compose.yaml up -d --build --no-cache
```

3. If you want to build and run with logging, enter this command on a single line:

```
podman-compose -f docker-compose.yaml up -d --build --no-cache ; podman⇒
logs -fnl
```



---

**Note.** To exit the command, enter CTRL+Z.

---

4. To view the container logs, enter this command.

```
podman container logs --color -fn <container-name>
```

5. To log in to the container as the psadm2 user, which is created by the DPK setup script, enter this command:

```
podman exec -ti <container-name> su - psadm2
```

6. To view the DPK logs, log in to <container-name>.

If the deployment was successful, the logs will be in /ps/psft\_dpk\_setup.log.

If the deployment failed, the logs will be in /in/pttmp/setup/psft\_dpk\_setup.log.

The container is up and running when it shows the following message in the container logs:

```
=====
PEOPLETOOLS IS READY TO USE!
=====
```

Use these commands to view and copy the DPKs logs to the current location on the Linux VM:

```
podman exec -ti <container-name> vi /in/pttmp/setup/psft_dpk_setup.log
```

```
podman cp -a <container-name>:/in/pttmp/setup/psft_dpk_setup.log
```

In case the deployment results in errors, you can find information on error messages associated with the PeopleSoft containers in PS\_HOME/containers/OraclePeopleTools/FAQ.md.

## Task A-2-4: Starting and Stopping the PeopleTools Mid-tier Container

Use this command to stop the container. This command gracefully shuts down all PeopleTools domains and then exits the container.

```
podman stop <container-name> -t<time in secs>
```

To view logs for the shutdown simultaneously, open a new terminal and enter this command:

```
podman logs -fn <container-name>
```

Use this command to start the container. This command starts all PeopleTools domains.

```
podman start <container-name>
```

Use this command to start the container and view the logs:

```
podman start <container-name> ; podman logs -fnl
```

To view logs simultaneously, open a new terminal and enter this command.

```
podman logs -fn <container-name>
```

## Task A-2-5: Removing the PeopleTools Mid-tier Container

Use this command to stop and remove the container. This command gracefully shuts down all PeopleTools domains and then exits the container. Specify the number of seconds to allow for the domains to shut down in <time in secs>.

```
podman-compose down -t<time in secs>
```

Alternatively, use these commands to stop and remove the container.

```
podman-compose stop <container-name> -t<time in secs>
```

```
podman-compose rm <container-name>
```

To view logs simultaneously, open a new terminal and enter this command.

```
podman-compose -f <../OraclePeopleTools/docker-compose-pum.yaml> down ->
t<time in secs>
```

## Task A-2-6: Creating a Prebuilt Container Image for PeopleTools Mid-tier

You can create a prebuilt container, also called a container image, for the PeopleTools mid-tier installation. Users can use the prebuilt container to deploy more quickly.

1. Build and run a new container.

```
cd <../OraclePeopleTools>
```

```
podman-compose -f docker-compose.yaml up -d --build --no-cache
```

2. When the container is up and running, run the following commands to verify that the status is healthy..

```
podman ps -a --filter "name=<container-name>"
```

```
podman healthcheck run <container-name>
```

3. Open *PS\_HOME*/containers/OraclePeopleTools/docker-compose-prebldcon.yaml for editing and specify the prebuilt container image name, host name, and container name.

Ensure that the ports are not in use.

4. Run these commands.

For <pre-built container image name>, use lower-case letters, such as oracle/peopletools:8.61.02.

---

**Note.** Creating a prebuilt image takes some time, depending upon the container size.

---

```
podman stop <container-name> -t<time in secs>
```

```
podman commit --format docker -m "comment" -a "author" <container-name>=>
<pre-built container image name>
```

```
podman rm <container-name>
```

## Task A-2-7: Running the PeopleTools Mid-tier Prebuilt Container Image

To run the prebuilt container image:

1. Open *PS\_HOME*/containers/OraclePeopleTools/docker-compose-prebldcon.yaml for editing.

Substitute the name of the prebuilt container image for <pre-built container image name>

2. Run this command to boot up all domains in the container:

```
podman-compose -f docker-compose-prebldcon.yaml up -d
```

3. Check the logs for the prebuilt container image.

```
podman container logs --color -fn <prebld-container-name>
```

4. Run a health check on the prebuilt container image.

```
podman ps -a --filter "name=<container-name>"
```

5. To stop the prebuilt container image:

```
podman-compose -f docker-compose-prebldcon.yaml down -t<time in secs>
```

## Task A-3: Building Container Image and Installing Mid-tier Components (PeopleTools 8.61.06 and Later)

---

This section discusses:

- Understanding Building and Deploying Containers
- Preparing CONTAINER\_HOME
- Building the Container Image
- Preparing to Deploy PeopleTools Mid-tier in the Container Image
- Running PeopleTools Containers Using the PeopleTools Deploy-Only Container Image
- Starting, Stopping, and Removing the Container
- Running the Container Image for PeopleTools Mid-tier
- Creating a Prebuilt Container Image for PeopleTools Mid-tier
- Running a Prebuilt Container Image for PeopleTools Mid-tier

### Task A-3-1: Understanding Building and Deploying Containers

To deploy on containers for PeopleTools 8.61.06 and later, first build a container image and then install the PeopleTools software. The installation process runs the DPK setup script in silent mode with the `--deploy_only` option, which does not set up any domains. You can use this process to create and run the following containers:

- `mid-tier` — Install the software for an application server, Process Scheduler, and web server (PIA) that connects to an existing PeopleSoft application database. The deployment installs the necessary software but does not set up and start the domains.
- `appserver` — Install the software for the application server without setting up the domain..
- `prcs` — Deploy the software for a Process Scheduler server without setting up the domain.
- `appbatch` — Install the software for an Application Server and a Process Scheduler server without setting up the domains.
- `pia` — Install the software for the web server (PIA) without setting up the domain.

## Task A-3-2: Preparing CONTAINER\_HOME

Follow the instructions in this documentation to obtain the PeopleSoft PeopleTools 8.61.06 and later DPKs and install *PS\_HOME*.

1. Obtain the four PeopleSoft PeopleTools DPKs.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Obtaining the PeopleSoft PeopleTools DPKs.

2. Install *PS\_HOME* on the Linux VM.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Running the DPK Setup Script to Install *PS\_HOME* Only.

3. Locate the containers directory.

The *PS\_HOME*/containers/OraclePeopleTools directory includes text instructions (README.md), shell scripts, and configuration files. You will use these files in the following sections to build the container image and deploy PeopleTools components.

The README.md files, which are located in different directories under the OraclePeopleTools directory, cover different phases of the deployment. They may be useful for experts and users who are experienced with containers and PeopleSoft environments.

---

**Note.** You can view README.md and FAQ.md in a text editor. The .md extension refers to the Markdown language used for GitHub documents.

---

This documentation uses `<..>` to refer to the location of the OraclePeopleTools directory that holds the container files in your environment. Substitute the correct path when running commands.

4. If necessary, copy `<..>/OraclePeopleTools` to the installation location and set this environment variable:  
`export CONTAINER_HOME=<..>/OraclePeopleTools`

---

**Note.** You will be instructed to copy the DPKs into an installation location for building the container image and again for running.

---

## Task A-3-3: Building the Container Image

To build the container image:

1. Copy the four PeopleSoft PeopleTools DPKs into `$CONTAINER_HOME/containerfiles/pt`.

Don't unzip the files. The `cp -a` command retains the file attributes, such as the timestamp, during the copy operation.

```
cp -a "<DPK zipfiles>" "$CONTAINER_HOME/containerfiles/pt"
```

2. If you want to use the PT-INFRA DPKs, copy the two DPKs into `$CONTAINER_HOME/containerfiles/pt`.
3. Change to the pt directory holding the container scripts.

```
cd ${CONTAINER_HOME}/containerfiles/pt
```

4. Set this environment variable, which is required to support HEALTHCHECK specified in the `$CONTAINER_HOME/in/pt/Containerfile`.

```
export BUILDH_FORMAT=docker
```

5. Set this environment variable, which is needed for building the container image in rootless mode.

```
export BUILDAH_ISOLATION=chroot
```

6. Run the command to build the container:

```
podman build --no-cache -f ./Containerfile -t [image_name:tag] . | tee⇒
 bldimg.log
```

For [image\_name:tag], supply a name and a tag to apply to the built image. Use lower-case letters. For example:

```
podman build --no-cache -f ./Containerfile -t oracle/peopletools⇒
 /deployonly:8.61.06 . | tee bldimg.log
```

If you plan to submit the container image to the Oracle Container Registry (OCR), use this format for [image\_name:tag]:

```
<region-key>.ocir.io/<oci tenancy>/oracle/peopletools/deployonly:8.61.06
```

For the requirements for using Oracle Container Registry, and the <region-key> value for your region, see the Oracle Cloud Infrastructure Documentation..

See Preparing for Container Registry, <https://docs.oracle.com/en-us/iaas/Content/Registry/Concepts/registryprerequisites.htm>.

7. When the container image build process is complete, the output includes the message "Successfully tagged localhost/<[image\_name:tag]>", followed by the long image id.
8. To push the container image to Oracle Container Registry, run this command:
9. In case of errors during the container image build process, see the FAQ.md in *CONTAINER\_HOME*.
10. Run this command to list all images:

```
podman images -a
```

Run this command to display the configuration of an image:

```
podman inspect [image_name:tag]
```

---

**Note.** The build generates intermediate images of large size. Remove these images using following command.

```
podman rmi -f $(podman images -a | grep "<none>.*<none>" | awk '{ print $3; }') 2>/dev/null
```

---

## Task A-3-4: Preparing to Deploy PeopleTools Mid-tier in the Container Image

To prepare to deploy PeopleTools mid-tier components in the container image:

1. Copy the four PeopleSoft PeopleTools DPKs into \$CONTAINER\_HOME/in/pt.  
Don't unzip the files. The `cp -a` command retains the file attributes, such as the timestamp, during the copy operation.  

```
cp -a "<DPK zipfiles>" "$CONTAINER_HOME/in/pt"
```
2. If you want to use the PT-INFRA DPKs, copy the two DPKs into \$CONTAINER\_HOME/in/pt.
3. Change directory.

```
cd ${CONTAINER_HOME}/in/pt
```

---

**Note.** The volume `${CONTAINER_HOME}/in/pt` should be mapped to container at `/in/pt:ro`. Use `/in/pt:z` if you are using shared volume/storage. `${CONTAINER_HOME}/in/pt` will be mounted in the container and will be used to create and run domains.

---

4. Open `${CONTAINER_HOME}/in/pt/install.rsp` for editing.

The `install.rsp` file is the silent installation response file. This file is called by the silent installation command, which is contained in `install.file` in the same `/in/pt` directory.

This sample includes the required parameters. Supply the remaining values, such as the database name, users, and passwords. Use the response file sample in this documentation and modify it for your requirements.

See "Deploying the PeopleSoft PeopleTools Deployment Packages in Silent Mode," Reviewing the Response File Sample for Mid-tier Installation as a Non-Root User on Linux, AIX, or Solaris.

---

**Note.** Remove the completed `install.rsp` file after the container is up and running. The file includes plain text passwords, so do not save it. The file is not stored anywhere in the container.

---

```
env_type=midtier
db_platform=ORACLE
db_name=
db_service_name=
db_host=
db_port=1521
db_protocol=TCP
connect_id=
connect_pwd=
opr_id=
opr_pwd=
weblogic_admin_pwd=
webprofile_user_id=
webprofile_user_pwd=
gw_user_id=
domain_conn_pwd=
weblogic_admin_pwd=
gw_user_pwd=
gw_keystore_pwd=
psft_base_dir=/opt/oracle
user_home_dir=/home
```

5. Review the installation command in `${CONTAINER_HOME}/in/pt/install.file`, but do not make any changes.

The command deploys the DPK in silent installation mode with a customization file.

```
psft-dpk-setup.sh --silent --response_file=/in/pt/install.rsp -->
customization_file=/in/pt/psft_customizations.yaml
```

6. Review the information in `${CONTAINER_HOME}/in/pt/psft_customizations.yaml`.

The `psft_customizations.yaml` file includes the only DPK customizations that are supported for containers.

```
setup_share is not supported in containers
setup_share: false

setup_sysctl is not supported in containers
```

```
setup_sysctl: false
```

- Update <Container host FQDN> with the fully qualified domain name for the web server (PIA) host.
- Update <Container hostname or container\_name>:9033 with the hostname from compose.yaml. For example, if the container host name is mt.oraclevcn.com, enter mt.oraclevcn.com:9033.
- Do not change the setup\_share and setup\_sysctl parameters.

The parameter `setup_sysctl: false` specifies that the DPK setup will not overwrite Linux system parameters. The parameter `setup_share: false` specifies that the DPK setup does not create a share for access to the Linux VM.

7. Run this command to create the container network.

```
podman network create --driver bridge ps-net
```

## Task A-3-5: Running PeopleTools Containers Using the PeopleTools Deploy-Only Container Image

Use this command to run PeopleTools components (mid-tier, appserver, prcs, appbatch, or pia) using the PeopleTools deploy-only container image:

---

**Note.** The command is separated by line feeds (\) for readability. Do not enter the line feeds on the command line.

---

```
podman run -d --name <container name> \
 --hostname <container hostname> \
 -e DB_WAIT_TIMEOUT=1 \
 -p <Add Container Port Mapping > \
 -v [<host mount point>:]/in/pt \
 <[image_name:tag]>
```

For example:

```
podman run -d --name mt.oraclevcn.com \
 --hostname mt.oraclevcn.com \
 -e DB_WAIT_TIMEOUT=1 \
 -p 10100:10100 -p 10101:10101 -p 7000-7003:7000-7003 -p 7010:7010 ->
p 8000:8000 -p 8001:8001 \
 -v ${CONTAINER_HOME}/in/pt:/in/pt \
 oracle/peopletools/deployonly:8.61.06
```

- `--name`

(Optional): The name of the container. If you do not enter a name, a name is generated by default.

- **--hostname**

PeopleTools uses hostname for various processes, so it is important and necessary to set the container hostname properly. The value of <container hostname> will be the host name given to the container. This container hostname must not contain any underscore ("\_").

For example, if your mid-tier container VM host name is server.example.oraclevcn.com, set <container hostname> as mt.oraclevcn.com. In this case, when you run the commands in this table, you would see the corresponding results.

| Command                       | Result                                   | Comment                         |
|-------------------------------|------------------------------------------|---------------------------------|
| hostname -f                   | mt.oraclevcn.com                         | Container long host name (FQDN) |
| hostname -d                   | oraclevcn.com                            | Container DNS domain name       |
| hostname -a                   | mt                                       | Container alias name            |
| PeopleTools Auth Token Domain | [.oraclevcn.com]                         | NA                              |
| PIA URL                       | http://server.example.oraclevcn.com:8000 | NA                              |

Similarly, you can use appserver.oraclevcn.com for the application server container, prcs.oraclevcn.com for the Process Scheduler container, appbatch.oraclevcn.com for the application server and Process Scheduler container pia.oraclevcn.com for the web sever (PIA) container

- **-e**

(Optional) This is an environment variable for the database. Update DB\_WAIT\_TIMEOUT with the number of seconds to wait for the database.

- **-p**

The port mapping of the host port to the container port.

| Container | Port Mapping String < host ports >:< fixed container ports >                                |
|-----------|---------------------------------------------------------------------------------------------|
| mid-tier  | -p 10100:10100 -p 10101:10101 -p 7000-7003:7000-7003 -p 7010:7010 -p 8000:8000 -p 8001:8001 |
| appserver | p 10100:10100 -p 10101:10101 -p 7000-7003:7000-7003 -p 7010:7010 -p 9033-9043:9033-9043     |
| prcs      | NA                                                                                          |
| appbatch  | -p 10100:10100 -p 10101:10101 -p 7000-7003:7000-7003 -p 7010:7010 -p 9033-9043:9033-9043    |
| pia       | p 8000:8000 -p 8001:8001                                                                    |

- **-v**

\${CONTAINER\_HOME}/in/pt:/in/pt:ro

\${CONTAINER\_HOME}/in/pt:/in/pt:z if you are using shared volume/storage



- `--network`

(Optional): `ps-net`

If you plan to use the search component (OSK) container with the mid-tier container, create a network using following command:

```
podman network create --driver bridge ps-net
```

In case the deployment results in errors, you can find information on error messages associated with the PeopleSoft containers in `$CONTAINER_HOME/FAQ.md`.

## Task A-3-6: Starting, Stopping, and Removing the Container

Use this command to stop the container. This command gracefully shuts down all PeopleTools domains and then exits the container.

Specify the number of seconds to allow for the domains to shut down in `<time in secs>`.

```
podman stop <container-name> -t<time in secs>
```

To view logs for the shutdown simultaneously, open a new terminal and enter this command:

```
podman logs -fn <container-name>
```

Use this command to start the container. This command starts all PeopleTools domains.

```
podman start <container-name>
```

To view logs for starting simultaneously, open a new terminal and enter this command.

```
podman logs -fn <container-name>
```

Alternatively, use these commands to stop and remove the container.

```
podman-compose stop <container-name> -t<time in secs>
```

```
podman-compose rm <container-name>
```

## Task A-3-7: Running the Container Image for PeopleTools Mid-tier

To run the container image for PeopleTools mid-tier using `${CONTAINER_HOME}/compose.yaml`:

1. Change directory.

```
cd ${CONTAINER_HOME}
```

2. Open `${CONTAINER_HOME}/compose.yaml` for editing and enter `[image_name:tag]` for the image parameter.

3. Run this command:

Specify the number of seconds to allow for the domains to shut down in `<time in secs>`.

```
podman-compose -f ${CONTAINER_HOME}/compose.yaml down -t<time in secs>
```

4. Open a new terminal to view the container logs with this command.

```
podman logs <container-name>
```

The container is up and running when you see this message in the log.

```
=====
PEOPLETOOLS IS READY TO USE!
=====
```

5. Use these commands to view the DPK logs in the container.

- Use this command to open the log with the vi editor in case of successful completion..

```
podman exec -ti <container-name> vi /ps/psft_dpk_setup.log
```

- Use this command to open the log with the vi editor in case of failure:

```
podman exec -ti <container-name> vi /in/tmp/setup/psft_dpk_setup.log
```

- Use this command to open the log with the vi editor to copy the DPK log to the current location in case of failure.

```
podman cp -a <container-name>:/in/tmp/setup/psft_dpk_setup.log .
```

6. After verifying the container is up and running, remove the install.rsp file.

---

**Important!** The install.rsp file includes plain text passwords, so do not save it. The file is not stored anywhere in the container.

---

```
rm ${CONTAINER_HOME}/in/pt/install.rsp
```

7. To remove the container run this command:

```
podman-compose -f ${CONTAINER_HOME}/compose.yaml down -t<time in secs>
```

## Task A-3-8: Creating a Prebuilt Container Image for PeopleTools Mid-tier

You can create a prebuilt container, also called a container image, for the PeopleTools mid-tier installation. Users can use the prebuilt container to deploy more quickly.

1. Build and run a new container as described in the previous sections.
2. When the container is up and running, run the following commands to verify that the status is healthy..

```
podman ps -a --filter "name=<container-name>"
```

```
podman healthcheck run <container-name>
```

3. Run these commands.

For <pre-built container image name>, use lower-case letters, such as oracle/peopletools:8.61.06.

---

**Note.** Creating a prebuilt image takes some time, depending upon the container size.

---

```
podman stop <container-name> -t<time in secs>
```

```
podman commit --format docker -m "comment" -a "author" <container-name>=>
<pre-built container [image name:tag]>
```

```
podman rm <container-name>
```

4. To check the prebuilt image, run this command:

```
podman images -a
```

5. To use the prebuilt image on another computer, run these commands::

```
podman save
podman load
```

### Task A-3-9: Running a Prebuilt Container Image for PeopleTools Mid-tier

Running the prebuilt container image will start all domains in the container. Run this command:

```
podman run -d \
 --hostname <container hostname> \
 -e DB_WAIT_TIMEOUT=1 \
 -p <Add Container Port Mapping > \
 <pre-built container [image_name:tag]>
```

See the section Deploying PeopleTools Mid-tier in the Container Image for definitions for hostname and container port mapping.

## Task A-4: Building and Running the Container for Search Components (PeopleTools 8.61.03 to 8.61.05)

---

This section discusses:

- Using the DPKs to Install PS\_HOME
- Preparing to Deploy the Search Components Container
- Building and Running the Search Components Container
- Reviewing the Search Components Container
- Integrating PeopleTools Mid-tier with OpenSearch
- Creating a Prebuilt Container Image for OpenSearch
- Running the OpenSearch Prebuilt Container Image

### Task A-4-1: Using the DPKs to Install PS\_HOME

Follow the instructions in the PeopleTools documentation to obtain the PeopleSoft PeopleTools 8.61.02 and later DPKs and install *PS\_HOME* on the Linux VM.

1. Obtain the four PeopleSoft PeopleTools DPKs from My Oracle Support.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Obtaining the PeopleSoft PeopleTools DPKs.

2. Use the PeopleSoft PeopleTools DPKs to install *PS\_HOME* on the Linux VM.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Running the DPK Setup Script to Install PS\_HOME Only.

3. Locate the containers directory.

The *PS\_HOME*/containers/OraclePeopleTools directory includes text instructions (README.md), shell scripts, and configuration files. You will use these files in the following sections to build and run containers.

The README.md files, which are located in different directories under the OraclePeopleTools directory, cover different phases of the deployment. They may be useful for experts and users who are experienced with

containers and PeopleSoft environments.

---

**Note.** You can view README.md and FAQ.md in a text editor. The .md extension refers to the Markdown language used for GitHub documents.

---

This documentation uses < . . > to refer to the location of the OraclePeopleTools directory that holds the container files in your environment. Substitute the correct path when running commands.

4. Obtain the OpenSearch, OpenSearch Dashboards, and Logstash DPK (OSK DPK) for Linux from My Oracle Support.

See *PeopleSoft Deployment Package Installation for Search Components*, "Obtaining the OpenSearch, OpenSearch Dashboards, and Logstash DPK."

You can find the installation guide on the PeopleSoft PeopleTools page on Oracle Help Center.

## Task A-4-2: Preparing to Deploy the Search Components Container

To prepare to deploy OpenSearch:

1. Review the instructions in `PS_HOME/containers/OraclePeopleTools/README.md`.
2. Copy the OSK DPK into `PS_HOME/containers/OraclePeopleTools/in/osk`.
3. Open `PS_HOME/containers/OraclePeopleTools/in/osk/pt-osk.config` for editing.

The `pt-osk.config` file is the silent installation response file for OpenSearch. This file is called by the silent installation command, which is contained in `install-osk.file` in the same `./in/osk` directory. Use the response file sample in the Search Components installation guide and modify it for your requirements.

See *PeopleSoft Deployment Package Installation for Search Components*, "Installing OpenSearch and OpenSearch Dashboards on Linux in Silent Mode."

Verify these values in `pt-osk.config`:

- For `IB_REST_URL`, enter the Integration Broker REST service URL in the PeopleSoft mid-tier container deployment.

To locate the REST service URL, see the Integration Broker product documentation.

See *PeopleTools: Integration Broker Administration*, "Using the Target Locations Page to Set Target Locations for Services."

- Enter encrypted user ID and passwords, as described in the Search Components installation guide.

See *PeopleSoft Deployment Package Installation for Search Components*, "Installing OpenSearch and OpenSearch Dashboards on Linux in Silent Mode."

4. Open `PS_HOME/containers/OraclePeopleTools/docker-compose-osk.yaml` for editing.

```
version: 1
services:
 osk:
 image: oracle/peopletools/osk:230861_01
 build:
 context: ./dockerfiles/osk
 dockerfile: Dockerfile
 format: docker
 args:
 hostname: osk.oraclevcn.com
 container_name: osk.oraclevcn.com
 network: net
```

```

tty: true
ports:
 - "${PORT_OSSERVER:-9200}:9200"
 - "${PORT_OSSERVER_NODE:-9300}:9300"
 - "${PORT_LOGSTASH:-9800}:9800"
 - "${PORT OSDASHBOARD:-5601}:5601"
environment:
 - http_proxy=
 - https_proxy=
 - no_proxy=
 - OSK_BASE_DIR=/opt/oracle/osk
volumes:
 - /scratch/docker-images/OraclePeopleTools/in/osk:/in/osk:ro

networks:
 net:
 name: ps-net
 driver: bridge

```

Verify the following values:

- For image enter the type of environment and release. The default image name is oracle/peopletools/osk:230861\_01.
- The default hostname is osk.oraclevcn.com, where .oraclevcn.com is the Auth Token Domain..  
If your domain URL is portal.corp.com, enter osk.corp.com for the hostname and container\_name. The hostname must not contain any underscore ("\_").
- For the environment variable OSK\_BASE\_DIR, specify the full path to a location where the OSK services will be deployed..
- Verify that the path in the volumes parameter is correct for your environment.

The syntax for the volumes definition is `<directory_on_host>:<directory_in_container>:<options>`. The default path, /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro, assumes that you accepted the default path /scratch/docker-images/OraclePeopleTools. This will map to in/pt in the container, and the volume will be read-only (ro). If you used a different location, update the path accordingly.

- Ensure that ports listed are not in use.

PORT\_OSSERVER is the OpenSearch HTTP port, PORT\_OSSERVER\_NODE is the port for OpenSearch node communication, PORT\_LOGSTASH is the Logstash port, and PORT OSDASHBOARD is the OpenSearch Dashboards port.

Each container must use different ports. The syntax of the port definition is `<port on host>:<port on container>`. To override the default port mapping, define a PORT\_\* environment variable, which will be used by the docker-compose-pum.yaml file. For example, to change the default PORT\_OSSERVER to 9980 use this command:

```
export PORT_OSSERVER=9980
```

Then the line `${PORT_OSSERVER:-9200}:9200` will be translated as `9980:9200`.

---

**Note.** "MY\_VAR=\${NEW\_VAR:-DefaultValue}" is a BASH shell syntax to override a default value and assign a new value to MY\_VAR.

---

## Task A-4-3: Building and Running the Search Components Container

To build and run the container:

1. Ensure that the PeopleTools mid-tier container is up and running.
2. Change directory to `PS_HOME/containers`.

```
cd PS_HOME/containers
```

3. Run this command on a single line.

---

**Note.** Do not include the line-continuation arrow (`=>`).

---

```
podman-compose -f docker-compose-osk.yaml -p proj-osk up -d --build -->
no-cache
```

4. Use this command to log in to the container as the `psadm2` user, which is created by the DPK setup script.

```
podman exec -ti <osk-container-name> su - psadm2
```

To view the DPK logs, log in to `<container-name>`.

If the deployment was successful, the logs will be in `/ps/psft_dpk_setup.log`.

If the deployment failed, the logs will be in `/in/pttmp/setup/psft_dpk_setup.log`.

5. Verify that the container is up and running.

The container is up and running when it shows the following message in the container logs:

```
=====
PEOPLETOOLS OSK IS READY TO USE!
=====
```

In case the deployment results in errors, you can find information on error messages associated with the PeopleSoft containers in `PS_HOME/containers/OraclePeopleTools/FAQ.md`.

## Task A-4-4: Reviewing the Search Components Container

Use these commands to review and maintain the container:

- Log in to the container.

```
podman exec -ti <osk-container-name> bash
```

- View the container logs.

```
podman container logs --color -fn <osk-container-name>
```

- Stop the container.

```
cd PS_HOME/containers/OraclePeopleTools
```

```
podman-compose -f docker-compose-osk.yaml down -t<time in secs>
```

## Task A-4-5: Integrating PeopleTools Mid-tier with OpenSearch

This is an optional task. After you build containers for PeopleTools mid-tier and search components, use these steps to integrate OpenSearch and the PeopleSoft environment using Automated Configuration Management (ACM) plug-ins.

To set up the PTSFConfigureSrchInstance plug-in:

1. Create a property file named OSK\_SEARCH\_TEMPLATE.

Use the sample given in *PS\_HOME*/containers/dockerfiles/osk/README.md as a guide, and modify it for your environment.

---

**Note.** The sample includes parameters with "Kibana." Be aware that Kibana is not supported for PeopleTools 8.61. These parameters are used for configuration for OpenSearch Dashboards. The sample parameters are subject to change in future releases of the OSK DPK. Review the product documentation when preparing your template.

---

```
tee -a "OSK_SEARCH_TEMPLATE" <<EOF

configure=true
verify=true
decrypt_password=false

#TEMPLATE VARIABLES SECTION
template.domain=@webhist.SESSIONCOOKIEIDOM
template.host=@webhist.WEBSERVERNAME
template.httpport=@webhist.PORTALHTTPPORT
template.nodename=%LocalNode
template.searchhost=search.com
template.searchport=9200
template.sslport=@webhist.PORTALHTTPSSPORT
template.userid=%UserId
#END: TEMPLATE VARIABLES SECTION

#####
#Configure Peoplesoft system to talk to Search Server and assign roles
#####

plugin.0=PTEM_CONFIG:PTSFConfigureSrchInstance
env.search_nodes=1
env.search_provider=OS
env.ptsf_search_instance=<Search Instance Name>
env.node1_search_host=<osk-container-name>
env.node1_search_port=9200
env.node1_search_use_ssl=false
env.node1_search_admin_user=osadmin
env.node1_search_admin_password=password
env.node1_search_read_user=osadmin
env.node1_search_read_password=password
```

```

#Kibana
env.kibana_host=<osk-container-name>
env.kibana_port=5601
env.kibana_use_ssl=false

#Logstash
env.logstash_host=<osk-container-name>
env.logstash_port=9800
env.logstash_use_ssl=false

#Search call back properties
env.search_call_back_user=PS
env.search_call_back_password=password
env.ps_search_administrator_user=QEDMO
env.ps_search_developer_user=QEDMO
env.enable_global_menu_search=ALL
env.use_ssl_gateway=false
env.gateway_host=<mt-container-name>
env.gateway_port=8000
env.gateway_ssl_port=8443
env.default_local_node=PSFT_LOCAL

#####
#Deploy, Undeploy, Schedule index generation for search definitions \>
 categories from a selected list
#####

plugin.SRCH_GROUP.1=PTEM_CONFIG:PTSFAdministerSearch
env.prcsscheduleserver=PSUNX
scheduleviaprcs=true
env.ptsf_selection_type=GLOBAL
env.ptsf_exclude_definitions=PTPORTALREGISTRY
env.ptsf_check_audit_errors=false
env.ptsf_admin_operations=DEPLOY,INDEX
env.ptsf_index_all_languages=false

EOF

```

2. Copy the property file OSK\_SEARCH\_TEMPLATE with your entries to the PeopleTools mid-tier container host.

```
podman cp OSK_SEARCH_TEMPLATE <mt-container-name>:/home/psadm2/
```

3. Access the PeopleTools mid-tier container host remotely.

This command sets environment variables and uses the psrunACM.sh script to run the plug-in.

```

podman exec -ti <mt-container-name> su - psadm2 -c 'export PS_FILEDIR=>
/home/psadm2; \
export PS_SERVER_CFG=$PS_CFG_HOME/appserv/prcs/PRCSDOM/psprcs.cfg; \
$PS_HOME/utility/psrunACM.sh <mt-container-name> ORACLE <DBNAME>=>
 <OPRID> <OPRPWD> OSK_SEARCH_TEMPLATE'

```

- DBNAME is the name of the database that the PeopleTools mid-tier connects to.
- OPRID is the operator ID, or user ID, for the PeopleSoft environment, such as PS or VP1.



- OPRPWD is the password for the operator ID.

To set up the PTSFMonitorConfiguration plug-in:

1. Create a property file named OSK\_MONITOR\_CFG\_TEMPLATE.

Use the sample given in *PS\_HOME*/containers/dockerfiles/osk/README.md as a guide, and modify it for your environment.

```
tee -a "OSK_MONITOR_CFG_TEMPLATE" <<EOF
configure=true
verify=true
decrypt_password=false
#decrypt_password=true

#####
#Opensearch Monitoring Configuration Plugin
#####
plugin.0=PTEM_CONFIG:PTSFMonitorConfiguration
env.prcsscheduleserver=PSUNX
env.monitor_es_host=<osk-container-name>
env.monitor_es_port=9200
env.monitor_es_ssl=False
env.monitor_es_user=osadmin
env.monitor_es_password=password

env.monitor_kibana_host=<osk-container-name>
env.monitor_kibana_port=5601
env.monitor_kibana_ssl=False
env.scan_interval=5
env.purge_retention=1
env.enable_index_metrics=True
env.enable_system_metrics=True
env.dashboard_selection=ALL

EOF
```

2. Copy the property file OSK\_MONITOR\_CFG\_TEMPLATE with your entries to the PeopleTools mid-tier container host.

```
podman cp OSK_MONITOR_CFG_TEMPLATE <mt-container-name>:/home/psadm2/
```

3. Access the PeopleTools mid-tier container host remotely.

This command sets environment variables and uses the psrunACM.sh script to run the plug-in.

```
podman exec -ti <mt-container-name> su - psadm2 -c 'export PS_FILEDIR=>
/home/psadm2; \
export PS_SERVER_CFG=$PS_CFG_HOME/appserv/prcs/PRCSDOM/psprcs.cfg; \
$PS_HOME/utility/psrunACM.sh <mt-container-name> ORACLE <DBNAME>=>
<OPRID> <OPRPWD> OSK_MONITOR_CFG_TEMPLATE '
```

- DBNAME is the name of the database that the PeopleTools mid-tier connects to.
- OPRID is the operator ID, or user ID, for the PeopleSoft environment, such as PS or VP1.
- OPRPWD is the password for the operator ID.

Configure PeopleSoft Health Center alerts manually.

---

**Note.** Because the OSK container host is a virtual host, it cannot be accessed from outside using the virtual host name. To access PeopleSoft Health Center or Open Dashboard page from a browser, include the container host name and IP address in the `/etc/hosts` file of the client host machine.

---

## See Also

*PeopleTools: Automated Configuration Management*

*PeopleTools: Performance Monitor, "Configuring Health Center Alerts."*

## Task A-4-6: Creating a Prebuilt Container Image for OpenSearch

You can create a prebuilt container, also called a container image, for the OpenSearch installation. Users can use the prebuilt container to deploy more quickly.

1. Copy the OSK DPK into `PS_HOME/containers/OraclePeopleTools/in/osk`.
2. Open `PS_HOME/containers/OraclePeopleTools/in/osk/pt-osk.config` for editing.

The `pt-osk.config` file is the silent installation response file for OpenSearch. This file is called by the silent installation command, which is contained in `install-osk.file` in the same `/in/osk` directory. Use the response file sample in the Search Components installation guide and modify it for your requirements.

See *PeopleSoft Deployment Package Installation for Search Components, "Installing OpenSearch and OpenSearch Dashboards on Linux."*

3. Open `PS_HOME/containers/OraclePeopleTools/docker-compose-osk.yaml` for editing and specify the image name, host name, and container name.

Ensure that the ports listed are not in use.

```
version: 1
services:
 osk:
 image: oracle/peopletools/osk:230861_01
 build:
 context: ./dockerfiles/osk
 dockerfile: Dockerfile
 format: docker
 args:
 hostname: osk.oraclevcn.com
 container_name: osk.oraclevcn.com
 network: net
 tty: true
 ports:
 - "${PORT_OSSERVER:-9200}:9200"
 - "${PORT_OSSERVER_NODE:-9300}:9300"
 - "${PORT_LOGSTASH:-9800}:9800"
 - "${PORT OSDASHBOARD:-5601}:5601"
 environment:
 - http_proxy=
 - https_proxy=
 - no_proxy=
 - OSK_BASE_DIR=/opt/oracle/osk
 volumes:
 - /scratch/docker-images/OraclePeopleTools/in/osk:/in/osk:ro
```

```
networks:
 net:
 name: ps-net
 driver: bridge
```

#### 4. Run these commands.

For <osk-container-name> substitute the name of the OpenSearch container. Provide a name for the prebuilt container image. Do not include the line-continuation arrow (⇒) on the command line.

```
podman-compose -f docker-compose-osk.yaml up -d --build --no-cache
```

```
podman stop <osk-container-name> -t<time in secs>
```

```
podman commit --format docker -m "comment" -a "author" <osk-container-name> <pre-built container image name>
```

```
podman rm <osk-container-name>
```

## Task A-4-7: Running the OpenSearch Prebuilt Container Image

To run the prebuilt container image:

#### 1. Open *PS\_HOME*/containers/OraclePeopleTools/docker-compose-osk-prebldcon.yaml for editing.

Substitute the name of your prebuilt container image for <pre-built container image name>.

```
version: 1
services:
 osk:
 image: <pre-built container image name>
 hostname: osk.oraclevcn.com
 container_name: osk.oraclevcn.com
 network: net
 tty: true
 ports:
 - "${PORT_OSSERVER:-9200}:9200"
 - "${PORT_OSSERVER_NODE:-9300}:9300"
 - "${PORT_LOGSTASH:-9800}:9800"
 - "${PORT OSDASHBOARD:-5601}:5601"
 volumes:
 - /scratch/docker-images/OraclePeopleTools/in/osk:/in/osk:ro
 environment:
 - http_proxy=
 - https_proxy=
 - no_proxy=
 - OSK_BASE_DIR=/opt/oracle/osk
 healthcheck:
 test: ["CMD", "/ps/healthcheck.sh"]
 interval: 20s
 timeout: 10s
 retries: 30
 start_period: 1m

networks:
```

```
net:
 name: ps-net
 driver: bridge
```

2. Run this command.

```
podman-compose -f docker-compose-osk-prebldcon.yaml up -d
```

3. Use this command to check the logs for the prebuilt container.

```
podman container logs --color -fn <pre-build container name>
```

4. Use this command to perform a healthcheck.

```
podman ps -a --filter "name=<pre-build container name>"
```

## Task A-5: Building and Running the Container for Search Components (PeopleTools 8.61.06 and Later)

---

This section discusses:

- Using the DPKs to Install PS\_HOME
- Preparing to Deploy the Search Components Container
- Building and Running the Search Components Container
- Reviewing the Search Components Container
- Integrating PeopleTools Mid-tier with OpenSearch
- Creating a Prebuilt Container Image for OpenSearch
- Running the OpenSearch Prebuilt Container Image

### Task A-5-1: Using the DPKs to Install PS\_HOME

Follow the instructions in the PeopleTools documentation to obtain the PeopleSoft PeopleTools 8.61.02 and later DPKs and install *PS\_HOME* on the Linux VM.

1. Obtain the four PeopleSoft PeopleTools DPKs from My Oracle Support.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Obtaining the PeopleSoft PeopleTools DPKs.

2. Use the PeopleSoft PeopleTools DPKs to install *PS\_HOME* on the Linux VM.

See "Deploying the PeopleSoft PeopleTools Deployment Packages," Running the DPK Setup Script to Install PS\_HOME Only.

3. Locate the containers directory.

The *PS\_HOME*/containers/OraclePeopleTools directory includes text instructions (README.md), shell scripts, and configuration files. You will use these files in the following sections to build and run containers.

The README.md files, which are located in different directories under the OraclePeopleTools directory, cover different phases of the deployment. They may be useful for experts and users who are experienced with containers and PeopleSoft environments.

---

**Note.** You can view README.md and FAQ.md in a text editor. The .md extension refers to the Markdown language used for GitHub documents.

---

This documentation uses < . . > to refer to the location of the OraclePeopleTools directory that holds the container files in your environment. Substitute the correct path when running commands.

4. Obtain the OpenSearch, OpenSearch Dashboards, and Logstash DPK (OSK DPK) for Linux from My Oracle Support.

See *PeopleSoft Deployment Package Installation for Search Components*, "Obtaining the OpenSearch, OpenSearch Dashboards, and Logstash DPK."

You can find the installation guide on the PeopleSoft PeopleTools page on Oracle Help Center.

## Task A-5-2: Preparing to Deploy the Search Components Container

To prepare to deploy OpenSearch:

1. Review the instructions in *PS\_HOME*/containers/OraclePeopleTools/README.md.
2. Copy the OSK DPK into *PS\_HOME*/containers/OraclePeopleTools/in/osk.
3. Open *PS\_HOME*/containers/OraclePeopleTools/in/osk/pt-osk.config for editing.

The pt-osk.config file is the silent installation response file for OpenSearch. This file is called by the silent installation command, which is contained in install-osk.file in the same ./in/osk directory. Use the response file sample in the Search Components installation guide and modify it for your requirements.

See *PeopleSoft Deployment Package Installation for Search Components*, "Installing OpenSearch and OpenSearch Dashboards on Linux in Silent Mode."

Verify these values in pt-osk.config:

- For IB\_REST\_URL, enter the Integration Broker REST service URL in the PeopleSoft mid-tier container deployment.

To locate the REST service URL, see the Integration Broker product documentation.

See *PeopleTools: Integration Broker Administration*, "Using the Target Locations Page to Set Target Locations for Services."

- Enter encrypted user ID and passwords, as described in the Search Components installation guide.

See *PeopleSoft Deployment Package Installation for Search Components*, "Installing OpenSearch and OpenSearch Dashboards on Linux in Silent Mode."

4. Open *PS\_HOME*/containers/OraclePeopleTools/compose-osk.yaml for editing.

```
version: 1
services:
 osk:
 image: oracle/peopletools/osk:230861_01
 build:
 context: ./dockerfiles/osk
 dockerfile: Dockerfile
 format: docker
 args:
 hostname: osk.oraclevcn.com
 container_name: osk.oraclevcn.com
 network: net
 tty: true
```

```

ports:
 - "${PORT_OSSERVER:-9200}:9200"
 - "${PORT_OSSERVER_NODE:-9300}:9300"
 - "${PORT_LOGSTASH:-9800}:9800"
 - "${PORT OSDASHBOARD:-5601}:5601"
environment:
 - http_proxy=
 - https_proxy=
 - no_proxy=
 - OSK_BASE_DIR=/opt/oracle/osk
volumes:
 - /scratch/docker-images/OraclePeopleTools/in/osk:/in/osk:ro

networks:
 net:
 name: ps-net
 driver: bridge

```

Verify the following values:

- For image enter the type of environment and release. The default image name is oracle/peopletools/osk:230861\_01.
- The default hostname is osk.oraclevcn.com, where .oraclevcn.com is the Auth Token Domain..  
If your domain URL is portal.corp.com, enter osk.corp.com for the hostname and container\_name. The hostname must not contain any underscore ("\_").
- For the environment variable OSK\_BASE\_DIR, specify the full path to a location where the OSK services will be deployed..
- Verify that the path in the volumes parameter is correct for your environment.

The syntax for the volumes definition is `<directory_on_host>:<directory_in_container>:<options>`. The default path, /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro, assumes that you accepted the default path /scratch/docker-images/OraclePeopleTools. This will map to in/pt in the container, and the volume will be read-only (ro). If you used a different location, update the path accordingly.

- Ensure that ports listed are not in use.

PORT\_OSSERVER is the OpenSearch HTTP port, PORT\_OSSERVER\_NODE is the port for OpenSearch node communication, PORT\_LOGSTASH is the Logstash port, and PORT OSDASHBOARD is the OpenSearch Dashboards port.

Each container must use different ports. The syntax of the port definition is `<port on host>:<port on container>`. To override the default port mapping, define a PORT\_\* environment variable, which will be used by the compose-pum.yaml file. For example, to change the default PORT\_OSSERVER to 9980 use this command:

```
export PORT_OSSERVER=9980
```

Then the line `${PORT_OSSERVER:-9200}:9200` will be translated as `9980:9200`.

---

**Note.** "MY\_VAR=\${NEW\_VAR:-DefaultValue}" is a BASH shell syntax to override a default value and assign a new value to MY\_VAR.

---

## Task A-5-3: Building and Running the Search Components Container

To build and run the container:

1. Ensure that the PeopleTools mid-tier container is up and running.
2. Change directory to *PS\_HOME*/containers.

```
cd PS_HOME/containers
```

3. Run this command on a single line.

---

**Note.** Do not include the line-continuation arrow ( $\Rightarrow$ ).

---

```
podman-compose -f compose-osk.yaml -p proj-osk up -d --build --no-cache
```

4. Use this command to log in to the container as the psadm2 user, which is created by the DPK setup script.

```
podman exec -ti <osk-container-name> su - psadm2
```

To view the DPK logs, log in to <container-name>.

If the deployment was successful, the logs will be in /ps/psft\_dpk\_setup.log.

If the deployment failed, the logs will be in /in/tmp/setup/psft\_dpk\_setup.log.

5. Verify that the container is up and running.

The container is up and running when it shows the following message in the container logs:

```
=====
PEOPLETOOLS OSK IS READY TO USE!
=====
```

In case the deployment results in errors, you can find information on error messages associated with the PeopleSoft containers in *PS\_HOME*/containers/OraclePeopleTools/FAQ.md.

## Task A-5-4: Reviewing the Search Components Container

Use these commands to review and maintain the container:

- Log in to the container.

```
podman exec -ti <osk-container-name> bash
```

- View the container logs.

```
podman container logs --color -fn <osk-container-name>
```

- Stop the container.

```
cd PS_HOME/containers/OraclePeopleTools
```

```
podman-compose -f compose-osk.yaml down -t<time in secs>
```

## Task A-5-5: Integrating PeopleTools Mid-tier with OpenSearch

This is an optional task. After you build containers for PeopleTools mid-tier and search components, use these steps to integrate OpenSearch and the PeopleSoft environment using Automated Configuration Management (ACM) plug-ins.

To set up the PTSFConfigureSrchInstance plug-in:

1. Create a property file named *OSK\_SEARCH\_TEMPLATE*.

Use the sample given in *PS\_HOME*/containers/dockerfiles/osk/README.md as a guide, and modify it for

your environment.

---

**Note.** The sample includes parameters with "Kibana." Be aware that Kibana is not supported for PeopleTools 8.61. These parameters are used for configuration for OpenSearch Dashboards. The sample parameters are subject to change in future releases of the OSK DPK. Review the product documentation when preparing your template.

---

```
tee -a "OSK_SEARCH_TEMPLATE" <<EOF

configure=true
verify=true
decrypt_password=false

#TEMPLATE VARIABLES SECTION
template.domain=@webhist.SESSIONCOOKIEDOM
template.host=@webhist.WEBSERVERNAME
template.httpport=@webhist.PORTALHTTPPORT
template.nodename=%LocalNode
template.searchhost=search.com
template.searchport=9200
template.sslport=@webhist.PORTALHTTPSPORT
template.userid=%UserId
#END: TEMPLATE VARIABLES SECTION

#####
#Configure Peoplesoft system to talk to Search Server and assign roles
#####

plugin.0=PTEM_CONFIG:PTSFConfigureSrchInstance
env.search_nodes=1
env.search_provider=OS
env.ptsf_search_instance=<Search Instance Name>
env.nodel_search_host=<osk-container-name>
env.nodel_search_port=9200
env.nodel_search_use_ssl=false
env.nodel_search_admin_user=osadmin
env.nodel_search_admin_password=password
env.nodel_search_read_user=osadmin
env.nodel_search_read_password=password

#Kibana
env.kibana_host=<osk-container-name>
env.kibana_port=5601
env.kibana_use_ssl=false

#Logstash
env.logstash_host=<osk-container-name>
env.logstash_port=9800
env.logstash_use_ssl=false

#Search call back properties
```



```

env.search_call_back_user=PS
env.search_call_back_password=password
env.ps_search_administrator_user=QEDMO
env.ps_search_developer_user=QEDMO
env.enable_global_menu_search=ALL
env.use_ssl_gateway=false
env.gateway_host=<mt-container-name>
env.gateway_port=8000
env.gateway_ssl_port=8443
env.default_local_node=PSFT_LOCAL

#####
#Deploy, Undeploy, Schedule index generation for search definitions \=>
#categories from a selected list
#####

plugin.SRCH_GROUP.1=PTEM_CONFIG:PTSFAdministerSearch
env.prcsscheduleserver=PSUNX
scheduleviaprcs=true
env.ptsf_selection_type=GLOBAL
env.ptsf_exclude_definitions=PTPORTALREGISTRY
env.ptsf_check_audit_errors=false
env.ptsf_admin_operations=DEPLOY,INDEX
env.ptsf_index_all_languages=false

EOF

```

2. Copy the property file `OSK_SEARCH_TEMPLATE` with your entries to the PeopleTools mid-tier container host.

```
podman cp OSK_SEARCH_TEMPLATE <mt-container-name>:/home/psadm2/
```

3. Access the PeopleTools mid-tier container host remotely.

This command sets environment variables and uses the `psrunACM.sh` script to run the plug-in.

```

podman exec -ti <mt-container-name> su - psadm2 -c 'export PS_FILEDIR=>
/home/psadm2; \
export PS_SERVER_CFG=$PS_CFG_HOME/appserv/prcs/PRCSDOM/psprcs.cfg; \
$PS_HOME/utility/psrunACM.sh <mt-container-name> ORACLE <DBNAME>=>
<OPRID> <OPRPWD> OSK_SEARCH_TEMPLATE'

```

- `DBNAME` is the name of the database that the PeopleTools mid-tier connects to.
- `OPRID` is the operator ID, or user ID, for the PeopleSoft environment, such as PS or VP1.
- `OPRPWD` is the password for the operator ID.

To set up the PTSFMonitorConfiguration plug-in:

1. Create a property file named `OSK_MONITOR_CFG_TEMPLATE`.

Use the sample given in `PS_HOME/containers/dockerfiles/osk/README.md` as a guide, and modify it for your environment.

```

tee -a "OSK_MONITOR_CFG_TEMPLATE" <<EOF
configure=true
verify=true

```

```

decrypt_password=false
#decrypt_password=true

#####
#Opensearch Monitoring Configuration Plugin
#####
plugin.0=PTEM_CONFIG:PTSFMonitorConfiguration
env.prcsscheduleserver=PSUNX
env.monitor_es_host=<osk-container-name>
env.monitor_es_port=9200
env.monitor_es_ssl=False
env.monitor_es_user=osadmin
env.monitor_es_password=password

env.monitor_kibana_host=<osk-container-name>
env.monitor_kibana_port=5601
env.monitor_kibana_ssl=False
env.scan_interval=5
env.purge_retention=1
env.enable_index_metrics=True
env.enable_system_metrics=True
env.dashboard_selection=ALL

EOF

```

2. Copy the property file OSK\_MONITOR\_CFG\_TEMPLATE with your entries to the PeopleTools mid-tier container host.

```
podman cp OSK_MONITOR_CFG_TEMPLATE <mt-container-name>:/home/psadm2/
```

3. Access the PeopleTools mid-tier container host remotely.

This command sets environment variables and uses the psrunACM.sh script to run the plug-in.

```

podman exec -ti <mt-container-name> su - psadm2 -c 'export PS_FILEDIR=>
/home/psadm2; \
export PS_SERVER_CFG=$PS_CFG_HOME/appserv/prcs/PRCSDOM/psprcs.cfg; \
$PS_HOME/utility/psrunACM.sh <mt-container-name> ORACLE <DBNAME>=>
<OPRID> <OPRPWD> OSK_MONITOR_CFG_TEMPLATE '

```

- DBNAME is the name of the database that the PeopleTools mid-tier connects to.
- OPRID is the operator ID, or user ID, for the PeopleSoft environment, such as PS or VP1.
- OPRPWD is the password for the operator ID.

Configure PeopleSoft Health Center alerts manually.

---

**Note.** Because the OSK container host is a virtual host, it cannot be accessed from outside using the virtual host name. To access PeopleSoft Health Center or Open Dashboard page from a browser, include the container host name and IP address in the /etc/hosts file of the client host machine.

---

## See Also

*PeopleTools: Automated Configuration Management*

*PeopleTools: Performance Monitor, "Configuring Health Center Alerts"*

## Task A-5-6: Creating a Prebuilt Container Image for OpenSearch

You can create a prebuilt container, also called a container image, for the OpenSearch installation. Users can use the prebuilt container to deploy more quickly.

1. Copy the OSK DPK into `PS_HOME/containers/OraclePeopleTools/in/osk`.
2. Open `PS_HOME/containers/OraclePeopleTools/in/osk/pt-osk.config` for editing.

The `pt-osk.config` file is the silent installation response file for OpenSearch. This file is called by the silent installation command, which is contained in `install-osk.file` in the same `./in/osk` directory. Use the response file sample in the Search Components installation guide and modify it for your requirements.

See *PeopleSoft Deployment Package Installation for Search Components*, "Installing OpenSearch and OpenSearch Dashboards on Linux."

3. Open `PS_HOME/containers/OraclePeopleTools/compose-osk.yaml` for editing and specify the image name, host name, and container name.

Ensure that the ports listed are not in use.

```
version: 1
services:
 osk:
 image: oracle/peopletools/osk:230861_01
 build:
 context: ./dockerfiles/osk
 dockerfile: Dockerfile
 format: docker
 args:
 hostname: osk.oraclevcn.com
 container_name: osk.oraclevcn.com
 network: net
 tty: true
 ports:
 - "${PORT_OSSERVER:-9200}:9200"
 - "${PORT_OSSERVER_NODE:-9300}:9300"
 - "${PORT_LOGSTASH:-9800}:9800"
 - "${PORT OSDASHBOARD:-5601}:5601"
 environment:
 - http_proxy=
 - https_proxy=
 - no_proxy=
 - OSK_BASE_DIR=/opt/oracle/osk
 volumes:
 - /scratch/docker-images/OraclePeopleTools/in/osk:/in/osk:ro

networks:
 net:
 name: ps-net
 driver: bridge
```

4. Run these commands.

For `<osk-container-name>` substitute the name of the OpenSearch container. Provide a name for the prebuilt container image. Do not include the line-continuation arrow (`⇒`) on the command line.

```
podman-compose -f compose-osk.yaml up -d --build --no-cache

podman stop <osk-container-name> -t<time in secs>

podman commit --format docker -m "comment" -a "author" <osk-container-name> <pre-built container image name>

podman rm <osk-container-name>
```

## Task A-5-7: Running the OpenSearch Prebuilt Container Image

To run the prebuilt container image:

1. Open *PS\_HOME*/containers/OraclePeopleTools/compose-osk-prebldcon.yaml for editing.  
Substitute the name of your prebuilt container image for <pre-built container image name>.

```
version: 1
services:
 osk:
 image: <pre-built container image name>
 hostname: osk.oraclevcn.com
 container_name: osk.oraclevcn.com
 network: net
 tty: true
 ports:
 - "${PORT_OSSERVER:-9200}:9200"
 - "${PORT_OSSERVER_NODE:-9300}:9300"
 - "${PORT_LOGSTASH:-9800}:9800"
 - "${PORT OSDASHBOARD:-5601}:5601"
 volumes:
 - /scratch/docker-images/OraclePeopleTools/in/osk:/in/osk:ro
 environment:
 - http_proxy=
 - https_proxy=
 - no_proxy=
 - OSK_BASE_DIR=/opt/oracle/osk
 healthcheck:
 test: ["CMD", "/ps/healthcheck.sh"]
 interval: 20s
 timeout: 10s
 retries: 30
 start_period: 1m

networks:
 net:
 name: ps-net
 driver: bridge
```

2. Run this command.

```
podman-compose -f compose-osk-prebldcon.yaml up -d
```

3. Use this command to check the logs for the prebuilt container.

```
podman container logs --color -fn <pre-build container name>
```

4. Use this command to perform a healthcheck.

```
podman ps -a --filter "name=<pre-build container name>"
```

## Task A-6: Building and Running the Container for Full-tier Deployment (PeopleTools 8.61.03 to 8.61.05)

---

This section discusses:

- Using the DPKs to Install PS\_HOME and the Container Files
- Install PS\_HOME on the Linux VM
- Preparing to Deploy the PeopleSoft Full-tier Container
- Building and Running the PeopleSoft Full-tier Container
- Starting and Stopping the PeopleSoft Full-tier Container
- Removing the PeopleSoft Full-tier Container

### Task A-6-1: Using the DPKs to Install PS\_HOME and the Container Files

Follow these instructions to obtain the DPKs and install PS\_HOME.

1. Obtain the eleven DPKs in Linux format for the PeopleSoft Update Image.  
See "Installing the PeopleSoft Homes," Obtaining the PeopleSoft Application Images and PeopleTools DPKs.
2. Install *PS\_HOME* on the Linux VM, as described in the following section.
3. Locate the containers directory.

The *PS\_HOME*/containers/OraclePeopleTools directory includes text instructions (README.md), shell scripts, and configuration files. You will use these files in the following sections to build and run containers.

The README.md files, which are located in different directories under the OraclePeopleTools directory, cover different phases of the deployment. They may be useful for experts and users who are experienced with containers and PeopleSoft environments.

---

**Note.** You can view README.md and FAQ.md in a text editor. The .md extension refers to the Markdown language used for GitHub documents.

---

This documentation uses < . . > to refer to the location of the OraclePeopleTools directory that holds the container files in your environment. Substitute the correct path when running commands.

### Task A-6-2: Install PS\_HOME on the Linux VM

This procedure assumes you have obtained the DPK zip files for the PeopleSoft Application image and saved them in *DPK\_INSTALL* on the Linux VM

---

**Note.** Normally when a non-root user deploys the PeopleSoft DPKs, the root user must first run a prereq step. However, the prereq step is required for setting up the Oracle central inventory location, which isn't necessary here for the *PS\_HOME* installation.

---

To use the DPK setup script to install *PS\_HOME* only:

1. Extract the first zip file (*FILENAME\_1of4.zip*) in the same directory, *DPK\_INSTALL*.

The extraction creates the *DPK\_INSTALL/setup* directory and other files.

See "Preparing for Installation," Reviewing the PeopleSoft Application Images, for the DPK file name syntax.

2. Open a terminal window and change directory to *DPK\_INSTALL/setup*.
3. Run the script with the options for mid-tier and *PS\_HOME* deployment only.

```
psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type tools_⇒
home
```

4. Answer y (yes) to the following prompt:

```
You are running DPK setup without root/administrator access.
This is fine as long as the system administrator has performed
all necessary tasks and all prerequisites have been met.
Please see the documentation to determine the prerequisite tasks
that need to be performed to successfully run DPK set up
without root/administrator privilege.
Would you like to proceed with the setup as a non-root user? [y/n]: y
```

5. Wait while the script locates the valid PeopleSoft zip files and extracts them.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [ OK ] or [FAILED].

```
Starting the PeopleSoft Environment Setup Process:
Validating User Arguments: [OK]
Validating PeopleSoft Supported Platform: [OK]
```

6. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components.

---

**Note.** When entering the path for the base directory, use forward slashes (/). For example, */cs1/psft*. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter */ds1/psft/*).

---

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory [/opt/oracle⇒
/psft]:
Are you happy with your answer? [Y|n|q]:
```

The script validates if there is enough free space available under the specified base directory for the PeopleSoft environment. The PeopleSoft environment setup is aborted if there is not enough free space.

The script creates the following sub-directories under the user provided base directory, *BASE\_DIR*:

- *BASE\_DIR/db*

This directory is not used for this deployment.

- *BASE\_DIR/dpk*

The script uses this directory to extract the archives from the PeopleSoft DPKs.

- *BASE\_DIR/psft\_puppet\_agent*

The script uses this directory to install Puppet software.

- *BASE\_DIR/pt*

The script uses this directory to deploy PeopleSoft PeopleTools.

7. Review the status messages as the script validates the files found in *DPK\_INSTALL* and extracts the archives from the DPKs.

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

---

**Note.** The messages have been truncated for brevity.

---

```
Validating the PeopleSoft DPKs in the directory:
```

```
[...]
```

```
Extracting the DPK Archives in the VM:
```

```
[...]
```

8. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK\_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
```

```
[OK]
```

```
Installing eYAML Hiera Backend on this host:
```

```
[OK]
```

```
Checking if PeopleSoft DPKs are Present:
```

```
[OK]
```

```
Checking if the Base Directory has Enough Free Space:
```

```
[OK]
```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE\_DIR/dpk*) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the VM:
```

```
Generating eYAML Hiera Backend Encryption Keys:
```

```
[OK]
```

```
Updating the Puppet Hiera YAML Files in the Linux VM:
```

```
[OK]
```

```
Updating the Role in Puppet Site File for the Linux VM:
```

```
[OK]
```

10. Specify the information for your database platform.

- a. For the database platform, enter ORACLE.

```
Enter the PeopleSoft database platform [ORACLE]:
```

- b. Enter y (yes) to indicate that the database you are connecting to is a Unicode database.

---

**Note.** All PeopleSoft Update Image databases are required to be Unicode.

---

```
Is the PeopleSoft database unicode? [Y|n]: y
```

11. Enter y to continue with the script.

```
Are you happy with your answers? [y|n]: y
```

```
Updating the Puppet Hiera YAML Files with User Data:
```

```
[OK]
```

12. Answer y (yes) to the following prompt, and continue with the next step.

The bootstrap script is ready to deploy and configure the PeopleSoft

environment using the default configuration defined in the Puppet Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft\_customizations.yaml' and running the psft\_puppet\_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

### 13. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [ OK ] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying PeopleTools Components: [FAILED]
The initialization of PeopleSoft environment setup failed. Check the
log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors.
After correcting the errors, run the following commands to continue
with the setup of PeopleSoft environment.
```

From the shell, run /opt/oracle/psft/psft\_puppet\_apply.sh

Exiting the PeopleSoft environment setup process.

Upon successful completion, the DPK setup script displays the following message:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying PeopleTools Components: [OK]
Setting up PeopleSoft OS Users Environment: [OK]
```

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file psft\_dpk\_setup.log in the same location as the DPK setup script.

If you are running as a non-root user, the setup.log is written to the file <USER\_HOME>/psft\_dpk\_work/psft\_dpk\_setup\_<PID>.log, where <USER\_HOME> is the home directory for the user running the script, and <PID> is a process ID

## Task A-6-3: Preparing to Deploy the PeopleSoft Full-tier Container

To prepare to deploy the PeopleSoft application image in full-tier mode:

1. Review the instructions in *PS\_HOME*/containers/OraclePeopleTools/README.md.
2. Copy the eleven PeopleSoft application image DPKs into *PS\_HOME*/containers/OraclePeopleTools/in/pt.

Don't unzip the files. The command `cp -a` retains the file attributes, such as the timestamp, during the copy operation. Substitute the *PS\_HOME* location for <..>.

```
cp -a "<DPK zipfiles>" "<..>/OraclePeopleTools/in/pt"
```



3. Open `PS_HOME/containers/OraclePeopleTools/in/pt/install.rsp` for editing.

The `install.rsp` file is the silent installation response file. This file is called by the silent installation command, which is contained in `install.file` in the same `./in/pt` directory.

This sample includes the required parameters. Supply the remaining values, such as the database name, users, and passwords. Use the response file sample in this documentation and modify it for your requirements.

See "Deploying the PeopleSoft Application Deployment Packages in Silent Mode," Reviewing the Response File Sample for Full-tier Installation.

---

**Note.** Remove the completed `install.rsp` file after the container is up and running and save it outside of the container. The file is not stored anywhere in the container.

---

```
env_type=fulltier
install_type=FRESH
db_type=SYS
psft_base_dir="/opt/oracle/psft_silent"
user_home_dir="/home/psftuser"
user_config_home_dir="/home/psftuser/pscfg_pt861_silent"
db_service_name=
db_name=
db_is_ml=
db_listener_port=1521
db_host=
connect_id=
connect_pwd=
opr_id=PS
opr_pwd=
admin_pwd=
access_id=
access_pwd=
weblogic_admin_pwd=
webprofile_user_id=
webprofile_user_pwd=
domain_conn_pwd=
gw_user_id=
gw_user_pwd=
gw_keystore_pwd=
```

4. Review the installation command in `PS_HOME/containers/OraclePeopleTools/in/pt/install.file`, but do not make any changes.

The command deploys the PeopleSoft application image in silent installation mode with a customization file.

```
psft-dpk-setup.sh --silent --response_file=/in/pt/install.rsp -->
customization_file=/in/pt/psft_customizations.yaml
```

5. Review the information in `PS_HOME/containers/OraclePeopleTools/in/pt/psft_customizations.yaml`.

The `psft_customizations.yaml` file includes the only DPK customizations that are supported for containers.

```
setup_share is not supported in containers
setup_share: false

setup_sysctl is not supported in containers
setup_sysctl: false
```

```
#
pia_host_name: "<Container host FQDN>"
pia_psserver_list: "<Container hostname or container_name>:9033"
```

- Update <Container host FQDN> with the fully qualified domain name for the web server (PIA) host.
- Update <Container hostname or container\_name>:9033 with the hostname from docker-compose-pum.yaml. For example, if the container host name is ft.oraclevcn.com, enter **ft.oraclevcn.com:9033**.
- Do not change the **setup\_share** and **setup\_sysctl** parameters.

The parameter **setup\_sysctl: false** specifies that the DPK setup will not overwrite Linux system parameters. The parameter **setup\_share: false** specifies that the DPK setup does not create a share for access to the Linux VM.

6. Open *PS\_HOME*/containers/OraclePeopleTools/docker-compose-pum.yaml for editing.

```
version: 1
services:
 ft:
 image: oracle/peopletools/pum:861app
 build:
 context: ./dockerfiles/pt
 dockerfile: Dockerfile
 format: docker
 hostname: ft.oraclevcn.com
 container_name: ft.oraclevcn.com
 network: net
 tty: true
 ports:
 - "1521:1521"
 - "5500:5500"
 - "${PORT_RMT_ADMIN:-10100}:10100"
 - "${PORT_RMT_ADMIN_RMI:-10101}:10101"
 - "${PORT_WSL:-7000}:7000"
 - "${PORT_WSL_SSL:-7010}:7010"
 - "${PORT_PIA:-8000}:8000"
 - "${PORT_PIA_SSL:-8001}:8001"
 volumes:
 - /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro

networks:
 net:
 name: ps-net
 driver: bridge
```

- For image enter the type of environment and release, such as **peopletools:861**.
- The default hostname is **ft.oraclevcn.com**, where **.oraclevcn.com** is the Auth Token Domain.

If your domain URL is **portal.corp.com**, enter **ft.corp.com** for the hostname and **container\_name**. The hostname must not contain any underscore ("\_").

- Verify that the volumes path is correct for your environment.

The syntax for the volumes definition is **<directory\_on\_host>:<directory\_in\_container>:<options>**. The default path, **/scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro**, assumes that you accepted the default path **/scratch/docker-images/OraclePeopleTools**. This will map to **in/pt** in the container, and the

volume will be read-only (ro). If you used a different location, update the path accordingly.

- Ensure that the ports listed are not in use.

PORT\_PIA and PORT\_PIA\_SSL refer to the ports to access the PIA URL. PORT\_WSL and PORT\_WSL\_SSL refer to the workstation listener ports. PORT\_RMT\_ADMIN and PORT\_RMT\_ADMIN\_RMI refer to Remote Administration ports for JMX agents.

Each container must use different ports. The syntax of the port definition is *<port on host>:<port on container>*. To override the default port mapping, define a PORT\_\* environment variable, which will be used by the docker-compose-pum.yaml file. For example, to change the default PORT\_PIA to 9980 use this command:

```
export PORT_PIA=9980
```

Then the line `${PORT_PIA} : 8000` will be translated as `9980 : 8000`. With this definition, when you use the PIA URL `http://server.example.com:8000/ps/signon.html`, the Linux host VM reads it as `http://server.example.com:9980/ps/signon.html`.

---

**Note.** "MY\_VAR=\${NEW\_VAR:-DefaultValue}" is a BASH shell syntax to override a default value and assign a new value to MY\_VAR.

---

## Task A-6-4: Building and Running the PeopleSoft Full-tier Container

To build and run the container:

1. Change directory to *PS\_HOME*/containers.

```
cd PS_HOME/containers
```

2. Run this command:

```
podman-compose -f docker-compose-pum.yaml up -d --build --no-cache
```

3. If you want to build and run with logging, enter this command on a single line:

```
podman-compose -f docker-compose-pum.yaml up -d --build --no-cache ;>
podman logs -fnl
```

---

**Note.** To exit the command, enter CTRL+Z.

---

4. To view the container logs, enter this command.

```
podman container logs --color -fn <container-name>
```

5. To log in to the container:

```
podman exec -ti <container-name> su - psadm2
```

6. To view the DPK logs, log in to <container-name>.

If the deployment was successful, the logs will be in `/ps/psft_dpk_setup.log`.

If the deployment failed, the logs will be in `/in/pttmp/setup/psft_dpk_setup.log`.

The container is up and running when it shows the following message in the container logs:

```
=====
PEOPLETOOLS IS READY TO USE!
=====
```

Use these commands to view and copy the DPKs logs to the current location on the Linux VM:

```
podman exec -ti <container-name> vi /in/pttmp/setup/psft_dpk_setup.log

podman cp -a <container-name>:/in/pttmp/setup/psft_dpk_setup.log
```

7. To view the PIA URL for the container, use this command:

```
echo "http://$(hostname -f):${PORT_PIA:-8000}"
```

For example, `http://<Container Host FQDN>:8000`, or `http://myserver.example.com:8000`.

In case the deployment results in errors, you can find information on error messages associated with the PeopleSoft containers in *PS\_HOME*/containers/OraclePeopleTools/FAQ.md.

---

**Note.** Instructions are not given for creating a prebuilt container image for PeopleSoft Update Image containers because there may be issues with the size and other limitations. Depending upon the PeopleSoft application, a prebuilt container image may require up to 100 GB disk space.

---

## Task A-6-5: Starting and Stopping the PeopleSoft Full-tier Container

Use this command to stop the container. This command gracefully shuts down all PeopleTools domains, followed by the Oracle Database instance, and then exits the container.

```
podman stop <container-name> -t<time in secs>
```

To view logs for the shutdown simultaneously, open a new terminal and enter this command:

```
podman logs -fn <container-name>
```

Use this command to start the container. This command starts the Oracle Database instance, followed by starting all PeopleTools domains.

```
podman start <container-name>
```

Use this command to start the container and view the logs:

```
podman start <container-name> ; podman logs -fnl
```

To view logs simultaneously, open a new terminal and enter this command.

```
podman logs -fn <container-name>
```

## Task A-6-6: Removing the PeopleSoft Full-tier Container

Use this command to stop and remove the container. This command gracefully shuts down all PeopleTools domains, followed by the Oracle Database instance, and then exits the container. Specify the number of seconds to allow for the domains to shut down in `<time in secs>`. Allow more time for the PeopleSoft Update Image container than you would for the mid-tier or search container.

```
podman-compose down -t<time in secs>
```

Alternatively, use these commands to stop and remove the container.

```
podman-compose stop <container-name> -t<time in secs>
```

```
podman-compose rm <container-name>
```

To view logs simultaneously, open a new terminal and enter this command.

```
podman-compose -f <../OraclePeopleTools/docker-compose-pum.yaml> down -->
t<time in secs>
```

## Task A-7: Building and Running the Container for Full-tier Deployment (PeopleTools 8.61.06 and Later)

---

This section discusses:

- Using the DPKs to Install PS\_HOME and the Container Files
- Install PS\_HOME on the Linux VM
- Preparing to Deploy the PeopleSoft Full-tier Container
- Building and Running the PeopleSoft Full-tier Container
- Starting and Stopping the PeopleSoft Full-tier Container
- Removing the PeopleSoft Full-tier Container

### Task A-7-1: Using the DPKs to Install PS\_HOME and the Container Files

Follow these instructions to obtain the DPKs and install PS\_HOME.

1. Obtain the eleven DPKs in Linux format for the PeopleSoft Update Image.  
See "Installing the PeopleSoft Homes," Obtaining the PeopleSoft Application Images and PeopleTools DPKs.
2. Install PS\_HOME on the Linux VM, as described in the following section.
3. Locate the containers directory.

The PS\_HOME/containers/OraclePeopleTools directory includes text instructions (README.md), shell scripts, and configuration files. You will use these files in the following sections to build and run containers.

The README.md files, which are located in different directories under the OraclePeopleTools directory, cover different phases of the deployment. They may be useful for experts and users who are experienced with containers and PeopleSoft environments.

---

**Note.** You can view README.md and FAQ.md in a text editor. The .md extension refers to the Markdown language used for GitHub documents.

---

This documentation uses < . . > to refer to the location of the OraclePeopleTools directory that holds the container files in your environment. Substitute the correct path when running commands.

### Task A-7-2: Install PS\_HOME on the Linux VM

This procedure assumes you have obtained the DPK zip files for the PeopleSoft Application image and saved them in DPK\_INSTALL on the Linux VM

---

**Note.** Normally when a non-root user deploys the PeopleSoft DPKs, the root user must first run a prereq step. However, the prereq step is required for setting up the Oracle central inventory location, which isn't necessary here for the PS\_HOME installation.

---

To use the DPK setup script to install PS\_HOME only:

1. Extract the first zip file (FILENAME\_1of4.zip) in the same directory, DPK\_INSTALL.

The extraction creates the *DPK\_INSTALL/setup* directory and other files.

See "Preparing for Installation," Reviewing the PeopleSoft Application Images, for the DPK file name syntax.

2. Open a terminal window and change directory to *DPK\_INSTALL/setup*.
3. Run the script with the options for mid-tier and *PS\_HOME* deployment only.

```
psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type tools_⇒
home
```

4. Answer y (yes) to the following prompt:

```
You are running DPK setup without root/administrator access.
This is fine as long as the system administrator has performed
all necessary tasks and all prerequisites have been met.
Please see the documentation to determine the prerequisite tasks
that need to be performed to successfully run DPK set up
without root/administrator privilege.
Would you like to proceed with the setup as a non-root user? [y/n]: y
```

5. Wait while the script locates the valid PeopleSoft zip files and extracts them.

The system displays messages indicating the steps in the setup process. The success or failure of each step is indicated by [ OK ] or [ FAILED].

```
Starting the PeopleSoft Environment Setup Process:
Validating User Arguments: [OK]
Validating PeopleSoft Supported Platform: [OK]
```

6. At the following prompt, enter the full path to a location that is accessible to the host to be used as the PeopleSoft base directory.

The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components.

---

**Note.** When entering the path for the base directory, use forward slashes (/). For example, /cs1/psft. Do not use a name for the base directory that begins with a number. Do not end the base directory name with a forward slash (for example, do not enter /ds1/psft/).

---

The base directory is used to extract the PeopleSoft DPKs. It is also used to deploy the PeopleSoft components. This directory should be accessible, must have write permission and should have enough free space.

```
Enter the full path for the PeopleSoft Base Directory [/opt/oracle⇒
/psft]:
Are you happy with your answer? [Y|n|q]:
```

The script validates if there is enough free space available under the specified base directory for the PeopleSoft environment. The PeopleSoft environment setup is aborted if there is not enough free space.

The script creates the following sub-directories under the user provided base directory, *BASE\_DIR*:

- *BASE\_DIR/db*  
This directory is not used for this deployment.
- *BASE\_DIR/dpk*  
The script uses this directory to extract the archives from the PeopleSoft DPKs.
- *BASE\_DIR/psft\_puppet\_agent*

The script uses this directory to install Puppet software.

- *BASE\_DIR*/pt

The script uses this directory to deploy PeopleSoft PeopleTools.

7. Review the status messages as the script validates the files found in *DPK\_INSTALL* and extracts the archives from the DPKs.

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

---

**Note.** The messages have been truncated for brevity.

---

```
Validating the PeopleSoft DPKs in the directory:
```

```
[...]
```

```
Extracting the DPK Archives in the VM:
```

```
[...]
```

8. Review the status messages.

The script installs Puppet software, verifies if the DPKs are available in *DPK\_INSTALL*, and checks for available space. It aborts with the message [FAILED] in case of errors.

```
Installing PSFT Relocatable Puppet Software in the base directory:
```

```
[OK]
```

```
Installing eYAML Hiera Backend on this host: [OK]
```

```
Checking if PeopleSoft DPKs are Present: [OK]
```

```
Checking if the Base Directory has Enough Free Space: [OK]
```

9. Review the status messages as the script sets up the Puppet file system.

The script sets up Puppet on the host. It then copies the PeopleSoft Puppet modules to the standard location (*BASE\_DIR*/dpk) and updates the YAML files to reflect the type of PeopleSoft environment setup.

```
Setting up Puppet on the VM:
```

```
Generating eYAML Hiera Backend Encryption Keys: [OK]
```

```
Updating the Puppet Hiera YAML Files in the Linux VM: [OK]
```

```
Updating the Role in Puppet Site File for the Linux VM: [OK]
```

10. Specify the information for your database platform.

- a. For the database platform, enter ORACLE.

```
Enter the PeopleSoft database platform [ORACLE]:
```

- b. Enter y (yes) to indicate that the database you are connecting to is a Unicode database.

---

**Note.** All PeopleSoft Update Image databases are required to be Unicode.

---

```
Is the PeopleSoft database unicode? [Y|n]: y
```

11. Enter y to continue with the script.

```
Are you happy with your answers? [y|n]: y
```

```
Updating the Puppet Hiera YAML Files with User Data: [OK]
```

12. Answer y (yes) to the following prompt, and continue with the next step.

The bootstrap script is ready to deploy and configure the PeopleSoft environment using the default configuration defined in the Puppet

Hiera YAML files. You can proceed by answering 'y' at the following prompt. And, if you want to customize the environment by overriding the default configuration, you can answer 'n'. If you answer 'n', you should follow the instructions in the PeopleSoft Installation Guide for creating the Hiera YAML file 'psft\_customizations.yaml' and running the psft\_puppet\_apply script to continue with the setup of the PeopleSoft environment.

Do you want to continue with the default initialization process? [y|n]:

### 13. Review the status messages as the script runs Puppet profiles to set up the PeopleSoft environment.

A message of [ OK ] indicates that the profile has been applied successfully while a message [FAILED] indicates that the profile application failed.

The script stops and exits the first time a profile application fails, and displays an error message. This example shows the error message after the first step failed:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying PeopleTools Components: [FAILED]
The initialization of PeopleSoft environment setup failed. Check the
log file [/opt/DPK_INSTALL/setup/psft_dpk_setup.log] for the errors.
After correcting the errors, run the following commands to continue
with the setup of PeopleSoft environment.
```

From the shell, run /opt/oracle/psft/psft\_puppet\_apply.sh

Exiting the PeopleSoft environment setup process.

Upon successful completion, the DPK setup script displays the following message:

Starting the Default Initialization of PeopleSoft Environment:

```
Deploying PeopleTools Components: [OK]
Setting up PeopleSoft OS Users Environment: [OK]
```

The PeopleSoft Environment Setup Process Ended.

The complete setup log is written to the file psft\_dpk\_setup.log in the same location as the DPK setup script.

If you are running as a non-root user, the setup.log is written to the file <USER\_HOME>/psft\_dpk\_work/psft\_dpk\_setup\_<PID>.log, where <USER\_HOME> is the home directory for the user running the script, and <PID> is a process ID

## Task A-7-3: Preparing to Deploy the PeopleSoft Full-tier Container

To prepare to deploy the PeopleSoft application image in full-tier mode:

1. Review the instructions in *PS\_HOME*/containers/OraclePeopleTools/README.md.
2. Copy the eleven PeopleSoft application image DPKs into *PS\_HOME*/containers/OraclePeopleTools/in/pt.  
Don't unzip the files. The command `cp -a` retains the file attributes, such as the timestamp, during the copy operation. Substitute the *PS\_HOME* location for <..>.  
`cp -a "<DPK zipfiles>" "<..>/OraclePeopleTools/in/pt"`
3. Open *PS\_HOME*/containers/OraclePeopleTools/in/pt/install.rsp for editing.



The `install.rsp` file is the silent installation response file. This file is called by the silent installation command, which is contained in `install.file` in the same `./in/pt` directory.

This sample includes the required parameters. Supply the remaining values, such as the database name, users, and passwords. Use the response file sample in this documentation and modify it for your requirements.

See "Deploying the PeopleSoft Application Deployment Packages in Silent Mode," Reviewing the Response File Sample for Full-tier Installation.

---

**Note.** Remove the completed `install.rsp` file after the container is up and running and save it outside of the container. The file is not stored anywhere in the container.

---

```
env_type=fulltier
install_type=FRESH
db_type=SYS
psft_base_dir="/opt/oracle/psft_silent"
user_home_dir="/home/psftuser"
user_config_home_dir="/home/psftuser/pscfg_pt861_silent"
db_service_name=
db_name=
db_is_ml=
db_listener_port=1521
db_host=
connect_id=
connect_pwd=
opr_id=PS
opr_pwd=
admin_pwd=
access_id=
access_pwd=
weblogic_admin_pwd=
webprofile_user_id=
webprofile_user_pwd=
domain_conn_pwd=
gw_user_id=
gw_user_pwd=
gw_keystore_pwd=
```

4. Review the installation command in `PS_HOME/containers/OraclePeopleTools/in/pt/install.file`, but do not make any changes.

The command deploys the PeopleSoft application image in silent installation mode with a customization file.

```
psft-dpk-setup.sh --silent --response_file=/in/pt/install.rsp -->
customization_file=/in/pt/psft_customizations.yaml
```

5. Review the information in `PS_HOME/containers/OraclePeopleTools/in/pt/psft_customizations.yaml`.

The `psft_customizations.yaml` file includes the only DPK customizations that are supported for containers.

```
setup_share is not supported in containers
setup_share: false

setup_sysctl is not supported in containers
setup_sysctl: false

#
```

```
pia_host_name: "<Container host FQDN>"
pia_psserver_list: "<Container hostname or container_name>:9033"
```

- Update <Container host FQDN> with the fully qualified domain name for the web server (PIA) host.
- Update <Container hostname or container\_name>:9033 with the hostname from compose-pum.yaml. For example, if the container host name is ft.oraclevcn.com, enter ft.oraclevcn.com:9033.
- Do not change the setup\_share and setup\_sysctl parameters.

The parameter `setup_sysctl: false` specifies that the DPK setup will not overwrite Linux system parameters. The parameter `setup_share: false` specifies that the DPK setup does not create a share for access to the Linux VM.

6. Open `PS_HOME/containers/OraclePeopleTools/compose-pum.yaml` for editing.

```
version: 1
services:
 ft:
 image: oracle/peopletools/pum:861app
 build:
 context: ./dockerfiles/pt
 dockerfile: Dockerfile
 format: docker
 hostname: ft.oraclevcn.com
 container_name: ft.oraclevcn.com
 network: net
 tty: true
 ports:
 - "1521:1521"
 - "5500:5500"
 - "${PORT_RMT_ADMIN:-10100}:10100"
 - "${PORT_RMT_ADMIN_RMI:-10101}:10101"
 - "${PORT_WSL:-7000}:7000"
 - "${PORT_WSL_SSL:-7010}:7010"
 - "${PORT_PIA:-8000}:8000"
 - "${PORT_PIA_SSL:-8001}:8001"
 volumes:
 - /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro

networks:
 net:
 name: ps-net
 driver: bridge
```

- For image enter the type of environment and release, such as peopletools:861.
- The default hostname is ft.oraclevcn.com, where .oraclevcn.com is the Auth Token Domain.

If your domain URL is portal.corp.com, enter ft.corp.com for the hostname and container\_name. The hostname must not contain any underscore ("\_").

- Verify that the volumes path is correct for your environment.

The syntax for the volumes definition is <directory\_on\_host>:<directory\_in\_container>:<options>. The default path, /scratch/docker-images/OraclePeopleTools/in/pt:/in/pt:ro, assumes that you accepted the default path /scratch/docker-images/OraclePeopleTools. This will map to in/pt in the container, and the volume will be read-only (ro). If you used a different location, update the path accordingly.

- Ensure that the ports listed are not in use.

PORT\_PIA and PORT\_PIA\_SSL refer to the ports to access the PIA URL. PORT\_WSL and PORT\_WSL\_SSL refer to the workstation listener ports. PORT\_RMT\_ADMIN and PORT\_RMT\_ADMIN\_RMI refer to Remote Administration ports for JMX agents.

Each container must use different ports. The syntax of the port definition is *<port on host>:<port on container>*. To override the default port mapping, define a PORT\_\* environment variable, which will be used by the compose-pum.yaml file. For example, to change the default PORT\_PIA to 9980 use this command:

```
export PORT_PIA=9980
```

Then the line `${PORT_PIA:-8000}:8000` will be translated as `9980:8000`. With this definition, when you use the PIA URL `http://server.example.com:8000/ps/signon.html`, the Linux host VM reads it as `http://server.example.com:9980/ps/signon.html`.

---

**Note.** "MY\_VAR=\${NEW\_VAR:-DefaultValue}" is a BASH shell syntax to override a default value and assign a new value to MY\_VAR.

---

## Task A-7-4: Building and Running the PeopleSoft Full-tier Container

To build and run the container:

1. Change directory to *PS\_HOME*/containers.

```
cd PS_HOME/containers
```

2. Run this command:

```
podman-compose -f compose-pum.yaml up -d --build --no-cache
```

3. If you want to build and run with logging, enter this command on a single line:

```
podman-compose -f compose-pum.yaml up -d --build --no-cache ; podman⇒
logs -fnl
```

---

**Note.** To exit the command, enter CTRL+Z.

---

4. To view the container logs, enter this command.

```
podman container logs --color -fn <container-name>
```

5. To log in to the container:

```
podman exec -ti <container-name> su - psadm2
```

6. To view the DPK logs, log in to <container-name>.

If the deployment was successful, the logs will be in `/ps/psft_dpk_setup.log`.

If the deployment failed, the logs will be in `/in/tmp/setup/psft_dpk_setup.log`.

The container is up and running when it shows the following message in the container logs:

```
=====
PEOPLETOOLS IS READY TO USE!
=====
```

Use these commands to view and copy the DPKs logs to the current location on the Linux VM:

```
podman exec -ti <container-name> vi /in/tmp/setup/psft_dpk_setup.log
```

```
podman cp -a <container-name>:/in/tmp/setup/psft_dpk_setup.log
```

7. To view the PIA URL for the container, use this command:

```
echo "http://$(hostname -f):${PORT_PIA:-8000}"
```

For example, `http://<Container Host FQDN>:8000`, or `http://myserver.example.com:8000`.

In case the deployment results in errors, you can find information on error messages associated with the PeopleSoft containers in *PS\_HOME*/containers/OraclePeopleTools/FAQ.md.

---

**Note.** Instructions are not given for creating a prebuilt container image for PeopleSoft Update Image containers because there may be issues with the size and other limitations. Depending upon the PeopleSoft application, a prebuilt container image may require up to 100 GB disk space.

---

## Task A-7-5: Starting and Stopping the PeopleSoft Full-tier Container

Use this command to stop the container. This command gracefully shuts down all PeopleTools domains, followed by the Oracle Database instance, and then exits the container.

```
podman stop <container-name> -t<time in secs>
```

To view logs for the shutdown simultaneously, open a new terminal and enter this command:

```
podman logs -fn <container-name>
```

Use this command to start the container. This command starts the Oracle Database instance, followed by starting all PeopleTools domains.

```
podman start <container-name>
```

Use this command to start the container and view the logs:

```
podman start <container-name> ; podman logs -fnl
```

To view logs simultaneously, open a new terminal and enter this command.

```
podman logs -fn <container-name>
```

## Task A-7-6: Removing the PeopleSoft Full-tier Container

Use this command to stop and remove the container. This command gracefully shuts down all PeopleTools domains, followed by the Oracle Database instance, and then exits the container. Specify the number of seconds to allow for the domains to shut down in `<time in secs>`. Allow more time for the PeopleSoft Update Image container than you would for the mid-tier or search container.

```
podman-compose down -t<time in secs>
```

Alternatively, use these commands to stop and remove the container.

```
podman-compose stop <container-name> -t<time in secs>
```

```
podman-compose rm <container-name>
```

To view logs simultaneously, open a new terminal and enter this command.

```
podman-compose -f <../OraclePeopleTools/compose-pum.yaml> down -t<time in secs>
```

## Task A-8: Working With PeopleSoft Containers

---

After the container is up and running, you can connect to the PeopleSoft environment in the container from a Microsoft Windows-based PeopleTools Client to use utilities such as Change Assistant. Use the IP address for the Linux VM, the port numbers from the setup YAML file, and the user IDs and passwords from the silent response file for the connection.

Use these commands to review and maintain the containers. These are examples of commands to perform actions without logging into the container.

- To perform a health check on the container:  

```
podman ps -a --filter "name=<container-name>"
```

```
podman healthcheck run <container-name>
```
- To list all of the port mappings in use in the container:  

```
podman port -a
```
- To display the Podman disk usage:  

```
podman system df -v
```
- To display the container configuration and status:  

```
podman ps -a
```
- To log in to the container as the psadm2 user, which is one of the default Linux users that is created by the DPK setup script.  

```
podman exec -ti <container-name> su - psadm2
```
- To view the PeopleSoft PIA URL:  

```
echo "http://$(hostname -f):${PORT_PIA:-8000}"
```
- To view the peopletools.properties file:  

```
podman exec -ti <container-name> su - psadm2 -c 'cat ${PS_HOME}⇒
/peopletools.properties'
```
- To view the PeopleTools release:  

```
podman exec -ti <container-name> su - psadm2 -c 'psreleaseinfo'
```
- To view the location of *PS\_HOME*:  

```
podman exec -ti <container-name> su - psadm2 -c 'echo $PS_HOME'
```
- To run the PSADMIN utility:  

```
podman exec -ti <container-name> su - psadm2 -c 'psadmin'
```
- To run Data Mover on the command line:  

```
podman exec -ti <container-name> su - psadm2 -c 'psdmtx'
```
- To run Application Designer on the command line:  

```
podman exec -ti <container-name> su - psadm2 -c 'psidex'
```

- To run Application Engine:

```
podman exec -ti <container-name> su - psadm2 -c 'psae'
```

- To view the tnsnames.ora file, used for connectivity to the Oracle Database:

```
podman exec -ti <container-name> su - psadm2 -c 'cat ${TNS_ADMIN}⇒
/tnsnames.ora'
```

- To connect to the database with sqlplus (enter the user and password):

```
podman exec -ti <container-name> su - psadm2 -c 'sqlplus <user>⇒
/<password>@<dbname>
```

- To run the Automated Configuration Management (ACM) script:

```
podman exec -ti <container-name> su - psadm2 -c '$PS_HOME/utility/psrun⇒
ACM.sh'
```

- To run the top command to list the psadm2 processes.

```
podman exec -ti <container-name> su - psadm2 -c 'top'
```

## Appendix B

# Describing Debugger Requirements

This appendix discusses:

- Describing Debugger Requirements for the AIX Operating System
- Describing Debugger Requirements for the HP-UX Operating System
- Describing Debugger Requirements for the Linux Operating System
- Describing Debugger Requirements for the Oracle Solaris Operating System

## Describing Debugger Requirements for the AIX Operating System

If you are installing on an AIX platform, download and install the latest gdb RPM from IBM's website, and install it.

## Describing Debugger Requirements for the HP-UX Operating System

If you are installing on an HP-UX platform, download and install the latest wdb from <http://www.hp.com/go/wdb>.

## Describing Debugger Requirements for the Linux Operating System

If you are installing on a Linux platform, install the "glibc-debuginfo" RPM package.

There should be one "glibc-debuginfo" package for each installed "glibc" package and the version numbers must match exactly. Use the following commands to determine the packages installed:

- To see the installed "glibc" versions, run:

```
rpm -q --queryformat "%{NAME}-%{VERSION}-%{RELEASE}-%{ARCH}\n" glibc
```

For example, running this command on an Intel-based Linux system should produce output similar to this:

```
glibc-2.5-24-i686
glibc-2.5-24-x86_64
```

Running this command on a zSeries Linux system should produce output similar to this:

```
glibc-2.4-31.2-s390x
```

- To see the installed "glibc-debuginfo" packages, run:

```
rpm -q --queryformat "%{NAME}-%{VERSION}-%{RELEASE}-%{ARCH}\n" glibc-⇒
debuginfo
```

Make sure that the "glibc-debuginfo" RPM version is exactly the same as the "glibc" version.

## Describing Debugger Requirements for the Oracle Solaris Operating System

---

If you are installing on an Oracle Solaris platform, install dbx. No compiler license of any kind is needed for this. Download the latest Sun Studio, and on the Select Components page of the installer, expand the Compilers and Tools component and deselect all of the subcomponents except dbx. Also deselect the Performance Library and Third-Party Tools components. The installer will install the dbx subcomponent and the Support files subcomponent. The Support files subcomponent includes packages on which dbx depends. After you complete the installation, add the full path to dbx to your PATH environment variable.



## Appendix C

# Encrypting Passwords for Customization Files

This appendix discusses:

- Encrypting Passwords for Customization Files on Linux, AIX, or Solaris
- Encrypting Passwords for Customization Files on Microsoft Windows

## Task C-1: Encrypting Passwords for Customization Files on Linux, AIX, or Solaris

---

This section describes how to produce an encrypted version of a clear text password and include it in the `psft_customizations.yaml` file for a customized deployment for non-default users and groups on Linux, AIX, or Solaris. This section applies to installations with the Native OS for Linux, AIX, or Solaris DPKs.

---

**Note.** You can skip this section if you are creating `psft_customizations.yaml` files for silent mode installations. Use clear text passwords with silent mode installations.

---

In general, when you run the DPK setup script, you supply several user IDs and passwords, such as the Connect ID password and operator ID password. The script encrypts the passwords that you supply and includes them in the generated YAML files in `BASE_DIR/dpk/puppet/production/data`. When you create a `psft_customizations.yaml` file, you can copy these encrypted passwords from the generated YAML files and include them in the `psft_customizations.yaml` file. However, the passwords for the Linux, AIX, or Solaris users are not prompted for, and therefore the encrypted passwords are not available in any of the generated YAML files.

Note that the successful use of the encrypted password depends on the presence of the public and private keys in the `BASE_DIR/dpk/puppet` directory referred to in the `eyaml encrypt` command. You cannot save an encrypted password and use it with a deployment with a different `BASE_DIR`.

This procedure assumes that you have carried out the first portion of a customized deployment, and stopped at the question "Do you want to continue with the default initialization?"

See "Completing the DPK Initialization with Customizations," Preparing the Customization Files for Linux, AIX, or Solaris Users and Groups.

To encrypt a password:

1. Run this command to source the `pspuppet.sh` script, which sets necessary environment variables (the command begins with a period followed by a space):  

```
. BASE_DIR/psft_puppet_agent/pspuppet.sh
```

See "Completing the DPK Initialization with Customizations," Understanding the PeopleSoft Environment Customizations.

2. Open the `BASE_DIR/dpk/puppet/hiera.yaml` file and note the full path to the public and private keys:

```
:pkcs7_private_key: BASE_DIR/dpk/puppet/secure/keys/private_→
key.pkcs7.pem
:pkcs7_public_key: BASE_DIR/dpk/puppet/secure/keys/public_key.pkcs7.pem
```

3. Run the following command in a terminal window, supplying the paths from the previous step:

```
<BASE_DIR>/psft_puppet_agent/bin/eyaml encrypt -s "<clear_password>" --→
pkcs7-private-key=<private_key_full_path>/<key_name> --pkcs7-public-→
key=<public_key_full_path>/<key_name> --output=string
```

---

**Note.** The double-quotes around the password are required. Be sure to use the correct punctuation for the command. Note that the command uses different punctuation for the keys than the hiera.yaml file.

---



---

**Note.** If your password includes an exclamation mark (!) you must enclose the entire password in double quotes surrounded by single quotes. For example, '"passw!ord" '.

---

Example for Linux:

```
BASE_DIR/psft_puppet_agent/bin/eyaml encrypt -s "password" --pkcs7-→
private-key=/cs1/psft/dpk/puppet/secure/keys/private_key.pkcs7.pem --→
pkcs7-public-key=/cs1/psft/dpk/puppet/secure/keys/public_key.pkcs7.pem→
--output=string
```

Example for AIX or Solaris:

```
BASE_DIR/psft_puppet_agent/bin/eyaml encrypt -s "password" --pkcs7-→
private-key=/cs1/psft/dpk/puppet/secure/keys/private_key.pkcs7.pem --→
pkcs7-public-key=/cs1/psft/dpk/puppet/secure/keys/public_key.pkcs7.pem→
--output=string
```

4. Copy the encrypted password from the output in the terminal window.

The encrypted text will be a long single line of letters and numbers. Be sure to copy the text in one unbroken line, with no spaces or line feeds. Here is a truncated representation of an encrypted password:

```
ENC[PKCS7,MIIBeQYJKoZIhvc.....]
```

5. Paste the encrypted password in the psft\_customizations.yaml file, replacing the text password.

Again, the encrypted text must be a single line. Also, be sure to retain the indentation in the psft\_customizations.yaml file. This is a sample psft\_customizations.yaml for a new single user and existing single group:

```

psft_runtime_user_name: newusr3

users:
 psft_user:
 name: newusr3
 gid: 35000
 home_dir: /dpk_base/home/userhome
 password: ENC[PKCS7,MIIBeQYJKoZIhvc.....]
 remove: false
```

6. Use the psft\_customizations.yaml file for deployment with the psft\_puppet\_apply script.

The DPK deployment will automatically decrypt the password from the `psft_customizations.yaml` and use it for deployment.

## Task C-2: Encrypting Passwords for Customization Files on Microsoft Windows

---

This section describes how to produce an encrypted version of a clear text password and include it in the `psft_customizations.yaml` file for a customized deployment on Microsoft Windows. This section applies to installations with the Native OS for Windows DPKs.

**Note.** You can skip this section if you are creating `psft_customizations.yaml` files for silent mode installations. Use clear text passwords with silent mode installations.

---

In general, when you run the DPK setup script, you supply several user IDs and passwords, such as the Connect ID password and operator ID password. The script encrypts the passwords that you supply and includes them in the generated YAML files in `BASE_DIR/dpk/puppet/production/data`. When you create a `psft_customizations.yaml` file, you can copy these encrypted passwords from the generated YAML files and include them in the `psft_customizations.yaml` file. If you need to encrypt a different password, you can use this procedure.

Note that the successful use of the encrypted password depends on the presence of the public and private keys in the `BASE_DIR/dpk/puppet` directory referred to in the `eyaml encrypt` command. You cannot save an encrypted password and use it with a deployment with a different `BASE_DIR`.

This procedure assumes that you have carried out the first portion of a customized deployment, and stopped at the question "Do you want to continue with the default initialization?"

See "Completing the DPK Initialization with Customizations."

To encrypt a password:

1. Open the `BASE_DIR\dpk\puppet\hiera.yaml` file and note the full path to the public and private keys:

```
:pkcs7_private_key: BASE_DIR\dpk\puppet\secure\keys\private_
key.pkcs7.pem
:pkcs7_public_key: BASE_DIR\dpk\puppet\secure\keys\public_key.pkcs7.pem
```

2. Open a command prompt and run the following command, supplying the full paths from the previous step.

Enter the command on a single line.

```
<BASE_DIR>\psft_puppet_agent\bin\eyaml encrypt -s "<clear_password>" -->
pkcs7-private-key=<private_key_full_path>\<key_name> --pkcs7-public->
key=<public_key_full_path>\<key_name> --output=string
```

**Note.** The double-quotes around the password are required. Be sure to use the correct punctuation for the command. Note that the command uses different punctuation for the keys than the `hiera.yaml` file.

---

**Note.** If your password includes an exclamation mark (!) you must enclose the entire password in double quotes surrounded by single quotes. For example, '"passw!ord" '.

---

For example:

```
C:\psft\psft_puppet_agent\bin\eyaml encrypt -s "password" --pkcs7->
private-key=C:\psft\dpk\puppet\secure\keys\private_key.pkcs7.pem -->
```

```
pkcs7-public-key=C:\psft\dpk\puppet\secure\keys\public_key.pkcs7.pem -->
output=string
```

3. Copy the encrypted password from the output in the command prompt window.

The encrypted text will be a long single line of letters and numbers. Be sure to copy the text in one unbroken line, with no spaces or line feeds. Here is a truncated representation of an encrypted password:

```
ENC[PKCS7,MIIBeQYJKoZIhvc.....]
```

4. Paste the encrypted password in the `psft_customizations.yaml` file, replacing the text password.

Again, the encrypted text must be a single line. Also, be sure to retain the indentation in the `psft_customizations.yaml` file. This is a sample `psft_customizations.yaml` with an entry for the connect ID:

```

db_connect_id: people
db_connect_pwd: ENC[PKCS7,MIIBeQYJKoZIhvc.....]
```

5. Use the `psft_customizations.yaml` file for deployment with the `psft_puppet_apply` script.

The DPK deployment will automatically decrypt the password from the `psft_customizations.yaml` and use it for deployment.

## Appendix D

# Relinking SQR on UNIX

This appendix discusses:

- Understanding SQR Relinking
- Relinking SQR on UNIX
- Relinking SQR on Oracle Solaris

## Understanding SQR Relinking

---

PeopleSoft SQR is now linked with Unicode libraries and therefore no longer requires relinking with Unicode libraries. PeopleSoft SQR uses dynamic linking for database connectivity libraries and should not require relinking to support new versions of database connectivity. The exception to this rule is if the PeopleSoft PeopleTools release spans multiple RDBMS versions and the database connectivity changes the names or functionality of required libraries in the new release. In addition, relinking may be required for invoking an external application's APIs using the UFUNC.C interface, as described in the PeopleSoft product documentation.

See *PeopleTools: SQR for PeopleSoft Developers*, "Invoking an External Application API by Using the UFUNC.C Interface."

Based on the timing of our release we built the SQR modules for a specific PeopleSoft release with the lowest supported RDBMS version. For the current PeopleSoft PeopleTools release, the minimum supported Oracle version is Oracle 19c. This means PeopleSoft SQR will work right out of the box on Oracle 19c (no relink required).

## Task D-1: Relinking SQR on UNIX

---

Here's a high-level overview of what you need to do, on a UNIX platform, to relink SQR:

1. Export the following environment variables:
  - SQRDIR, the location of the SQR executable.
  - PS\_HOME, the PeopleSoft home directory.
  - PS\_DB, the platform identifier variable: ORA for Oracle
2. Export the database install home directory: ORACLE\_HOME
3. Add SQRDIR to the library path.

```
export LD_LIBRARY_PATH=$SQRDIR:$LD_LIBRARY_PATH
```

OR

```
export SHLIB_PATH=$SQRDIR:$SHLIB_PATH
```

4. Change directory to <PS\_HOME>/bin/sqr/<PS\_DB>/lib

5. Run sqrmake.

## Task D-2: Relinking SQR on Oracle Solaris

---

The following section is a step-by-step example illustrating how to relink SQR for an Oracle database on the Oracle Solaris platform. These steps will vary depending upon your environment.

This is an sample specific to an Oracle database on the Oracle Solaris operating system. Other operating system/database platform combinations work in a similar fashion, but the specific steps are not provided in this documentation.

To relink SQR on Oracle Solaris:

1. If the psconfig.sh shell script has not been executed, check for SQR environment variables and set them as necessary.

---

**Note.** If your `PS_HOME/psconfig.sh` correctly sets the environment variables described below, you can skip this step.

---

```
env | grep SQRDIR
SQRDIR=
export SQRDIR=/home/PT-SOL/bin/sqr/ORA/bin

env | grep PS_HOME
PS_HOME=
export PS_HOME=/home/PT-SOL

env | grep PS_DB
PS_DB=
export PS_DB=ORA

env | grep ORACLE_HOME
ORACLE_HOME=
export ORACLE_HOME=/products/oracle/11.2.0.4.0-64bit

export SHLIB_PATH=/home/PT-SOL/bin/sqr/ORA/bin:$SHLIB_PATH
```

2. Recheck the SQR env:

```
st-sun06:$ env | grep -i sqr

LD_LIBRARY_PATH=/home/PT-SOL/jre/lib/sparcv9/native_threads:/home/PT-SOL/jre/lib/sparcv9/server:/home/PT-SOL/jre/lib/sparcv9:/lib:/usr/lib:/usr/local/lib:/usr/lib/X11:/tuxedo/prod/12.2.2.0-j12-64bit/lib:/products/oracle/11.2.0.4.0-64bit/lib:/pt/products/solaris-11-sparc/lib:/home/PT-SOL/bin:/home/PT-SOL/bin/interfacedrivers:/home/PT-SOL/bin/sqr/ORA/bin:/home/PT-SOL/optbin:/home/PT-SOL/verity/solaris/_ssol26/bin:/products/oracle/11.2.0.4.0-64bit/lib

PWD=/home/PT-SOL/bin/sqr/ORA/bin

SQRDIR=/home/PT-SOL/bin/sqr/ORA/bin
```

```
SQR_HOME=/home/PT-SOL/bin/sqr/ORA
```

### 3. Relink SQR using sqrmake file.

```
st-sun06:$ sqrmake
```

```
/usr/ccs/bin/ld -o sqr -u __lcH__CimplKcplus_init6F_v_ -s -R/usr/ccs⇒
/lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 crt1.o CCrti.o crt1.o values⇒
xa.o -Y P,/usr/ccs/lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 -L⇒
/products/oracle/11.2.0.4.0-64bit/lib -L/products/oracle/11.2.0.4.0⇒
64bit/rdbms/lib sqr.o rosette.o sqr.a sqrlibsti64.a sqrbcl.a ⇒
sqrzlib.a -L. -lsqrbtunicode /home/PT-SOL/bin/libpdf.so -lclntsh -lc ⇒
/usr/lib/64/libCrun.so.1 /usr/lib/64/libCstd.so.1 -lm -lthread -lc⇒
CCrtn.o crtn.o -lkstat -lnsl -lsocket -lresolv -lggen -ldl -lsched -lrt⇒
-lc -laio -lposix4 -lpool -ladm -lefi
/usr/ccs/bin/ld -o sqrp -u __lcH__CimplKcplus_init6F_v_ -s -R/usr/ccs⇒
/lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 crt1.o CCrti.o crt1.o values⇒
xa.o -Y P,/usr/ccs/lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 -L⇒
/products/oracle/11.2.0.4.0-64bit/lib -L/products/oracle/11.2.0.4.0⇒
64bit/rdbms/lib sqrp.o rosette.o sqrp.a sqrlibsti64.a sqrbcl.a ⇒
sqrzlib.a -L. -lsqrbtunicode /home/PT-SOL/bin/libpdf.so -lc /usr/lib⇒
/64/libCrun.so.1 /usr/lib/64/libCstd.so.1 -lm -lthread -lc CCrtn.o⇒
crtn.o -lkstat -lnsl -lsocket -lresolv -lggen -ldl -lsched -lrt -lc ⇒
laio -lposix4 -lpool -ladm -lefi
/usr/ccs/bin/ld -o sqrt -u __lcH__CimplKcplus_init6F_v_ -s -R/usr/ccs⇒
/lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 crt1.o CCrti.o crt1.o values⇒
xa.o -Y P,/usr/ccs/lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 -L⇒
/products/oracle/11.2.0.4.0-64bit/lib -L/products/oracle/11.2.0.4.0⇒
64bit/rdbms/lib sqrt.o rosette.o sqrt.a sqrlibsti64.a sqrbcl.a ⇒
sqrzlib.a -L. -lsqrbtunicode /home/PT-SOL/bin/libpdf.so -lclntsh -lc ⇒
/usr/lib/64/libCrun.so.1 /usr/lib/64/libCstd.so.1 -lm -lthread -lc⇒
CCrtn.o crtn.o -lkstat -lnsl -lsocket -lresolv -lggen -ldl -lsched -lrt⇒
-lc -laio -lposix4 -lpool -ladm -lefi
cp -i sqr /home/PT-SOL/bin/sqr/ORA/bin/sqr
cp: overwrite /home/PT-SOL/bin/sqr/ORA/bin/sqr (yes/no)? yes
cp -i sqrp /home/PT-SOL/bin/sqr/ORA/bin/sqrp
cp: overwrite /home/PT-SOL/bin/sqr/ORA/bin/sqrp (yes/no)? yes
cp -i sqrt /home/PT-SOL/bin/sqr/ORA/bin/sqrt
cp: overwrite /home/PT-SOL/bin/sqr/ORA/bin/sqrt (yes/no)? yes
chmod ugo+x /home/PT-SOL/bin/sqr/ORA/bin/sqr
chmod ugo+x /home/PT-SOL/bin/sqr/ORA/bin/sqrp
chmod ugo+x /home/PT-SOL/bin/sqr/ORA/bin/sqrt
```

### 4. Validate the relinked SQR executable:

#### a. Once linked, change directory to \$SQRDIR.

```
st-sun06:$ cd $SQRDIR
st-sun06:$ pwd
/home/PT-SOL/bin/sqr/ORA/bin
```

## b. Enter this command:

```
st-sun06:$ sqr -id
```

SQR for PeopleSoft/8.57/Sun/SunOS/Oracle/Apr 17 2017

Use, duplication or disclosure by the Government is subject to⇒  
 restrictions  
 as set forth in subparagraph (c) (1) (ii) of DFARS 52.227-7013 for⇒  
 the DOD  
 and as set forth in FAR 52.227-19 (a) - (d) for civilian⇒  
 agencies.

SQR is a registered trademark.

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 or registered trademarks of their respective companies.

## c. Enter this command:

SQR for PeopleSoft V8.57

SQR for PeopleSoft [program] [username/password] [-flags...] ⇒  
 [pars...] [@file...]

where

```

 program = Report filename
 username = Database username
 password = Database password
 -A = Append to existing output file
 -Bn = Fetch n rows at a time
 -Burst:{xx} = Generate .LIS using specified burst mode (S,T or⇒
P)
 -Dn = Display report while processing, pause every n⇒
lines
 -DEBUGxx = Compile #DEBUG[x] lines
 -DNT:{xx} = Set the default numeric type ⇒
(Decimal,Integer,Float)
 -E[file] = Direct errors to {program}.ERR or specified file
 -EH_BQD[:file] = Create BQD file or set linkage for Enhanced HTML
 -EH_APPLETS:dir = Set applets directory name for Enhanced HTML
 -EH_BROWSER:{xx} = Specify target browser for Enhanced HTML
 -EH_CSV[:file] = Create CSV file or set CSV linkage for Enhanced⇒
HTML
 -EH_CSVONLY = Create CSV file but do not create HTML file
 -EH_ICONS:dir = Set icons directory name for Enhanced HTML
 -EH_IMAGES:dir = Set images directory name for Enhanced HTML
 -EH_KEEP = Copy (not move) files when used with -EH_ZIP
 -EH_FULLHTML:{xx} = Specify the level of the generated Enhanced HTML
 -EH_LANGUAGE:{xx} = Specify language for Enhanced HTML navigation bar
 -EH_PDF = Set PDF linkage for Enhanced HTML
 -EH_SCALE:nn = Set scaling factor for Enhanced HTML
 -EH_XIMG = Do not remove directory path from IMAGE reference

```



```

-EH_XML[:file] = Set XML linkage for Enhanced HTML
-EH_ZIP[:file] = Move files to ZIP container file
-F[dir/file] = Use [dir]{program}.LIS or specified file for⇒
output
-Idir_list = Directory list to be searched for include files
-ID = Display copyright banner
-KEEP = Keep the .SPF file(s) after program run
-LL{s|d}{c|i} = Load-Lookup: S=SQR, D=DB, C=Case Sensitive, I⇒
Insensitive
-Mfile = Maximum sizes declared in file
-NOLIS = Do not generate .LIS file(s) from .SPF file(s)
-O[file] = Direct log messages to console or specified file
-PRINTER:{xx} = Printer mode: EP, EH, HT, LP, HP, PD, or PS
-RS = Save run time file in {program}.sqt
-RT = Use run time file (skip compile)
-S = Display cursor status at end of run
-Tn = Test report for n pages, ignore 'order by's
-XB = Do not display the program banner
-XI = Do not allow user interaction during program run
-XL = Do not logon to database (no SQL in program)
-XLFF = Do not generate trailing report form feed
-XTB = Do not trim blanks from LP .LIS files
-XNAV = Do not put navigation bar into .HTM file
-XTOC = Do not generate Table Of Contents
-ZEN{name} = Set default encoding name
-ZIF[file] = Complete pathname of the initialization file to⇒
use
-ZMF[file] = Complete pathname of the message file to use
 pars = Report parameters for ASK and INPUT commands
 @file = File containing report parameters, one per line

```

5. Change directory (cd) to the actual location of \$PS\_HOME to set the PeopleSoft environment with the correct SQR environment.

```

st-sun06:$. ./psconfig.sh
st-sun06:$

```

6. Test SQR from the UNIX command line, entering the access ID and password for the database <DBNAME>.

---

**Note.** Remember that this example is specifically for Oracle database platforms. The commands for other RDBMS platforms may be different.

---

```

st-sun06:$ sqr $PS_HOME/sqr/xrffwin <ACCESS_ID>/<ACCESS_PSWD>@<DBNAME> -⇒
ZIF$PS_⇒
HOME/sqr/pssqr.unx
SQR for PeopleSoft V8.57
Database Name (Optional, Press ENTER to continue):
Process Instance (Optional, Press ENTER to continue):

SQR for PeopleSoft: End of Run.
st-sun06:$

```

