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PeopleSoft PeopleTools 8.56 DPK Installation and PeopleSoft Database Setup (Oracle)

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(Oracle)

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About This Documentation

This preface discusses:

- Understanding This Documentation
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- 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.

Required updates to this installation documentation are provided in the form of "Required for Install" incidents, which are available on My Oracle Support. In addition, 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 and search for the installation guide for your product and release.

Note. Before proceeding with your installation, check My Oracle Support 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 operating environment and RDBMS and have the necessary skills to support that environment. You should also have a working knowledge of:

- SQL and SQL command syntax.

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

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

See Oracle University, http://education.oracle.com.

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.
Italics	Indicates field values, emphasis, and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example: Enter the letter *O*. Italics are also used to indicate user-supplied information. For example, the term *domain* 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 *<PS_CFG_HOME>/*appserv/*<domain>* 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.
Cross-references	Cross-references that begin with *See* refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation. Cross-references under the heading *See Also* refer you to additional documentation that has more information regarding the subject.

Convention	Description
⇒ (line-continuation arrow)	A line-continuation arrow inserted at the end of a line of code indicates that the line of code has been wrapped at the page margin. The code should be viewed or entered as a continuous line of code, without the line-continuation arrow.
" " (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 *Note.* indicates information that you should pay particular attention to as you work with your PeopleSoft system.
Important! Important note text.	A note that begins with *Important!* is crucial and includes information about what you need to do for the system to function properly.
Warning! Warning text.	A note that begins with *Warning!* contains 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® BPEL Process Manager
- 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, http://www.oracle.com/us/products/product-list/products-a-z/index.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 Hosted Documentation site. You can also find documentation by searching for the product name on My Oracle Support.

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

  To locate documentation on My Oracle Support, search for the title and select PeopleSoft Enterprise to refine the search results.

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

- *PeopleTools: Getting Started with PeopleTools* for your release. This documentation provides a high-level introduction to PeopleTools technology and usage.

  See Oracle PeopleSoft Online Help, http://www.peoplesoftonlinehelp.com.

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

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 Also

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 Application Database Setup Using PeopleTools DPKs
- Reviewing Software Requirements
- Planning Your Initial Configuration
- Planning Database Creation
- Installing Supporting Applications
- 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 Application Database Setup Using PeopleTools DPKs

It is possible to use the PeopleTools 8.56 DPKs in combination with PeopleSoft application software delivered in the traditional, non-DPK format (often referred to as VCD format) to install a PeopleSoft environment. This assumes that the PeopleSoft application was built on a PeopleTools release prior to PeopleTools 8.56, and therefore was not delivered in the DPK format.

This process includes the following high-level steps:

1. Download the PeopleSoft PeopleTools 8.56 DPKs.

2. Use the DPK setup script from the PeopleSoft PeopleTools 8.56 DPKs to carry out one of these steps:

   - Install the PeopleSoft PeopleTools 8.56 *PS_HOME,* which includes the PeopleTools setup and development utilities.

   - Install the PeopleSoft PeopleTools 8.56 *PS_HOME,* Oracle Tuxedo, and Oracle WebLogic.

     Note. If you want to use the Database Configuration Wizard to create your PeopleSoft application database in the next step, you need to install Oracle Tuxedo first.

3. Install *PS_APP_HOME* using the PeopleSoft installer to obtain the PeopleSoft application-specific database and other files.

4. Create a PeopleSoft application database using scripts and tools from the PeopleSoft PeopleTools 8.56 *PS_HOME.*

5. Update the database to PeopleSoft PeopleTools 8.56.

6. Use the DPK setup script to install the application server, Process Scheduler, and web server software (mid-tier components) and set up the domains.

Task 1-1: Reviewing Software Requirements

This section discusses:

- Reviewing Software Requirements on Microsoft Windows
- Reviewing Software Requirements on Linux or UNIX
- Reviewing Software Requirements on AIX
- Reviewing Requirements for the Puppet Software

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

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

- Administrative permission
- Web Browser

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

  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`

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

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

- You must have root access to install the PeopleSoft DPKs.
- If you are installing the PeopleSoft DPKs on Oracle Linux 6 or 7 with Unbreakable Enterprise Kernel (UEK), apply the latest UEK kernel from the Oracle YUM repository at http://public-yum.oracle.com/index.html.
- Zip utility

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

  - For AIX, gunzip or unzip
  - For Linux, tar or unzip
  - For Solaris, tar or unzip
- OpenSSL

  For deployments on AIX and Solaris, obtain the latest version of OpenSSL for your operating system and install it on the host.

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

If you are installing the AIX version of the PeopleSoft DPKs, you must manually install JDK 8.0 from the IBM web site. This requirement is in addition to the requirements for Linux and UNIX.

To obtain 64-bit IBM JDK for IBM AIX:

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

   http://www.ibm.com/developerworks/java/jdk/aix/service.html

   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 the link for Java 8 64-bit under Java SE Version 8.

3. Provide the required information to sign in.

4. Install the JDK on the AIX computer where you will install the PeopleSoft AIX DPK.

5. Make a note of the installation location.

   To perform the 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 Component Software Locations.

Task 1-1-4: Reviewing Requirements for the Puppet Software

The PeopleSoft DPKs are delivered with the PeopleSoft Puppet modules, which are initialization and management scripts based upon open-source Puppet software. In most cases, the Puppet software will be installed by the DPK deployment. In some scenarios you may be required to install either Puppet or its dependencies.

- Installation requirements

  In most cases, the Puppet software will be installed by the DPKs. In some scenarios it may be necessary for you to install it directly. If so, use these guidelines:

  - The DPK deployment requires open-source Puppet software.

    See the Puppet Labs Web site at www.puppetlabs.com to download the software.

  - Customer installation of Puppet is supported only for Linux and Microsoft Windows operating systems.

    If you are installing the PeopleSoft DPKs for IBM AIX or Oracle Solaris for SPARC, you must use the Puppet software that is delivered with the DPKs.

- These are the minimum requirements for the software versions associated with using Puppet with the PeopleSoft DPKs on Microsoft Windows and Linux operating systems:

  - Puppet Agent 1.5.2

  - Puppet 4.5.2

  - Hiera 3.2.0

  - Facter 3.2.0

  - Ruby 2.1.9

- These are the minimum requirements for the software versions associated with using Puppet with the PeopleSoft DPKs on AIX, and Oracle Solaris for SPARC operating systems:

  - Puppet 4.5.2

- Hiera 3.2.0
- Facter 3.2.0
- Ruby 2.1.9

- Operating system packages required for Puppet

  The Puppet software used for the DPK deployment is dependent on certain OS-level packages, which may not be present in the delivered DPKs. In this case, you can use the information in the DPK setup log file to determine which packages are needed. It is the responsibility of the user to obtain and install the required packages.

  See "Deploying the PeopleSoft PeopleTools Deployment Packages," Obtaining Operating System Packages Required for Puppet.

- Installation location

  Puppet software is installed in a standard location by the DPKs. The DPK deployment checks for existing Puppet installations only in that standard location. If Puppet software was installed in a different location, for example for other business or development requirements, the DPK will not recognize or try to remove that existing Puppet installation. It will install to the standard location dictated by the DPK requirement, and the other Puppet installation may subsequently cause problems.

Task 1-2: 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 often 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 1-2-1: 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 1-2-2: 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. You can use the instructions in the chapter "Using the PeopleSoft Installer" to perform such local installations.

Task 1-2-3: 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 1-2-4: 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 1-2-5: 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 through the PeopleSoft Installer; 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 1-2-6: 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/*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/*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_home8.56.12.

  - *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*<version>,* where <version> is the supported JDK version; for example, jdk1.8.0_74.

- For a full-tier installation, the files needed to install the supported version of the PeopleSoft PeopleTools client software are installed in *BASE_DIR/*pt/tools_client.

- *BASE_DIR/*db

  This directory is used for an Oracle RDBMS full-tier installation.

  - 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.

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.

Defining PS_CFG_HOME

The *PS_CFG_HOME* location holds the configuration files for the application server, batch server and search server domains.

It also holds the configuration files for web server domains if *PIA_HOME,* defined in the next section, is equal to *PS_CFG_HOME.* This location is sometimes referred to as "Config Home."

When you install PeopleSoft PeopleTools and the PeopleSoft application software, the PeopleSoft installer places the required files into the specified *PS_HOME* directory. When you create an application server, batch server, 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:

Operating System	PS_CFG_HOME Default Location
UNIX	/home/psadm2/psft/pt/*<peopletools_version>*
Microsoft Windows	%USERPROFILE%\psft\pt*<peopletools_version>*

For example, if USERPROFILE is C:\Users\psftuser and the PeopleTools version is 8.56, by default *PS_CFG_HOME* would be C:\Users\psftuser\psft\pt\8.56. The configuration and log files for the application server, process scheduler server, and search server are installed below this directory.

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 the 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, *PIA_HOME,* does not have to be 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 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 1-2-7: 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 either of the following two J2EE web application servers (also commonly referred to as web servers):

- Oracle WebLogic Server
- IBM WebSphere Server

The PeopleSoft DPKs install Oracle WebLogic. If you want to use IBM WebSphere for your environment, you must install it manually and set up the application server and Process Scheduler domains using the traditional method with PSADMIN.

Refer to the Certifications page on My Oracle Support for supported web server combinations.

To find support information for the HTTP servers that can be used as reverse proxy servers (RPS), see the following:

- For Oracle WebLogic, see the Oracle WebLogic documentation, included with Oracle Fusion Middleware.
- For IBM WebSphere, see the information for PeopleSoft PeopleTools on My Oracle Support, Certifications.

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

Task 1-3: 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 1-3-1: 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 1-3-2: 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. You must limit the owner password (access password) to 30 characters or less.

Note. Refer to your Oracle database platform documentation for information about access ID and password length requirements. The PeopleSoft system accepts access ID passwords between 8 and 30 characters in length to accommodate different database and operating system platforms.

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.
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	sysadm	hrdm
Development	HRDVLP	sysadm2	sysadm2	hrdm
Training	HRTRAIN1	sysadm3	sysadm3	hrdm
Training	HRTRAIN2	sysadm4	sysadm4	hrdm

Note. With Oracle 11gR1 the database user ID is case-sensitive. So, when running the installation, system administrators need to make sure the database user ID, such as SYSADM, with all upper-case letters, is represented consistently, wherever it needs to be supplied in the configuration tools and scripts as well as on any signon screen.

Task 1-3-3: Using Oracle Pluggable Databases

If your RDBMS is Oracle 12c, for PeopleSoft PeopleTools 8.54 and later, you can use the Oracle 12c database multitenant architecture, with pluggable databases. The Pluggable Databases (PDB) functionality is an Oracle 12c 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 Database Concepts 12c Release 1 (12.1), "Introduction to the Multitenant Architecture," Oracle Database Documentation Library, http://st-doc.us.oracle.com/12/121/server.121/e17633/toc.htm

PeopleTools: Data Management, "Using Pluggable Databases"

Tech Update - PeopleSoft Supports Oracle 12c Multitenant, My Oracle Support, (search for article title)

Task 1-4: 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).

- 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 Server Express or IBM Compiler for IBM AIX.

  - For Microsoft Windows servers, install the appropriate version of Micro Focus Net Express.

- 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 or Linux, 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.

- The PeopleSoft Installer installs COBOL source code from the installation directory to your Microsoft Windows file server and to all UNIX servers, but not to the rest of your Microsoft Windows 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.

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 1-5: 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 1-5-1: 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 1-6: 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. PeopleTools 8.44 introduced a new feature called Query Kill. For Query Kill 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, Query Kill 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.

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 1-7: 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 (either 11g or 12c for PeopleSoft PeopleTools 8.54 and later) on your workstations, applications servers, batch servers, and database servers. PeopleSoft PeopleTools 8.55 requires at a minimum the NET 11g (version 11.2.0.x) functionality. 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 1-8: 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 1-9: 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 PeopleTools DPKs
- Reviewing the DPK Setup Script Options
- Running the DPK Setup Script to Install PS_HOME Only
- Running the DPK Setup Script to Install All Software
- Obtaining Operating System Packages Required by Puppet
- Removing a Deployed PeopleSoft Environment

Task 2-1: Obtaining the PeopleSoft PeopleTools DPKs

This section discusses:

- Obtaining the PeopleSoft PeopleTools DPKs from My Oracle Support
- Obtaining from Oracle Software Delivery Cloud

Task 2-1-1: Obtaining the PeopleSoft PeopleTools DPKs from My Oracle Support

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

To locate and download the DPKs:

1. Go to the PeopleSoft PeopleTools Patches Home Page, My Oracle Support, Doc ID 2062712.2, to find the information on locating and downloading the latest PeopleSoft PeopleTools patch.

   This page includes documentation and links to the most recent patches. To find earlier PeopleSoft PeopleTools patches:

   a. Sign in to My Oracle Support.

   b. Select the Patches & Updates tab.

   c. Select Product or Family (Advanced), and search for PeopleSoft PeopleTools.

2. Download the DPK zip files 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. When you download, there will probably be multiple zip files. The multiple files are needed due to size limitations.

   The zip files have the following format:

   PEOPLETOOLS-*<Operating_System>*-*<Release>*-#of*n*.zip

For example:

PEOPLETOOLS-LNX-8.56.02-1of4.zip

PEOPLETOOLS-LNX-8.56.02-2of4.zip

PEOPLETOOLS-LNX-8.56.02-3of4.zip

PEOPLETOOLS-LNX-8.56.02-4of4.zip

The files names are comprised of the following parts:

- *<Operating_System>* is AIX for IBM AIX, LNX for Oracle Linux, SOL for Oracle Solaris for SPARC, or WIN for Microsoft Windows.

- *<Release>* is the release and patch number for the product, such as 8.56.02.

- *n* represents the total number of zip files.

Task 2-1-2: Obtaining from Oracle Software Delivery Cloud

At the general availability date for PeopleSoft PeopleTools 8.56, you can obtain the PeopleSoft PeopleTools DPKs from Oracle Software Delivery Cloud. This version includes the 8.56.01 patch and the full codeline. Later patches are available only on My Oracle Support. To obtain the PeopleSoft PeopleTools DPKs from Oracle Software Delivery Cloud:

1. Sign in to Oracle Software Delivery Cloud.

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

2. Search for PeopleSoft PeopleTools release.

3. Select your operating system from the Platform list, and click Search.

4. Click Continue twice.

5. Review and accept the terms and conditions.

6. Download the DPK zip files, for example V123456-0#.zip, 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. When you download, there will probably be multiple zip files. The multiple files are needed due to size limitations.

Task 2-2: Reviewing the DPK Setup Script Options

The PeopleSoft PeopleTools DPK setup script alleviates the installation process by automating most of the manual tasks in using DPKs to set up PeopleSoft mid-tier components 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 two scripts, a Microsoft Windows script (psft-dpk-setup.bat) and a Linux or UNIX shell script (psft-dpk-setup.sh). To set up a PeopleSoft environment, run the script pertinent to the host operating system (OS) platform on which the DPK setup script is invoked. The DPK setup script offers a variety of options for setting up mid-tier components, *PS_HOME* folder, 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 mid-tier environment connecting to an existing PeopleSoft database.

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.

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 or UNIX The suffix *<ext>* in the table refers to the operating system specific extension.

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

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

Deployment	DPK Setup Script Command
Perform the following: • 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). • Install the *PS_HOME* directory.	```psft-dpk-setup.<ext>` ` --env_type midtier```
Perform the following: • 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 *PS_HOME* directory.	```psft-dpk-setup.<ext>` ` --env_type midtier` ` --deploy_only``` or ```psft-dpk-setup.<ext>` ` --env_type midtier` ` --deploy_only` `--deploy_type all```
Deploy the *PS_HOME* directory only. This option does not set up any domains.	```psft-dpk-setup.<ext>` ` --env_type midtier` ` --deploy_only` ` --deploy_type tools_home```
Deploy and set up the domain for the Application Server only.	```./psft-dpk-setup.<ext>` ` --env_type midtier` ` --domain_type appserver```
Deploy and set up the domain for the Process Scheduler only.	```psft-dpk-setup.<ext>` ` --env_type midtier` ` --domain_type prcs```
Deploy and set up the domain for PIA only.	```psft-dpk-setup.<ext>` ` --env_type midtier` ` --domain_type pia```
Deploy and set up the domains for the Application Server and the Process Scheduler.	```psft-dpk-setup.<ext>` ` --env_type midtier` ` --domain_type appbatch```

Deployment	DPK Setup Script Command

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.
	`psft-dpk-setup.<ext>`
	` --env_type midtier`
	`--dpk_src_dir <full_DPK_path>`

Remove a deployed environment. See "Using and Maintaining the PeopleSoft Environment," Removing a Deployed PeopleSoft Environment.	`psft-dpk-setup.<ext>` ` --cleanup`

The following options are also available for PeopleSoft application DPKs. These options require the presence of PeopleSoft application DPKs in the deployment folder. If *DPK_INSTALL* includes only the PeopleTools DPKs files, you cannot use these options.

See PeopleSoft Update Manager (PUM) Home Page, My Oracle Support, Doc ID 1641843.2, for more information on the PeopleSoft application DPKs.

Deployment	DPK Setup Script Command

Deploy the *PS_APP_HOME* directory only.
 	
This option does not set up any domains.
	`psft-dpk-setup.<ext>`
	` --env_type midtier`
	` --deploy_only`
	` --deploy_type app_home`

Deploy the *PS_HOME* and *PS_APP_HOME* directories only.
 	
This option does not set up any domains.
	`psft-dpk-setup.<ext>`
	` --env_type midtier`
	` --deploy_only`
	` --deploy_type app_and_tools_home`

Include the following decisions in preparing for the installation process:

- FRESH or PUM installation type

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

  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 other options.

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

- Default or manual configuration

  After extracting the DPKs, you are given the option to exit the process and complete the configuration manually using Puppet files. Use the manual configuration if you want to change installation locations and so on.

  See "Completing the DPK Initialization with Customizations."

  The following installation scenarios require manual configuration using the customizations:

  - Installing on an AIX operating system

    See Reviewing the Software Requirements on AIX

    See Preparing the Customization File for Component Software Locations.

- •   Connecting to a non-Oracle RDBMS platform.
- •   User IDs and password

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

  You are given the option to have the DPK setup script install translated files for a multi-language installation.
- •   Unicode or non-Unicode

  You are given the option to have the DPK setup script install a Unicode or non-Unicode environment.

Task 2-3: Running the DPK Setup Script to Install PS_HOME Only

This section discusses:

- •   Understanding the PS_HOME Deployment
- •   Installing PS_HOME Only on Microsoft Windows
- •   Installing PS_HOME Only on Linux

Understanding the PS_HOME Deployment

Use these instructions to install the *PS_HOME* installation folder, which includes the PeopleSoft PeopleTools server utilities. Use this deployment, for example, to get the tools needed to carry out database creation. The *PS_HOME* deployment includes the following:

- •   *PS_HOME* installed to *BASE_DIR/*pt/ps_home8.56.xx by default.
- •   PeopleTools utilities and scripts including:
  - •   *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
  - •   Other PeopleTools utilities
- •   Setup utilities including:
  - •   *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_HOME/*setup/PsMpWebAppDeployInstall (Web Application Deployment installer)

Task 2-3-1: Installing PS_HOME Only on Microsoft Windows

This procedure assumes you have obtained the four PeopleSoft PeopleTools DPK zip files and saved them in *DPK_INSTALL.* 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 folder and other files.

   See Obtaining the PeopleSoft PeopleTools DPK for the DPK file name syntax.

2. Open a command prompt with Run as Administrator.

3. Change directory to *DPK_INSTALL/*setup.

4. Run the script with the options for mid-tier and 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.

   ```
   psft-dpk-setup.bat --env_type midtier --deploy_only --deploy_type tools_⇒
   home
   ```

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].

   The script locates the valid PeopleSoft zip files and extracts them. After it completes the extraction, it deletes the original downloaded zip files.

   ```
   Starting the PeopleSoft Environment Setup Process:

   Extracting the Zip File FILENAME_1of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_2of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_3of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_4of4.zip:    [  OK  ]
   ```

6. Specify whether to install the Puppet software if necessary at the next prompt.

   The script verifies if Puppet software is installed in the default location specified by the DPKs. If not, answer *y* (yes) to install the Puppet software and *n* to abort the PeopleSoft environment setup process. The default action (if nothing is entered at the prompt) is to install the software.

   If there is any error during the Puppet software installation, the script aborts the setup process.

   ```
   Validating User Arguments:                           [  OK  ]
   Validating PeopleSoft Supported Platform:            [  OK  ]
   Verifying if Puppet Software is Installed on the Host:

   Puppet Software is not installed on the Host. If this Host is
   used to setup a PeopleSoft environment, Puppet Software should
   be Installed.

   Do you want to Install Puppet Software on this Host? [Y|n]: y

   Installing Puppet Software on the Host:              [  OK  ]
   ```

   The script verifies if the DPKs are available in *DPK_INSTALL,* and aborts with the message [FAILED] if they are not.

   ```
   Preparing the Windows 2012 Server VM for PeopleSoft Environment:

   Checking if PeopleSoft DPKs are Present:             [  OK  ]
   ```

7. At the following prompt, enter 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, `C:/psft`.

```
The base folder is used to extract the PeopleSoft DPKs. It is also
used to deploy the PeopleSoft components. This folder should be
accessible on the Windows VM, must have write permissions and should
have enough free space

Enter the PeopleSoft Base Folder: [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.

```
Checking if the Base Folder has Enough Free Space:        [  OK  ]
```

The script creates the following three sub-directories under the user provided base directory, *BASE_DIR*:

- *BASE_DIR*\dpk

    The script uses this directory to extract the archives from the PeopleSoft DPKs.

- *BASE_DIR*\pt

    The script uses this directory to deploy PeopleSoft PeopleTools.

- *BASE_DIR*\db

    This directory is not used for this deployment.

8. Review the status messages as the script validates the files found in the base folder.

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

```
Validating the PeopleSoft DPKs in the Folder:
Validating the PeopleSoft PeopleTools Server DPK:                 [ ⇒
  OK  ]
Validating the Oracle Server Database DPK:                        [ ⇒
  OK  ]
Validating the PeopleSoft PeopleTools Application Database DPK:   [ ⇒
  OK  ]
Validating the PeopleSoft PeopleTools Client DPK:                 [ ⇒
  OK  ]
Validating the Manifest Information in Peoplesoft DPKs:           [ ⇒
  OK  ]
```

9. Review the status messages as the script extracts the archives from the DPKs.

```
Extracting the Peoplesoft DPK Archives in Windows VM:
Extracting the Oracle Database Server DPK Archive:
Extracting the PeopleSoft PeopleTools Application Database DPK Archive:⇒
     [  OK  ]
```

```
Extracting the PeopleSoft PeopleTools Server DPK:                    ⇒
    [  OK  ]
```

10. 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  ]
```

11. Specify the information for your database platform.

    a. For the database platform, enter ORACLE, MSSQL (Microsoft SQL Server), DB2UNIX (DB2 for Linux, UNIX, and Windows), or DB2ODBC (DB2 for z/OS).

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

    b. Enter *y* (yes) to indicate that the database you will connect to is a Unicode database.

    Note. All PeopleSoft Update Image databases are required to be Unicode.

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

12. 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  ]
```

13. 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.

    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 customization Hiera YAML file and running the Puppet
'apply' command directly to continue with the setup of the PeopleSoft
environment

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

14. 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 step to set up the PeopleSoft OS Users environment 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 environemnt.

1. cd C:\psft\dpk\puppet\production\manifests
2. puppet apply --confdir=C:\psft\dpk\puppet site.pp --debug --trace

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 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.

Task 2-3-2: Installing PS_HOME Only on Linux

This procedure assumes you have obtained the four PeopleSoft PeopleTools DPK zip files and saved them in *DPK_INSTALL.* 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 folder and other files.

   See Obtaining the PeopleSoft PeopleTools DPKs for the DPK file name syntax.

2. Open a terminal window and change directory to *DPK_INSTALL/*setup.

3. As a user with root access, run the script with the options for mid-tier and deployment only.

   ```
   psft-dpk-setup.sh --env_type midtier --deploy_only --deploy_type tools_⇒
   home
   ```

4. 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:

   Extracting the Zip File FILENAME_1of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_2of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_3of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_4of4.zip:    [  OK  ]
   ```

5. Specify whether to install the Puppet software if necessary at the next prompt.

   The script verifies if Puppet software is installed in the default location specified by the DPKs. If not, answer *y* (yes) to install the Puppet software and *n* to abort the PeopleSoft environment setup process. The default action (if nothing is entered at the prompt) is to install the software.

If there is any error during the Puppet software installation, the script aborts the setup process.

```
Validating User Arguments:                               [  OK  ]
Validating PeopleSoft Supported Platform:                [  OK  ]
Verifying if Puppet Software is Installed on the Host:

Puppet Software is not installed on the Host. If this Host is
used to setup a PeopleSoft environment, Puppet Software should
be Installed.

Do you want to Install Puppet Software on this Host? [Y|n]: y

Installing Puppet Software on the Host:                  [  OK  ]
```

The script verifies if the DPKs are available in *DPK_INSTALL,* and aborts with the message [FAILED] if they are not.

```
Preparing the Linux VM for PeopleSoft Environment:

Checking if PeopleSoft DPKs are Present:                 [  OK  ]
```

6. At the following prompt, enter 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`.

```
The base folder is used to extract the PeopleSoft DPKs as
well as for deploying PeopleSoft Components. This folder should be
accessible on the host, has write permission, and has enough free
spaceThe base folder is used to extract the PeopleSoft DPKs. It is also
used to deploy the PeopleSoft components. This folder should be
accessible on the Linux VM, must have write permissions and should
have enough free space.
.
Enter the PeopleSoft Base Folder [/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.

```
Checking if the Base Filesystem has Enough Free Space:   [  OK  ]
```

   The script creates the following three sub-directories under the user provided base directory, *BASE_DIR*:

   • *BASE_DIR/*dpk

     The script uses this directory to extract the archives from the PeopleSoft DPKs.

   • *BASE_DIR/*pt

     The script uses this directory to deploy PeopleSoft PeopleTools.

   • *BASE_DIR/*db

     This directory is not used for this deployment.

7. Review the status messages as the script validates the files found in the base folder.

   The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft

environment setup is aborted.

```
Validating the PeopleSoft DPKs in the Folder:
Validating the PeopleSoft Application DPK:                [  OK  ]
Validating the PeopleSoft PeopleTools DPK:                [  OK  ]
Validating the PeopleSoft PeopleTools Client DPK:         [  OK  ]
Validating the Manifest Information in DPKs:              [  OK  ]
```

8. Review the status messages as the script extracts the archives from the DPKs.

```
Extracting the DPK Archives in the VM:
Extracting the PeopleSoft PeopleTools Server DPK Archive:             ⇒
     [  OK  ]
Extracting the Oracle Database Server DPK Archive:
Extracting the PeopleSoft PeopleTools Application Database DPK Archive:⇒
     [  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, MSSQL (Microsoft SQL Server), DB2UNIX (DB2 for Linux, UNIX, and Windows), or DB2ODBC (DB2 for z/OS).

```
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. 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.

    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 customization Hiera YAML file and running the Puppet
'apply' command directly 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 Default Initialization of PeopleSoft Environment:

Deploying PeopleTools Components:                       [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 commands to continue
with the setup of PeopleSoft environemnt.

1. cd /opt/oracle/psft/dpk/puppet/production/manifests
2. puppet apply --confdir=/opt/oracle/psft/dpk/puppet site.pp --debug --⇒
trace

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 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.

Task 2-4: Running the DPK Setup Script to Install All Software

This section discusses:

- Understanding the DPK Installation
- Installing on Microsoft Windows
- Installing on Linux or UNIX
- Reviewing the Installed Software

Understanding the DPK Installation

Use these instructions to install all software required to continue with the PeopleSoft installation. This deployment uses the DPK setup script options --env_type midtier --deploy_only --deploy_type all to install the PeopleSoft PeopleTools software in *PS_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 or UNIX 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 PeopleSoft PeopleTools DPKs, and saved them in a location referred to here as *DPK_INSTALL.*

Task 2-4-1: 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_*1of*n.*zip).

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

   The extraction creates the *DPK_INSTALL/*setup folder 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 mid-tier and 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:

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

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].

   The script locates the valid PeopleSoft zip files and extracts them. After it 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 PeopleSoft application DPKs.

   ```
   Starting the PeopleSoft Environment Setup Process:

   Extracting the Zip File FILENAME_1of4.zip:    [  OK  ]
   Extracting the Zip File FILENAME_2of4.zip:    [  OK  ]
   ...
   Extracting the Zip File FILENAME_4of4.zip:    [  OK  ]
   ```

6. Specify whether to install the Puppet software if necessary at the next prompt.

   The script verifies if Puppet software is installed in the default location specified by the DPKs. If not, answer *y* (yes) to install the Puppet software and *n* to abort the PeopleSoft environment setup process. The default action (if nothing is entered at the prompt) is to install the software.

   If there is any error during the Puppet software installation, the script aborts the setup process.

```
Validating User Arguments:                                    [  OK  ]
Validating PeopleSoft Supported Platform:                     [  OK  ]
Verifying if Puppet Software is Installed on the Windows Host:

Puppet Software is not installed on the Windows Host. If PeopleSoft
environment needs to be setup on this Host, Puppet software
should be Installed..

Do you want to proceed with the Puppet Installation? [Y|n]: y

Installing Puppet Software on the Windows Host:               [  OK  ]
```

The script verifies whether the eYAML Hiera files are installed.

```
Verifying if eYAML Hiera Backend is Installed:                [  OK  ]
```

The script verifies if the DPKs are available in the download directory, *DPK_INSTALL,* and aborts with the message [FAILED] if they are not.

```
Preparing the Windows 2012 Server VM for PeopleSoft Environment:

Checking if PeopleSoft DPKs are Present:                      [  OK  ]
```

7. At the following prompt, enter 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 base directory location; for example, C:/psft.

```
The base folder is used to extract the PeopleSoft DPKs. It is also
used to deploy the PeopleSoft components. This folder should be
accessible on the Windows VM, must have write permissions and should
have enough free space

Enter the PeopleSoft Base Folder: 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.

```
Checking if the Base Folder has Enough Free Space:       [  OK  ]
```

8. Review the status messages as the script validates the files found in the base folder.

   The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

```
Validating the PeopleSoft DPKs in the Folder:
Validating the PeopleSoft PeopleTools Application DPK:        [  OK  ]
Validating the PeopleSoft PeopleTools Server DPK:            [  OK  ]
Validating the PeopleSoft PeopleTools Client DPK:           [  OK  ]
Validating the Manifest Information in Peoplesoft DPKs:      [  OK  ]
```

9. Review the status messages as the script extracts the archives from the DPKs.

```
Extracting the Peoplesoft DPK Archives in Windows VM:
```

```
Extracting the PeopleSoft PeopleTools Application DPK Archive:  [  OK  ]
Extracting the PeopleSoft PeopleTools Server DPK:              [  OK  ]
```

10. 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  ]
    ```

11. Specify whether this is a fresh (new) installation or an installation for PeopleSoft Update Manager (PUM):

    ```
    Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
    ```

12. 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.

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

13. 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
    ```

14. 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  ]
    ```

15. If you want to continue running the initialization script interactively, 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 customization Hiera YAML file and running the Puppet
    'apply' command directly to continue with the setup of the PeopleSoft
    environment

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

16. 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 [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 environemnt.

1. cd C:\psft\dpk\puppet\production\manifests
2. puppet apply --confdir=C:\psft\dpk\puppet site.pp --debug --trace

Exiting the PeopleSoft environment setup process.
```

See "Customizing a PeopleSoft Environment."

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.

See Obtaining Operating System Packages Required by Puppet if you see messages about missing packages in the log.

Task 2-4-2: Installing on Linux or UNIX

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

1. Extract the first zip file *(FILENAME_*1of*n.*zip).

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

   The extraction creates the *DPK_INSTALL/*setup folder 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 options for mid-tier and 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 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:

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

4. 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].

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

```
Starting the PeopleSoft Environment Setup Process:

Extracting the Zip File FILENAME_1of4.zip:     [  OK  ]
Extracting the Zip File FILENAME_2of4.zip:     [  OK  ]
...
Extracting the Zip File FILENAME_4of4.zip:     [  OK  ]
```

5. Specify whether to install the Puppet software if necessary at the next prompt.

    The script verifies if Puppet software is installed in the default location specified by the DPKs. If not, answer *y* (yes) to install the Puppet software and *n* to abort the PeopleSoft environment setup process. The default action (if nothing is entered at the prompt) is to install the software.

    If there is any error during the Puppet software installation, the script aborts the setup process.

```
Validating User Arguments:                               [  OK  ]
Validating PeopleSoft Supported Platform:                [  OK  ]
Verifying if Puppet Software is Installed:

Puppet Software is not installed on the Linux Host. If PeopleSoft
environment needs to be setup on this Host, Puppet software
should be Installed.

Do you want to proceed with the Puppet Installation? [Y|n]: y

Installing Puppet Software on the Host:                   [  OK  ]
```

    The script verifies whether the eYAML Hiera files are installed.

```
Verifying if eYAML Hiera Backend is Installed:           [  OK  ]
```

    The script verifies if the DPKs are available in *DPK_INSTALL,* and aborts with the message [FAILED] if they are not.

```
Preparing the Linux VM for PeopleSoft Environment:

Checking if PeopleSoft DPKs are Present:                 [  OK  ]
```

6. At the following prompt, enter a location that is accessible to the host to be used as the PeopleSoft base directory.

    Use forward slashes (/) to specify the directory; for example, /opt/oracle/psft. The base directory is used to extract the PeopleSoft DPKs as well as for deploying PeopleSoft components.

```
The base folder is used to extract the PeopleSoft DPKs. It is also
used to deploy the PeopleSoft components. This folder should be
accessible on the Linux VM, must have write permissions and should
have enough free space.
.
Enter the PeopleSoft Base Folder: /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.

Note. A mid-tier setup of a PeopleSoft environment requires about 25 GB of disk space.

```
Checking if the Base Filesystem has Enough Free Space:     [  OK  ]
```

7. If the default home directory is not writable, enter a new location at the following prompt.

   The DPK setup creates local users on the host. These users deploy the PeopleSoft components and own the PeopleSoft runtime domains. The script checks whether the default home directory for the PeopleSoft users (/home) is writable. If not, it will prompt the user to enter a new location to be used for creating the home directories for these local users.

   ```
   Checking if Default User Home Directory /home is Writable:  [WARNING]

   The PeopleSoft environment setup creates local users on the VM.
   The default Home directory for these users is /home. Please
   ensure this directory is writable or provide a new directory on the
   VM that is writable.

   Please Enter a directory on the VM that is writable [/home]: /ds1
   Are you happy with your answer? [y|n|q]:
   ```

   If the /home directory is writable, no response is required.

   ```
   Checking if Default User Home Directory /home is Writable:  [  OK  ]
   ```

8. Review the status messages as the script validates the files found in the download directory, *DPK_INSTALL.*

   The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

   ```
   Validating the PeopleSoft DPKs in the Folder:
   Validating the PeopleSoft Application DPK:               [  OK  ]
   Validating the PeopleSoft PeopleTools Server DPK:        [  OK  ]
   Validating the PeopleSoft PeopleTools Client DPK:        [  OK  ]
   Validating the Manifest Information in Peoplesoft DPKs:  [  OK  ]
   ```

9. Review the status messages as the script extracts the archives from the DPKs.

   ```
   Extracting the Peoplesoft DPK Archives in the host:
   Extracting the PeopleSoft PeopleTools Server DPK:        [  OK  ]
   Extracting the PeopleSoft Application DPK Archive:       [  OK  ]
   ```

10. 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  ]
    ```

11. Specify whether this is a fresh (new) installation or an installation for PeopleSoft Update Manager (PUM):

    ```
    Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
    ```

12. 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.

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

13. 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
```

14. 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  ]
```

15. If you want to continue running the initialization script interactively, 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 "Customizing a PeopleSoft Environment"

```
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 customization Hiera YAML file and running the Puppet
'apply' command directly to continue with the setup of the PeopleSoft
environment

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

16. 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 commands to continue
with the setup of PeopleSoft environment.

1. cd /opt/oracle/psft/dpk/puppet/production/manifests
2. puppet apply --confdir=/opt/oracle/psft/dpk/puppet site.pp --debug --⇒
trace

Exiting the PeopleSoft environment setup process.
```

    See "Customizing a PeopleSoft Environment."

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.

See Obtaining Operating System Packages Required by Puppet if you see messages about missing packages in the log.

Task 2-4-3: Reviewing the Installed Software

This section describes some of the files and folders 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 three sub-directories under the user-specified base directory, *BASE_DIR*:

• *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_home8.56.*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_HOME/*setup/PsMpWebAppDeployInstall (Web Application Deployment installer)

   • Oracle Tuxedo software in the standard location, *<BASE_DIR>/*pt/bea/tuxedo

   • Oracle Tuxedo services on Microsoft Windows:

      ORACLE ProcMGR VS12.2.2.0.0_VS2015 and Tlisten VS12.2.2.0.0_VS2015

   • 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_1.8.0_*xx.*

• *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 2-5: Obtaining Operating System Packages Required by Puppet

The Puppet software used for the DPK deployment is dependent on certain OS-level packages, which may not be present in the delivered DPKs. In this case, you can use the information in the log file that is generated when you run the DPK setup script to determine which packages are needed. It is the responsibility of the user to obtain and install the required packages.

This is a one-time requirement, for a specific Puppet version, the first time the host is set up. If you are using a virtual Microsoft Windows or Linux OS, depending upon your organization's standards, you can add the missing packages to the standard OS from which you instantiate VMs, or create a custom OS image and re-use it later.

1. If you are using a virtual OS platform, create a new VM instance.

2. Use the DPK setup script, `psft-dpk-setup.bat` (Microsoft Windows), or `psft-dpk-setup.sh` (Linux) to deploy on the host.

3. Review the deployment log file in *DPK_INSTALL*setup.

   The log file will list any missing OS packages.

4. Remove the PeopleSoft environment created by the DPK deployment, using `psft-dpk-setup.bat --cleanup` (Microsoft Windows) or `psft-dpk-setup.sh --cleanup` (Linux).

5. If you are using a virtual OS platform, recreate the VM instance.

6. Obtain and load the missing OS packages on the new OS instance.

7. Rerun the DPK setup script.

   The log file should not list any missing packages.

Task 2-6: 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
- Using Puppet to Remove the PeopleSoft Environment on Microsoft Windows
- Using Puppet to Remove the PeopleSoft Environment on Linux
- Troubleshooting the Removal Process on Microsoft Windows
- Troubleshooting the Removal Process on Linux

Understanding the Removal Process

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 process described here 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. The PeopleSoft environment can be cleaned up either using the PeopleSoft DPK setup script or using a puppet command. 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.

Task 2-6-1: 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 the following command:

    ```
    psft-dpk-setup.bat --cleanup
    ```

3. Specify the base directory (*BASE_DIR*) that you want to remove.

    You see this prompt if the script detects more than one deployment.

    ```
    Enter the PeopleSoft Base Folder specified during setup:
    ```

4. Review the cleanup log file in *DPK_INSTALL*\setup.

Task 2-6-2: Using the DPK Setup Script to Remove the PeopleSoft Environment on Linux

Use these steps to remove a deployed PeopleSoft environment using the PeopleSoft DPK setup script on Linux or UNIX:

1. Open a terminal window as a user with root permission.

2. Go to *DPK_INSTALL*\setup and run the following command:

    ```
    sh psft-dpk-setup.sh --cleanup
    ```

3. Specify the base directory *(BASE_DIR*) that you want to remove.

    You see this prompt if the script detects more than one deployment.

    ```
    Enter the PeopleSoft Base Folder specified during setup:
    ```

4. Review the cleanup log file in *DPK_INSTALL*\setup.

The DPK setup script displays [OK] for each step of the process, and [FAILED] if any of the steps are not successful. After completing these steps, verify that the DPK installation directories (*BASE_DIR/*pt and *BASE_DIR/*db) have been cleared. On Microsoft Windows, verify that any services have been removed. If anything remains, 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 Troubleshooting the Removal Process.

Task 2-6-3: Using Puppet to Remove the PeopleSoft Environment on Microsoft Windows

Use the `puppet apply` command to remove the PeopleSoft environment manually. When you run the `puppet apply --confdir=`*BASE_DIR/*`dpk/puppet site.pp --debug --trace` command, the debug and trace messages appear in the command prompt. If you want to save them as a file, see the Puppet Labs documentation for the correct options.

See Puppet Labs Documentation, http://docs.puppetlabs.com.

To remove the environment manually on Microsoft Windows:

1. Open the file *BASE_DIR/*dpk/production/data/defaults.yaml in a text editor, such as Notepad.

   See "Using the Puppet Hiera YAML Files for Customization."

2. Change the value of the `ensure` attribute from `present` to `absent`.

3. Open a command prompt.

4. If the Puppet environment is not set, run the following command (optional):

   `C:\"Program Files\Puppet Labs\Puppet\bin\puppet_shell.bat"`

5. Change directory to the *BASE_DIR/*dpk/production/manifests folder.

6. Run the following command:

   `puppet apply --confdir=`*BASE_DIR/*`dpk/puppet site.pp --debug --trace`

   Note. The options require double dashes.

Task 2-6-4: Using Puppet to Remove the PeopleSoft Environment on Linux

To remove the environment manually on Linux:

1. Open the file *BASE_DIR/*dpk/production/data/defaults.yaml in a text editor, such as vi.

   See "Using the Puppet Hiera YAML Files for Customization."

2. Change the value of the `ensure` attribute from `present` to `absent`.

3. Open a command prompt.

4. Change directory to the *BASE_DIR/*dpk/production/manifests directory.

5. Run the following command:

   `puppet apply --confdir=`*BASE_DIR/*`dpk/puppet site.pp --debug --trace`

   Note. The options require double dashes.

Task 2-6-5: Troubleshooting the Removal Process on Microsoft Windows

This section includes advanced steps to be used only if the previous procedures in this section failed. 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 Services.

2. Stop the services OracleService CBD*<Database Name>* and OracleOraDB12cHomeTNSListener by highlighting the names, right-clicking and selecting Stop.

   Note. When you stop the service for the CBD (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 service for the PeopleSoft PIA domain.

4. Open a command prompt, running as administrator, and remove the two database services and the PeopleSoft domains services with the commands:

```
sc delete OracleService CDB<Database Name>
sc delete OracleOraDB12cHomeTNSListener
sc delete PsftAppServerDomain<app_domain_name>Service
sc delete PsftPrcsDomain<ProcSched_domain_name>Service
sc delete PsftPIADomain<PIA_domain_name>Service
```

5. In the Services window, stop ORACLE ProcMGR V12.2.2.0.0_VS205 and TListen 12.2.2.0.0_VS2015(Port3050) by highlighting the names, right-clicking and selecting Stop.

6. In the Services window, right-click each of the services in step 4, 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_OraDB12cHome (C:\psft\db by default)

   • KEY_OraTux1222Home (C:\psft\pt\bea\tuxedo by default)

   • KEY_OraWL1213Home (C:\psft\pt\bea by default)

10. In the Registry Editor, locate the HKLM\SOFTWARE\ORACLE\TUXEDO folder.

    Select the 12.2.2.0.0_VS2015 key and verify that it contains references to the DPK installation locations in *BASE_DIR* (C:\psft\pt\bea\tuxedo by default).

11. In the Registry Editor, only for the keys from step 8 and 9 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 three lines that reference the DPK deployment:

```
<HOME NAME="OraWL1213Home" LOC="C:/psft/pt/bea" TYPE="O" IDX="16"/>
 <HOME NAME="OraTux1213Home" LOC="C:\psft\pt\bea\tuxedo" TYPE="O" IDX=⇒
"17"/>
 <HOME NAME="OraDB12cHome" LOC="C:\psft\db\oracle-server\12.1.0.2" 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 (C:/psft/db, C:/psft/dpk, and C:/psft/pt).

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/8.56 (PS_CFG_HOME).

Task 2-6-6: Troubleshooting the Removal Process on Linux

This section includes advanced steps to be used only if the previous procedures in this section failed. If the cleanup process on Linux 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.sh --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, try the following troubleshooting steps.

Here are a few things to check for the advanced manual cleanup on Linux. Depending upon where the cleanup process failed, some of the items mentioned may have already been removed.

- Kill any left-over processes.

    1. For example, use this command, and look for PeopleSoft processes:

       ps -aux|more

    2. To stop the processes, for example, use this command with the process ID:

       kill -STOP <PID>

- Check for left-over PeopleSoft users.

    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.

    1. Check for the four PeopleSoft user IDs using this command:

```
id psadm1
id psadm2
id psadm3
id oracle2
```

If the commands give an output, it means the user exists.

2. Check for running processes associated with the users with this command:

   ```
   ps -ef|grep <user_id>
   ```

3. Stop any running processes associated with the users, if necessary.

4. Delete the users, with this command:

   ```
   userdel -r <user_id>
   ```

Chapter 3

Completing the DPK Initialization with Customizations

This chapter discusses:

- Understanding PeopleSoft Environment Customizations
- Preparing the Customization File for PeopleSoft Domain Definitions
- Preparing the Customization File for Linux Users
- Preparing the Customization File for Component Software Locations
- Preparing the Customization File for Unicode
- Preparing the Customization File for the PeopleSoft Homes
- 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 a few examples of ways to use the YAML files for customization, but is not meant to be an exhaustive list of the possible customizations.

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.

Use these guidelines when customizing your environment:

- 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:

  - *BASE_DIR/*dpk/puppet/production/data/default.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

- 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, the DPK setup script can still be used 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.

- Always use the customizations for these setups:

  - Installing on an AIX operating system

  - Connecting to a non-Oracle RDBMS platform.

- Always create a psft_customizations.yaml file to use for modified parameters.

  Never modify the delivered YAML files. Instead, copying the parameters that you want to modify into the psft_customizations.yaml file gives you the option to save the customization.

- Use a single psft_customizations.yaml file.

  You can copy sections from more than one of the delivered YAML files and include them in a single psft_customizations.yaml file.

- 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, include the `remove: false` attribute at the end of the segment.

  - If you remove the environment using the `puppet apply` command, 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 the entire section containing the parameter to be modified.

  The hierarchy and alignment of the YAML files are very important to the correct operation. 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.

  In addition, 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.

- Replace the entire attribute string.

  The parameters in the delivered YAML files are written with Hiera 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 segment:

```
weblogic:
  location: "%{hiera('pt_location')}/bea"
```

When pt_location is set as C:/psft, Oracle WebLogic will be installed in C:/psft/bea. To change this, remove the entire string of text `"%{hiera('pt_location')}/bea"` and replace it 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
```

On Linux:

```
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 Updates 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.

- Open a command prompt, using Run as administrator.

- Set the Puppet environment if necessary.

  The last step in the examples given here is to run the `puppet apply` command. If you receive a message saying that the term "puppet" is not recognized when running this command, it probably means that the Puppet software is not included in your system's path. To set the Puppet environment, run this command:

  On Microsoft Windows:

  `"C:\Program Files\Puppet Labs\Puppet\bin\puppet_shell.bat"`

  On AIX or Linux, specify the following environment variables before running the `puppet apply` command:

  - export PUPPET_DIR=/opt/puppetlabs
  - export PUPPET_BIN=${PUPPET_DIR}/bin
  - export PUPPET_LIB=${PUPPET_DIR}/lib
  - export PATH=${PUPPET_BIN}:$PATH
  - export LIBPATH=${PUPPET_LIB}:$LIBPATH

- See the Puppet Labs documentation if you want to save the log files.

  When you run the `--confdir=BASE_DIR/dpk/puppet site.pp --debug --trace` command, the debug and trace messages appear in the command prompt. If you want to save them as a file, see the Puppet Labs documentation for the correct options.

  See Puppet Labs Documentation, http://docs.puppetlabs.com.

See Also

PeopleSoft PeopleTools 8.56 Deployment Packages Installation, "Using the Puppet Hiera YAML Files for Customization"

Task 3-1: 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 an Application Server Domain with Custom PS_CFG_HOME
- Reviewing the Customization File for Multiple Domains

Task 3-1-1: 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.

1. Locate the psft_configuration.yaml file in *BASE_DIR/*dpk/production/puppet/data.

2. If necessary, create a psft_customizations.yaml using a standard editing tool, such as Notepad on Microsoft Windows or vi on Linux, 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 the file begins with three 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.

   The following sections include sample psft_customizations.yaml files.

4. Save the file.

Task 3-1-2: 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.

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 `"%{hiera('appserver_domain_name')}"` in the `appserver_domain_list` section.

```
---
db_name:              FS85606C
db_user:              VP1
db_user_pwd:          <DB_USER_PWD>

db_connect_id:        people
db_connect_pwd:       <DB_CONN_PWD>

domain_user:             "%{hiera('psft_runtime_user_name')}"
ps_config_home:          "C:/Users/%{::env_username}/psft/pt/8.56"
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
pia_gateway_user_pwd:   <GATEWAY_USER_PWD>
webserver_type:         weblogic
pia_webprofile_name:    PROD
pia_psserver_list:      "%{::fqdn}:%{hiera('jolt_port')}"
report_repository_dir:  "%{hiera('ps_config_home')}/psreports"


domain_conn_pwd:        <DOMAIN_CONN_PWD>


help_uri:               pt854pbh1
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')}"


db2_server_list:
  "%{hiera('db_name')}":
    db2_type:         "%{hiera('db_platform')}"
    db2_host:         "%{::fqdn}"
    db2_port:         "%{hiera('db_port')}"
    db2_node:         TCPLNX01
    db2_target_db:    "%{hiera('db_name')}"


mssql_server_list:
  "%{hiera('db_name')}":
    mss_server_name:  "%{::fqdn}"
    mss_odbc_name:    "ODBC Driver 11 for SQL Server"

###################################################################
# 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"
        PSPPMSRV:       "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/PrcsServerName: "%{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_settings:
      webserver_type:            "%{hiera('webserver_type')}"
      webserver_home:            "%{hiera('weblogic_location')}"
      webserver_admin_user:      system
      webserver_admin_user_pwd: <WEBSERVER_ADMIN_PWD>
      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:    <WEBPROFILE_USER_PWD>

        report_repository_dir: "%{hiera('report_repository_dir')}"
####################################################################
# End PIA section.                                                 #
####################################################################

ohs_domain:
    name:                          ohsdom

#######################################################
# Remaining text removed for brevity.                 #
#######################################################
```

Task 3-1-3: 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. Note that the indentation in the original psft_configuration.yaml file must be maintained when creating a psft_customizations.yaml file.

```
---
appserver_domain_list:
  "APPDOM1":                                            ### Custom domain name⇒
 ###
    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')}"
      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 3-1-4: Reviewing the Customization File for an Application Server Domain with Custom PS_CFG_HOME

If you want to create application server domains in a non-default PS_CFG_HOME location, you must also specify the value for ps_cfg_home in the application server section:

```
---
ps_config_home:       C:/user/psft_config/8.56             ### Custom PS_⇒
CFG_HOME location ###

appserver_domain_list:
  "APPDOM2":                                            ### Custom⇒
```

```
 domain name ###
    os_user:          "%{hiera('domain_user')}"
    template_type:    "%{hiera('appserver_template')}"
    ps_cfg_home_dir:  C:/user/psft_config/8.56                    ### Custom PS_⇒
CFG_HOME location ###

    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')}"
      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 3-1-5: 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 (marked by ### characters) for the purposes of this explanation.

Follow these guidelines in creating a psft_customizations.yaml file for customized PeopleSoft domains. The letters correspond to those in the code sample above:

- (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) Copy the entire section for the domains that you want to customize.

- (C) Specify unique names for each domain.

- (D) Specify unique ports for each domain.

- (E) If specifying more than one application server domain, you must configure the REN server to use a unique port by setting the attribute `PSRENSRV/default_http_port` to a value other than the default, 7180 in the psft_customizations.yaml.

Note. The REN server setting is also a requirement for a traditional PeopleSoft installation when setting up more than one application server on a single machine.

- (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 second Process Scheduler server has a different name, `PRCS222`.

  (G) In addition, 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) ###

appserver_domain_list:
  "APPDOM111":                                               ###(B), (C)###
    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:           9033                      ###(D)###
      Workstation Listener/Port:    7000                      ###(D ###

    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"

  "APPDOM222":                                            ###(B), (C)###
    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:            9043                 ###(D)###
      Workstation Listener/Port:     7001                 ###(D)###
      PSRENSRV/default_http_port:    7191                 ###(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"


pia_domain_list:
  "PIADOM111":                                            ###(B), (C)###
    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: Tmt0wtd1
      webserver_admin_port:       8000                              ###(D)###
      webserver_http_port:        8000                              ###(D)###
      webserver_https_port:       8443                              ###(D)###

    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:     PTWEBSERVER

        report_repository_dir: "%{hiera('report_repository_dir')}"

  "PIADOM222":                                            ###(B), (C)###
    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: Tmt0wtd1
      webserver_admin_port:       8002                              ###(D)###
      webserver_http_port:        8002                              ###(D)###
      webserver_https_port:       8445                              ###(D)###

    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:     PTWEBSERVER

        report_repository_dir: "%{hiera('report_repository_dir')}"


prcs_domain_list:
```

```
  "PRCSDOM111":
    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: PRCS222                     ###(F)###
        Security/DomainConnectionPwd:     "%{hiera('domain_conn_pwd')}"

    feature_settings:
      MSTRSRV:       "No"                                                 ###(G)###
      APPENG:        "Yes"
```

Task 3-2: Preparing the Customization File for Linux Users

This section discusses:

- Preparing the Customization File for Non-Default Linux Users
- Preparing the Customization File for a Single Linux User

Task 3-2-1: Preparing the Customization File for Non-Default Linux Users

This user customization applies to Linux platforms only. If you choose the default initialization, the Puppet framework creates four local users: psadm1, psadm2, psadm3, and oracle2. 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 an existing user (for example an LDAP user) or users, and Puppet will use them instead of the delivered users.

1. Locate the psft_unix_system.yaml file.

    By default, the DPK setup script installs the YAML files in *BASE_DIR/*dpk/puppet/production/data.

    The psft_unix_system.yaml file lists the default users. The `users` section includes interpolation functions that refer to the user names at the top. For example, psadm1 is defined as the `psft_install_user_name`, and is also defined as the name of the `tools_install_user` with the interpolation function `"%{hiera('psft_install_user_name')}"`.

```
psft_install_user_name:      psadm1
psft_runtime_user_name:      psadm2
psft_app_install_user_name: psadm3
oracle_user_name:            oracle2

users:
  tools_install_user:
    name:      "%{hiera('psft_install_user_name')}"
    gid:       "%{hiera('oracle_install_group_name')}"
    groups:    "%{hiera('psft_runtime_group_name')}"
    expiry:    absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('psft_install_user_⇒
name')}"
    password: "%{hiera('psft_user_pwd')}"
  psft_runtime_user:
    name:      "%{hiera('psft_runtime_user_name')}"
    gid:       "%{hiera('oracle_install_group_name')}"
    groups:    "%{hiera('psft_runtime_group_name')}"
    expiry:    absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('psft_runtime_user_⇒
name')}"
    password: "%{hiera('psft_user_pwd')}"
  app_install_user:
    name:      "%{hiera('psft_app_install_user_name')}"
    gid:       "%{hiera('psft_app_install_group_name')}"
    groups:    "%{hiera('psft_runtime_group_name')}"
    expiry:    absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('psft_app_install_user_⇒
name')}"
    password: "%{hiera('psft_user_pwd')}"
  oracle_user:
    name:      "%{hiera('oracle_user_name')}"
    gid:       "%{hiera('oracle_install_group_name')}"
    groups:    "%{hiera('oracle_runtime_group_name')}"
    expiry:    absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('oracle_user_name')}"
```

```
          password: "%{hiera('oracle_user_pwd')}"
```

2. If necessary, create a psft_customizations.yaml using a standard editing tool, such as Notepad on Microsoft Windows or 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 the file begins with three dashes (---).

3. Copy the entire section above from the psft_unix_system.yaml file into the psft_customizations.yaml file and modify the values as needed.

   Include the keys only for those users that you want to customize, and then include the `users` section with any necessary changes. For example, if you want to use non-default Linux or UNIX users for the install user and runtime user, include the `psft_install_user_name` and `psft_runtime_user_name` keys with the custom user name. Include the entire `users` section, and modify the names for the `tools_install_user` and `psft_runtime_user`.

   For example:

```
---
psft_install_user_name:     cust_user1
psft_runtime_user_name:     cust_user2

users:
  tools_install_user:
    name:      cust_user1
    groups:    "%{hiera('psft_runtime_group_name')}"
    expiry:    absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('psft_install_user_⇒
name')}"
    password: "%{hiera('psft_user_pwd')}"
  psft_runtime_user:
    name:      cust_user2
    gid:       "%{hiera('oracle_install_group_name')}"
    groups:    "%{hiera('psft_runtime_group_name')}"
    expiry:    absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('psft_runtime_user_⇒
name')}"
    password: "%{hiera('psft_user_pwd')}"
  app_install_user:
    name:       "%{hiera('psft_app_install_user_name')}"
    gid:        "%{hiera('psft_app_install_group_name')}"
    groups:     "%{hiera('psft_runtime_group_name')}"
    expiry:     absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('psft_app_install_user_⇒
name')}"
    password: "%{hiera('psft_user_pwd')}"
  oracle_user:
    name:       "%{hiera('oracle_user_name')}"
    gid:        "%{hiera('oracle_install_group_name')}"
    groups:     "%{hiera('oracle_runtime_group_name')}"
    expiry:     absent
    home_dir: "%{hiera('user_home_dir')}/%{hiera('oracle_user_name')}"
    password: "%{hiera('oracle_user_pwd')}"
```

4. Save the file.

Task 3-2-2: Preparing the Customization File for a Single Linux User

If your setup requires a single user for the whole PeopleSoft environment, use the `psft_user` key.

Note. The `psft_user` parameter is not included in the delivered psft_unix_system.yaml file.

```
---
users:
  psft_user:
    name:     psftuser1
    gid:      psftuser1
    expiry:   absent
    home_dir: /home/psftuser1
    password: *******
    remove: false
```

Task 3-3: 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. As mentioned in the section Reviewing Software Requirements for AIX, you must use customizations to specify the installation location of the manually installed JDK 8.0 for the AIX DPK.

1. Locate the psft_deployment.yaml file in *BASE_DIR/*dpk/production/puppet/data.

   The installation locations for Oracle Tuxedo, Oracle WebLogic, and JDK 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, 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 the file begins with three 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 user section will not be deleted when the deployed environment is removed.

   • Copy the entire `jdk` section from the psft_deployment.yaml file into the psft_customizations.yaml file and modify the location value; for example:

     ```
     ---
     jdk_location:      C:/jdk
       remove:          false
     ```

   • If you are installing on AIX, use the following:

     ```
     ---
     jdk_location:      ibm-java-ppc64-80
       remove:          false
     ```

   • Copy the entire `tuxedo` section from the psft_deployment.yaml file into the psft_customizations.yaml

file and modify the location value; for example:

```
---
tuxedo:
   location:        C:/psft/tuxedo
   remove:          false
```

* For Oracle WebLogic, copy both the `weblogic_location` parameter and the entire `weblogic` section from the psft_deployment.yaml file into the psft_customizations.yaml file. Be sure to set the locations to the same value. Do not indent `weblogic_location` or `weblogic`, as shown in this example:

```
---
weblogic:
   location:          C:/psft/weblogic
   remove:            false
weblogic_location:  C:/psft/weblogic
```

* If you want to customize JDK, Oracle Tuxedo, and Oracle Tuxedo, add all three entries to psft_customizations.yaml; for example:

```
---
jdk:
   location:        C:/jdk
   remove:          false

tuxedo:
   location:        C:/psft/tuxedo
   remove:          false

weblogic:
   location:          C:/psft/weblogic
   remove:            false
weblogic_location:  C:/psft/weblogic
```

4. Save the file.

Task 3-4: Preparing the Customization File for Unicode

Use these instructions if you want to change the Unicode designation for your database.

1. Locate the psft_deployment.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, 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 the file begins with three 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.

Task 3-5: Preparing the Customization File 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

Task 3-5-1: 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 8.56.12. Use these steps to specify a different *PS_HOME* location.

1. Locate the psft_deployment.yaml file in *BASE_DIR/*dpk/production/puppet/data.

The *PS_HOME* installation location is specified by the ps_home_location parameter.

```
ps_home_location: "%{hiera('pt_location')}/ps_home8.56.12"
"
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, 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 the file begins with three 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.

For example, on Linux or UNIX:

```
---
ps_home_location: /home/psft8.56.12
"
ps_home:
  db_type:    "%{hiera('db_platform')}"
  unicode_db: "%{hiera('unicode_db')}"
  location:   /home/psft8.56.12
```

For example, on Microsoft Windows:

```
---
ps_home_location: C:/psft8.56.12
"
ps_home:
  db_type:    "%{hiera('db_platform')}"
  unicode_db: "%{hiera('unicode_db')}"
  location:   C:/psft8.56.12
```

4. Save the file.

Task 3-5-2: 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/*<application>*
_app_home, where <application> is the abbreviation for the PeopleSoft application, such as fscm for PeopleSoft
Financials and Supply Chain Management. Use these steps to specify the *PS_APP_HOME* location.

1. Locate the psft_deployment.yaml file in *BASE_DIR/*dpk/production/puppet/data.

    The *PS_APP_HOME* installation location is specified by the ps_apphome_location parameter.

    ```
    ps_apphome_location: "%{hiera('pt_location')}/fscm_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, 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 the file begins with three 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.

    For example, on Linux or UNIX:

    ```
    ---
    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.

Task 3-5-3: 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/8.56, such as C:/users/username/psft/pt/8.56 on Microsoft Windows, and /home/psadm2/psft/pt/8.56 on Linux or UNIX. 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.

1. Locate the psft_configuration.yaml file in *BASE_DIR/*dpk/production/puppet/data.

   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/8.56"
   ```

2. If necessary, create a psft_customizations.yaml using a standard editing tool, such as Notepad on Microsoft Windows or vi on Linux, 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 the file begins with three 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.

   For example, on Linux or UNIX:

   ```
   ---
   ps_config_home:        /home/pt856_config
   ```

   For example, on Microsoft Windows:

   ```
   ---
   ps_config_home:        C:/pt856_config
   ```

4. Save the file.

Task 3-6: 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.

2. Answer *n* (no) to the following prompt:

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

The script stops.

3. Prepare the psft_customizations.yaml file as previously described and save it in *BASE_DIR/*
   dpk/puppet/production/data.

4. Open a command prompt, running as administrator, and change directory to the Puppet manifest directory,
   *BASE_DIR/*dpk/puppet/production/manifests.

5. Run the following command to set up the PeopleSoft environment using the modified YAML files.

Note. The confdir, debug, and trace options begin with two dashes.

On Microsoft Windows, Linux or UNIX:

```
puppet apply --confdir=BASE_DIR/dpk/puppet site.pp --debug --trace
```

On AIX and other operating systems it may be necessary to provide the full path to site.pp:

```
puppet apply --confdir=BASE_DIR/dpk/puppet BASE_DIR/dpk/puppet⇒
/production/manifests/site.pp --debug --trace
```

Chapter 4

Installing PS_APP_HOME Using the PeopleSoft Installer

This chapter discusses:

- Preparing for the PS_APP_HOME Installation
- Using the PeopleSoft Installer
- Verifying Necessary Files for Installation on Windows

Preparing for the PS_APP_HOME Installation

To get the files necessary to create a PeopleSoft application demo or system database, you must install the PeopleSoft application installation files to the *PS_APP_HOME* location. The PeopleTools DPK setup requires a *PS_APP_HOME* location that is different from the *PS_HOME* location where PeopleSoft PeopleTools is installed.

The PeopleSoft installer is a Java-based tool used to install PeopleSoft PeopleTools and PeopleSoft application from releases prior to PeopleTools 8.56, which were not delivered in the DPK format. You can run the PeopleSoft installer in GUI or console mode. For details on the prerequisites and options for running the PeopleSoft installer, see the PeopleSoft PeopleTools installation guide for your database platform (DB2 for Linux, UNIX, and Windows, DB2 for z/OS, Microsoft SQL Server, or Oracle RDBMS). Select the PeopleSoft PeopleTools release that your PeopleSoft application was built on.

If you need to obtain the software for the PeopleSoft application that you want to install, and if it is no longer available on Oracle Software Delivery Cloud or My Oracle Support, open a service request with Oracle support.

See Also

PeopleSoft PeopleTools 8.55 Installation Home Page, My Oracle Support, Doc ID 2068525.1

PeopleSoft PeopleTools 8.54 Installation Home Page, My Oracle Support, Doc ID 1905010.1

Task 4-1: Using the PeopleSoft Installer

This section discusses:

- Starting the PeopleSoft Installer
- Using the PeopleSoft Installer in GUI Mode
- Using the PeopleSoft Installer in Console Mode

Task 4-1-1: Starting the PeopleSoft Installer

After you download and extract the PeopleSoft PeopleTools installation files you can find the installer in *PS_INSTALL*/disk1.

To start the PeopleSoft Installer on Microsoft Windows, type:

```
PS_INSTALL\disk1\setup.bat [command line options]
```

To start the PeopleSoft Installer on a supported UNIX or Linux operating system, type:

```
PS_INSTALL/disk1/setup.sh [command line options]
```

The following list includes options that you can use when running setup.bat and setup.sh on the command line, their allowed values, descriptions, and environment variables that must be set before using the options.

Note. Only the command line options listed in this documentation are supported for PeopleSoft installation. Note that the use of a response file for silent installation is not supported for the installer for PeopleSoft PeopleTools 8.55. For some of the installations described elsewhere in this documentation, such as PeopleSoft Pure Internet Architecture, the same options apply.

- Specify console or GUI mode with the −i option.

    - To run in GUI mode:
      ```
      setup.bat -i GUI
      ```

    - To run in console mode:
      ```
      setup.sh -i console
      setup.bat -i console
      ```

- Specify the full absolute path to the Java (JRE or JDK) executable.

    Use either of the options −javahome or −LAX_VM to specify the absolute path to the JRE or JDK executable, including the executable name. Use this option if your installation is different than the vendor-defined installation path. This is used by the installer as the runtime javahome.

    On Microsoft Windows:
    ```
    setup.bat -javahome D:\prod\java8\bin\java.exe
    setup.bat -LAX_VM D:\prod\java8\bin\java.exe
    ```

    On UNIX:
    ```
    setup.sh -javahome /opt/java8/bin/java
    setup.sh -LAX_VM /opt/java8/bin/java
    ```

- Run in debug mode to investigate basic installer features.

    1. Set the environment variable LAX_DEBUG; for example:

       On Microsoft Windows:
       ```
       set LAX_DEBUG=true
       ```

       On UNIX:
       ```
       export LAX_DEBUG=true
       ```

    2. Run the installer; for example:

       On Microsoft Windows:

```
setup.bat -DDEBUG=console
```

On UNIX:

```
setup.sh -DDEBUG=console
```

- Specify the temporary directory to extract temporary files.

  This is recommended if you have less than 2 GB of space in your default temporary directory.

  - On Microsoft Windows, set the environment variable %TMP%, and then run setup.bat without an option for the temporary directory; for example:

    ```
    set TMP=D:\user\temp
    setup.bat
    ```

  - On UNIX, use the −tempdir option to specify the absolute path to the temporary directory; for example:

    ```
    setup.sh -tempdir /opt/home/user/temp
    ```

- To use more than one of the preceding options, you can combine them in any order; for example:

  ```
  setup.bat -i console -javahome D:\prod\java8\bin\java.exe
  ```

  ```
  setup.sh -LAX_VM /opt/java8/bin/java -DDEBUG=console -i console
  ```

- To start the debugger in GUI mode:

  1. Type the command; for example:

     ```
     setup.bat -DDEBUG=console -i console
     ```

  2. Press ENTER, and then hold down the CTRL key.

     The GUI installer window opens, and a console window also opens with the debugger messages.

Task 4-1-2: Using the PeopleSoft Installer in GUI Mode

To install PeopleSoft PeopleTools with the PeopleSoft Installer in GUI mode:

1. Launch the installer. For example:

   PS_INSTALL\disk1\setup.bat

   Click Next when you see the Welcome screen for PeopleTools.

2. Click the radio button to accept the license agreement and click Next.

   The License Agreement window includes the terms in several languages.

3. Choose a Unicode or non-Unicode database and click Next.

   Note. Unicode databases are recommended by Oracle. Some languages in a PeopleSoft installation are only supported in a Unicode database. Unicode databases can require more disk space than non-Unicode databases.

   See *PeopleTools: Global Technology.*

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

   For example, select the PeopleSoft Application Server, PeopleSoft Batch Server, PeopleSoft Database Server, PeopleSoft File Server, and PeopleSoft Web Server.

   Use the following information to help you make your selection on the Server window:

   - You can install multiple servers at the same time, but they will all be installed on the same machine. If you

want to install servers on separate machines, you need to run the PeopleSoft Installer on each server machine.

- If you do not have admin privileges, you will not be able to install PeopleSoft web server. You will have to either acquire admin privileges or deselect the Web Server option to continue.

- You *must* install the PeopleSoft software on your database server in order to run the PeopleSoft Database Configuration Wizard. (Running the Database Configuration Wizard is discussed in the chapter on creating a database.)

5. Specify the directory where you want to install PeopleSoft PeopleTools, referred to in this documentation as *PS_HOME,* in the Directory Name field, and click *Next.*

Note. Substitute your network drive and the directory name of your choice for the default selection. The installation directory name cannot contain a space. Note that directory names containing periods or non-US-ASCII characters may not work with some additional component software.

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

For Oracle database platforms, specify the path to the 64-bit connectivity software.

The default location for the connectivity software for Oracle 11g is C:\oracle\product\11.2.0\dbhome_1\BIN, as shown in this example.

Note. If you are using Oracle 12c, the default location is C:\oracle\product\12.1.0\dbhome_1\BIN.

7. Depending on the PeopleSoft servers you selected, choose whether to install the PeopleSoft PeopleTools icons and click Next.

8. If you elected to install PeopleSoft PeopleTools icons, choose a valid group folder in which to create them and click Next.

9. Enter the configuration information for Environment Management, the Environment Management machine name and port number.

Select the machine name of the web server running the Environment Manager Hub. (This will very likely be the machine on which you run the PeopleSoft Pure Internet Architecture). Select the hub port number (the default is 80, as shown in the example). This needs to match the PeopleSoft Pure Internet Architecture port. If you change the port number for the PeopleSoft Pure Internet Architecture configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

See the information on configuring and running Environment Management Components in the *PeopleTools: Change Assistant and Update Manager* product documentation.

10. The next screen lists the PeopleSoft PeopleTools components (product features). Accept the defaults for the PeopleSoft PeopleTools features and click Next.

- Select *PeopleTools* to install PeopleSoft PeopleTools and the PeopleSoft Pure Internet Architecture. This component contains the core PeopleTools files and is required for the proper operation of the PeopleSoft system and the PeopleSoft Pure Internet Architecture.

- Select *PeopleTools System Database* to allow your developers to create custom PeopleSoft PeopleTools applications outside of the delivered PeopleSoft Application.

- The *PeopleTools Language Pack* and *PeopleTools Language Development Kit* contain the translated PeopleSoft PeopleTools DLLs and the resource files and headers needed to build them.

Note. These options are available only for installations on Windows.

Select *PeopleTools Language Pack* if you plan on running the Windows components of the installation in languages other than English. This component contains the compiled PeopleSoft translations for the Windows client. If you are not using multiple languages throughout your implementation, you do not need

this component.

Select *PeopleTools Language Development Kit* if you plan on modifying or creating your own new translations for the PeopleSoft PeopleTools Windows client components. It contains the source and header files required to modify and compile new versions of these translations. Again, you do not need this component if you are not using multiple languages.

11. You will see an installation confirmation window. If the information is correct, choose Next. If you need to modify any of the information, choose the Back button and make your changes.

    The summary information includes the installation directory, the features, and the PeopleSoft servers:

12. After the files have been installed, click *Done* to complete the setup.

    The window displays the installation directory..

Task 4-1-3: Using the PeopleSoft Installer in Console Mode

To install PeopleSoft PeopleTools with the PeopleSoft Installer in console mode:

Note. The console mode installation is typically used on UNIX and Linux platforms, but can also be used on Microsoft Windows.

1. Launch the PeopleSoft Installer in console mode. For example:

   On Unix and Linux

   ```
   PS_INSTALL/disk1/setup.sh -i console -tempdir /tmp
   ```

   On Microsoft Windows

   ```
   PS_INSTALL/disk1/setup.bat -i console
   ```

   See Starting the PeopleSoft Installer.

2. At the Welcome prompt, press ENTER to continue.

   ```
   =========================================================================⇒
   =======
   Welcome
   -------

   InstallAnywhere will guide you through the installation of PeopleTools
   8.55.

   PRESS <ENTER> TO CONTINUE:
   ```

3. Accept the license agreement by entering *Y*. Select 0 when you are finished.

   Portions of the agreement text have been omitted from this example for brevity.

   ```
   =========================================================================⇒
   =======
   License Agreement
   -----------------

   Installation and Use of PeopleTools Requires Acceptance of the Following
   License Agreement:

   English
   ```

```
Notice:  This installation program may install products above and⇒
 beyond those
that you have licensed.  Please refer to your master license agreement⇒
 for the
products you are entitled to use. Installing and/or using software that⇒
 you
have not specifically licensed may result in termination of your license
agreement with PeopleSoft and entitle PeopleSoft to receive damages.  ⇒
 It may
also be an infringement of PeopleSoft's intellectual property rights.

DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? (Y/N): y
```

4. Enter *1* to select a Unicode Database (Recommended), or *2* to select a non-Unicode database, and then 0 to continue.

   Note. Unicode databases are beneficial if you intend to deploy your applications globally. Some languages in a PeopleSoft installation are only supported in a Unicode database. Unicode databases can require more disk space than non-Unicode databases.

   See *PeopleTools: Global Technology.*

   ```
   Please select the Oracle database character set:

     ->1- Unicode Database (Recommended)
       2- Non-Unicode Database

   To select an item enter its number, or 0 when you are finished [0] :
   ```

5. Select the PeopleSoft servers you want to install.

   ```
   For Oracle please select the products to install:

     ->1- PeopleSoft Application Server
     ->2- PeopleSoft Batch Server
     ->3- PeopleSoft Database Server
     ->4- PeopleSoft File Server
     ->5- PeopleSoft Web Server

   To select an item enter its number, or 0 when you are finished [0] :
   ```

   By default, all of the servers supported for your database platform are selected.

   Note. If you are installing on UNIX, do not use Symbolic Links. Use the actual directory.

6. Enter the installation location, such as /home/pt855, referred to as *PS_HOME,* and press ENTER to continue.

   Note. In console mode, the browse option for specifying a different install directory is unavailable.

   ```
   Please enter an installation location or press <ENTER> to accept the⇒
    default
      (Default: C:\PT8.55):
   ```

7. *Microsoft Windows only:* Specify the database connectivity directory.

```
Please select the location of Connectivity Program Directory [c:\orawin⇒
\bin]
    :
```

Specify the path to the 64-bit connectivity software.

The default location for the connectivity software for Oracle 11g is: C:\oracle\product\11.2.0\dbhome_1\BIN. If the database connectivity software was installed to a different directory, enter that path instead.

Note. If you are using Oracle 12c, the default location is C:\oracle\product\12.1.0\dbhome_1\BIN.

8. *Microsoft Windows only:* Indicate whether you want icons to be created.

```
Do you want to Install PeopleTools Icons?

   ->1- Yes
     2- No

To select an item enter its number, or 0 when you are finished [0] :
```

9. If you select the option to create PeopleTools icons, enter the name for the program group.

   The default is PeopleTools 8.55.

```
 Please enter in the program group folder you wish to create the icons⇒
 in
   [PeopleTools 8.55]:
```

10. Enter the configuration for Environment Management. Select the machine name and port number.

```
Please enter the hub machine name: [PSEMHUB]:

   Please enter the hub port number: [80]:
```

    Select the machine name of the web server running the Environment Manager Hub. (This will very likely be the machine on which you run the PeopleSoft Pure Internet Architecture). Select the hub port number (the default is 80). This needs to match the PeopleSoft Pure Internet Architecture port. If you change the port number for the PeopleSoft Pure Internet Architecture configuration, you must also change the web server listener port number for all the agents in the configuration.properties file.

    See the information on configuring and running Environment Management components in the *PeopleTools: Change Assistant and Update Manager* product documentation.

11. Choose the features that you wish to install:

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

          -> 1-  PeopleTools
             2-  PeopleTools System Database
             3-  PeopleTools Language Pack
             4-  PeopleTools Language Development Kit
```

    Options 3 and 4 appear only on Microsoft Windows.

12. At this point, you can toggle the install status of each product. Press 0 and then ENTER to continue and the PeopleSoft Installer will give you a summary of your selection. This summary will depend on your earlier selections.

```
Pre-Install Summary
```

```
    Please review the following before continuing:

    PeopleTools  will be installed in the following location: /home/PT855

    with the following features:
    PeopleTools
    PeopleTools System Database

    The following PeopleSoft Servers were selected by you:
    PeopleSoft Application Server
    PeopleSoft Batch Server
    PeopleSoft Database Server
    PeopleSoft File Server
    PeopleSoft Web Server

    Database Type:
    Oracle

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

    Press 1 for Next, 2 for Previous, 3 to Cancel, or 5 to Redisplay [1]
```

13. Press ENTER to start the installation.

    The PeopleSoft Installer displays a text-based progress bar to indicate the progress of the installation.

14. Press ENTER to exit.

    Note. For UNIX operating systems, if you chose PeopleSoft servers that require a JRE, you see the "Unpacking JRE" message after the progress bar.

```
    Installation Complete
    ---------------------

    Congratulations. PeopleTools has been successfully installed to:

       /home/PT855

    PRESS <ENTER> TO EXIT THE INSTALLER:
```

15. If you are installing on AIX, go to the *PS_HOME/*jre directory and ensure that the directory has executable permissions. If not, set the permission using a command such as chmod +x.

Task 4-2: Verifying Necessary Files for Installation on Windows

The current PeopleSoft PeopleTools release was developed using Microsoft Visual Studio 2015. PeopleSoft PeopleTools programs require Microsoft Visual C++ Redistributable for Visual Studio 2015 files to be present or the programs will not run.

During your PeopleSoft PeopleTools installation, the install programs will automatically update the Microsoft Windows machine performing the installation.

The required Visual C++ Redistributable for Visual Studio 2015 packages are part of the installation for the following components:

- PeopleSoft PeopleTools
- PeopleTools Client
- Database Configuration Wizard (DCW)
- PeopleSoft Pure Internet Architecture
- Change Assistant
- Change Impact Analyzer
- Web Application Deployment tool

In some cases it may be necessary for you to carry out a separate installation of the Visual C++ Redistributable for Visual Studio 2015 packages. For example:

- If the update does not take place during the installation program run, you may not be able to launch PeopleSoft PeopleTools client or server executables on that machine and may receive error messages.
- If you are accessing PeopleSoft PeopleTools executables from a machine on which you did not install directly, the executables may not work and you may receive error messages.

If you encounter these errors, you can update the Microsoft Windows machine's Visual C++ Redistributable for Visual Studio 2015 packages by running the installers manually.

If installing on a server or PeopleTools Client environment:

1. Go to *PS_HOME*\setup\psvccrt.

2. Run vcredist_x64.exe.

   Note. For each installer, the installation is completed automatically.

Chapter 5

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"

"Using the PeopleSoft Installer"

Task 5-1: 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:

- On Microsoft Windows 7, select *Start, Programs, PeopleTools 8.56, Configuration Manager.* (This program group will be available if you installed PeopleSoft PeopleTools on this workstation.)
- On Microsoft Windows 8 or 2012 R2, access the Apps screen, navigate to the PeopleTools 8.56 category, and select Configuration Manager.

  Note. See the documentation for your operating system for information on accessing the Apps screen.

- If the *PeopleTools 8.56* program group was not installed on this workstation, run pscfg.exe directly from the *PS_HOME*\bin\client\winx86 directory on the file server.

Task 5-2: 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 5-3: 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.
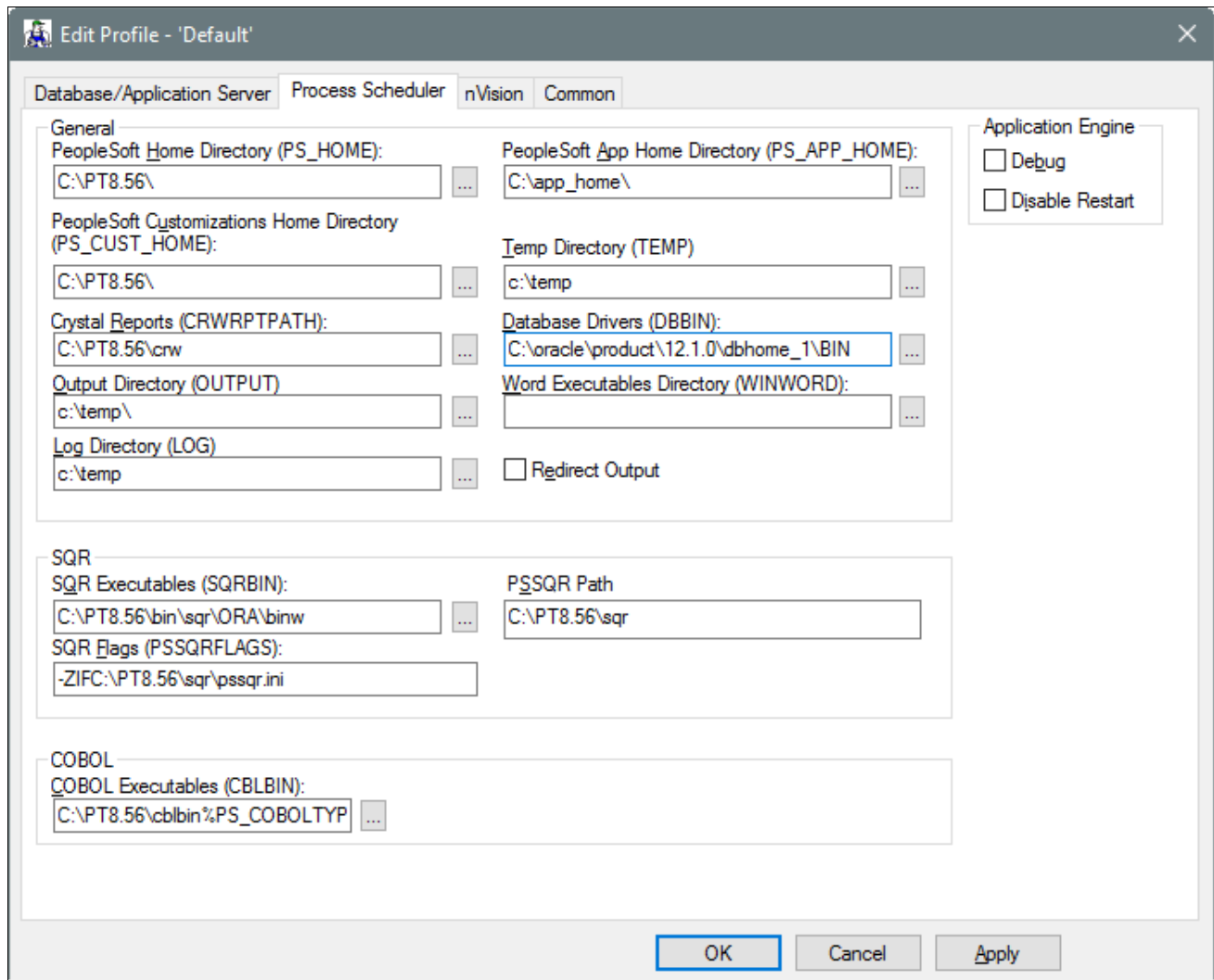
Edit Profile dialog box: Process Scheduler tab

- 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;\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:\oracle\product\11.2.0\dbhome_1\bin.

- Set the SQR Executables (SQRBIN) field to the file server directory where SQR for Windows was installed when you ran the PeopleSoft Installer.

- Set the SQR Flags (PSSQRFLAGS) field to *-ZIF<PS_HOME>\sqr\pssqr.ini.*

- Set the SQR Report Search 1 (PSSQR1) field to *PS_HOME\sqr.* The remaining SQR Report Search fields

can be left blank, because no additional SQR report directories have been created yet.

4. Select the Common tab of the Edit Profile dialog box, shown in this example:
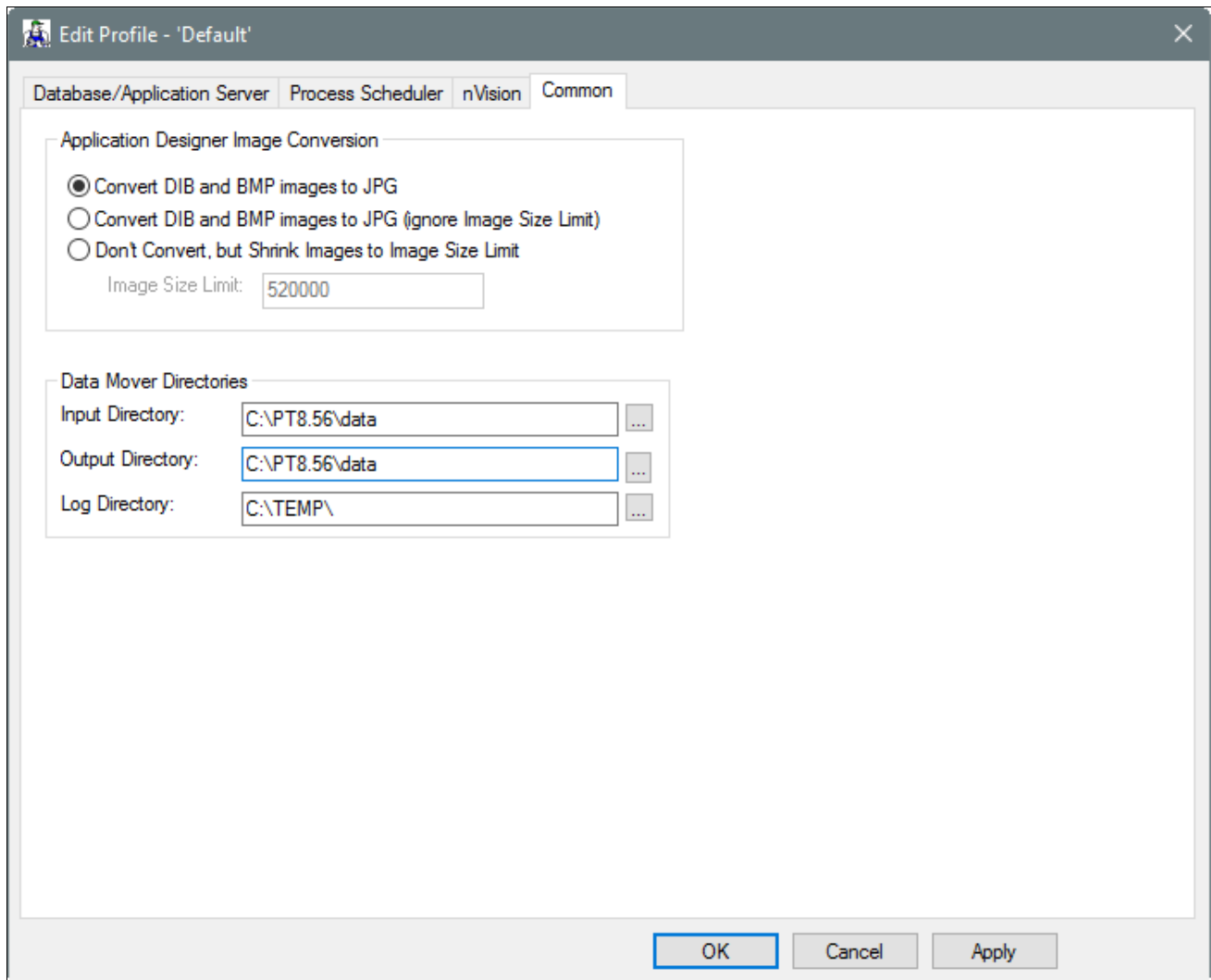
Edit Profile dialog box: Common tab

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 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 5-4: 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 8.56.*

3. If you do not have a PeopleTools 8.56 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 8.56 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 8.56 program group or install local DLLs.

5. Click OK to run Client Setup and close Configuration Manager.

Chapter 6A

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
- Setting NLS_LANG in the Windows Registry
- 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.

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 for 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 which tasks to use according to the RDBMS you installed, as follows:

*   If you installed Oracle 12c Enterprise Edition RDBMS, you can choose to create either CDBs or non-CDBs.
*   If you installed Oracle 11gR2 RDBMS, you can create only a non-CDB. For installations on Oracle 11gR2, pluggable databases are not supported. In this case, use the non-multitenant sections.

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.

See Also

"Preparing for Installation," Planning Database Creation

"Setting Up the Install Workstation"

Task 6A-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 6A-1-1: Installing the PeopleSoft Database Server Components on the Database Server

To create a PeopleSoft Database you *must have installed* the PeopleSoft software on your database server by running the PeopleSoft Installer and choosing the Database Server option, as described in a previous chapter. In addition, you need to install your application software to your database server before loading the database.

See "Using the PeopleSoft Installer."

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 6A-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

Note. If you are creating pluggable databases, you must install Oracle 12c Enterprise Edition.

Task 6A-1-3: Identifying the Oracle RDBMS Trace and Alert File Locations

For Oracle 11gR2 and later releases, 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 6A-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 to add a Windows service. 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 6A-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 CREATEDB.SQL script

   Note. PeopleSoft PeopleTools 8.55 supports Oracle 11g and Oracle 12c on Microsoft Windows. The PeopleSoft scripts are delivered to work across all versions of the Oracle RDBMS that Oracle supports for this release of PeopleSoft PeopleTools. To support these versions the PeopleSoft installation is delivered with the CREATEDB.SQL script for Oracle 11g or later installations.

   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 9.0 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 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:

- CREATEDB.SQL
- UTLSPACE.SQL
- *XX*DDL.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=manager 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 CREATEDB.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 6A-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.

Task 6A-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 CREATEDB.SQL, UTLSPACE.SQL, and *XX*DDL.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 CREATEDB.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 CREATEDB.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\Oracle11g\oradata\ORC1\control01.ctl", "c:⇒
\apps\db⇒
\Oracle11g\oradata\ORC1\control02.ctl", "c:\apps\db\Oracle11g\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 *XX*DDL.SQL scripts make the following directory path structure references:

Note. This is a sample of the first several Create Tablespace SQL statements in the *XX*DDL.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 6A-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 6A-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. Select Start, Control Panel, System and Security, System on Microsoft Windows 7.

   Click the Start button, then Control Panel, System and Security, System, on Microsoft Windows 8 or 2012 R2.

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.
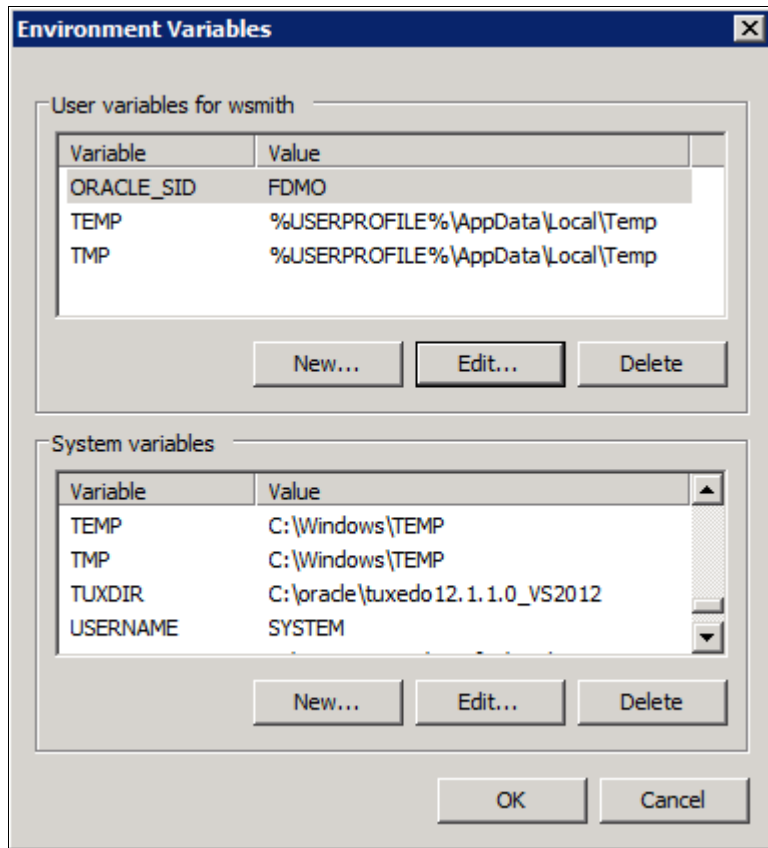
Setting the ORACLE_SID environment variable

Task 6A-2: Creating the Windows Service for the Database Instance

Before running the CREATEDB.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 to add a Microsoft Windows service. 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=manager⇒
 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 manager -startmode
auto -pfile %ORACLE_HOME%⇒ \database\init<SID>.ora
```

Task 6A-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 6A-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 for CDBs later in this chapter.

Task 6A-4-1: Modifying Database Scripts

To edit required database scripts:

1. Go to the *PS_HOME*\scripts\nt directory on the file server.

2. Edit the scripts to conform to your environment.

   The following list presents the necessary scripts:

   - CREATEDB.SQL

     Edit CREATEDB.SQL to remove the REMARK from the following line:

     ```
     REMARK startup nomount pfile=%ORACLE_HOME%\dbs\init<SID>.ora
     ```

     Note. When editing CREATEDB.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.

   - *XX*DDL.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 PeopleSoft PeopleTools 8.55. 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 *XX*DDL.SQL with the tablespaces in PTDDL.SQL. If the tablespace sizes in PTDDL.SQL are larger, increase the PeopleTools tablespace sizes in *XX*DDL.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.

See Also

"Using the PeopleSoft Installer"

Task 6A-5: Creating an Oracle Instance (non-Multitenant)

Run the CREATEDB.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 CREATEDB.SQL script, using the following example as a guide:

   ```
   sqlplus>@<PS_HOME>\scripts\nt\createdb.sql
   ```

Note. When editing CREATEDB.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 6A-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 6A-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
   ```

Task 6A-8: Creating Application-Specific Dbspaces and Tablespaces (non-Multitenant)

To create tablespaces for the product you are installing, run the appropriate *XX*DDL.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_HOME>\scripts\nt\epddl.sql
   ```

Task 6A-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 6A-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/manager
   ```

2. Run the PSADMIN.SQL script.

   ```
   SQLPLUS>@<PS_HOME>\scripts\nt\psadmin.sql
   ```

3. Supply values for Access ID, Access ID password, and the default tablespace name when prompted.

   Note. The password for Access ID must be between 6 and 30 characters.

Task 6A-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, LASTREFRESHDTTM, 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

Log-in Processing Steps	Related Database SQL Operations
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 6A-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 6A-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 *XX*DDL.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.

- CREATEDBCDB.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 CREATEDBCDB.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

  No changes are required.

- • 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.

- • *XX*DDL.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 6A-13: Creating an Oracle Instance (Multitenant Architecture)

This section discusses:

- • Creating a Root Container Database
- • Creating a PDB

Task 6A-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 createdbcdb.sql script, using the following example as a guide:

   ```
   sqlplus>@<PS_HOME>\scripts\nt\pdb\createdbcdb.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 scripts 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 6A-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$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 6A-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 6A-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/manager@<PDB_SERVICE_NAME>
   ```

2. Run the DBOWNER.SQL script, using the following example as a guide:

   ```
   sqlplus>@<PS_HOME>\scripts\nt\pdb\dbowner.sql
   ```

Task 6A-16: Creating Application-Specific Dbspaces and Tablespaces (Multitenant Architecture)

To create tablespaces for the product you are installing, run the appropriate *XX*DDL.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/manager@<PDB_SERVICE_NAME>
```

2. Run the appropriate DDL scripts.

   For example, for PeopleSoft Financials/Supply Chain Management:

   ```
   sqlplus>@<PS_HOME>\scripts\nt\epddl.sql
   ```

Task 6A-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 6A-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, and the default tablespace name when prompted.

   Note. The password for Access ID must be between 6 and 30 characters.

Task 6A-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, LASTREFRESHDTTM, 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

Log-in Processing Steps	Related Database SQL Operations
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 6A-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 6A-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 6A-21: Setting NLS_LANG in the Windows Registry

You must set the NLS_LANG Oracle registry key 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 SQL*Plus 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 a PeopleSoft installation would be AMERICAN_AMERICA.AL32UTF8. See the Oracle National Language Support guide for full details.

The NLS_LANG parameter should be set on *each* workstation you use to access the PeopleSoft application in two-tier mode, and on your application server machine.

Note. When using SQL*Plus to query data, set NLS_LANG on the client side to match the OS character set rather than the database character set.

To set NLS_LANG in the Windows registry:

1. Open the Windows Registry Editor by selecting *Run* from the Microsoft Windows Start menu.

2. Type REGEDIT in the Run dialog.

3. Navigate to the key HKEY_LOCAL_MACHINE\Software\Oracle.

Navigating to NLS_LANG

4. Double-click on the NLS_LANG key in the right hand side of the window.

    The Edit String dialog box appears as in this example.

Entering the Value data

5. Enter *<language>_<territory>*.AL32UTF8 in the Value Data field, substituting <language> and <territory> for your preferred language and territory settings.

    If unsure, use AMERICAN_AMERICA.AL32UTF8.

6. Click *OK* and close the Registry Editor.

Task 6A-22: 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 6A-22-1: 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 6A-22-2: 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 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, 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 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, 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. You must limit the access password to 30 characters or less.

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.

    If you installed the Multilanguage software, each application will be listed several times, once for each language. 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.

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 defined in the chapter "Preparing for Installation." Limit this to 30 characters or less.

- *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 a database for a language other than English. 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.

- 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.

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 6A-23: 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 6A-23-1: 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 6A-24: Cleaning Up Orphaned Language Data

Perform this task if you are a Multilingual customer and are installing non-English languages. The Application Engine program PTIACLEANLNG removes any orphaned related language objects that do not have a matching base language object.

1. Run the following SQL statement using the appropriate SQL query tool for your RDBMS.

   For <Log Path>, specify the path where you want the log for the application engine program in step 2 to be generated, such as c:\temp\.

   ```
   UPDATE PS_PTIASPDMPARAM SET PTIASPPROPVAL ='<Log Path>' WHERE
   PTIASPPROPNM='DMLOGPATH';
   ```

2. Run the PTIACLEANLNG application engine program.

   From the command line utility, the syntax is::

   ```
   <PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -⇒
   CP <pswd> -R <run_control> -AI PTIACLEANLNG
   ```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <userid> respectively. However, be aware that <userpswd> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <userpswd> that is the password associated with the <userid>.

Task 6A-25: Checking the Log Files and Troubleshooting

This section discusses:

- Checking the Log Files
- Running Data Mover
- Troubleshooting
- Improving Performance

Task 6A-25-1: 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 6A-25-2: Running Data Mover

Use one of these methods to run Data Mover.

Microsoft Windows

* On Microsoft Windows 2012 R2, access the Apps screen, and navigate to PeopleTools 8.56, Data Mover 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 6A-25-3: 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_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>;
```

where <RECORD NAME> is 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).

See Also

"Using the PeopleSoft Installer," Verifying Necessary Files for Installation on Windows.

Task 6A-25-4: 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 6A-26: 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 6B

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)." Choose whether to create pluggable databases according to the Oracle RDBMS you installed, as follows:

- If you installed the Oracle 12c Enterprise Edition RDBMS, you can choose to create either CDBs or non-CDBs.
- If you installed Oracle 11gR2 RDBMB, you can create only a non-CDB. For installations on Oracle 11gR2, pluggable databases are not supported.

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 for z/Linux. To create a database on that operating system platform, you must use the manual method of creating a database.

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.

Important! The Database Configuration Wizard cannot be used for an Unicode database on an Oracle database version lower than 11g. You must use the manual method of creating a database for this configuration.

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 6B-1: Fulfilling PeopleSoft Database Configuration Wizard Prerequisites

This section discusses:

- Installing the PeopleSoft Database Server Components on the Database Server
- Changing the Ownership for PS_APP_HOME
- 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 6B-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 Database component of your 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 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

"Using the PeopleSoft Installer"

"Setting Up the Install Workstation"

Task 6B-1-2: Changing the Ownership for PS_APP_HOME

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 6B-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

Note. The PeopleSoft Database Configuration Wizard for the current PeopleSoft PeopleTools release supports Oracle 11g or Oracle 12c. If you are using the pluggable database functionality, you must install Oracle 12c Enterprise Edition.

Task 6B-1-4: Identifying the Trace and Alert File Locations

For Oracle 11gR2 and later releases, 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 6B-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

PeopleSoft PeopleTools supports Oracle 11g and Oracle 12c. 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 CREATEDB.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:

- CREATEDB.SQL
- UTLSPACE.SQL
- *XX*DDL.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 CREATEDB.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 6B-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 6B-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 prepended to 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 CREATEDB.SQL, UTLSPACE.SQL, and *XX*DDL.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 *XX*DDL.SQL with PTDDL.SQL, and if PTDDL.SQL has bigger tablespace sizes than *XX*DDL.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 CREATEDB.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 CREATEDB.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 hardcoded 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 *XX*DDL.SQL scripts make the following directory path structure references:

Note. This is a sample of the first several Create Tablespace SQL statements in the *XX*DDL.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 6B-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 6B-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 6B-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 6B-2: Using the Database Configuration Wizard in Silent Mode

This section discusses:

- Understanding the Database Configuration Wizard
- Preparing the Response File
- 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.

Task 6B-2-1: Preparing the Response File

In the current release, the Database Configuration Wizard is run in silent mode. In silent mode, you provide the required information in a text file and run the script without further interaction.

Here is a sample text file. The file includes basic and RDBMS-specific sections. Copy the file and modify the values for your environment. Save the file in a location referred to as *<path_to_response_file>*.

Most of the entries are self-explanatory. Here are notes about a few entries:

- PS_APP_HOME

  Note that the DPK installation requires that the PS_APP_HOME location be different from the PS_HOME location.

- BASE_LANGUAGE

The base language selection 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.*

- ENABLE_USERPROFILE

  Set this option 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.

- SET_GLOBAL_PWD and PS_GLOBAL_PWD

  - Set this option to 0 (zero) to specify a password that is the same as the User ID (for example, VP1/VP1).

  - Set the option to 1 (one) to set a common global password for all the User profiles in the database.

    If you set the option to 1, for PS_GLOBAL_PWD, specify the password to be used for all user profiles.

- UNICODE and DB_CHARSET_CODE, and DB_CHAR_DES

  For information on allowed character sets, see Planning Multilingual Strategy in PeopleSoft PeopleTools Installation for your database platform.

```
#
# Response file for Database Configuration Wizard (DCW)

# Notes:
# 1. In Microsoft Windows
#    Open a command prompt; go to PS_HOME\setup\PsMpDbInstall and run the⇒
 following command:
#    setup.bat -f <path_to_response_file>
#
# 2. In Linux or UNIX
#    Go to  PS_HOME/setup/PsMpDbInstall and run the following command:
#    setup.sh -f <path_to_response_file>
#
# 3. Please use forward slashes( / ) for specifying Windows directories (⇒
 like I:/install.mss )
# 4. Change the values for your environment.
#
# *****************************************************************
##################################################################


                          BASIC Input

##################################################################



#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=C:\fscm_app_home
```

```
#If you have installed PeopleSoft Applications outside PeopleTools PS_HOME⇒
 then choose the PeopleSoft Applications home PS_APP_HOME, else leave the⇒
 default PS_HOME.

DB_SERVER_TYPE=ORA
#DB_SERVER_TYPE=MSS
#DB_SERVER_TYPE=DB2
#DB_SERVER_TYPE=DB2UNIX
#DB_SERVER_TYPE=DB2ODBC

# 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

#UNICODE=0
# This value is determined in unicode.cfg. Specify the value here to⇒
 override that setting.
#
UNICODE=0
DB_CHARSET_CODE=ISO8859-1
DB_CHAR_DES= Western European ISO 8859-1

BASE_LANGUAGE=ENG
#APP_LANGUAGE = UKE


DB_DB_NAME=PTSYS12
PS_CONNECT_ID=people
PS_CONN_PWD=<password>
PS_CONN_PWD_RETYPE=<password>


PS_APP_USER=PS
PS_APP_PWD=<password>
PS_APP_PWD_RETYPE=<password>

PS_WEB_USER=PTWEBSERVER
PS_WEB_PWD=<password>
PS_WEB_PWD_RETYPE=<password>

ENABLE_USERPROFILE=1
SET_GLOBAL_PWD=0
#PS_GLOBAL_PWD=


##################################################################

                         ORACLE Input

##################################################################
```

```
# Specify Yes for container database.
CDB=NO
#CDB=YES
DBCONFIGTYPE=
ORACLE_HOME=/ds1/app/oracle/product/12.1.0/dbhome_1
SQLPLUS_PATH=/ds1/app/oracle/product/12.1.0/dbhome_1/BIN
NEW_SID=YES
#NEW_SID=NO
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
```

#Mount Point 2 (for PSTEMP and PSDEFAULT file in utlspace.sql, ex: NT 'C'⇒
  , UNIX 'u01') [c]: data1/psft/db

```
DB_ORCL_MP2=ds1
```

#Mount Point 3 (for all files in xxddl.sql, ex: NT 'C' , UNIX 'u01') [c]:⇒
 data1/psft/db

```
DB_ORCL_MP3=ds1
AUTOEXTEND=YES
#AUTOEXTEND=NO
DB_OWNER_ID=SYSADM
DB_OWNER_PWD=<password>
DB_OWNER_PWD_RETYPE=<password>

PS_DEF_TBL_SPCE=PSDEFAULT
#complete path of init.ora file
P_FILE_PATH=/ds1/app/oracle/product/12.1.0/dbhome_1/dbs/initFSDMO.ora
```

Task 6B-2-2: 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 procedures.

On Microsoft Windows:

1. In a command prompt, go to *PS_HOME*\setup\PsMpDbInstall.

2. Run the following command, using forward slashes (/) to specify the path:

   ```
   setup.bat -f <path_to_response_file>
   ```

   For example:
   ```
   setup.bat -f D:/psftinstall
   ```

On Linux or 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
   ```

Task 6B-3: Cleaning Up Orphaned Language Data

Perform this task if you are a Multilingual customer and are installing non-English languages. The Application Engine program PTIACLEANLNG removes any orphaned related language objects that do not have a matching base language object.

1. Run the following SQL statement using the appropriate SQL query tool for your RDBMS.

   For <Log Path>, specify the path where you want the log for the application engine program in step 2 to be generated, such as c:\temp\.

   ```
   UPDATE PS_PTIASPDMPARAM SET PTIASPPROPVAL ='<Log Path>' WHERE
   PTIASPPROPNM='DMLOGPATH';
   ```

2. Run the PTIACLEANLNG application engine program.

   From the command line utility, the syntax is::

   ```
   <PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -⇒
   CP <pswd> -R <run_control> -AI PTIACLEANLNG
   ```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <userid> respectively. However, be aware that <userpswd> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <userpswd> that is the password associated with the <userid>.

Task 6B-4: Checking the Log Files and Troubleshooting

This section discusses:

- Checking the Log Files
- Running Data Mover
- Troubleshooting
- Improving Performance

Task 6B-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 6B-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|DB2UNIX|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:

   a. Change directory to *PS_HOME/*setup.

   b. Copy parmfile to parm<DBNAME>. For example, *parmPT856.*

   c. 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/pt856ora.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/parmPT856
      ```

      You see Data Mover log messages tracking the progress.

See Also

PeopleTools: Data Management

Task 6B-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_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 repeat the database creation.

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. Start Data Mover by running psdmtx on the command line.

   See Running Data Mover.

3. Log on using the Access ID to start Data Mover in *bootstrap mode.*

   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_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>;
   ```

   where <RECORD NAME> is 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. To restart the script, use the `psdmtx` command to execute Data Mover on the command line.

   See Running Data Mover.

Task 6B-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 6C

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)
- Setting NLS_LANG in the Windows Registry
- 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.

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 for 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 which tasks to use according to the RDBMS you installed, as follows:

- If you installed Oracle 12c Enterprise Edition RDBMS, you can choose to create either CDBs or non-CDBs.
- If you installed Oracle 11gR2 RDBMS, you can create only a non-CDB. For installations on Oracle 11gR2, pluggable databases are not supported. In this case, use the non-multitenant sections.

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.

See Also

"Preparing for Installation," Planning Database Creation

"Setting Up the Install Workstation"

Task 6C-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 6C-1-1: Installing the PeopleSoft Database Sever Components on the Database Server

To create a PeopleSoft Database you must have installed the PeopleSoft software on your database server by running the PeopleSoft Installer and choosing the Database Server option, as described in a previous chapter. In addition, you need to install your application software to your database server before loading the database.

See "Using the PeopleSoft Installer."

Note. Remember, you need to have the PeopleTools Development Environment set up to create your database.

See "Setting Up the Install Workstation."

See the information on using PeopleSoft Configuration Manager in the *PeopleTools: System and Server Administration* product documentation.

Task 6C-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

Note. If you are creating pluggable databases, you must install Oracle 12c Enterprise Edition.

Task 6C-1-3: Identifying the Trace and Alert File Locations

For Oracle 11gR2 and later releases, 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 6C-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 6C-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

Note. PeopleSoft PeopleTools supports Oracle 11g and Oracle 12c. The PeopleSoft scripts are delivered to work across all versions of the Oracle RDBMS that Oracle will support for this release of PeopleSoft PeopleTools.

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 9.0 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:

* CREATEDB.SQL
* UTLSPACE.SQL
* *XX*DDL.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=manager 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 CREATEDB.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 6C-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.

Task 6C-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 6C-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 were installed on the server using the PeopleSoft Installer described in the chapter "Using the PeopleSoft Installer." These scripts 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 6C-3-1: Modifying Database Scripts

To edit required database scripts:

1. Go to the *PS_HOME/*scripts/unix directory on the database server.
2. Edit the scripts to conform to your environment.

    The following list presents the necessary scripts:

    *   CREATEDB.SQL

        Edit CREATEDB.SQL to remove the REMARK from the following line:

        ```
        REMARK startup nomount pfile=%ORACLE_HOME%\dbs\init<SID>.ora
        ```

        Note. When editing CREATEDB.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.
    *   *XX*DDL.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 PeopleSoft PeopleTools 8.55. 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 *XX*DDL.SQL with the tablespaces in PTDDL.SQL. If the tablespace sizes in PTDDL.SQL are larger, increase the PeopleTools tablespace sizes in *XX*DDL.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.

See Also

"Using the PeopleSoft Installer"

Task 6C-4: Setting NLS_LANG in the Windows Registry

You must set the NLS_LANG Oracle registry key 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 SQL*Plus 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 a PeopleSoft installation would be AMERICAN_AMERICA.AL32UTF8. See the Oracle National Language Support guide for full details.

The NLS_LANG parameter should be set on *each* workstation you use to access the PeopleSoft application in two-tier mode, and on your application server machine.

Note. When using SQL*Plus to query data, set NLS_LANG on the client side to match the OS character set rather than the database character set.

To set NLS_LANG in the Windows registry:

1. Open the Windows Registry Editor by selecting *Run* from the Microsoft Windows Start menu.

2. Type REGEDIT in the Run dialog.

3. Navigate to the key HKEY_LOCAL_MACHINE\Software\Oracle.

Navigating to NLS_LANG

4. Double-click on the NLS_LANG key in the right hand side of the window.

   The Edit String dialog box appears as in this example.

Entering the Value data

5. Enter *<language>_<territory>*.AL32UTF8 in the Value Data field, substituting <language> and <territory> for your preferred language and territory settings.

   If unsure, use AMERICAN_AMERICA.AL32UTF8.

6. Click *OK* and close the Registry Editor.

Task 6C-5: Creating an Oracle Instance (non-Multitenant)

Run the CREATEDB.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 CREATEDB.SQL script using the following example as a guide:

```
sqlplus>@<PS_HOME>/scripts/unix/createdb.sql
```

Note. When editing CREATEDB.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 6C-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/unix/utlspace.sql
```

Task 6C-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/unix/dbowner.sql
```

Task 6C-8: Creating Application-Specific Dbspaces and Tablespaces (non-Multitenant)

To create tablespaces for the product you are installing, run the appropriate *XX*DDL.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_HOME>/scripts/unix/epddl.sql
```

Task 6C-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/unix/psroles.sql
   ```

Task 6C-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/manager
   ```

2. Run the PSADMIN.SQL script.

   ```
   SQLPLUS>@<PS_HOME>/scripts/unix/psadmin.sql
   ```

3. Supply values for Access ID, Access ID password, and the default tablespace name when prompted.

   Note. The password for Access ID must be between 6 and 30 characters.

Task 6C-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, LASTREFRESHDTTM, 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 6C-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/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 6C-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 *XX*DDL.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.

- CREATEDBCDB.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 CREATEDBCDB.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

  No changes are required.

- 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.

- *XX*DDL.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 6C-13: Creating an Oracle Instance (Multitenant Architecture)

This section discusses:

- Creating a Root Container Database
- Creating a PDB

Task 6C-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 createdbcdb.sql script, using the following example as a guide:

   ```
   sqlplus>@<PS_HOME>/scripts/unix/pdb/createdbcdb.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 ptperlcat.sh.

   This scripts 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 6C-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/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 6C-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/unix/pdb/utlspace.sql
   ```

Task 6C-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/manager@<PDB_SERVICE_NAME>
   ```

2. Run the DBOWNER.SQL script, using the following example as a guide:

   ```
   sqlplus>@<PS_HOME>/scripts/unix/pdb/dbowner.sql
   ```

Task 6C-16: Creating Application-Specific Dbspaces and Tablespaces (Multitenant Architecture)

To create tablespaces for the product you are installing, run the appropriate *XX*DDL.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/manager@<PDB_SERVICE_NAME>
   ```

2. Run the appropriate DDL scripts.

   For example, for PeopleSoft Financials/Supply Chain Management:

   ```
   sqlplus>@<PS_HOME>/scripts/unix/epddl.sql
   ```

Task 6C-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/unix/pdb/psroles.sql
   ```

3. Run the PSROLES2.SQL script:

   ```
   sqlplus>@<PS_HOME>/scripts/unix/pdb/psroles2.sql
   ```

Task 6C-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/unix/pdb/psadmin.sql
   ```

3. Supply values for Access ID, Access ID password, and the default tablespace name when prompted.

   Note. The password for Access ID must be between 6 and 30 characters.

Task 6C-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, LASTREFRESHDTTM, 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 6C-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/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 6C-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 6C-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 6C-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 6C-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 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, 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 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, 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. You must limit the access password to 30 characters or less.

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.

If you installed the Multilanguage software, each application will be listed several times, once for each language. 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.

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 defined in the chapter "Preparing for Installation." Limit this to 30 characters or less.

- *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 a database for a language other than English. 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.

- 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.

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 6C-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 6C-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 6C-23: Cleaning Up Orphaned Language Data

Perform this task if you are a Multilingual customer and are installing non-English languages. The Application Engine program PTIACLEANLNG removes any orphaned related language objects that do not have a matching base language object.

1. Run the following SQL statement using the appropriate SQL query tool for your RDBMS.

   For <Log Path>, specify the path where you want the log for the application engine program in step 2 to be generated, such as c:\temp\.

   ```
   UPDATE PS_PTIASPDMPARAM SET PTIASPPROPVAL ='<Log Path>' WHERE
   PTIASPPROPNM='DMLOGPATH';
   ```

2. Run the PTIACLEANLNG application engine program.

   From the command line utility, the syntax is::

   ```
   <PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -⇒
   CP <pswd> -R <run_control> -AI PTIACLEANLNG
   ```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <userid> respectively. However, be aware that <userpswd> is not the same as the connect password you entered on the Configuration Manager startup tab. Enter a value for <userpswd> that is the password associated with the <userid>.

Task 6C-24: Checking the Log Files and Troubleshooting

This section discusses:

- Checking the Log Files
- Running Data Mover
- Troubleshooting
- Improving Performance

Task 6C-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 6C-24-2: 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|DB2UNIX|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:

    a. Change directory to *PS_HOME/*setup.

    b. Copy parmfile to parm<DBNAME>. For example, *parmPT856*.

    c. 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/pt856ora.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/parmPT856
        ```

        You see Data Mover log messages tracking the progress.

See Also

PeopleTools: Data Management

Task 6C-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. Start Data Mover by running psdmtx on the command line.

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_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>;
```

where <RECORD NAME> is 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. To restart the script, use the `psdmtx` command to execute Data Mover on the command line.

Task 6C-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 6C-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 7

Completing the Database Setup

This chapter discusses:

- Selecting the Necessary Tasks to Complete the Database Setup
- Updating Database to Latest PeopleTools Release
- 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 7-1: Updating Database to Latest PeopleTools Release

This section discusses:

- Understanding Database Updates
- Cleaning Up Data
- Deleting Object Permission Data
- Deleting Performance Monitor System Default Data
- Creating New PeopleTools Tablespaces
- Updating PeopleTools System Tables
- Updating Select PeopleTools Database Objects
- Deleting Select PeopleTools Database Objects
- Updating Select PeopleTools Patch Database Objects
- Merging the PeopleTools Projects
- Altering PeopleTools Tables
- Updating PeopleTools Database Objects
- Deleting Obsolete PeopleTools Database Objects
- Applying Patched PeopleTools Database Objects

• Migrating Records to New Tablespaces

• Updating PeopleTools System Data

• Running PeopleTools Conversions

• Converting Integration Broker

• Running Additional PeopleTools Conversions

Understanding Database Updates

Your PeopleSoft application database may be on a PeopleSoft PeopleTools release prior to the version that you are currently running. For you to be able to sign on to your database after running the Data Mover script to load your database, the PeopleSoft PeopleTools versions for your database and your file server must match. The steps in this task ensure that your PeopleSoft database is in sync with the PeopleSoft PeopleTools version that you are running.

Note. You will use Application Designer for several steps in this portion of the installation. Consult the Application Designer documentation if you have questions.

See *PeopleTools: Application Designer Developer's Guide*

Note. If you are installing a database delivered on PeopleSoft PeopleTools 8.56, and you are applying a required for install PeopleSoft PeopleTools patch, skip the steps in this task. Instead, follow the directions in the patch user doc to apply the database changes, and then continue with the install at the task Running Additional Data Mover Scripts. If you are installing an application SYS or DMO database that is not delivered on PeopleSoft PeopleTools 8.56, please proceed with this task.

This task must be run for any applications where the PeopleSoft PeopleTools version of the database that was shipped is different than the version of PeopleSoft PeopleTools that you are running. To verify the PeopleSoft PeopleTools release for your application database, run this SQL query:

```
select TOOLSREL from PSSTATUS
```

If the PeopleTools version is not 8.56, you must run this task. Otherwise, continue to the task Running Additional Data Mover Scripts.

Task 7-1-1: Cleaning Up Data

If your database is delivered on PeopleSoft PeopleTools 8.48 or higher, do *not* run this step, and instead, proceed to Deleting Performance Monitor System Default Data. If your database is delivered on PeopleSoft PeopleTools 8.47 or earlier, perform this step to clean out obsolete message data.

Warning! Performing this task when updating from PeopleSoft PeopleTools 8.48 or later will wipe out current valid data that is needed for your system to function properly.

Message functionality and structure changed as of PeopleSoft PeopleTools 8.48 and the old data is obsolete. Edit *PS_HOME*\scripts\ptupgibdel.sql to delete data from the tables that only exist in the old PeopleSoft PeopleTools release. Open the script and make the following modifications, and then run the modified script using your SQL query tool:

1. Search for the string "--- End of PT8.*<xx>* ---" where *<xx>* represents the last two digits of the PeopleSoft PeopleTools release you are upgrading from.

2. Delete the entire portion of the script below this string.

3. Save the script as *<PS_HOME>*\scripts\ptupgibdel8*<xx>*.sql where *<xx>* represents the last two digits of the

PeopleSoft PeopleTools release you are upgrading from, as determined in Step 1.

Important! Be sure to save the script using the naming convention shown above. This will preserve the original script for use in updating other databases at different PeopleSoft PeopleTools releases.

4. Using a SQL query tool, run the ptupgibdel8<*xx*>.sql script against your PeopleSoft database.

Task 7-1-2: Deleting Object Permission Data

If your database is delivered on PeopleSoft PeopleTools 8.55 or earlier you must run this step. Truncate the PeopleTools table PSAPPDES_OBJ_PERM to ensure the successful completion of your installation. Because a primary key index on this table changed in PeopleSoft PeopleTools 8.56, the data stored in this table needs to be deleted to ensure that the index can be successfully created later in the installation.

Task 7-1-3: Deleting Performance Monitor System Default Data

If your database is delivered on PeopleSoft PeopleTools 8.54 or higher, do *not* run this step, and instead, proceed to Creating New PeopleTools Tablespaces. If your database is delivered on PeopleSoft PeopleTools 8.45 through 8.53, perform this task to clean out obsolete message data.

Warning! Performing this task when updating from PeopleSoft PeopleTools 8.54 or later will wipe out current valid data that is needed for your system to function properly.

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

Task 7-1-4: Creating New PeopleTools Tablespaces

Review the *XX*DDL.SQL tablespace creation script that was run earlier in the install process (*XX* is a two-letter code for your product line). Compare the contents of the script with the ptddlupg.sql script.

Work with your database administrator (DBA) to review, edit, and then run the ptddlupg.sql script to create any missing tablespaces before continuing with the installation.

See Also

"Creating a Database Manually on Windows," Editing Database Scripts

"Creating a Database on UNIX," Fulfilling PeopleSoft Database Configuration Wizard Prerequisites

"Creating a Database Manually on UNIX," Editing Database Scripts

Task 7-1-5: Updating PeopleTools System Tables

Run SQL scripts to update your PeopleSoft PeopleTools system tables to the latest PeopleSoft PeopleTools release (currently 8.56).

Use a query tool, such as Query SQL*Plus, to run SQL scripts while in the PeopleSoft database.

This procedure also includes steps to run Data Mover scripts. Depending upon the step, you run Data Mover in "bootstrap mode" or in "user mode."

See the section Checking the Log Files and Troubleshooting, Running Data Mover in the chapters on creating a database using the Database Configuration Wizard, or creating a database manually.

To update your PeopleSoft PeopleTools system tables:

1. Run the appropriate SQL scripts for your application version.

   The following scripts are found in the *PS_HOME*\scripts directory.

   Use the scripts in the following table for non-Unicode databases:

Application Database Version	Required Scripts for Non-Unicode Databases
8.40	rel841, rel842, rel843, rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.41	rel842, rel843, rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.42	rel843, rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.43	rel844, rel845, rel846, rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.44	rel845, rel846, rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.45	rel846, rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.46	rel847, rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.47	rel848, rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856 **Note.** If you are installing ELM 9.0, run rel848n, rel849n, rel850n, rel851n, rel852n, rel853n, rel854n, rel855n, and rel856n instead.
8.48	rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856 **Note.** If you are installing a 9.0 or higher application, run rel849n, rel850n, rel851n, rel852n, rel853n, rel854n, rel855n, and rel856n instead.
8.49	rel850, rel851, rel852, rel853, rel854, rel855, and rel856 **Note.** If you are installing a 9.0 or higher application, run rel850n, rel851n, rel852n, rel853n, rel854n, rel855n , and rel856n instead.
8.50	rel851, rel852, rel853, rel854, rel855, and rel856 **Note.** If you are installing a 9.0 or higher application, run rel851n, rel852n, rel853n, rel854n, rel855n, and rel856n instead.
8.51	rel852, rel853, rel854, and rel855, and rel856

Application Database Version	Required Scripts for Non-Unicode Databases
	Note. If you are installing a 9.0 or higher application, run rel852n, rel853n, rel854n, rel855n, and rel856 instead.
8.52	rel853, rel854, rel855, and rel856 **Note.** If you are installing a 9.0 or higher application, run rel853n, rel854n, rel855n, and rel856n instead.
8.53	rel854, rel855, and rel856 **Note.** If you are installing a 9.0 or higher application, run rel854n, rel855n, and rel856n instead.
8.54	rel855 and rel856 **Note.** If you are installing a 9.0 or higher application, run rel855n and rel856n instead.
8.55	rel856 **Note.** If you are installing a 9.0 or higher application, run rel856n instead.
8.56	None

Use the scripts in the following table for Unicode databases:

Application Database Version	Required Scripts for Unicode Databases
8.40	rel841u, rel842u, rel843u, rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.41	rel842u, rel843u, rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.42	rel843u, rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.43	rel844u, rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.44	rel845u, rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.45	rel846u, rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u

Application Database Version	Required Scripts for Unicode Databases
8.46	rel847u, rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.47	rel848u, rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u **Note.** If you are installing ELM 9.0, run rel848un, rel849un, rel850un, rel851un, rel852un, rel853un, and rel854un, rel855un, and rel856un instead.
8.48	rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u **Note.** If you are installing a 9.0 or higher application, run rel849un, rel850un, rel851un, rel852un, rel853un, rel854un, rel855un, and rel856un instead.
8.49	rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u **Note.** If you are installing a 9.0 or higher application, run rel850un, rel851un, rel852un, rel853un, rel854un, rel855un, and rel856un instead.
8.50	rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u **Note.** If you are installing a 9.0 or higher application, run rel851un, rel852un, rel853un, rel854un, rel855un, and rel856un instead.
8.51	rel852u, rel853u, rel854u, rel855u, and rel856u **Note.** If you are installing a 9.0 or higher application, run rel852un, rel853un, rel854un, rel855un, and rel856un instead.
8.52	rel853u, rel854u, rel855u, and rel856u **Note.** If you are installing a 9.0 or higher application, run rel853un, rel854un, rel855un, and rel856un instead.
8.53	rel854u, rel855u, and rel856u **Note.** If you are installing a 9.0 or higher application, run rel854un, rel855un, and rel856un instead.
8.54	rel855u and rel856u **Note.** If you are installing a 9.0 or higher application, run rel855un and rel856un instead.
8.55	rel856u **Note.** If you are installing a 9.0 or higher application, run rel856un instead.

Application Database Version	Required Scripts for Unicode Databases
8.56	None

2. If the application database version you are installing is either 8.42 or 8.43, run the following SQL command:

```
DROP TABLE PS_PSMCFQUEUESLANG
```

Note. PS_PSMCFQUEUESLANG may not exist in some 8.43 application databases. Do *not* drop the table PSMCFQUEUESLANG.

3. If the application database you are installing is 8.45 or lower, run the following SQL command:

```
DROP TABLE PSOPTSTATUS
```

4. Edit and run the grant.sql script in the *PS_HOME*\scripts directory. This will grant permissions to the Connect ID.

5. If the application database you are installing is 8.54 or lower, you are using Oracle 12c or higher, and you are using multitenant architecture, re-run the scripts to create the PeopleSoft database roles.

   This will grant additional privileges to enable use of the Oracle in-memory feature in Oracle 12c and restrict certain privileges to the Access ID.

   a. Open *PS_HOME*\scripts\nt\pdb\psroles2.sql for editing and replace the variable <PDB_SERVICE_NAME> with the PDB database name.

   b. Log on to SQL*Plus, connecting as sysdba.

   ```
   sqlplus / as sysdba
   ```

   c. Run the PSROLES.SQL script:

   ```
   sqlplus>@PS_HOME\scripts\nt\pdb\psroles.sql
   ```

   d. Run the PSROLES2.SQL script:

   ```
   sqlplus>@PS_HOME\scripts\nt\pdb\psroles2.sql
   ```

   e. Run the following SQL command, substituting your access ID:

   ```
   grant PSADMIN to ACCESSID
   ```

6. If the application database you are installing is 8.54 or lower, you are using Oracle 12c or higher, and the database is non-multitenant, re-run the script to create the PeopleSoft database roles.

   This will grant additional privileges to enable use of the Oracle in-memory feature in Oracle 12c and restrict certain privileges to the Access ID.

   a. Log on to SQL*Plus, connecting as sysdba.

   ```
   sqlplus / as sysdba
   ```

   b. Run the PSROLES.SQL script:

   ```
   sqlplus>@PS_HOME\scripts\nt\psroles.sql
   ```

   c. Run the following SQL command, substituting your access ID:

   ```
   grant PSADMIN to ACCESSID
   ```

7. If your database is delivered on PeopleSoft PeopleTools 8.49 or earlier, run the UPGDBOPTIONS_ENABLETIMESTAMPS.sql script in the *PS_HOME*\scripts directory.

This enables the usage of the TIMESTAMP data type.

8. If the application database you are installing is 8.54 or lower, invoke Data Mover in bootstrap mode, and run the encrypt.dms Data Mover script in the *PS_HOME*\scripts directory.

    This will encrypt the operator passwords in your database.

9. With Data Mover still in bootstrap mode, run the msgtlsupg.dms Data Mover script in the *PS_HOME*\scripts directory.

    This will update the PeopleSoft PeopleTools messages in your database.

10. If you are applying a required for install PeopleSoft PeopleTools patch, invoke Data Mover in user mode and run *PS_HOME*\scripts\PTPATCH.DMS.

11. With Data Mover still in user mode, run the storeddl.dms Data Mover script in the *PS_HOME*\scripts directory.

    Note. Comment out the other platform-specific scripts according to your platform.

    This will update your platform-specific DDL model statements.

Task 7-1-6: Updating Select PeopleTools Database Objects

To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft PeopleTools release. Failure to run this step will introduce problems to your environment.

To update PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PPLTLS84CUR from the list of projects and click the Select button.

    Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

Selecting Project PPLTLS84CUR in the Copy From File dialog box

4. The Copy From File dialog box appears.

    Select *only* the first three object types (Records, Fields, and Indexes) in the Definition Type(s) field and then click Options.

    Do not select any other object types.

5. On the Upgrade Options dialog box, select the General Options tab.

    Make sure that the Keep Target Origin option is selected, as shown in this example, and click OK.

Upgrade Options dialog box: General Options page

6. On the Copy from File dialog box, click the Copy button.

    When the progress window disappears, the project has been copied.

If you see the following types of messages in the output window do not worry; they are acceptable because the field label properties were copied with the object definition:

*   Definition Name: OPERPSWD.OPERPSWD not copied, entire definition already copied (62,32).

*   Definition Name: OPRID.NEW not copied, entire definition already copied (62,32).

Task 7-1-7: Deleting Select PeopleTools Database Objects

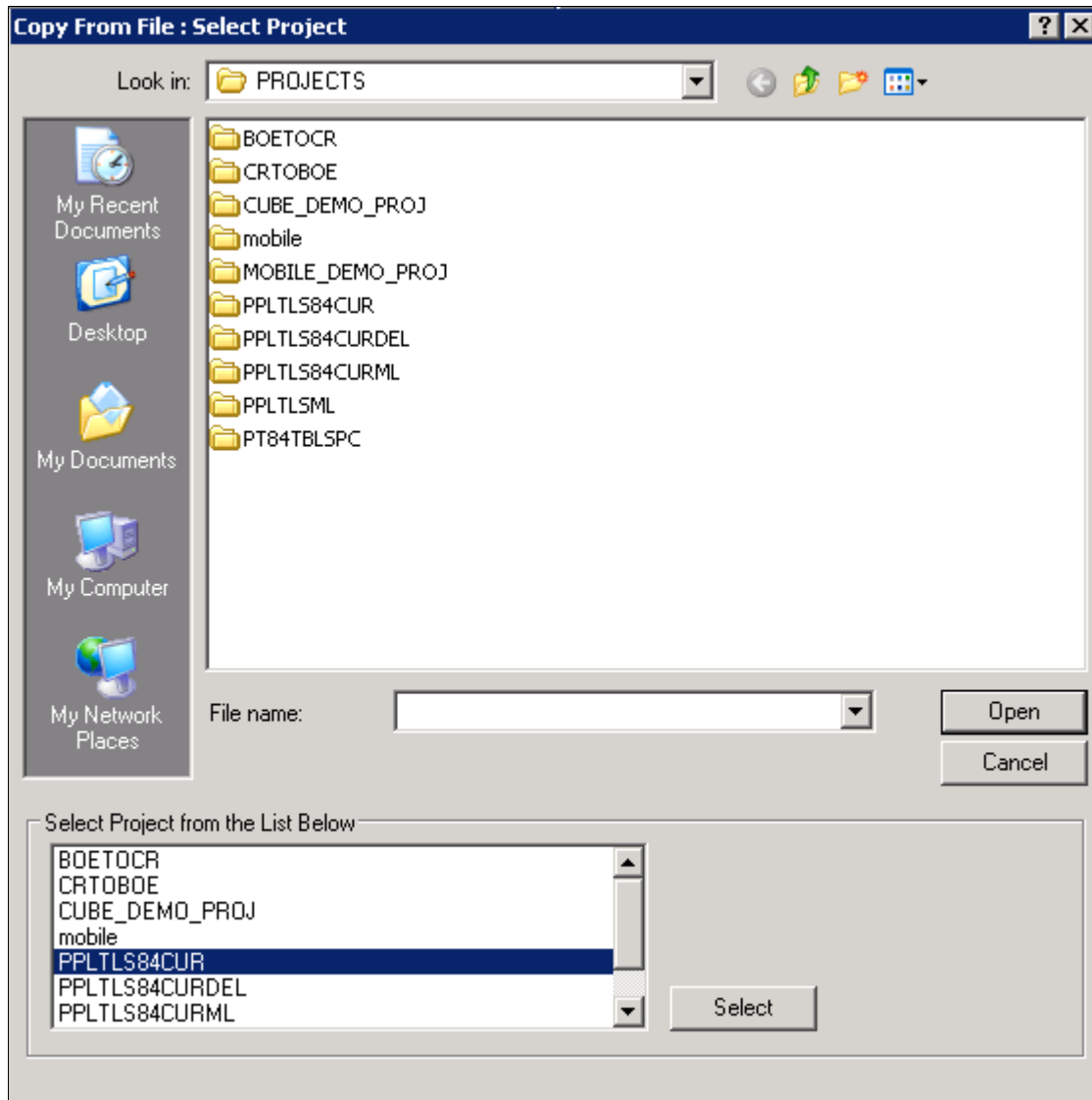This process removes obsolete PeopleSoft PeopleTools records, fields, and indexes from your database. To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. You will use the Copy from File functionality to delete the obsolete objects from the database.

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

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

You must clean up any objects that reference the deleted field(s) after the upgrade. While PeopleTools has deleted the field as part of the new release, you may still have objects that reference this deleted field. After fixing any objects that reference this field, delete the field from your system.

To delete obsolete PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PPLTLS84CURDEL from the list of projects and click Select.

Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

Selecting Project PPLTLS84CURDEL in the Copy From File dialog box

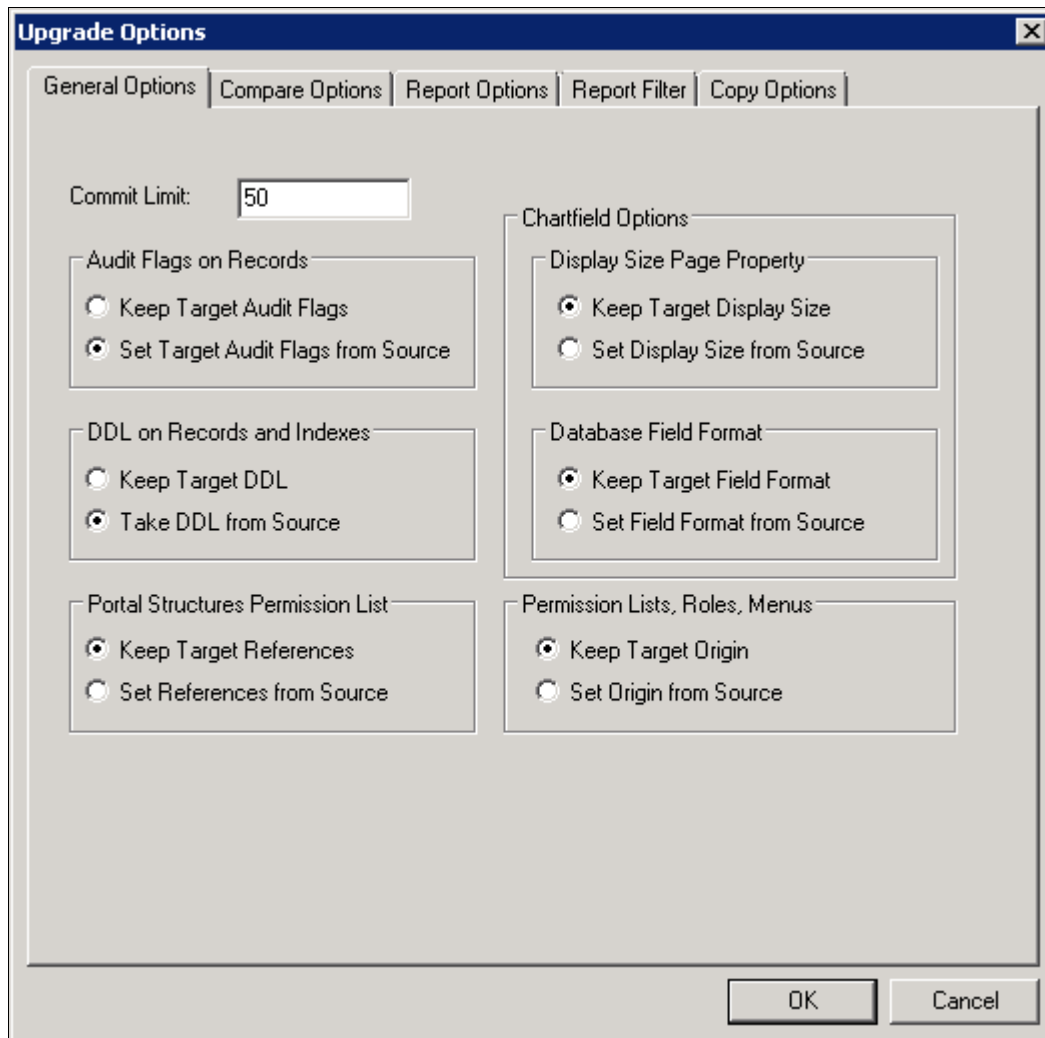4. The Copy From File dialog box appears.

Select *only* the first three object types (Records, Fields, and Indexes) in the Definition Type(s) field, and then click Options.

Do not select any other object types.

Note. If you have a multilingual database, do not change the languages that are selected by default.

5. On the Copy from File dialog box, click Copy.

   When the progress dialog box disappears, the project has been copied.

Task 7-1-8: Updating Select PeopleTools Patch Database Objects

If you are applying a required for install PeopleSoft PeopleTools patch and *if a database project is included as part of the patch,* apply the database project now. Make sure to read the patch release notes to find out if database changes are in the patch.

To update patched PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft PeopleTools patch release. Failure to run this step will introduce problems to your environment.

To apply patched PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. On the Copy From File dialog box, change the import directory to *PS_HOME*\projects, select the patch project from the list of projects and click the Select button.

4. Follow the patch instructions to select the correct copy options.

   Select *only* records, fields, and indexes object types.

5. On the Copy From File dialog box, click Copy.

   When the progress window disappears, the project has been copied.

Task 7-1-9: Merging the PeopleTools Projects

In this task, you will merge the PPLTLS84CUR and PATCH856 projects definitions so that the PPLTLS84CUR project definition is updated with any new records that might have been delivered in the PeopleTools Patch.

To merge project definitions:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select File, Open.

   The Open Definition dialog box opens.

3. Select Project from the Definition drop-down list, enter PPLTLS84CUR in the name dialog box, and click OK.

4. Select File, Merge Projects.

5. Enter PATCH856 in the Name dialog box, and press ENTER.

6. Select the PATCH856 project in the lower window and click Insert.

7. Click Close.

Task 7-1-10: Altering PeopleTools Tables

Use the ALTER AUDIT process in this step to check whether the PeopleSoft PeopleTools tables are synchronized with the underlying SQL data tables in your database. This step uses a delivered project to compare the data structures of your database tables with the PeopleSoft PeopleTools tables to uncover inconsistencies. The ALTER AUDIT process then reports its findings. At this point in the installation, we expect to see differences between the database structure and the PeopleSoft PeopleTools tables. You will generate and run a SQL script to synchronize the PeopleSoft PeopleTools table definitions with the underlying tables in your database.

To alter PeopleSoft PeopleTools tables:

1. Launch Application Designer with a valid PeopleSoft user ID and sign on to the installed database.

2. Select File, Open.

    The Open Definition dialog box opens.

3. Select *Project* from the Definition drop-down list, enter *PPLTLS84CUR* in the name dialog box, and click OK.

4. Select Build, Project.

    The Build dialog box appears:
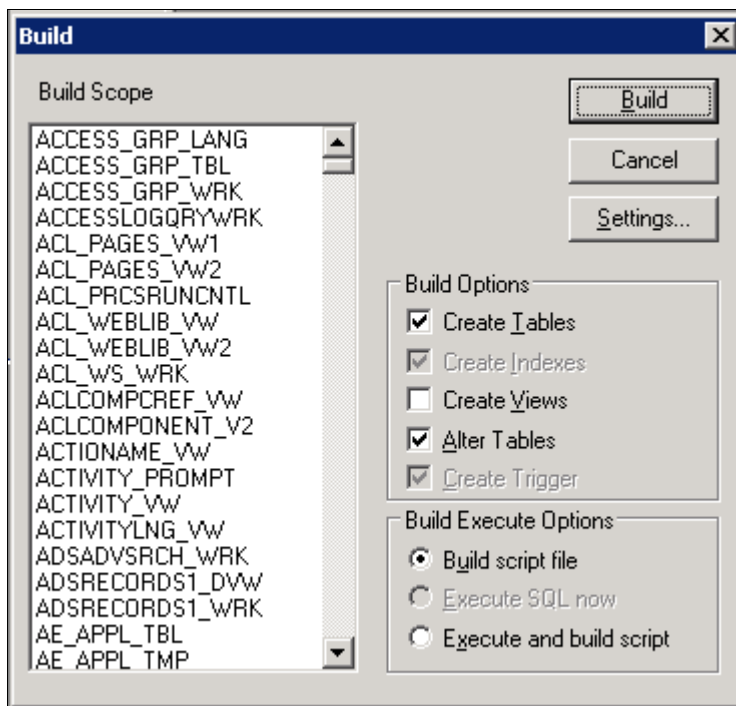
The Build dialog box with selections for altering tables

5. Select Create Tables and Alter Tables in the Build Options region as shown in the example above (Create Indexes and Create Trigger will automatically be selected).

6. Select Build script file in the Build Execute Options region.

7. Click Settings.

The Build Settings dialog box appears:
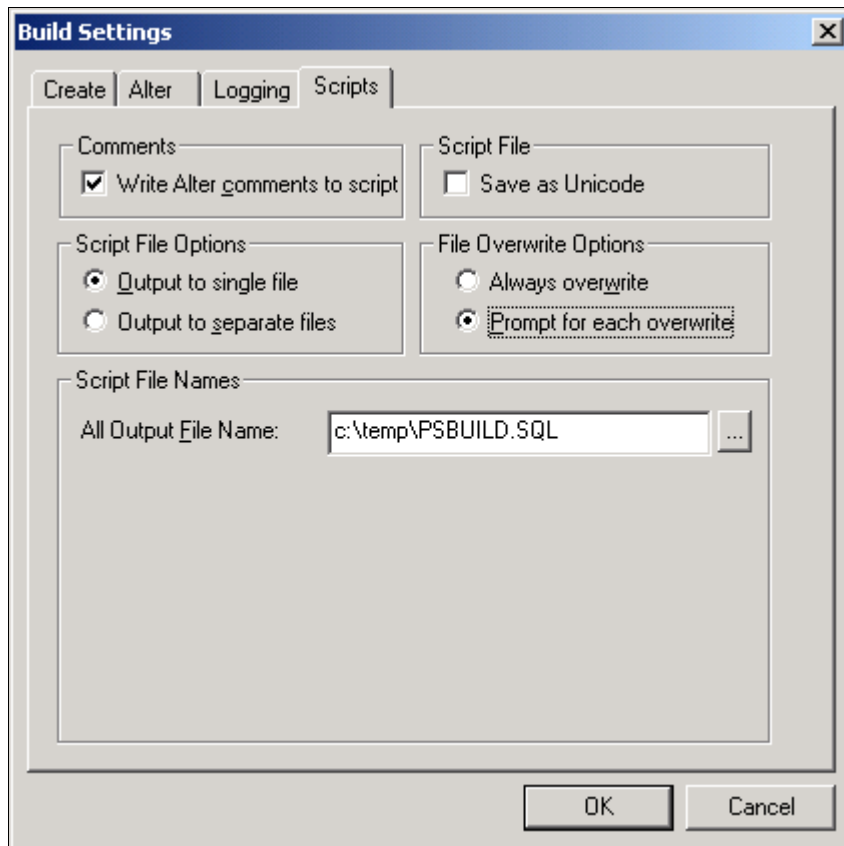
Build Settings dialog box: Scripts tab

8. Select the Scripts tab.

9. Select Write Alter comments to script.

10. Select the Alter tab and ensure that the Adds, Changes, Renames, and Deletes check boxes are selected in the Alter Any region.

The check box Drop column if data present should be selected in the Drop Column Options region, and the option Truncate data if field too short should be selected in the Change Column Length Options region.

Make sure that the option Alter by Table Rename is selected in the Alter Table Options region.
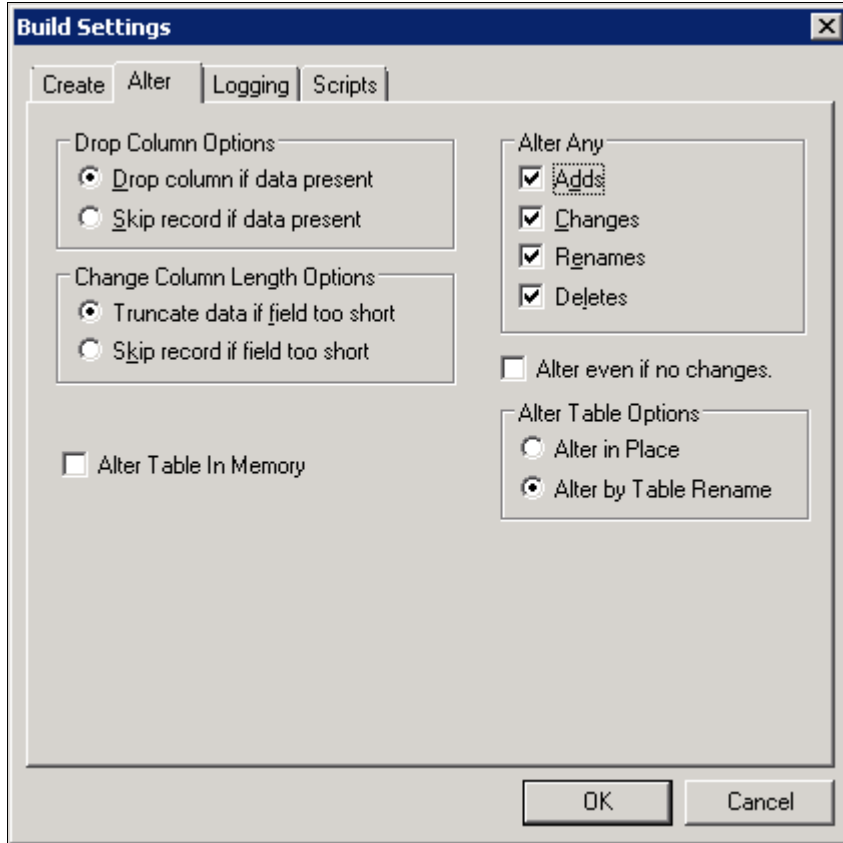
Build Settings dialog box: Alter tab

11. Select the Create tab and ensure that the options Skip table if it already exists, Recreate view if it already exists, and Recreate index only if modified options are selected.
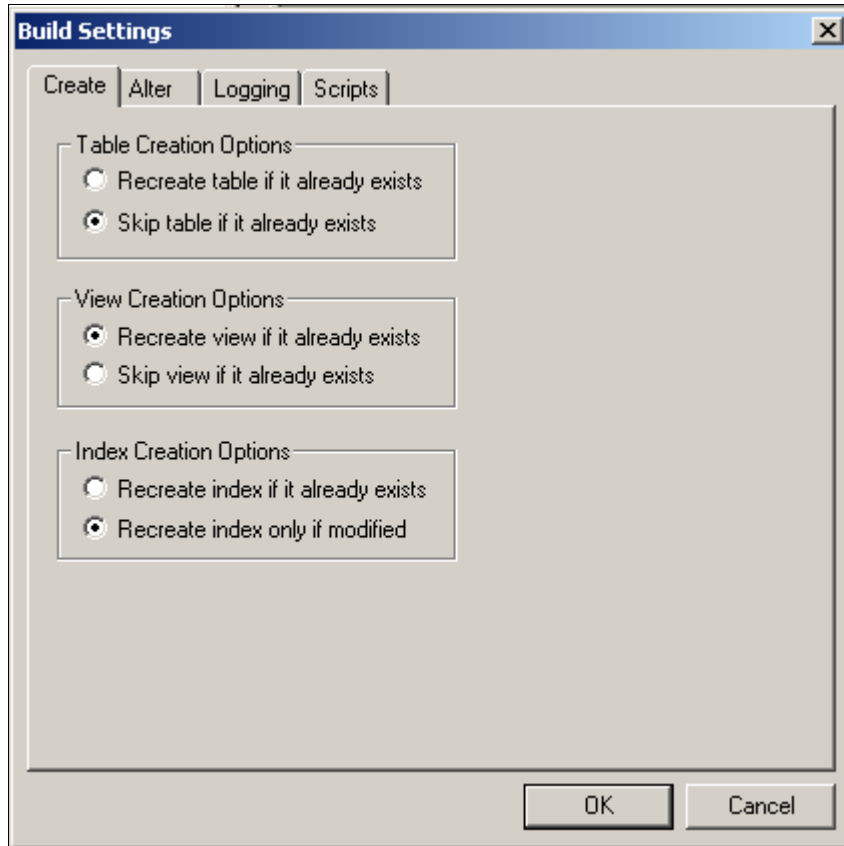
Build Settings dialog box: Create tab

12. Click OK.

The Build dialog box reappears.

13. Click Build.

14. Click Close when the process is completed.

15. Edit the generated SQL script for the correct tablespace names and sizing parameters if you are not using delivered PeopleSoft Tablespace names.

16. Run the generated SQL script in your platform-specific query tool to bring your database structure in sync with the PeopleSoft PeopleTools tables.

Task 7-1-11: Updating PeopleTools Database Objects

To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft PeopleTools release. Failure to run this step will introduce problems to your environment.

To update PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PPLTLS84CUR from
    the list of projects and click the Select button.

    Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to
    overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

Selecting Project PPLTLS84CUR in the Copy From File dialog box

4. The Copy From File dialog box appears.

    Clear (deselect) the first three object types (Records, Fields, and Indexes) in the Definitions Type(s) field.

    Ensure that all of the remaining object types are selected, and then click Options.

5. On the Upgrade Options dialog box, select the General Options tab.

    Make sure that the Keep Target Origin option is selected, as shown in this example, and click OK.

Upgrade Options dialog box: General Options page

6. On the Copy from File dialog box, click the Copy button.

    When the progress window disappears, the project has been copied.

If you see the following types of messages in the output window do not worry; they are acceptable because the field label properties were copied with the object definition:

*   Definition Name: OPERPSWD.OPERPSWD not copied, entire definition already copied (62,32).

*   Definition Name: OPRID.NEW not copied, entire definition already copied (62,32).

Task 7-1-12: Deleting Obsolete PeopleTools Database Objects

This process removes obsolete PeopleSoft PeopleTools objects from your database. To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. You will use the Copy from File functionality to delete the obsolete objects from the database.

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

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

You must clean up any objects that reference the deleted field(s) after the upgrade. While PeopleTools has deleted the field as part of the new release, you may still have objects that reference this deleted field. After fixing any objects that reference this field, delete the field from your system.

To delete obsolete PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PPLTLS84CURDEL from the list of projects and click Select.

Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

Selecting Project PPLTLS84CURDEL in the Copy From File dialog box

4. The Copy From File dialog box appears.

Clear (deselect) the first three object types (Records, Fields, and Indexes) in the Definitions Type(s) field.

Ensure that all of the remaining object types are selected, and then click Options.

Note. If you have a multilingual database, do not change the languages that are selected by default.

5. On the Upgrade Options dialog box, select the General Options tab and make sure that the Keep Target Origin option is selected.

   Click OK.

6. On the Copy from File dialog box, click the Copy button.

   When the progress dialog box disappears, the project has been copied.

Task 7-1-13: Applying Patched PeopleTools Database Objects

If you are applying a required for install PeopleSoft PeopleTools patch and *if a database project is included as part of the patch,* apply the database project now. Make sure to read the patch release notes to find out if database changes are in the patch.
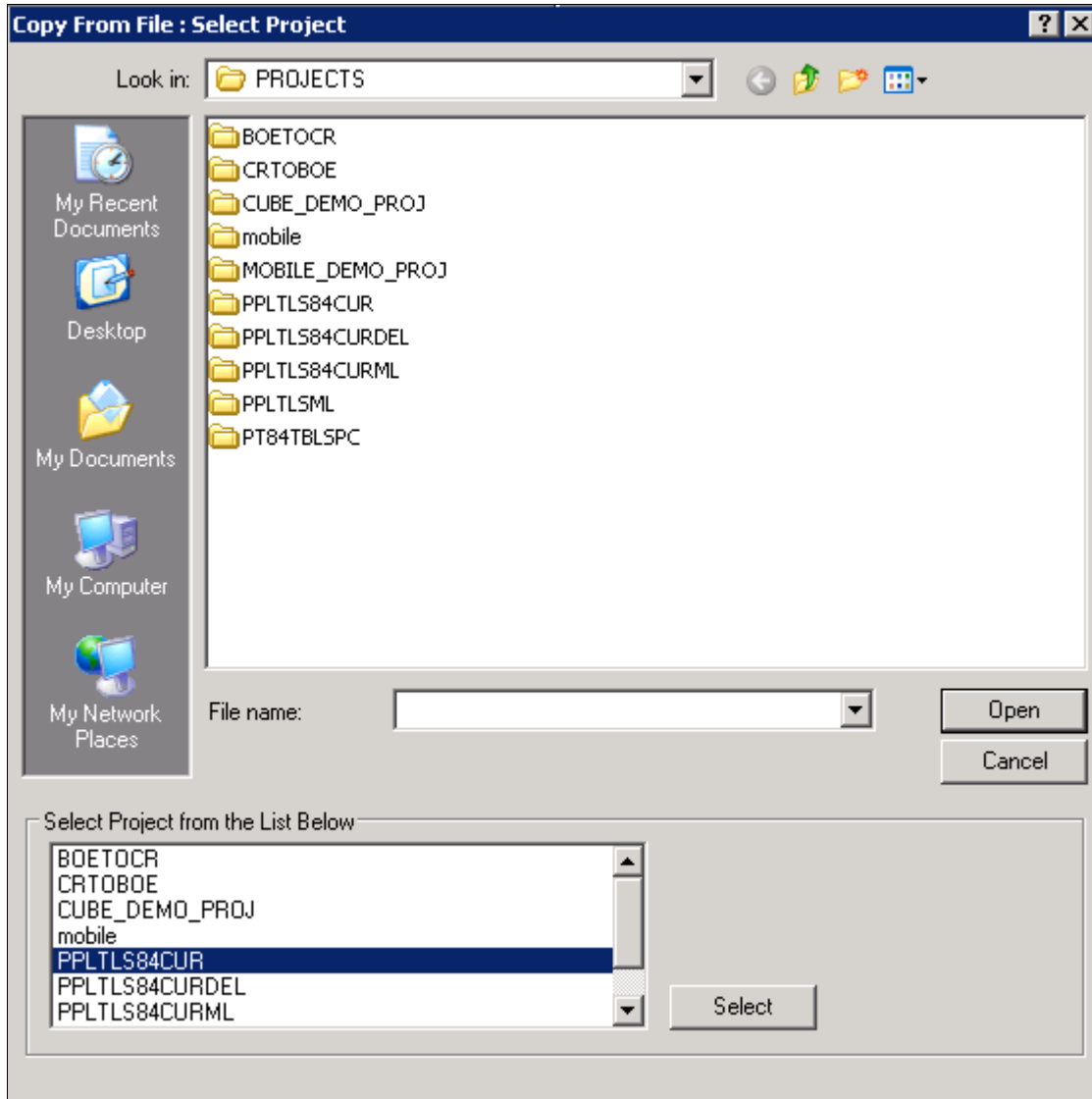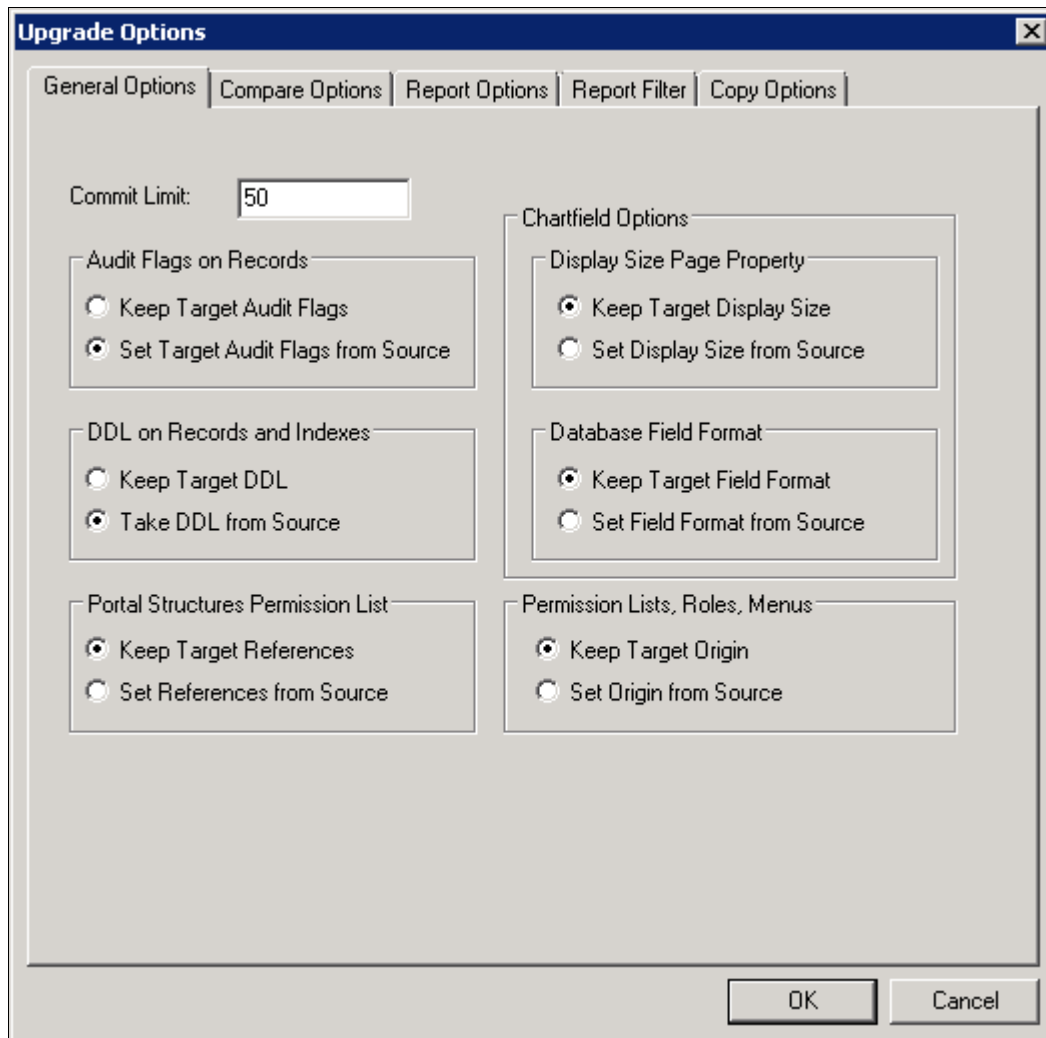
To update patched PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft PeopleTools patch release. Failure to run this step will introduce problems to your environment.

To apply patched PeopleSoft PeopleTools database objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. On the Copy From File dialog box, change the import directory to *PS_HOME*\projects, select the patch project from the list of projects and click the Select button.

4. Follow the patch instructions to select the correct copy options.

   Clear (deselect) the first three object types (Records, Fields, and Indexes). Ensure that all of the remaining object types are selected, and then click Options.

5. On the Upgrade Options dialog box, select the General Options tab.

6. Select the Keep Target Origin option, and click OK.

7. On the Copy From File dialog box, click Copy.

   When the progress window disappears, the project has been copied.

Task 7-1-14: Migrating Records to New Tablespaces

This section discusses:

• Copying the Tablespace Record Project

• Running Alter Tools Tables

Copying the Tablespace Record Project

In every PeopleSoft PeopleTools release, Oracle moves some delivered tables to different tablespaces. You must run this step to move the tables.

To copy the Tablespace Record project:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. Select Tools, Copy Project, From File.

3. In the resulting dialog box, change the import directory to *PS_HOME*\projects, select PT84TBLSPC from the list of projects, and click Select.

Note. If the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.
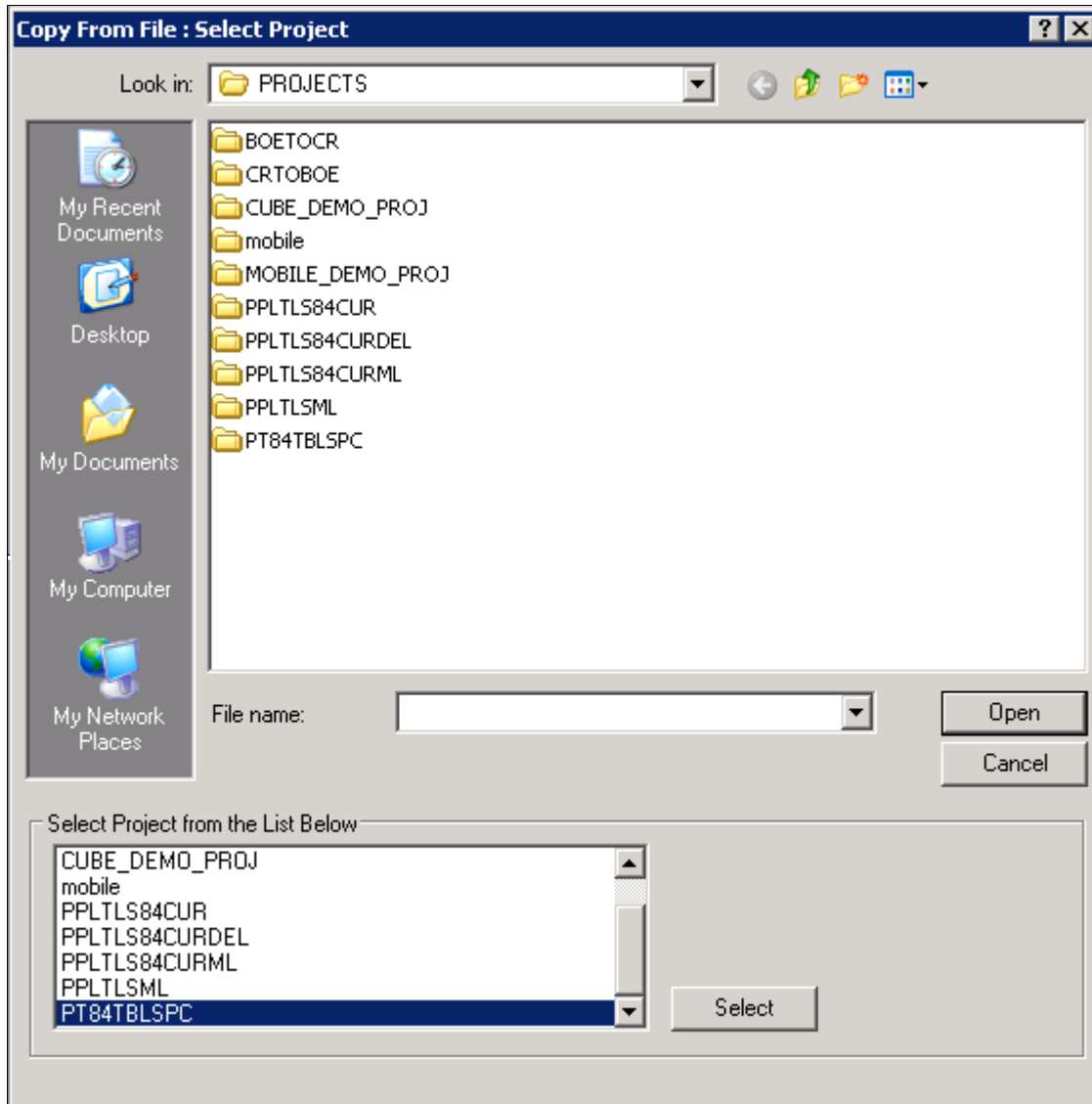
Selecting Project PT84TBLSPC in the Copy From File dialog box

4. The Copy From File dialog box appears.

    Select all object types and click the Options button.
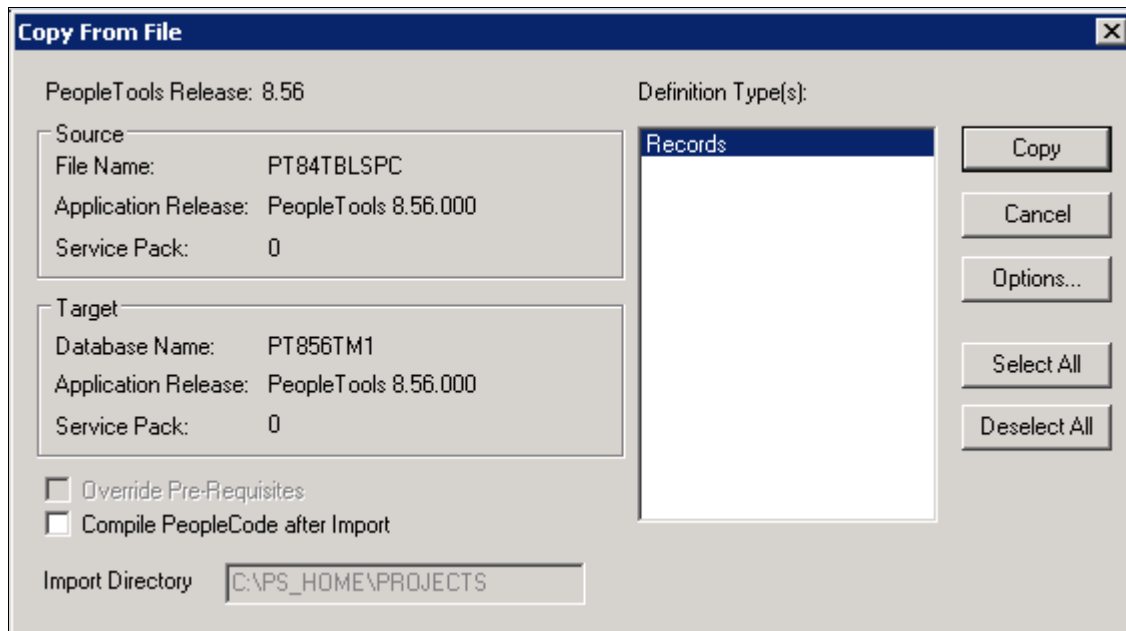
The Copy From File dialog box showing that PT84TBLSPC will be copied

5. On the Upgrade Options dialog box, select the General Options tab and make sure that the Take DDL from Source and Keep Target Origin options are selected.

    Click OK.
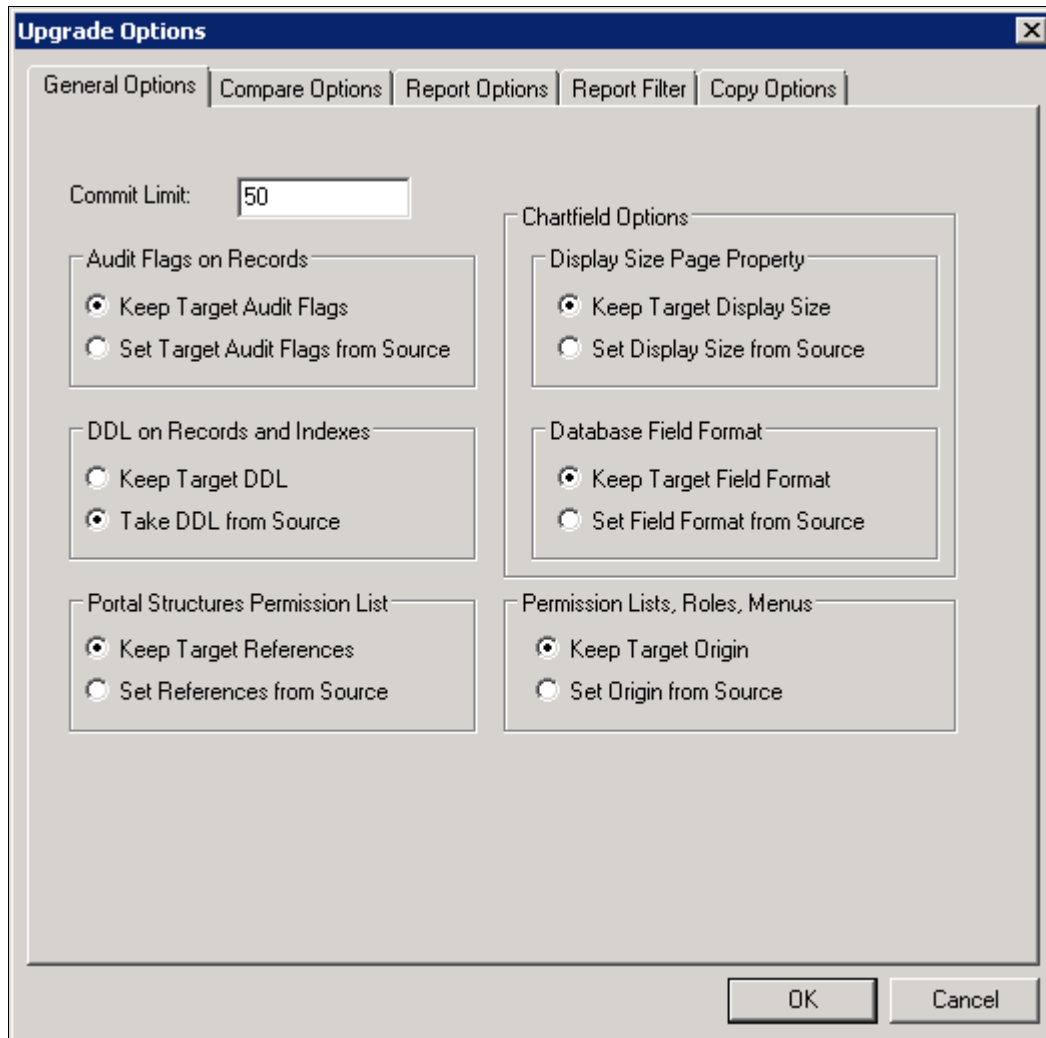
Upgrade Options dialog box: General Options tab

6. On the Copy From File dialog box, click the Copy button.

    When the progress dialog box disappears, the project has been copied.

Running Alter Tools Tables

To run Alter Tools tables:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. From the Application Designer, select File, Open.

3. Select *Project* from the Definition drop-down list, enter *PT84TBLSPC* in the name dialog box, and click OK.

4. Select Build, Project.

    The Build dialog box appears:
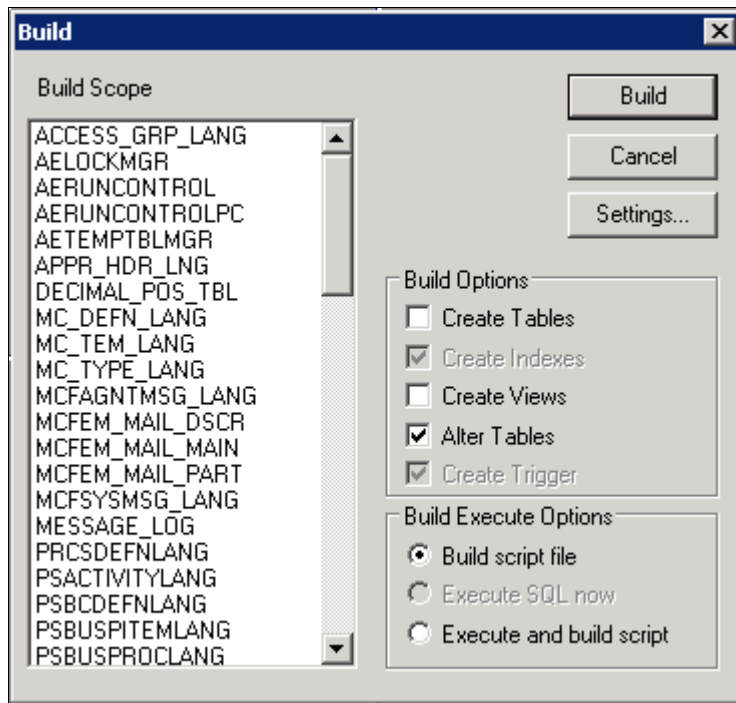
The Build dialog box

5. Select Alter Tables in the Build Options region as shown in the example above (Create Indexes and Create Trigger will automatically be selected).

6. Select Build script file in the Build Execute Options region.

7. Click Settings.

   The Build Settings dialog box appears:
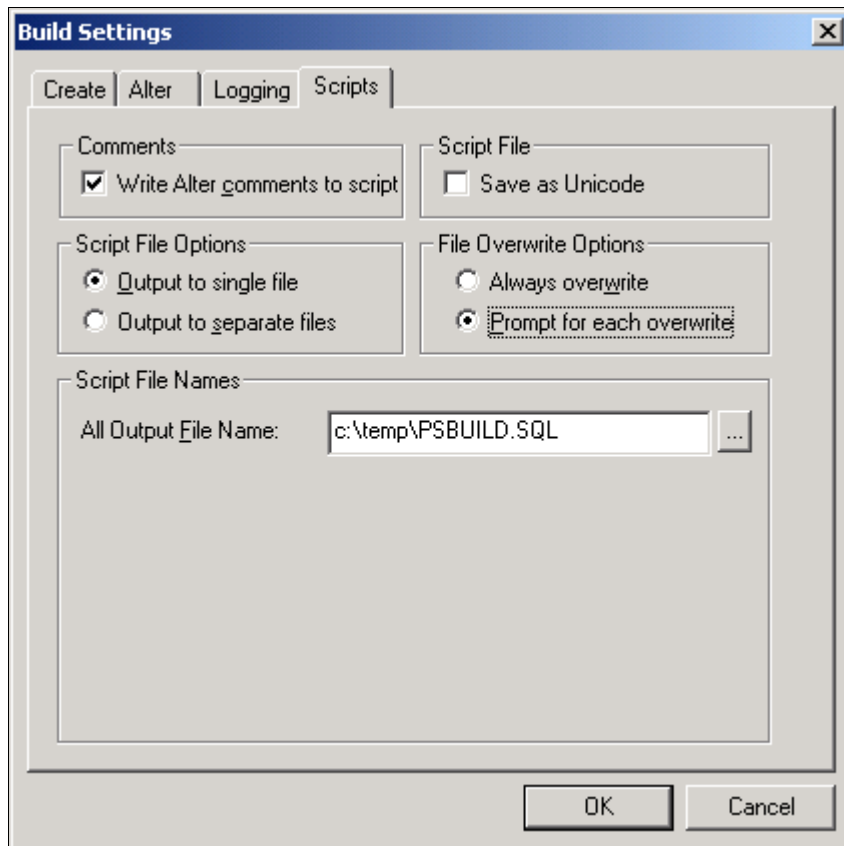
Build Settings dialog box: Scripts tab

8. Select the Scripts tab.
9. Select Write Alter comments to script.

10. Select the Alter tab and ensure that the Adds, Changes, Renames, and Deletes check boxes are selected in the Alter Any region, and that the Alter even if no changes check box has been selected.

Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.
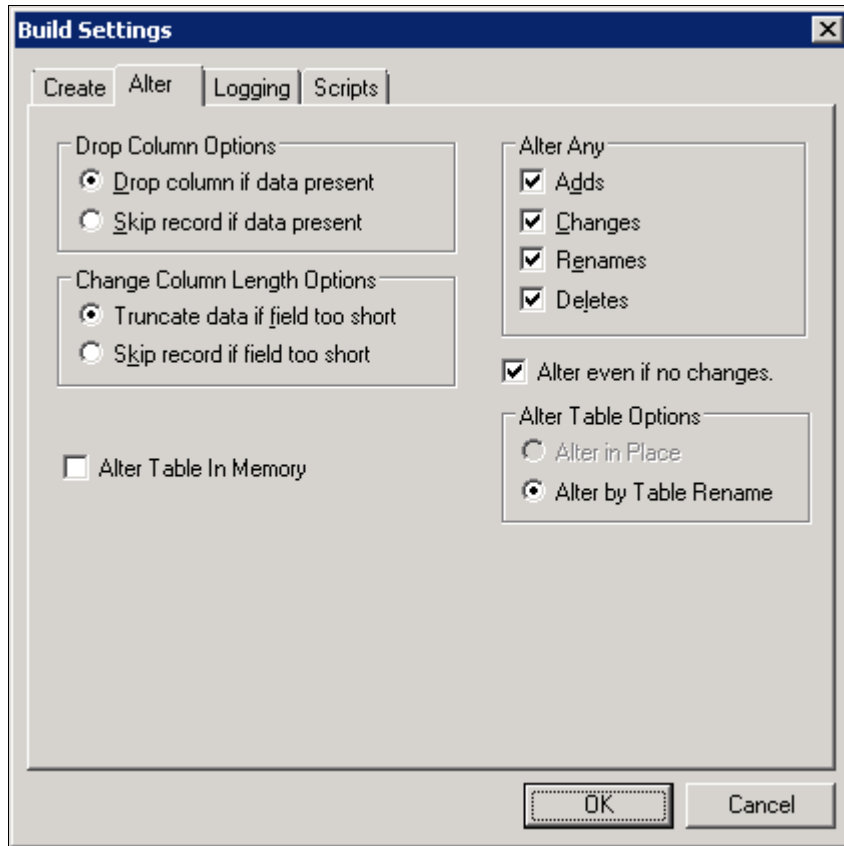
Build Settings dialog box: Alter tab

11. Click OK.

The Build dialog box reappears.

12. Click Build.

13. Click Close when the process is completed.

14. Edit the generated SQL script for the correct tablespace names and sizing parameters if you are not using delivered PeopleSoft tablespace names.

15. Run the generated SQL script in your platform-specific query tool move the tables to the correct tablespaces.

Task 7-1-15: Updating PeopleTools System Data

Data Mover scripts that update PeopleSoft PeopleTools system data are run to enable new features and load new messages for the PeopleSoft PeopleTools 8.56 release. Several of the scripts that you need to run are dependent upon the version of the application you are running.

See Understanding Database Updates.

To update PeopleSoft PeopleTools system data:

1. Invoke Data Mover by running *PS_HOME*\bin\client\winx86\psdmt.exe.

The PeopleSoft Logon window appears.

2. Log on using the access ID you specified when you created your Data Mover scripts with the Database Setup program.

    This will start Data Mover in bootstrap mode.

3. Run the appropriate Data Mover scripts for your application database version.

   The application database version refers to the version before you started this step. Be sure to run the scripts in the order listed. The scripts are found in the *PS_HOME*\scripts directory:

Application Database Version	Scripts to Run
8.40	pt841tls, pt842tls, pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.41	pt842tls, pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.42	pt843tls, pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.43	pt844tls, pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.44	pt845tls, pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.45	pt846tls, pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.46	pt847tls, pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.47	pt848tls, pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.48	pt849tls, pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.49	pt850tls, pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.50	pt851tls, pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.51	pt852tls, pt853tls, pt854tls, pt855tls, and pt856tls
8.52	pt853tls, pt854tls, pt855tls, and pt856tls
8.53	pt854tls, pt855tls, and pt856tls
8.54	pt855tls and pt856tls
8.55	pt856tls

Application Database Version	Scripts to Run
8.56	None

4. Run the pslanguages.dms Data Mover script in the *PS_HOME*\scripts directory.

   This script loads language-specific seed data.

5. Run the tlsupgnoncomp.dms Data Mover script in the *PS_HOME*\scripts directory.

   This will import the updated PeopleSoft PeopleTools Trees, Roles, and Access Groups into your database.

6. If you are a Multilingual customer, from the Data Mover script that was created for your PeopleSoft database installation, find the UPDATE to PSLANGUAGES.

   The statement should look similar to the following, where *xxx* is one of the PeopleSoft three-letter language code identifiers, as described earlier:

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

   See "Preparing for Installation," Planning Multilingual Strategy.

   Run the SQL command identified above using your SQL tool.

7. Open Data Mover using a valid PeopleSoft Operator ID, such as PS for Human Capital Management or VP1 for Financials/Supply Chain Management.

8. If you are a Multilingual customer and are using non-English languages, run the pt*xxx*.dms scripts in the *PS_HOME*\scripts directory.

   This will update the language-specific PeopleSoft PeopleTools system data in your database.

   Note. The portion of the script name *xxx* is equivalent to the language code (that is, FRA, CFR, GER, JPN, and so on) of the non-English languages you have installed. There will be a Data Mover script for each non-English language.

9. Run the msgtleng.dms Data Mover Script in the *PS_HOME*\scripts directory.

   Non-English message data was loaded in the pt*xxx*.dms scripts. This will update the messages in your database.

10. Run the ptstreng.dms Data Mover script in the *PS_HOME*\scripts directory.

    Non-English system data was loaded in the pt*xxx*.dms scripts. This will update the SQR strings in your database.

11. Run the storept.dms Data Mover script in the *PS_HOME*\src\cbl\base directory.

    This will update your PeopleSoft PeopleTools COBOL stored statements.

12. Run the ptdefnsec.dms Data Mover script in the *PS_HOME*\scripts directory.

    This will update the PeopleSoft PeopleTools Definition Security group.

13. If the application database you are installing is PeopleSoft PeopleTools 8.53 or later, you must compile all directive PeopleCode in your database. Execute the following command on your database to run PeopleSoft Application Designer in quiet mode. From the DOS command line, the syntax is:

    ```
    <PS_HOME>\bin\client\winx86\pside.exe -CT ORACLE -cD <dbname> -CS⇒
     <database server name> -CO <oprid> -CP <pswd> -SS NO -QUIET -HIDE -⇒
    CMPDIRPC -LF <full path of log file>
    ```

14. Run the createvw.dms Data Mover script in the *PS_HOME*\scripts directory.

    This will recreate all the views in your database.

Task 7-1-16: Running PeopleTools Conversions

This section discusses:

- Understanding Usage of Application Engine Programs
- Converting Portal Objects
- Converting Setup Manager
- Converting Navigation Collection and Pagelet Wizard Data
- Converting Additional Pagelet Wizard Data
- Populating the Feed Options Table
- Updating Feeds for Active Data Guard
- Updating Web Profiles
- Updating Chart and Grid Filters
- Populating the Hash Values
- Migrating the Authorization Configuration Data
- Populating BI Publisher Templates with Object Owner ID Values
- Creating the NavBar and Adding Default Tiles
- Populating the DB-Cache Lock Table

Understanding Usage of Application Engine Programs

You run several Application Engine programs in this section. For information on Application Engine, including how to use and restart Application Engine programs, consult the Application Engine documentation.

See *PeopleTools: Application Engine.*

Converting Portal Objects

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.43 or earlier. The Application Engine program UPG844PORTAL splits PSPRSMDEFN.PORTAL_URLTEXT into segments. This is performed for PeopleSoft Components URLs to extract Menu, Component, and Market information. Record, Field, Event, and Function Names are extracted from Iscript URLs. This program must be run by a PeopleSoft user with the Portal Administrator or PeopleSoft Administrator role. The following SQL will identify which users have the PeopleSoft Administrator or Portal Administrator roles:

```
select ROLEUSER, ROLENAME from PSROLEUSER where ROLENAME in ('PeopleSoft⇒
 Administrator','Portal Administrator')
```

Run the UPG844PORTAL Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPG844PORTAL
```

Use the values for the database name and user ID that you entered on the startup tab of the Configuration Manager for <dbname> and <oprid>, respectively. However, be aware that <pswd> is not the same as the connect password that you entered on the Configuration Manager startup tab. Enter a value for <pswd> that is the password you want to be associated with the <oprid>.

See "Setting Up the Install Workstation."

You may see some of the following errors when running this Application Engine program:

* `Not authorized CRef: <Portal Object Name> (95,5032).`

  This means that you do not have proper privileges to run this conversion. The user ID that you are using to run this conversion needs to have Portal Administrator permissions.

* `Security synchronization failed for Portal Object: <Portal Object Name> (96,61).`

  This is not a fatal error. It may be caused by a content reference that contains invalid URL text and indicates that there was an internal error writing to the security table. The invalid URL text may be pointing to a component or script that does not exist in the database. If you receive this error, search the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database.

* `Cref <Portal Object Name> points to Menu: <Menu Name>, Component <Component Name> which doesn't exist. (96,80).`

  The content reference is pointing to an invalid Menu/Component combination. If you receive this error, search the Patches and Updates section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database.

See "Preparing for Installation," Reviewing Patches and Updates Required at Installation.

See *PeopleTools: Portal Technology.*

Converting Setup Manager

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.45 or earlier. The application engine program UPGPTSMDAT upgrades Setup Manager Version 1 (shipped with Fin SCM 8.8, CRM 8.9, and with HCM 8.9) to Setup Manager Version 2 (shipped with PeopleSoft PeopleTools 8.46 and above). The program moves all data from Setup Manager Version 1 tables to Version 2 tables.

The application engine program was designed so that it can be run in any database, and can be rerun in the same database. In either case, it will determine if there is data to convert and run as appropriate. For detailed information, see comments attached to the Steps and Actions in this Application Engine Program within Application Designer. This program must be run by a PeopleSoft user with PeopleSoft Administrator role.

Run the UPGPTSMDAT Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPTSMDAT
```

Converting Navigation Collection and Pagelet Wizard Data

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.45 or earlier. The application engine program UPGPT846PP adds Navigation Collection and Pagelet Wizard data from the Common Components and PeopleSoft Applications Portal storage tables into PeopleSoft PeopleTools tables.

The application engine program performs the following conversions:

1. Moves data from Common Components tables to PeopleSoft PeopleTools tables.

2. Moves data from PeopleSoft Applications Portal tables to PeopleSoft PeopleTools tables.

3. Updates the registry definitions to enable displaying Navigation pages.

4. Adds, updates, and deletes the Navigation Collections folders and content references in the portal registry to the new structures.

5. Converts Pagelet Wizard definitions to the PeopleSoft PeopleTools Pagelet Wizard version.

6. Renames Navigation Collection and Pagelet Wizard portal registry attributes to the PeopleSoft PeopleTools attribute names.

This program must be run by a PeopleSoft user with the Portal Administrator or PeopleSoft Administrator role.

Run the UPGPT846PP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPT846PP
```

You may see the following error when running this Application Engine program:

```
You are not authorized for the <objecttype>...
```

This means that you do not have proper privileges to run this conversion. The user ID that you are using to run this conversion needs to have Portal Administrator permissions.

You can ignore any other errors encountered on Oracle-delivered objects at this time. Check the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database. You can safely rerun UPGPT846PP to check for any remaining errors after applying patches.

Converting Additional Pagelet Wizard Data

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.47 or earlier. The application engine program UPGPT848PP adds the following Pagelet Wizard data sources from PeopleSoft Applications Portal to PeopleSoft PeopleTools: IB Connector, Integration Broker, SOAP, and URL. In addition, the application program transforms the WSRP Portlets created in PeopleSoft PeopleTools 8.46 or 8.47 versions of Pagelet Wizard. The process includes the following:

• Move data from PeopleSoft Applications Portal tables to PeopleSoft PeopleTools tables.

• Convert WSRP Portlets created by Pagelet Wizard to the new version.

This program must be run by a PeopleSoft user with the Portal Administrator or PeopleSoft Administrator role.

Run the UPGPT848PP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R⇒
 INSTALL -AI UPGPT848PP
```

You may see the following error when running this Application Engine program:

```
You are not authorized for the <objecttype>...
```

This means that you do not have proper privileges to run this conversion. The user ID that you are using to run this conversion needs to have Portal Administrator permissions.

You can ignore any other errors encountered on Oracle-delivered objects at this time. Check the Patches and Downloads section of My Oracle Support for Required at Install patches for your application and apply the patches after installing your database. You can safely rerun UPGPT848PP to check for any remaining errors after applying patches.

Populating the Feed Options Table

The Application Engine program UPGPT850PTFP populates the feed options table PS_PTFP_OPTIONS if it is empty.

Run the UPGPT850PTFP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPT850PTFP
```

Updating Feeds for Active Data Guard

The Application Engine program UPGPT852PTFP updates Service Operations used by Feeds for Active Data Guard support.

Run the UPGPT852PTFP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPT852PTFP
```

Updating Web Profiles

The Application Engine Program UPGPTWBPFNVP migrates the web profile properties from the PT_PROPVALUE field to the PT_LPROPVALUE field for the PSWEBPROFNVP record.

Run the UPGPTWBPFNVP Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPTWBPFNVP
```

Updating Chart and Grid Filters

The Application Engine program UPGPTPGFLRS upgrades the Pivot Grid and chart filters from the PSPGVIEWOPT record into the new long filter fields. The grid filters are updated in the PTPG_FLRS_GRID_EX field on the PSPGVIEWOPT record and the chart filters are updated in the PTPG_FLRS_CHART_EX field on the PSPGCHRTFLRSOPT record.

Run the UPGPTPGFLRS Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPTPGFLRS
```

Populating the Hash Values

The Application Engine program UPGPTHASH populates the hash columns on PSPCMTEXT and PSSQLHASH if they are empty.

Run the UPGPTHASH Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPTHASH
```

Migrating the Authorization Configuration Data

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.53 or earlier. The Application Engine program UPGPT854AUTH migrates the authorization configuration data from PTCAC_AUTHCONF to PTCAC_AUTHORIZE.

Run the UPGPT854AUTH Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPT854AUTH
```

Populating BI Publisher Templates with Object Owner ID Values

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.53 or earlier. The Application Engine program UPGPTXPTMPL populates Oracle Business Intelligence Publisher (BI Publisher) templates with owner ID values.

Run the UPGPTXPTMPL Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPTXPTMPL
```

Creating the NavBar and Adding Default Tiles

Perform this step if the application database you are installing is PeopleSoft PeopleTools 8.53 or earlier. The Application Engine program UPGPT855NUI creates the Fluid User Interface navigation bar (NavBar) and adds default tiles if they do not exist.

See *PeopleTools: Application User's Guide,* "Working with Fluid Homepages."

Run the UPGPT855NUI Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPT855NUI
```

Populating the DB-Cache Lock Table

The Application Engine program UPGPT851DBC populates the DB Cache lock table PSOBJCACHELOCK.

Run the UPGPT851DBC Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R INSTALL -AI UPGPT851DBC
```

Task 7-1-17: Converting Integration Broker

This section discusses:

- Updating Integration Broker Defaults
- Creating Integration Broker Objects
- Saving Application Messaging Objects
- Exporting Node Transactions
- Deleting Application Messaging Objects
- Deleting Node Transactions

If your database is delivered with PeopleSoft PeopleTools 8.48 or higher, do *not* run this task since the database is already delivered with the new Integration Broker objects as of PeopleSoft PeopleTools 8.48. Instead, proceed to Running Additional PeopleTools Conversions.

Updating Integration Broker Defaults

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

Open Data Mover using a valid PeopleSoft Operator ID and run this script.

Creating Integration Broker Objects

The application engine program UPGPT848IBUG converts Application Package metadata into Integration Broker metadata. It also creates the projects PTUPGIBCLONE and PTUPGIBDELETE, and the script ptupg_trx.dms.

Note. Conversion errors in the Application Engine log file will be resolved by applying application-specific Required for Install patches.

Run the UPGPT848IBUG Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R⇒
 INSTALL -AI UPGPT848IBUG
```

Saving Application Messaging Objects

The PTUPGIBCLONE project was created by the UPGPT848IBUG Application Engine program and contains objects that were successfully converted. Copy this project to a directory of your choice where it will not be overwritten. The objects are copied to file as a precautionary measure since you will delete them from the database in a subsequent step.

To save Application Messaging Objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. From the Application Designer, select File, Open.

3. Select Project, enter *PTUPGIBCLONE* in the name dialog box, and click OK.

4. Select Tools, Copy Project, To File.

5. In the resulting dialog box, change the export directory to one of your choice, and click Copy.

    When the progress dialog box disappears, the project has been copied to the specified location.

Exporting Node Transactions

Open Data Mover using a valid PeopleSoft Operator ID and run the script *PS_HOME* scripts\ptupg_trx_export.dms to save the old pre-conversion node transaction data.

Deleting Application Messaging Objects

Delete the obsolete pre-conversion object definitions from the database by first copying the PTUPGIBDELETE project to file, and then copying the same project from file. This project was created by the UPGPT848IBUG Application Engine program and contains the same objects as PTUPGIBCLONE.

To delete Application Messaging Objects:

1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

2. From the Application Designer, select File, Open.

3. Select Project, enter *PTUPGIBDELETE* in the name dialog box, and click OK.

4. Select Tools, Copy Project, To File.

5. In the resulting dialog box, change the export directory to the same one you used for PTUPGIBCLONE, and click Copy.

    When the progress dialog box disappears, the project has been copied to the specified location.

6. Select Tools, Copy Project, From File.

7. In the resulting dialog box, change the import directory to the previously specified directory, select PTUPGIBDELETE from the list of projects, and click Select.

    Note. Because the project already exists on the database, a confirmation dialog box appears asking if you want to overwrite the existing project. Select the File radio button and click OK to overwrite the existing project.

8. Select all object types and click the Copy button.

    When the progress dialog box disappears, the project has been copied. The actions in the project are set to Delete, so this will delete the obsolete pre-conversion object definitions from the database.

Deleting Node Transactions

The script ptupg_trx.dms is generated by the UPGPT848IBUG Application Engine program. This script can be found in the location specified in the OUTPUT variable set in Configuration Manager.

To view the OUTPUT variable:

1. Open Configuration Manager.

2. Select the Profile tab.

3. Click Edit to open the Default profile.

4. Select the Process Scheduler tab.

5. Examine the Output Directory value.

Open Data Mover using a valid PeopleSoft Operator ID and run this script to remove obsolete node transaction data associated with the obsolete objects in the PTUPGIBDELETE project.

Task 7-1-18: Running Additional PeopleTools Conversions

The Application Engine program UPGPTSERVOPR converts WSDL and Schema data.

Run the UPGPTSERVOPR Application Engine program on your database. From the DOS command line, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT ORACLE -CO <oprid> -CP⇒
 <pswd> -R⇒
 INSTALL -AI UPGPTSERVOPR
```

Task 7-2: 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 7-3: 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:\PT856
```

See Also

PeopleTools: SQR for PeopleSoft Developers

PeopleTools: SQR Language Reference for PeopleSoft

Task 7-3-1: 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).
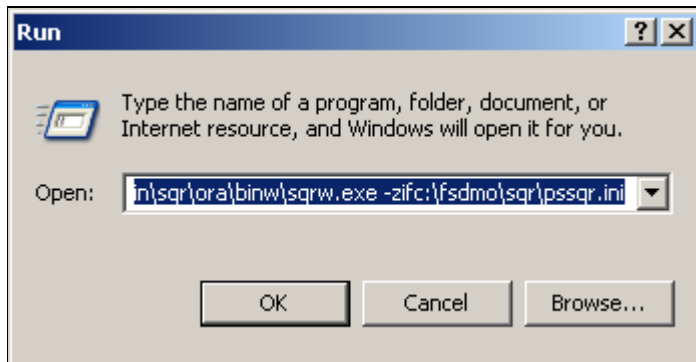
Microsoft Windows Run dialog box launching SQRW

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 –keep flag, you must specify the directory with a trailing slash. If you use the –printer flag, specify a full pathname with a filename for the HTML file.
-ZIF	Sets the full path and name of the SQR initialization file. The -ZIF flag should point to your *PS_HOME*\sqr\pssqr.ini file.
-keep	Keeps the .SPF file after the program runs. This enables you to view the report with the SQR viewer.
-printer:ht	Generates the output file in HTML format. Specify the filename, with path location, with the –f flag.

3. Click OK.

    The SQR for PeopleSoft V8.56 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.
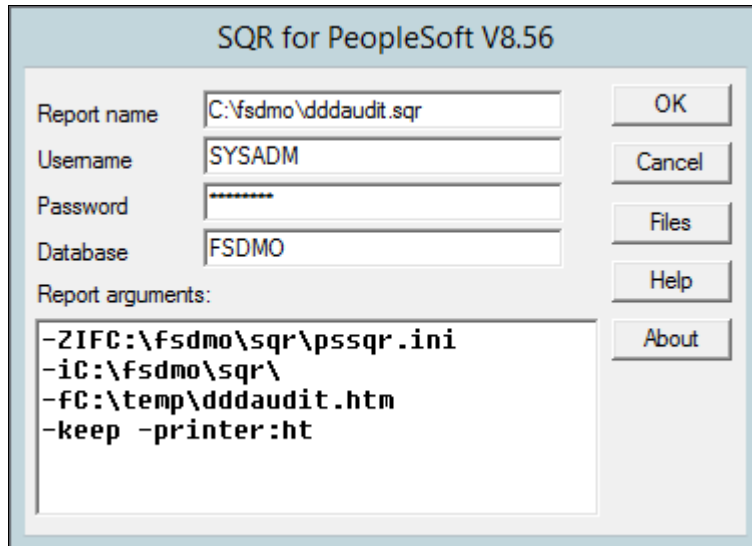
SQR for PeopleSoft dialog box with DDDAUDIT.SQR

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 7-3-2: 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 7-4: 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.

Note. If any records show up in the VIEWS-2 or TABLE-3 section of dddaudit and are contained within the PPLTLS84CURDEL project, you may safely drop these records using the SQL query tool for your platform.

See Also

PeopleTools: Data Management

PeopleTools: System and Server Administration

Task 7-5: 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.
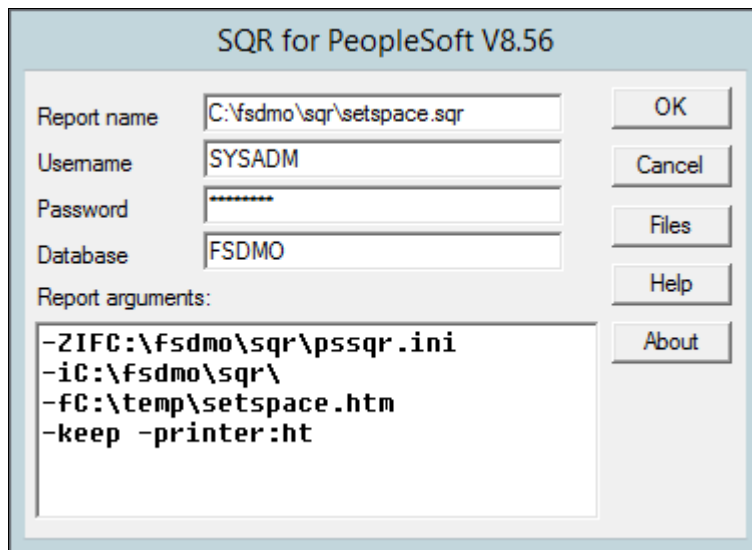
SQR for PeopleSoft dialog box with setspace.sqr

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 8

Deploying Mid-Tier Components

This chapter discusses:

* Understanding the Mid-Tier Deployment
* Running the DPK Setup Script for Mid-Tier Deployment
* Using the PeopleSoft Installation
* Completing Post-Installation Steps

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.
* Installs Oracle Tuxedo and Oracle WebLogic software, unless the DPK setup script installed them in previous deployment to the same *BASE_DIR/*pt location.

The DPK installation does not support IBM WebSphere. If you want to use IBM WebSphere rather than Oracle WebLogic as the web server software, you must install it manually and use traditional methods to set up the domains.

Task 8-1: Running the DPK Setup Script for Mid-Tier Deployment

This section discusses:

* Prerequisites
* Running with the Mid-Tier Option on Microsoft Windows
* Running with the Mid-Tier Option on Linux and UNIX

Prerequisites

Use this procedure to install the PeopleSoft mid-tier components (application server, PIA, and Process Scheduler domains) and the Oracle WebLogic and Oracle Tuxedo software required. This procedure assumes that:

* You have downloaded all of the required PeopleSoft PeopleTools DPKs, and saved them in a location accessible to the Microsoft Windows or Linux host, referred to here as *DPK_INSTALL.*

See Obtaining the PeopleSoft 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 folder.

- Remove any previous installations of the same version of Oracle Tuxedo.
- You extracted the first zip file. The extraction gives a setup folder and other files.

  See "Deploying the PeopleSoft Homes."
- 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.
- For deployment on Linux, there is a writable directory available for the home for the users that own the PeopleSoft runtime. The default is /home.
- For deployment with the AIX DPK, you have installed JDK.

  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.

> **Note.** You have the option to install Oracle database connectivity software using the PeopleTools client DPK. See "Deploying the PeopleTools Client DPK."

- 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:
  - PeopleSoft Connect ID and password
  - PeopleSoft database administrator
  - PeopleSoft operator ID (such as PS or VP1) and password
  - Application Server Domain Connection password (optional)
  - PTWEBSERVER web profile user password
  - Oracle WebLogic server administrator password
  - Integration Gateway administrator
- If you created a psft_customizations.yaml file, back it up in a location other than the installation location, *BASE_DIR/*dpk/production/puppet/data. The DPK setup script will delete the existing YAML files, including the psft_customizations.yaml.

Task 8-1-1: 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 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].

   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 PeopleSoft application DPKs.

   ```
   Starting the PeopleSoft Environment Setup Process:

   Extracting the Zip File FILENAME-1of4.zip:  [  OK  ]
   Extracting the Zip File FILENAME-2of4.zip:  [  OK  ]
   Extracting the Zip File FILENAME-3of4.zip:  [  OK  ]
   Extracting the Zip File FILENAME-4of4.zip:  [  OK  ]
   ```

5. Specify whether to install the Puppet software if necessary at the next prompt.

   The script verifies if Puppet software is installed in the default location specified by the DPKs. If not, answer *y* (yes) to install the Puppet software and *n* to abort the PeopleSoft environment setup process. The default action (if nothing is entered at the prompt) is to install the software.

   If there is any error during the Puppet software installation, the script aborts the setup process. Review the log file in *DPK_INSTALL/*setup. If there are missing operating system packages, you will need to carry out additional steps.

   See Obtaining Operating System Packages Required for Puppet.

   ```
   Starting the PeopleSoft Environment Setup Process:

   Verifying if Puppet Software is Installed on the Host:
   ```

```
Puppet Software is not installed on the Host. If this Host is
used to setup a PeopleSoft environment, Puppet Software should
be Installed.

Do you want to Install Puppet Software on this Host? [Y|n]: y

Installing Puppet Software on the Host:                        [  OK  ]
```

The script verifies the eYAML software.

```
Verifying if eYAML Hiera Backend is Installed:                 [  OK  ]
```

The script verifies if the DPKs are available in *DPK_INSTALL,* and aborts with the message [FAILED] if they are not.

```
Preparing the Windows 2012Server VM for PeopleSoft Environment:

Checking if PeopleSoft DPKs are Present:                       [  OK  ]
```

6. At the following prompt, enter 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 folder 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.

   ```
   The base folder is used to extract the PeopleSoft DPKs. It is also
   used to deploy the PeopleSoft components. This folder should be
   accessible on the Windows VM, must have write permissions and should
   have enough free space.

   Enter the PeopleSoft Base Folder: 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.

   ```
   Checking if the Base Folder has Enough Free Space:           [  OK  ]
   ```

   The script creates the following three sub-directories under the user provided base directory, *BASE_DIR*:

   • *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*\pt

     The script uses this directory to deploy PeopleSoft PeopleTools components.

   • *BASE_DIR*\db

     This directory is not used for a mid-tier deployment.

7. Review the status messages as the script validates the files found in *DPK_INSTALL.*

   The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft

environment setup is aborted.

```
Validating the PeopleSoft DPKs in the Windows VM:
Validating the PeopleSoft PeopleTools Server DPK:        [  OK  ]
Validating the PeopleSoft PeopleTools Client DPK:        [  OK  ]
Validating the Manifest Information in PeopleSoft DPKs:  [  OK  ]
```

8. Review the status messages as the script extracts the archives from the DPKs.

```
Extracting the PeopleSoft DPK Archives in the Windows VM:
Extracting the PeopleSoft PeopleTools Server DPK Archives:  [  OK  ]
Extracting the 8.56 PeopleTools Client DPK Archive:        [  OK  ]
```

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 folder *(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  ]
```

10. Specify the installation type.

```
Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
```

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 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-lingual support.

```
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 [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".

```
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".

```
Enter the PeopleSoft database host name:
Enter the PeopleSoft database port [1521]: 1521
```

12. Enter the PeopleSoft Connect ID at the following prompt:

The default is people.

```
Enter the 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.

```
Enter the PeopleSoft database Connect ID [people] password:
The password should contain only alphanumeric characters and is between⇒
 6
and 30 characters in length:
Re-Enter the PeopleSoft database Connect ID password:
```

14. Enter *y* (yes) if you want the DPK setup script to update user passwords, as described in the prompt:

```
Note: If the PeopleSoft environment is setup using DPKs in a distributed
topology with dbtier on one host and midtier on another, the PeopleSoft
application users [Access ID, Operator ID, WebProfile User] passwords
need to be reset from a midtier after DB provision. If this is the first
midtier instance accessing the database, we can automate the process of
updating these passwords.

Do you want to update the user passwords in PeopleSoft database? [y|N]:N
```

15. Enter the password twice for the database administrator:

```
Enter the PeopleSoft database Admin ID password:
Re-Enter the PeopleSoft database Admin ID password:
```

Note. You see this prompt if you answered yes to the previous prompt for updating the user passwords.

16. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

```
Enter a new PeopleSoft database Operator ID [PS] password.
The password should contain only alphanumeric characters and is between⇒
 1
and 32 characters in length:
Re-Enter the PeopleSoft Operator ID password:
```

17. Enter the password for the Access ID for the database:

```
Enter a new PeopleSoft database Access ID [SYSADM] password. Ensure
that the password contains only alphanumeric characters and is no
more than 8 characters in length:
Re-Enter the PeopleSoft database Access ID password:
```

Note. You see this prompt if you answered yes to the previous prompt for updating the user passwords.

18. 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 the password is between 8 and 30 characters in length and do
not contain any space ( ), percentage (%), slash (/), quote (",')
and equals (=) characters:
Re-Enter the Application Server Domain connection password:
```

19. Enter the password for the PTWEBSERVER web profile user at the following prompt:

```
Enter the PeopleSoft WebProfile user PTWEBSERVER password:
The password should contain only alphanumeric characters and is between⇒
 6
and 32 characters in length:
Re-Enter the PeopleSoft WebProfile user PTWEBSERVER password:
```

20. 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⇒
 lower
case letter, one uppercase letter and one number or one special⇒
 character
(!@#$%^&):
Re-Enter the WebLogic Server Admin user password:
```

21. 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 contains only alphanumeric characters and is between 8
and 30 characters in length:
Re-Enter the PeopleSoft Integration Gateway user password:
```

22. 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]:
```

23. 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  ]
```

24. 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.

Note. If you are installing on an AIX operating system, you must use the customizations to specify the location of the manually installed JDK.

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 customization Hiera YAML file and running the Puppet
'apply' command directly to continue with the setup of the PeopleSoft
environment.

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

25. 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.

1. cd C:\psft\dpk\puppet\production\manifests
2. puppet apply --confdir=C:\psft\dpk\puppet site.pp --debug --trace

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 8-1-2: Running with the Mid-Tier Option on Linux and UNIX

To deploy mid-tier components on Linux and UNIX hosts:

1. Open a terminal window and change directory to *DPK_INSTALL/*setup.

2. As a user with root access, 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 deploy 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.

3. 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].

   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 PeopleSoft application DPKs.

   ```
   Starting the PeopleSoft Environment Setup Process:

   Extracting the Zip File FILENAME-1of4.zip:  [  OK  ]
   Extracting the Zip File FILENAME-2of4.zip:  [  OK  ]
   Extracting the Zip File FILENAME-3of4.zip:  [  OK  ]
   Extracting the Zip File FILENAME-4of4.zip:  [  OK  ]
   ```

4. Specify whether to install the Puppet software if necessary at the next prompt.

   The script verifies if Puppet software is installed in the default location specified by the DPKs. If not, answer *y* (yes) to install the Puppet software and *n* to abort the PeopleSoft environment setup process. The default action (if nothing is entered at the prompt) is to install the software.

   If there is any error during the Puppet software installation, the script aborts the setup process. Review the log file in *DPK_INSTALL/*setup. If there are missing operating system packages, you will need to carry out additional steps.

   See Obtaining Operating System Packages Required for Puppet.

   ```
   Starting the PeopleSoft Environment Setup Process:

   Verifying if Puppet Software is Installed on the Host:
   ```

```
Puppet Software is not installed on the Host. If this Host is
used to setup a PeopleSoft environment, Puppet Software should
be Installed.

Do you want to Install Puppet Software on this Host? [Y|n]:

Installing Puppet Software on the Host:                    [  OK  ]
```

The script verifies the eYAML software.

```
Verifying if eYAML Hiera Backend is Installed:                    [⇒
  OK  ]
```

The script verifies if the DPKs are available in *DPK_INSTALL,* and aborts with the message [FAILED] if they are not.

```
Preparing the OracleLinux VM for PeopleSoft Environment:

Checking if PeopleSoft DPKs are Present:                    [  OK  ]
```

5. At the following prompt, enter 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 (/). If the name includes any non-alphanumeric characters such as periods, enclose the name in double quotes. For example, `/cs1/psft`.

   ```
   The base directory is used to extract the PeopleSoft DPKs. It is also
   used to deploy the PeopleSoft components. This folder should be
   accessible on the Linux host, must have write permissions and should
   have enough free space.

   Enter the PeopleSoft Base Folder: /cs1/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 takes about 25 GB of disk space.

   ```
   Checking if the  Base Filesystem has Enough Free Space:   [  OK  ]
   ```

   The script creates the following three sub-directories under the user provided base directory, *BASE_DIR*:

   * *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/*pt

     The script uses this directory to deploy PeopleSoft PeopleTools components.

   * *BASE_DIR/*db

     This directory is not used for this deployment.

6. If the default home directory is not writable, enter a new location at the following prompt.

The DPK setup creates local users on the host. These users deploy the PeopleSoft components and own the PeopleSoft runtime domains. The script checks whether the default home directory for the PeopleSoft users (/home) is writable. If not, it will prompt the user to enter a new location to be used for creating the home directories for these local users.

```
Checking if Default User Home Directory /home is Writable:  [FAILED]


The PeopleSoft environment setup creates local users on the VM.
The default Home directory for these users is /home. Please
ensure this directory is writable or provide a new directory on the
VM that is writable.


Please Enter a directory on the VM that is writable [/home]: /ds1
Are you happy with your answer? [y|n|q]:
```

If the /home directory is writable, no response is required.

```
Checking if Default User Home Directory /home is Writable:  [  OK  ]
```

7. Review the status messages as the script validates the files found in *DPK_INSTALL.*

The script carries out validations for the mid-tier deployment. If any of the validations fail, the PeopleSoft environment setup is aborted.

```
Validating the PeopleSoft DPKs in the Linux VM:
Validating the PeopleSoft PeopleTools Server DPK:         [  OK  ]
Validating the PeopleSoft PeopleTools Client DPK:         [  OK  ]
Validating the Manifest Information in PeopleSoft DPKs:   [  OK  ]
```

8. Review the status messages as the script extracts the archives from the DPKs.

```
Extracting the PeopleSoft DPK Archives in the Linux VM:
Extracting the PeopleSoft PeopleTools Server DPK Archives: [  OK  ]
Extracting the 8.56 PeopleTools Client DPK Archive:       [  OK  ]
```

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 VM:
Generating eYAML Hiera Backend Encryption Keys:          [  OK  ]
Updating the Puppet Hiera YAML Files in the VM:          [  OK  ]
Updating the Role in Puppet Site File for the VM:        [  OK  ]
Applying Linux customizations to Puppet Hiera YAML Files: [  OK  ]
```

10. Specify FRESH for the installation type.

```
Enter the PeopleSoft installation [PUM or FRESH] type [PUM]: FRESH
```

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 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-lingual support.

```
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 [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".

```
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".

```
Enter the PeopleSoft database host name:
Enter the PeopleSoft database port [1521]: 1521
```

12. Enter the PeopleSoft Connect ID at the following prompt:

The default is people.

```
Enter the 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.

```
Enter the PeopleSoft database Connect ID [people] password:
The password should contain only alphanumeric characters and is between⇒
 6
and 30 characters in length:
Re-Enter the PeopleSoft database Connect ID password:
```

14. Enter *y* (yes) if you want the DPK setup script to update user passwords, as described in the prompt:

```
Note: If the PeopleSoft environment is setup using DPKs in a distributed
topology with dbtier on one host and midtier on another, the PeopleSoft
application users [Access ID, Operator ID, WebProfile User] passwords
need to be reset from a midtier after DB provision. If this is the first
midtier instance accessing the database, we can automate the process of
updating these passwords.

Do you want to update the user passwords in PeopleSoft database? [y|N]:N
```

15. Enter the password twice for the database administrator:

```
Enter the PeopleSoft database Admin ID password:
Re-Enter the PeopleSoft database Admin ID password:
```

Note. You see this prompt if you answered yes to the previous prompt for updating the user passwords.

16. Enter the password twice for the PeopleSoft operator ID, such as PS or VP1.

```
Enter the PeopleSoft database Operator ID [PS]:
Enter a new PeopleSoft database Operator ID [PS] password.
The password should contain only alphanumeric characters and is between⇒
 1
and 32 characters in length:
Re-Enter the PeopleSoft Operator ID password:
```

17. Enter the password twice for the Access ID for the database:

```
Enter a new PeopleSoft database Access ID [SYSADM] password.  Ensure
the password contains only alphanumeric characters and is between 6
and 30 characters in length:
Re-Enter the PeopleSoft Access ID password:
```

Note. You see this prompt if you answered yes to the previous prompt for updating the user passwords.

18. 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 the password contains only alphanumeric characters and is
between 8 and 30 characters in length:
Re-Enter the Application Server Domain connection password.
```

19. Enter the password twice for the PTWEBSERVER web profile user at the following prompt:

```
Enter the PeopleSoft WebProfile user PTWEBSERVER password:
The password should contain only alphanumeric characters and is between⇒
 6
and 32 characters in length:
Re-Enter the PeopleSoft WebProfile user PTWEBSERVER password:
```

20. 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⇒
 lower
case letter, one uppercase letter and one number or one special⇒
 character
(!@#$%^&):
Re-Enter the WebLogic Server Admin user password:
```

21. 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 contains only alphanumeric characters and is between 8
and 30 characters in length:
Re-Enter the PeopleSoft Integration Gateway user password:
```

22. 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]:
```

23. 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 Input:     [  OK  ]
```

24. 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. Skip the next step. 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 customization Hiera YAML file and running the Puppet
'apply' command directly to continue with the setup of the PeopleSoft
environment.

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

25. 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 [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.

1. cd /cs1/psft/dpk/puppet/production/manifests
2. puppet apply --confdir=/cs1/psft/dpk/puppet site.pp --debug --trace

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 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 8-2: Using the PeopleSoft Installation

This section discusses:

- Reviewing the PeopleSoft Environment
- Reviewing the Deployment File System
- Reviewing the Deployed Users
- Managing PeopleTools Domains with PSADMIN

Task 8-2-1: Reviewing the PeopleSoft Environment

After you complete the initialization of the virtual machine the PeopleSoft installation will be available. This section includes brief information to help you work with the PeopleSoft environment. For detailed definitions, and information on working with the components in a PeopleSoft installation, see the PeopleSoft documentation referenced earlier.

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.

Task 8-2-2: 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.

Directory	Description	Default Location	Access
PS_HOME	The binary installation files are placed into a secure *ps_home<peopletools_patch_version>* directory, where <peopletools_patch_version> is the full release, for example 8.56.01.	*BASE_DIR/*pt/ *ps_home<peopletools_patch_version>*	This directory can only be written to by the PeopleSoft administrator, psadm1.
PS_CFG_HOME	The Application Server and Process Scheduler server configuration files are placed into a *PS_CFG_HOME* directory named *<peopletools_major_version>,* where <peopletools_major_version> does not include patch numbers; for example, 8.56.	• On Linux, /home/psadm2/psft/pt/ *<peopletools_major_version>* • On Microsoft Windows, C:\%USERPROFILE%\ psft\pt\ *<peopletools_major_version>* For example, if the USERPROFILE environment variable is C:\Users\username, the location is C:\Users\username\psft\pt\8.56.	This directory is owned by psadm2.
PS_APP_HOME	The PeopleSoft application installation files are located in the *<app>*_ps_home directory, where *<app>* refers to the PeopleSoft application, such as fscm_ps_home for Financials and Supply Chain Management	*BASE_DIR/*pt/*<application>* _ps_home	This directory can only be written to by psadm3.

Directory	Description	Default Location	Access
ORACLE_HOME (Oracle RDBMS software)	This 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 database listener for the RDBMS hosting the PeopleSoft PeopleTools tables is 1522.	*BASE_DIR/*db/oracle-server	This directory is owned by user oracle2.
Oracle WebLogic	This includes the installation files for the Oracle WebLogic web server.	*BASE_DIR/*pt/bea/wlserver	
Oracle Tuxedo	This includes the installation files for Oracle Tuxedo.	*BASE_DIR/*pt/bea/tuxedo	
PeopleSoft database files (on Oracle RDBMS)	This includes the Oracle database files and tables for the PeopleSoft application.	*BASE_DIR/*pt/db/oradata	The owner of the database tables is oracle2 and its group is oinstall. **Note.** This is different from the users for the PeopleSoft installation and configuration.
Other directories	The rest of the environment, outside *PS_HOME* and *PS_CFG_HOME*. The file system ownership and permissions are similar to typical Oracle Linux and Microsoft Windows installations.	NA	These directories are owned by root on Linux OS.

See Also

PeopleTools: System and Server Administration, "Securing PS_HOME and PS_CFG_HOME"

Task 8-2-3: Reviewing the Deployed Users

The deployed configuration includes the default users and default passwords described in the following table.

Important! All default, non-root passwords are set to expire immediately. On the first login of one of the non-root 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 remains in effect.

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	Role Definition
psadm1	0radmin (the first character is the number zero)	The PeopleSoft installation administrator who owns *PS_HOME*. This user cannot write into *PS_CFG_HOME*.
psadm2	0radmin (the first character is the number zero)	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 *PS_HOME,* but has read-execute access.
psadm3	0radmin (the first character is the number zero)	The PeopleSoft installation administrator who owns *PS_APP_HOME*.
oracle2	oracle	The Oracle Database Server user name.

See Also

"Completing the DPK Initialization with Customizations," Preparing the Customization File for Linux Users

Task 8-2-4: Managing PeopleTools Domains with PSADMIN

Use the PSADMIN utility to manage any of the PIA, Application Server, or Process Scheduler domains. You can find the PSADMIN utility in *PS_HOME/*appserv. You must first sign in with the PeopleTools domain user psadm2, described in the section Reviewing the File System and Users. When you sign in as the PeopleTools domain user, the psconfig.sh script is automatically invoked through the user's profile. This is referred to as sourcing the psconfig.sh script. This ensures that all of the required environment variables are set prior to working with PSADMIN. You can perform all the usual administrative options for PIA, Application Server, and Process Scheduler domains using PSADMIN. You may reconfigure the existing domains, shut them down, restart them and create additional domains if necessary. The environment as delivered has however been sufficiently configured to perform many of the activities for which this virtual machine has been created.

See Also

PeopleTools: System and Server Administration, "Using the PSADMIN Utility"

Task 8-3: Completing Post-Installation Steps

This section discusses:

- Using Fluid User Interface
- Setting Options for Multilingual Databases
- Updating PeopleTools Options
- Updating Time Zone Information
- Updating Database Information

Task 8-3-1: 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:
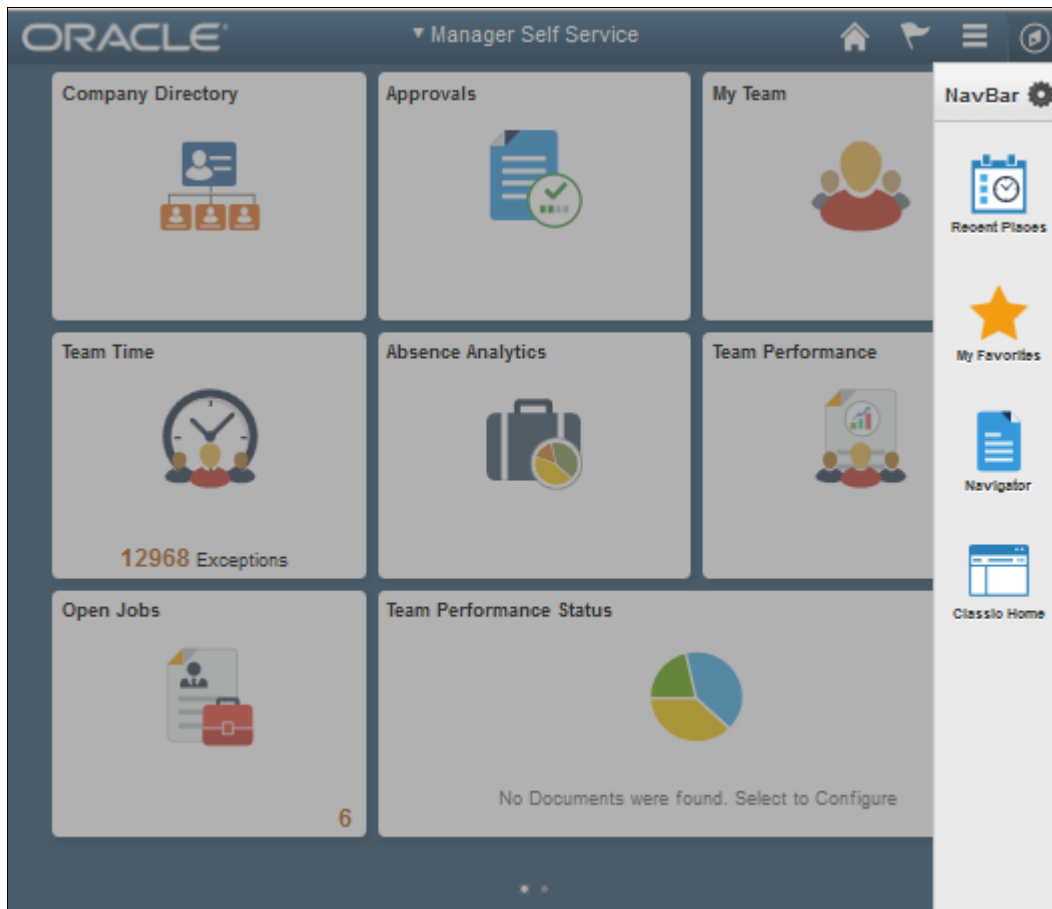
1. On the PeopleSoft Fluid User Interface, shown in this example, select (press) the NavBar button at the top right (diamond inside a circle).

PeopleSoft Fluid User Interface home page
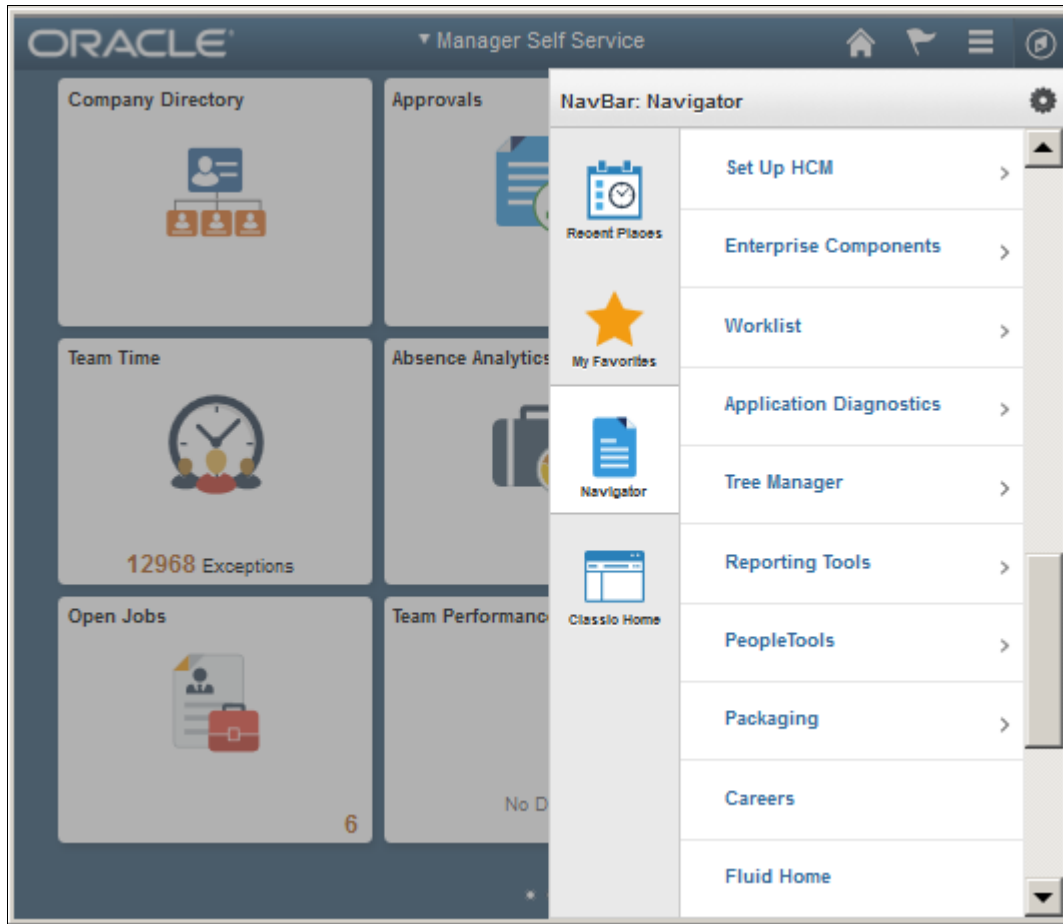
The Navigation bar (NavBar) side page appears.

2. Select (press) Navigator.

NavBar side page

The menu structure appears.

3. Navigate to the desired item, such as Set Up HCM or 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 8-3-2: 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.
- Alternatively, use the SQL tool for your database platform to modify the DBLENGTHTYPE parameter in the PSOPTIONS table.

See *PeopleTools: Global Technology,* "Setting Data Field Length Checking."

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

Use the guidelines in this table to select the correct option for your environment:

Environment	PeopleTools Option Page Selection	PSOPTIONS.DBLENGTHTYPE Value
Unicode-encoded database or a non-Unicode SBCS database	Others	N
Japanese database on DB2 LUW	DB2 MBCS	D
Non-Unicode Japanese database **Note.** If your installation uses the Shift-JIS character set for Japanese, you must use this option.	MBCS **Note.** The MBCS option is not supported for DB2 z/OS.	M

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 8-3-3: 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 8-3-4: 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 8-3-5: 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.

Chapter 9

Deploying the PeopleTools Client DPK

This chapter discusses:

• Deploying the PeopleTools Client DPK

Task 9-1: 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 9-1-1: Understanding the Standalone Mode Deployment

Use the standalone mode (SA mode) deployment for the PeopleTools Client DPKs when deploying the DPKs alone, without first deploying the PeopleSoft application or PeopleSoft PeopleTools DPKs. Use this method, for example, when carrying out a PeopleTools-only upgrade.

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.

See "Reviewing Deployment Use Cases," Reviewing the PeopleTools-only Upgrade Use Case.

• 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 "Reviewing Deployment Use Cases," Reviewing the PeopleTools Patch DPK Use Case.

• 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.

See the PeopleTools installation guide for your database platform, "Installing PeopleSoft Change Assistant."

*   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.

Task 9-1-2: Preparing for the PeopleTools Client DPK Deployment

To deploy 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.

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 9-1-3: Deploying in Standalone Mode

This section assumes that the user running the script has administrative permission.

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:

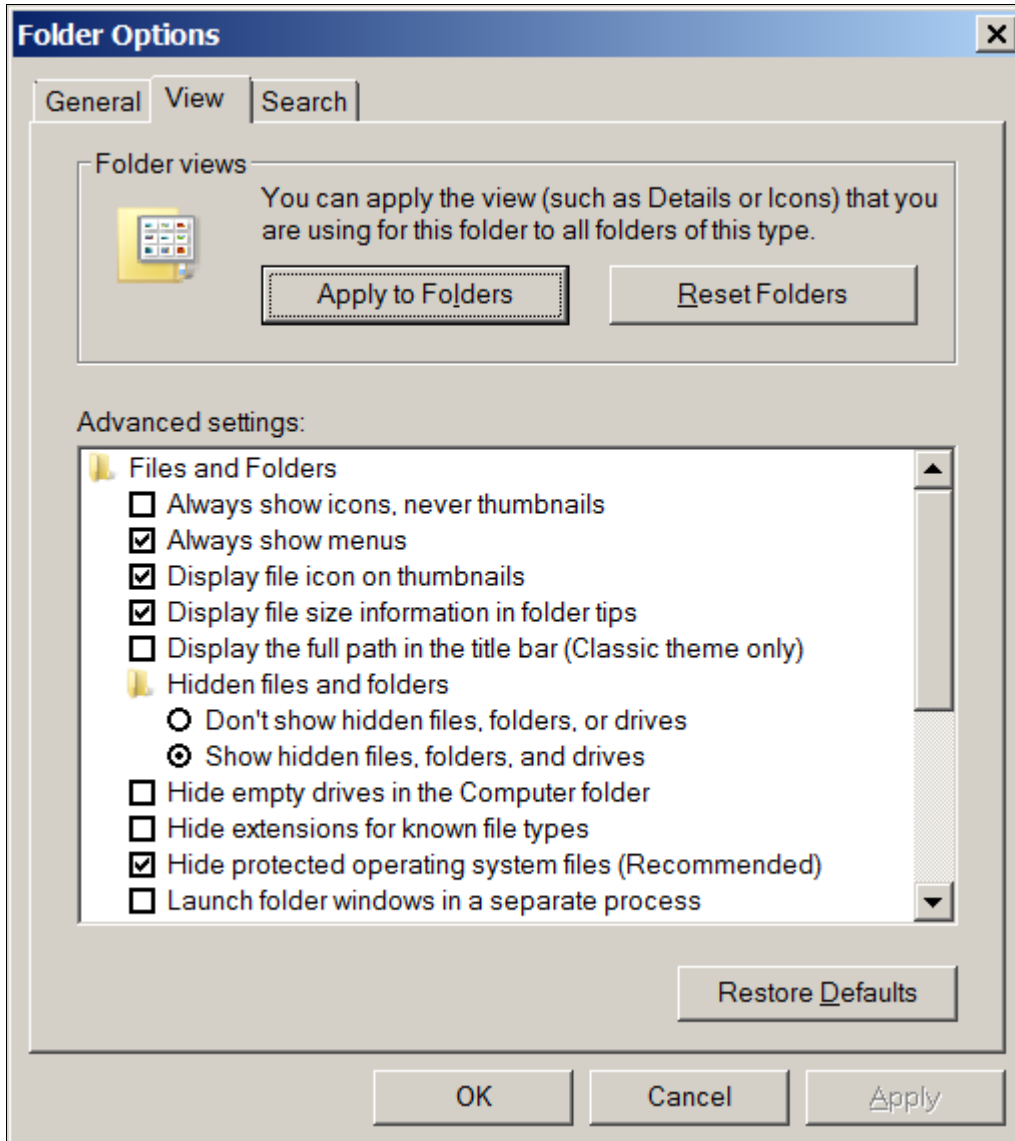   a. Open Windows Explorer and select Tools, Folder Options.

        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 folder.

    The tools_client folder includes various sub-folders, 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:

        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.

- The setup script deploys to drive C by default. To deploy to a different drive, you can use the option `-d <drive>`:

  ```
  SetupPTClient.bat -t -d E
  ```

  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, E:\ in this example. The drive can be any valid local or mapped shared drive.

- To enable logging, include the option `-l` in the command:

  ```
  SetupPTClient.bat -t -l
  ```

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. DB2 for LUW
   3. Microsoft SQL Server
   4. DB2 for zOS
   Enter your choice [1-4] : 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:\PT8.56.02_Client_ORA.

   ```
   Please specify the PSHOME for the PeopleTools Client [C:\PT8.56.02_⇒
   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 8.56.02 Client in C:\PT8.56.02_Client_ORA
    Configuring PeopleTools 8.56.02 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 10

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

This chapter explains how to install and configure the components of the PeopleSoft Pure Internet Architecture in silent mode.

See "Installing Web Server Products."

The setup program for the PeopleSoft Pure Internet Architecture is installed to the web server machine when you run the PeopleSoft Installer and select the PeopleSoft Web Server option.

See "Using the PeopleSoft Installer."

Oracle only supports customer installations that use web servers that are certified for PeopleSoft PeopleTools. *You must install the web server before you install the PeopleSoft Pure Internet Architecture.* Before you install the PeopleSoft Pure Internet Architecture, you must also have configured an application server, as described in the previous chapter.

The location where you install the PeopleSoft Pure Internet Architecture is referred to in this documentation as *PIA_HOME.* You can specify different locations for *PS_HOME* and *PIA_HOME.* After you complete the PeopleSoft Pure Internet Architecture installation, you can locate the installation files in the directory *PIA_HOME/*webserv.

For PeopleSoft PeopleTools 8.51 and later, if you are setting up the PeopleSoft Pure Internet Architecture on a Microsoft Windows platform, the directory and path that you specify for *PIA_HOME* may include spaces. However, parentheses in the directory name (for example, "C:\Program Files (x86)") are *not* allowed for *PIA_HOME.*

See "Preparing for Installation," Defining Installation Locations.

If your web server is on a different machine than your application server, you need to make sure you have JRE installed on your web server to run the PeopleSoft Pure Internet Architecture installation.

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 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.

Review the following additional notes before beginning the PeopleSoft Pure Internet Architecture installation:

- If you want to connect between multiple application databases, you need to implement single signon.

- If the PeopleSoft Pure Internet Architecture installation encounters an error, it will indicate which log files to refer to.

  See "Installing Web Server Products."

- The machine on which you run the PeopleSoft Pure Internet Architecture install must be running in *256 color mode.* This is not necessary for UNIX or console mode.

The PeopleSoft Pure Internet Architecture installation includes the following products:

- *PeopleSoft Pure Internet Architecture.* This product is the centerpiece of the PeopleSoft architecture that enables users to work on a machine with only a supported browser installed. This option installs the servlets required for deploying PeopleSoft Applications and for the PeopleSoft portal. The portal packs and 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 or IBM WebSphere.

Note. The authentication domain was referred to as the Authentication Token Domain in previous releases, and that term is still seen in the software.

When an authentication domain is specified during the PeopleSoft Pure Internet Architecture 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.*

If you use the PeopleSoft Mobile Application Platform (MAP), you must specify the same authentication domain during the PeopleSoft Pure Internet Architecture installation, for MAP, and for Integration Broker and integration hubs.

See *PeopleTools: Mobile Application Platform.*

See *PeopleTools: Integration Broker.*

Task 10-1: 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, and for both Oracle WebLogic and IBM WebSphere web servers.

Task 10-1-1: 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\scripts. Modify the values in the response file according to your installation requirements.

The response file should contain all the input parameters that are needed for deploying PeopleSoft Pure Internet Architecture, such as PS_CFG_HOME, DOMAIN_NAME, SERVER_TYPE, and so on. Many input parameters are self-explanatory, and the sample response file includes brief definitions in some cases. Here are some additional guidelines:

• Specify SERVER_TYPE=weblogic to deploy on Oracle WebLogic.

  For Oracle WebLogic, specify the installation location for BEA_HOME.

• Specify SERVER_TYPE=websphere to deploy on IBM WebSphere.

  If you installed IBM WebSphere, specify the installation location for WS_HOME.

• 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.

• INSTALL_TYPE

  • SINGLE_SERVER_INSTALLATION — This 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 — This 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.

  • 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.

    See Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation.

Note. When specifying paths on Microsoft Windows operating systems, use forward slashes (/), as shown in the examples in the response file.

Sample Response file template:

```
#Following inputs are required in response file for silent installation

# Location of PIA_HOME directory.  For windows path should have front⇒
 slash '/' instead of back slash '\'
# Set the below variable to the location where you want to install PIA.
# PLEASE NOTE this variable could be ANY DIRECTORY on your machine. It⇒
```

```
 includes but is definitely not limited to PeopleTools Home.
PS_CFG_HOME=C:/PT8.50

# Name of the PIA domain
DOMAIN_NAME=peoplesoft

# Web server type. Possible values are "weblogic", "websphere"
SERVER_TYPE=weblogic

# WebLogic home, the location where Oracle WebLogic is installed (for Web⇒
Logic deployment only)
BEA_HOME=c:/bea

# WebSphere Home, the location where IBM WebSphere is installed (for Web⇒
Sphere deployment only)
WS_HOME=C:/IBM/WebSphere/AppServer

# admin console user id/password for securing WebLogic/WebSphere admin⇒
 console credential
USER_ID=system
USER_PWD=
USER_PWD_RETYPE=

# 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

# Domain type to specify whether to create new domain or modify existing⇒
 domain. Possible values are "NEW_DOMAIN", "EXISTING_DOMAIN".
DOMAIN_TYPE=NEW_DOMAIN

# App home is required only when you are installing extensions from a⇒
 decoupled Apps home, please leave it commented otherwise.
# Silent installer can detect the deployable application extensions from⇒
 the PS_APP_HOME
# PS_APP_HOME=D:/CR9.2

# Install type to specify whether the installation is a single server or⇒
 multi server deployment. Possible values are "SINGLE_SERVER_⇒
INSTALLATION", "MULTI_SERVER_INSTALLATION"
INSTALL_TYPE=SINGLE_SERVER_INSTALLATION

# WebSite Name
WEBSITE_NAME=ps

# 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=

# AppServer Name
APPSERVER_NAME=

# Appserver JSL Port
JSL_PORT=

# HTTP Port
HTTP_PORT=80

# HTTPS Port
HTTPS_PORT=443

# Authentication Domain (optional)
AUTH_DOMAIN=

# Web Profile Name Possible Values are "DEV","TEST","PROD","KIOSK"
WEB_PROF_NAME=PROD

# Web Profile password for User "PTWEBSERVER"
WEB_PROF_PWD=
WEB_PROF_PWD_RETYPE=

# Integration Gateway user profile.
IGW_USERID=administrator
IGW_PWD=
IGW_PWD_RETYPE=

# AppServer connection user profile
APPSRVR_CONN_PWD=
APPSRVR_CONN_PWD_RETYPE=

# Directory path for reports
REPORTS_DIR=
```

Task 10-1-2: 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=D:/PT8.56
   ```

To install the PeopleSoft Pure Internet Architecture in silent mode on UNIX or Linux:

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.bat -i silent -DRES_FILE_PATH=/home/PT856
   ```

Task 10-2: Configuring the SSL/TLS Port for JSL

Supply the SSL/TLS port for JSL in the configuration.properties file for the web server.

See *PeopleTools: Integration Broker,* "Installing Web Server-Based Digital Certificates."

1. Using a text editor, open the configuration.properties file in the web server deployment folder located here:
   <PIA_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 *<PIA_HOME>*\webserv*<DOMAIN_NAME>*\ piaconfig\keystore\pskey.

   ```
   #Keystore password for ssl connection
   KeyStorePwd=={V1.1}7m4OtVwXFNyLc1j6pZG69Q==
   ```

4. Save and close the file.

Task 10-3: Testing and Administering the PeopleSoft Pure Internet Architecture Installation

This section discusses:

- Verifying the PeopleSoft Pure Internet Architecture Installation
- Starting and Stopping Oracle WebLogic
- Starting and Stopping IBM WebSphere Application Servers
- 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 or IBM WebSphere web servers whenever necessary.

Task 10-3-1: Starting and Stopping Oracle WebLogic

If you are using the Oracle WebLogic web server, you need to sign on to Oracle WebLogic before using these commands. If you are using IBM WebSphere instead, go on to the next section. 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>*\webserv*<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 or Linux:

  ```
  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 or Linux:

     ```
     startWebLogicAdmin.sh
     ```

  2. Then execute:

     On Microsoft Windows:

     ```
     startManagedWebLogic.cmd ManagedServerName
     ```

     On UNIX or Linux:

     ```
     startManagedWebLogic.sh ManagedServerName
     ```

- To stop the server, use the following commands:

  - Single Server on Microsoft Windows:

    ```
    stopPIA.cmd
    ```

    Single Server on UNIX or Linux:

    ```
    stopPIA.sh
    ```

  - Multiple Servers or Distributed Servers on Microsoft Windows:

```
stopWebLogic.cmd ManagedServerName
```

Single Server on UNIX or Linux:

```
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 10-3-2: Starting and Stopping IBM WebSphere Application Servers

This section discusses:

- Starting and Stopping IBM WebSphere Application Servers on Windows
- Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux
- Verifying the IBM WebSphere Installation

Starting and Stopping IBM WebSphere Application Servers on Windows

To start and stop the WebSphere Application Server Network Deployment 9.0.0.0 (WebSphere ND), use the WebSphere First Steps utility:

1. For example, on Microsoft Windows 2012 R2, access the Apps screen and locate the First steps utility in the IBM WebSphere category.

   The following example shows the First steps window for the profile *peoplesoft*:
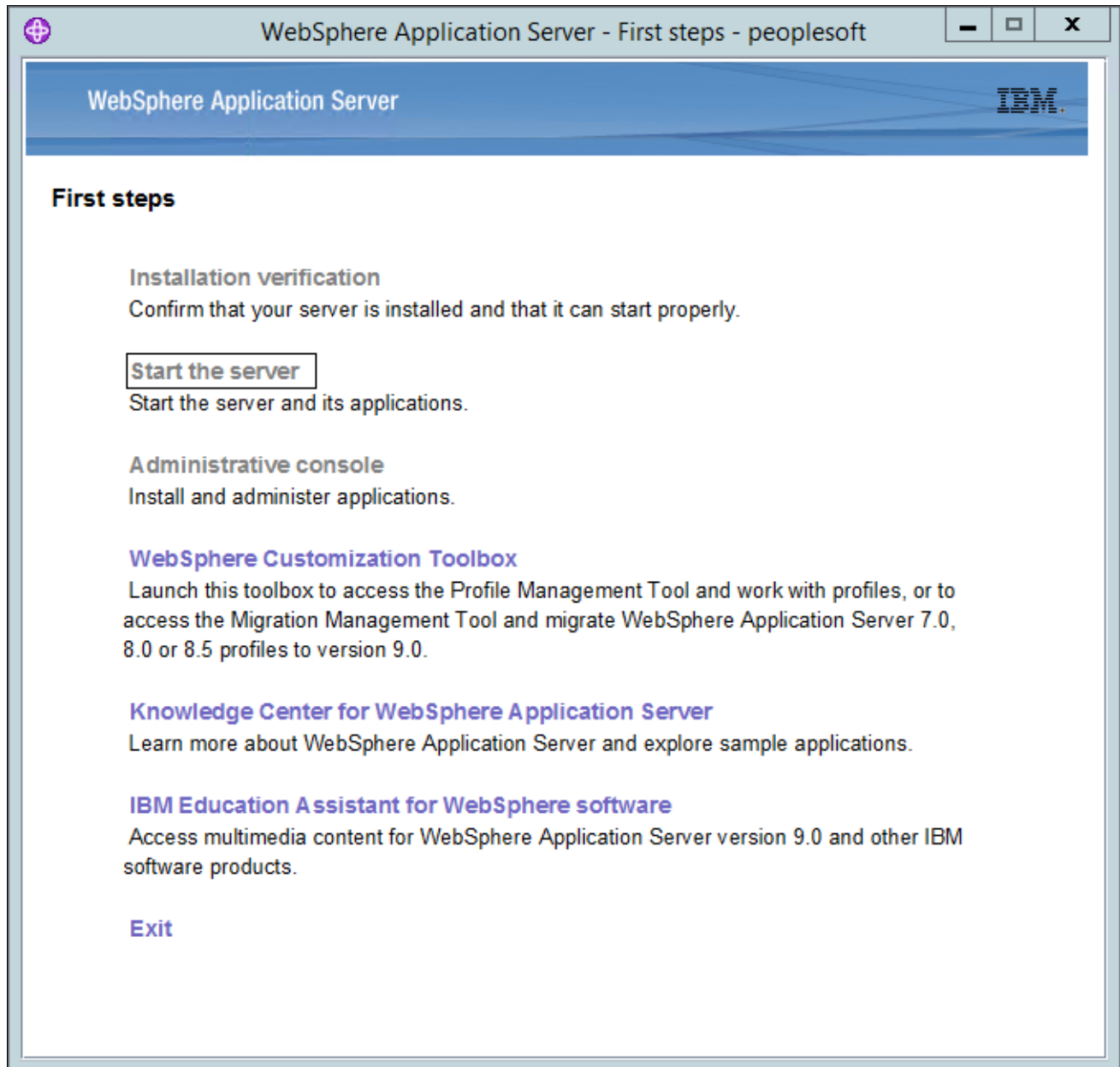
WebSphere Application Server - First steps window

2. Select the link Start the server.

   If the server starts properly, a verification window appears with several messages about the initialization process.

3. To verify whether the server was installed and can start properly, click the link Installation Verification on the First Step window and review the messages.

First steps output - Installation verification window

Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux

To start WebSphere ND on UNIX or Linux, use the following command:

`<PIA_HOME>/webserv/<profile_name>/bin/startServer.sh <server_name>`

For example:

`/home/pt856/webserver/peoplesoft/bin/startServer.sh server1`

To stop WebSphere ND, use the following command:

`<PIA_HOME>/webserv/<profile_name>/bin/stopServer.sh <server_name>`

Verifying the IBM WebSphere Installation

Use this method to verify the WebSphere ND and PIA installation for both Microsoft Windows and UNIX.

To verify the WebSphere ND and PIA installation, copy the following URL into a browser address bar, substituting your machine name and the http port number:

`http://<machine_name>:<http_port>/ivt/ivtservlet`

You should see the text "IVT Servlet" in the browser, as in this example:
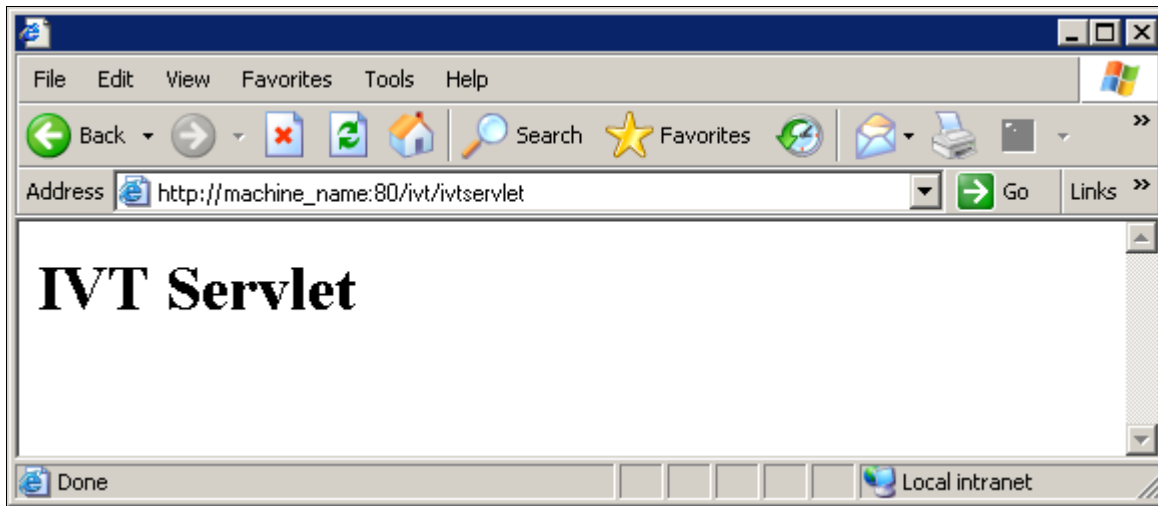
IVT Servlet window

You should also sign into the PeopleSoft application, as described in a later section, to verify the installation.

See Accessing the PeopleSoft Signon.

Task 10-3-3: Using PSADMIN to Start and Stop Web Servers

In addition to the methods given in the previous sections for starting and stopping Oracle WebLogic and IBM WebSphere web servers, in PeopleSoft PeopleTools 8.52 and later releases 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 10-3-4: Accessing the PeopleSoft Signon

To access the PeopleSoft signon:

1. Open your web browser.

2. Enter the name of the site you want to access—for example (the default value for *<site_name>* is ps):

   `http://<machine_name>:<http_port>/<site_name>/signon.html`

Note. PeopleSoft Pure Internet Architecture installed on IBM WebSphere server listens at the HTTP/HTTPS ports specified during the PeopleSoft Pure Internet Architecture install. Invoke PeopleSoft Pure Internet Architecture through a browser by using the specified HTTP or HTTPS ports—that is, http:// *<WebSphere_machine_name>*:*<server_port>*/*<site_name>*/signon.html (if AuthTokenDomain is not specified) or http://*<WebSphere_machine_name.mycompany.com>*:*<server_port>*/*<site_name>*/ signon.html (if you specified .mycompany.com as the AuthTokenDomain). You can find the HTTP and HTTPS ports in the file *<PIA_HOME>*/webserv/*<domain_name>*/logs/AboutThisProfile.txt.

This will take you to the sign-in window corresponding to your browser's language preference, as shown in this example:
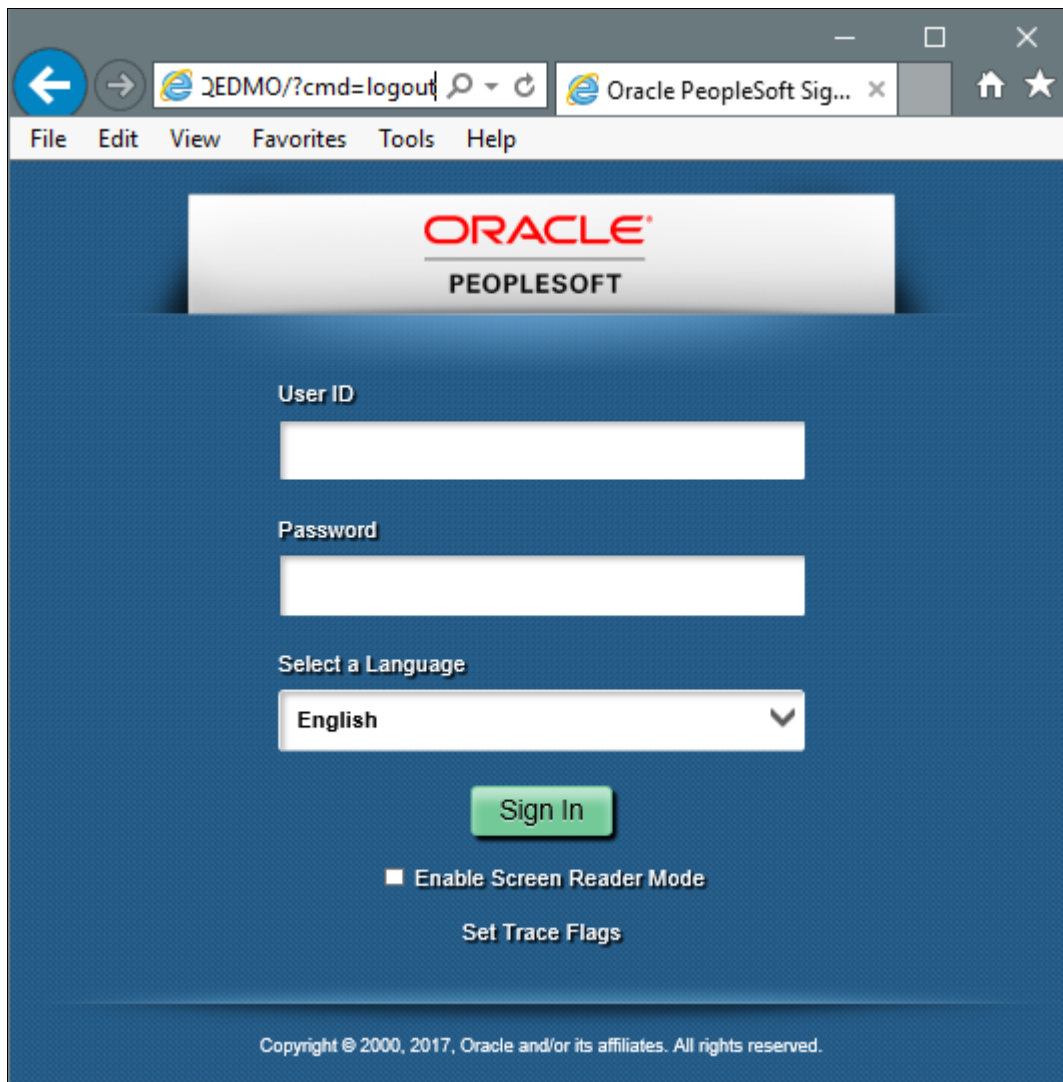
Oracle PeopleSoft Enterprise Sign in window

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 10-4: Completing Post-Installation Steps

This section discusses:

- Using Fluid User Interface
- Setting Options for Multilingual Databases
- Updating PeopleTools Options
- Updating Time Zone Information
- Updating Database Information

Task 10-4-1: 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, shown in this example, select (press) the NavBar button at the top right (diamond inside a circle).

PeopleSoft Fluid User Interface home page

The Navigation bar (NavBar) side page appears.

2. Select (press) Navigator.

NavBar side page

The menu structure appears.

3. Navigate to the desired item, such as Set Up HCM or 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 10-4-2: 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.
- Alternatively, use the SQL tool for your database platform to modify the DBLENGTHTYPE parameter in the PSOPTIONS table.

See *PeopleTools: Global Technology,* "Setting Data Field Length Checking."

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

Use the guidelines in this table to select the correct option for your environment:

Environment	PeopleTools Option Page Selection	PSOPTIONS.DBLENGTHTYPE Value
Unicode-encoded database or a non-Unicode SBCS database	Others	N
Japanese database on DB2 LUW	DB2 MBCS	D
Non-Unicode Japanese database **Note.** If your installation uses the Shift-JIS character set for Japanese, you must use this option.	MBCS **Note.** The MBCS option is not supported for DB2 z/OS.	M

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 10-4-3: 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 10-4-4: 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 10-4-5: 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.

Chapter 11

Installing PeopleSoft Change Assistant

This chapter discusses:

- Understanding PeopleSoft Change Assistant
- Installing PeopleSoft Change Assistant in Silent Mode
- 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 PeopleSoft Change Assistant to carry out maintenance both for PeopleSoft applications using the PeopleSoft Update Manager, and those using the classic patching method. PeopleSoft Change Assistant is a Java-based tool that runs only on Microsoft Windows-based operating systems.

For the current PeopleSoft PeopleTools release, the PeopleSoft Change Assistant installation includes the following features:

- You can install multiple instances of PeopleSoft Change Assistant from the current release on one physical machine.

  Note. You cannot run more than one instance at a time. That is, you cannot run multiple instances in parallel.

- You must remove installations of PeopleSoft Change Assistant from PeopleSoft PeopleTools 8.55 or earlier before installing from the current release. PeopleSoft Change Assistant from PeopleSoft PeopleTools 8.56 cannot co-exist with that from earlier releases.
- You must install each PeopleSoft Change Assistant instance in a separate installation location.
- You can remove or upgrade each PeopleSoft 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 PeopleSoft 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

"Using the PeopleSoft Installer," Verifying Necessary Files for Installation on Windows

Task 11-1: Installing PeopleSoft Change Assistant in Silent Mode

This section discusses:

• Understanding Silent Mode for PeopleSoft Change Assistant

• Using the Silent Mode Script

Understanding Silent Mode for PeopleSoft Change Assistant

You can carry out a silent installation of PeopleSoft Change Assistant by supplying command-line parameters to a script. With silent installation there is no user interaction after you begin the installation.

You can use install and upgrade PeopleSoft Change Assistant instances in silent mode for the current PeopleSoft PeopleTools release. In addition, you can use silent mode to remove installations from the current or earlier PeopleSoft PeopleTools releases. For example, running the silent mode installation from PeopleSoft PeopleTools 8.56 will remove a Change Assistant installation from PeopleSoft PeopleTools 8.54 or earlier, and also install the 8.56 version of Change Assistant.

The PeopleSoft Change Assistant installer includes the following files in the directory *PS_HOME*\setup\PsCA:

• silentInstall.bat — Use this script to upgrade or remove an existing PeopleSoft Change Assistant instance or install a new instance.

  Do not edit this file. The file includes instructions in the header portion.

  See Using the Silent Mode Script.

• CA-silentInstall-ResultCodes.rtf — Review this file to interpret the results seen in the *PS_HOME*setup\psCA\setup.log file after installation.

  The file is in Rich Text Format (RTF), and is most easily read if you open it with word processing software such as Microsoft Word.

Task 11-1-1: Using the Silent Mode Script

The PeopleSoft Change Assistant silent mode script requires the following command-line parameters:

• Install Home

  Specify the installation location for the PeopleSoft Change Assistant instance. If the location includes spaces, surround it with double quotes, such as "C:\Program Files\PeopleSoft\Change Assistant".

  As mentioned earlier in this chapter, for PeopleSoft PeopleTools 8.56 you can install multiple instances of PeopleSoft Change Assistant. You must specify a different installation location for each instance.

• Install Type

  • Specify *new* to create a new PeopleSoft Change Assistant instance.

  • Specify *upgrade* to upgrade an existing instance that was installed from the current PeopleSoft PeopleTools release.

  • Specify *uninstall* to remove an existing PeopleSoft Change Assistant instance.

• Backup Config

  • Specify *backup* to create a zip file containing files with configuration information. The backup file,

changeassistantcfgbak.zip, is saved in the installation location.

- Specify *nobackup* if you do not want to create a backup file with the configuration information.

To use the PeopleSoft Change Assistant silent installation script:

1. In a command prompt, go to *PS_HOME*\setup\PsCA.

   Note. Do not move the file to another location.

2. Run the following command:

   ```
   silentInstall.bat [Install Home] [Install Type] [Backup Config]
   ```

   You must include all three parameters. For example:

   - To install a new instance without retaining a configuration file

     ```
     silentInstall.bat "C:\Program Files\PeopleSoft\Change Assistant" new⇒
      nobackup
     ```

   - To upgrade an existing instance, and retain a configuration file:

     ```
     silentInstall.bat "C:\Program Files\PeopleSoft\Change Assistant 3"⇒
      upgrade backup
     ```

   - To remove an existing instance, and retain a configuration file:

     ```
     silentInstall.bat D:\CA uninstall backup
     ```

Task 11-2: 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 11-2-1: 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 11-2-2: 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 Home Page, My Oracle Support, Doc ID 1641843.2

Task 11-2-3: 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 11-2-4: 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 11-3: 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 OracleSoftware 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"):
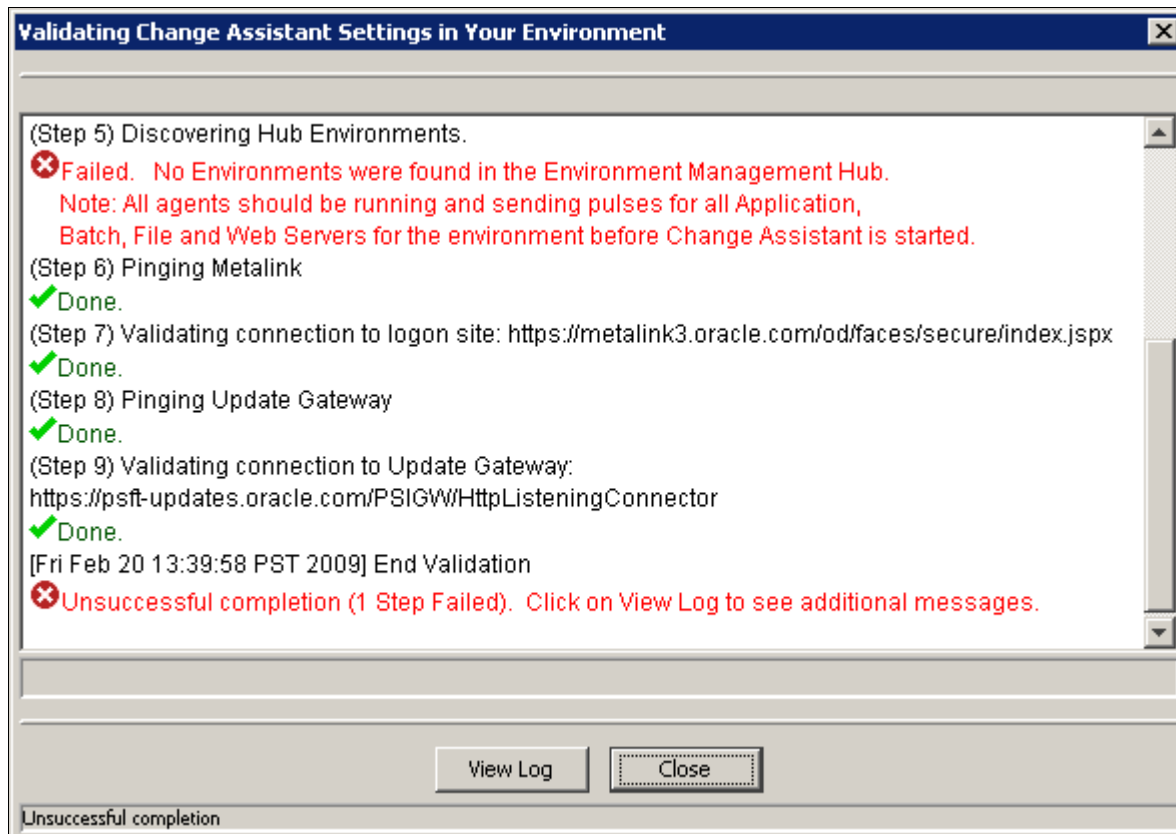
Validating Change Assistant Settings in Your Environment

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_2009_2_20_13_39.log - Notepad

File  Edit  Format  View  Help

[Fri Feb 20 13:39:46 PST 2009] Begin Validation
output written to: C:\Program Files\PeopleSoft\Change
Assistant\validate\validate_2009_2_20_13_39.log
(Step 1) Creating a Summary of Your Environment
PS_HOME: C:\pt850\
Output Directory: C:\pt850_Output\
Staging Directory: C:\pt850_Staging\
Path: C:\Program Files\PeopleSoft\Change
Assistant\jre\bin;.;C:\WINDOWS\Sun\Java\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\pt850
\bin\client\winx86;C:\oracle\product\10.2.0\db_1
\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\wbem;C:\apps\db\oracle102\bin;C:\Program
Files\Microsoft SQL Server\80\Tools\BINN;C:\bea\tuxedo9.1_vS2005_v2\bin
CLASSPATH: C:\Program Files\PeopleSoft\Change Assistant\changeassistant.jar;C:\Program
Files\PeopleSoft\Change Assistant\mx4j-jmx.jar;C:\Program Files\PeopleSoft\Change
Assistant\xercesImpl.jar;C:\Program Files\PeopleSoft\Change Assistant\xml-apis.jar;C:\Program
Files\PeopleSoft\Change Assistant\xalan_2_7_0.jar;C:\Program Files\PeopleSoft\Change
Assistant\serializer.jar;C:\Program Files\PeopleSoft\Change Assistant\commons-logging-
1.0.1.jar;C:\Program Files\PeopleSoft\Change Assistant\commons-httpclient-2.0-rc1.jar;C:\Program
Files\PeopleSoft\Change Assistant\commons-codec-1.1.jar;C:\Program Files\PeopleSoft\Change
Assistant\xmldb-api-20021118.jar;C:\Program Files\PeopleSoft\Change Assistant\xmldb-
common.jar;C:\Program Files\PeopleSoft\Change Assistant\xmldb-xupdate-20040205.jar;C:\Program
Files\PeopleSoft\Change Assistant\xindice-1.1b5-dev.jar;C:\Program Files\PeopleSoft\Change
Assistant\psemf.jar;C:\Program Files\PeopleSoft\Change Assistant\AbsoluteLayout.jar;C:\Program
Files\PeopleSoft\Change Assistant\log4j-1.2.8.jar;C:\Program Files\PeopleSoft\Change
Assistant\jxl.jar;C:\Program Files\PeopleSoft\Change Assistant\j2ee.jar
Current Working Directory: C:\Program Files\PeopleSoft\Change Assistant
Done.
(Step 2) Validating your SQL Query Tools
Found Microsoft SQL Query Tool at c:\Program Files\Microsoft SQL Server\80\Tools\Binn\OSQL.exe
Found Oracle SQL Query Tool at c:\Apps\db\oracle102\bin\sqlplus.exe
Done.   2 SQL Query Tools found.
(Step 3) Pinging Environment Management Hub
Pinging SERVER-11
Done.
(Step 4) Connecting to Hub: http:/SERVER-11:80/PSEMBUG/hub
Done.
(Step 5) Discovering Hub Environments.
Failed.   No Environments were found in the Environment Management Hub.
```

Validation log

Chapter 12

Installing PeopleSoft Change Impact Analyzer

This chapter discusses:

- Prerequisites
- Removing PeopleSoft Change Impact Analyzer Installations
- Installing and Removing PeopleSoft Change Impact Analyzer in Silent Mode

Prerequisites

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.
- You can install PeopleSoft Change Impact Analyzer from downloaded files as a standalone application, or as a part of your PeopleSoft PeopleTools installation. 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 12-1: Removing PeopleSoft Change Impact Analyzer Installations

To uninstall an existing installation of PeopleSoft Change Impact Analyzer, use the setup utility for the current release, as follows:

1. From the *PS_HOME*\setup\PsCIA directory, run `installCIA.exe`.

2. If there is an existing installation of PeopleSoft Change Impact Analyzer on your machine, the Remove the program window appears.

    Click Next to remove all installed features.
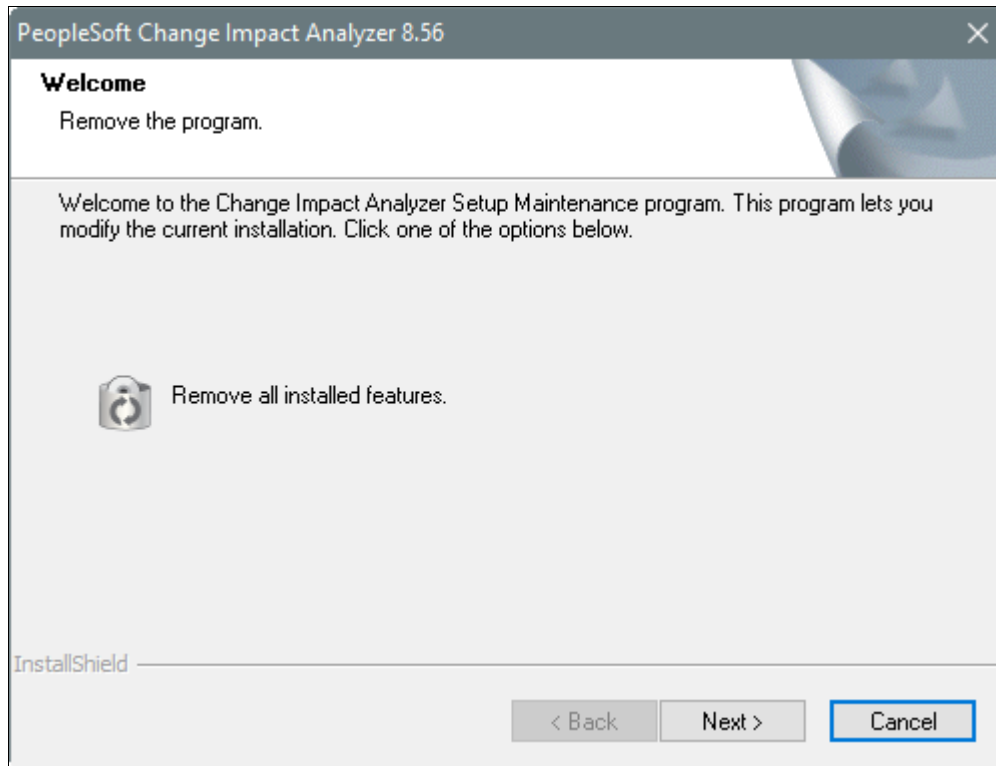
PeopleSoft Change Impact Analyzer Remove the program window

3. Click OK to confirm that you want to remove the previous PeopleSoft Change Impact Analyzer installation.
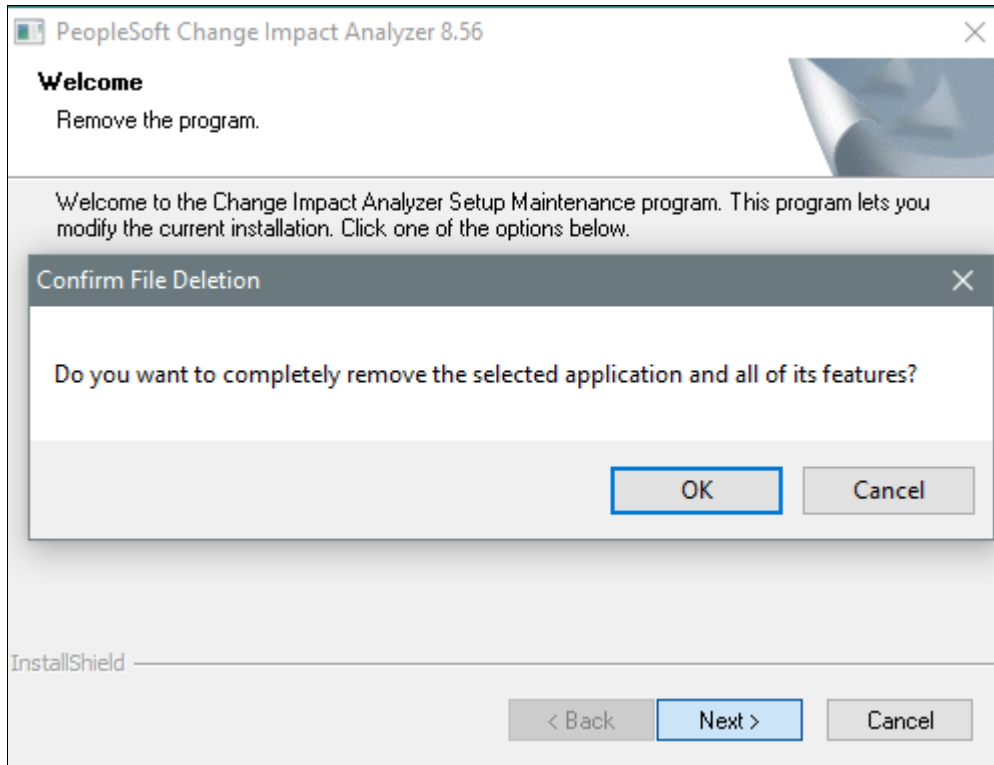
Confirm File Deletion message dialog box

4. When the removal process is complete, click Finish on the Uninstall Complete window.
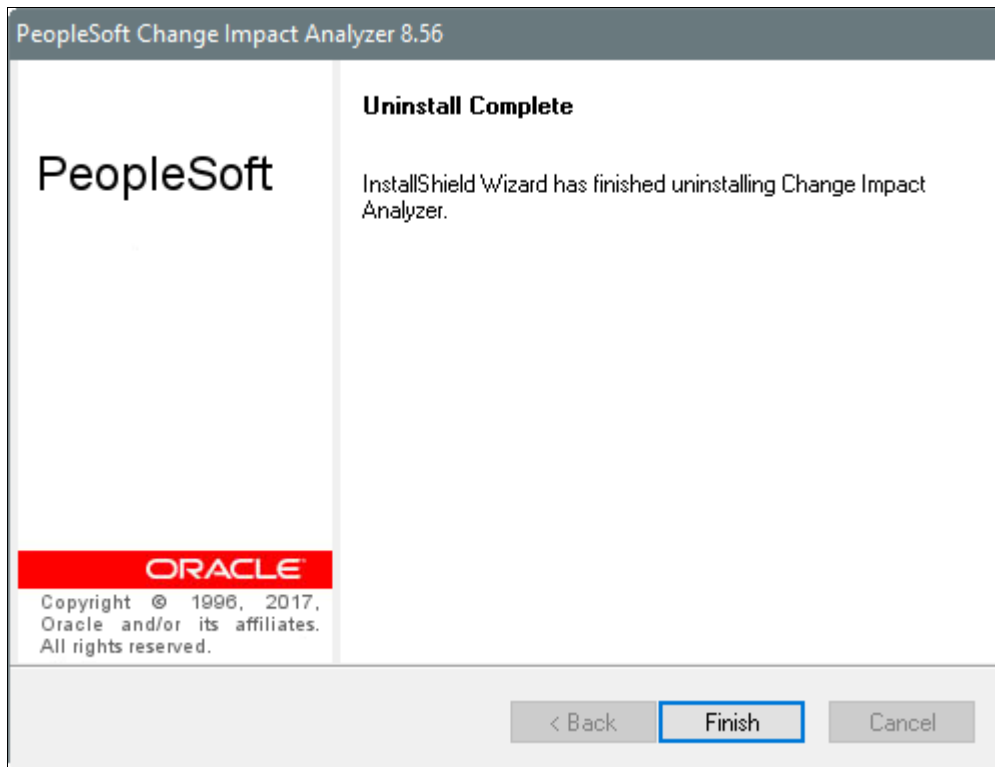
PeopleSoft Change Impact Analyzer Uninstall Complete window

5. Use the instructions in the next section, Installing PeopleSoft Change Impact Analyzer, to install the current release.

Task 12-2: Installing and Removing PeopleSoft Change Impact Analyzer in Silent Mode

This section discusses:

- Understanding Silent Mode for PeopleSoft Change Impact Analyzer
- Installing PeopleSoft Change Impact Analyzer in Silent Mode
- Removing the PeopleSoft Change Impact Analyzer Installation in Silent Mode
- Removing and Installing PeopleSoft Change Impact Analyzer in Silent Mode

Understanding Silent Mode for PeopleSoft Change Impact Analyzer

You can carry out a silent installation or removal of PeopleSoft Change Impact Analyzer by editing a response file to correspond to your installation requirement. When you work in silent mode there is no user interaction after you begin the installation or removal.

The PeopleSoft Change Impact Analyzer installer includes the following files in the directory *PS_HOME*setup\PsCIA:

- CIA-silent-install-response-file.txt — Use this response file to install PeopleSoft Change Impact Analyzer.

- CIA-silent-uninstall-response-file.txt — Use this response file to remove PeopleSoft Change Impact Analyzer installations.

- silentInstall.bat — Use this script to remove an existing PeopleSoft Change Impact Analyzer installation, and install a new instance.

- silentInstall-ResultCodes.rtf — Review this file to interpret the results seen in the setup.log file after installation.

  The file is in Rich Text Format (RTF), and is most easily read if you open it with an authoring tool, such as Microsoft Word.

Task 12-2-1: Installing PeopleSoft Change Impact Analyzer in Silent Mode

This section discusses:

- Editing the Response File
- Running the Silent Mode Installation

Editing the Response File

Review the header portion at the top of the response file for instructions on running the silent installation. Modify the response file according to your installation requirement. The sections labelled NOTE TO USER include items to be modified.

Open the file *PS_HOME*\setup\PsCIA\CIA-silent-install-response-file.txt for editing, modify the following items, and then save the file:

- JDBC driver type

  Enter 1 to specify your RDBMS platform, and 0 for the other selections. The options are: Oracle (default), MSS (Microsoft SQL Server), or DB2 (DB2 z/OS or DB2/LUW).

  ```
  ################# NOTE TO USER #############################
  # the following option is for DB type for JDBC driver
  # the default is Sel-0=1, for Oracle
  # set the Sel-1=1 for MSS
  # set the Sel-2=1 for DB2
  # NOTE: the options are mutually exclusive
  Sel-0=1
  Sel-1=0
  Sel-2=0
  ```

- Path to JDBC driver

  This information is not required for Oracle RDBMS, because the JDBC drivers are automatically installed.

  ```
  ################## NOTE TO USER #############################
  # For MSS & DB2 please enter the path to JDBC driver for "szPath" below
  szPath=c:\jdbcDrivers
  ```

- Installation location

  The default location is C:\Program Files\PeopleSoft\Change Impact Analyzer. If you want to install to a different location, enter the location for szDir.

  ```
  ################# NOTE TO USER #############################
  # For "szDir" enter the path where you want to install the Change Impact⇒
  ```

```
     Analyzer
     szDir=C:\Program Files\PeopleSoft\Change Impact Analyzer
```

Running the Silent Mode Installation

To run the silent mode installation with the modified response file:

1. In a command prompt, go to *PS_HOME*\setup\PsCIA.

2. Run the following command, substituting your *PS_HOME* location for %PS_HOME% in the command:

   ```
   installCIA.exe /s /f1"%PS_HOME%\setup\PsCIA\CIA-silent-install-response-⇒
   file.txt"
   ```

3. After the installation is complete, review the result status in the file *PS_HOME*\setup\PsCIA\setup.log.

   Result code 0 means a successful installation. The result codes are described in the file *PS_HOME*setup\PsCIA\silentInstall-ResultCodes.rtf.

Task 12-2-2: Removing the PeopleSoft Change Impact Analyzer Installation in Silent Mode

Review the header portion at the top of the response file for instructions. The process will search for and remove an existing installation of PeopleSoft Change Impact Analyzer. You do not need to edit the file before running. The file must be located in *PS_HOME*\setup\PsCIA.

1. In a command prompt, go to *PS_HOME*\setup\PsCIA.

2. Run the following command, substituting your *PS_HOME* location for %PS_HOME% in the command

   ```
   installCIA.exe /s /f1"%PS_HOME%\setup\PsCIA\CIA-silent-uninstall-⇒
   response-file.txt"
   ```

3. After the installation is complete, review the result status in the file *PS_HOME*\setup\PsCIA\setup.log.

   Result code 0 means a successful installation. The result codes are described in the file *PS_HOME*setup\PsCIA\silentInstall-ResultCodes.rtf.

Task 12-2-3: Removing and Installing PeopleSoft Change Impact Analyzer in Silent Mode

Use the silentInstall.bat script to remove an existing installation of PeopleSoft Change Impact Analyzer and install a new installation. This script runs commands using CIA-silent-uninstall-response-file.txt followed by CIA-silent-install-response-file.txt. Refer to the previous sections for information on those response files.

To remove an existing installation and reinstall:

1. In a command prompt, go to *PS_HOME*\setup\PsCIA.

2. Run the following command:

   ```
   silentInstall.bat
   ```

3. After the installation is complete, review the result status in the file *PS_HOME*\setup\PsCIA\setup.log.

   Result code 0 means a successful installation. The result codes are described in the file *PS_HOME*setup\PsCIA\silentInstall-ResultCodes.rtf.

Chapter 13A

Installing and Compiling COBOL on Windows

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Preparing COBOL for a PeopleTools-only Upgrade
- Installing Micro Focus Net Express on Microsoft Windows
- Managing Micro Focus Net Express Compiler Licenses
- Using the Micro Focus 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 Net Express COBOL compiler.

See Also

"Preparing for Installation," Installing Supporting Applications

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

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

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 13A-1: Preparing 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.

Ensure that the following COBOL runtime files in your client and server bin directories match those of your Micro Focus Net Express installation:

- CBLINTS.DLL

- CBLRTSS.DLL

- CBLVIOS.DLL

- COB32API.DLL

See Recompiling COBOL on Microsoft Windows.

Task 13A-2: Installing Micro Focus Net Express on Microsoft Windows

This section discusses:

- Prerequisites

- Obtaining Installation Files for Micro Focus Net Express from Oracle Software Delivery Cloud

- Installing Micro Focus Net Express Wrap Pack 6

- Installing Micro Focus Net Express Wrap Pack 14

Prerequisites

Micro Focus® Net Express™ 5.1 Wrap Pack 14 is the supported COBOL compiler on Microsoft Windows for the current PeopleSoft PeopleTools release. This Wrap Pack is an product update and does require a previous version of the product to be installed. Micro Focus Net Express 5.1 Wrap Pack 14 can upgrade any of the following releases or any combination of these releases:

- Micro Focus Net Express 5.1 Wrap Pack 6

- Micro Focus Net Express 5.1 Wrap Pack 7

- Micro Focus Net Express 5.1 Wrap Pack 8

- Micro Focus Net Express 5.1 Wrap Pack 9

- Micro Focus Net Express 5.1 Wrap Pack 10

- Micro Focus Net Express 5.1 Wrap Pack 11

- Micro Focus Net Express 5.1 Wrap Pack 12

- Micro Focus Net Express 5.1 Wrap Pack 13

If you are running a Wrap Pack prior to Wrap Pack 6 or have no Net Express version installed, install Wrap Pack 6 before installing Wrap Pack 14.

See Installing Micro Focus Net Express Wrap Pack 6.

Check the certification information on My Oracle Support for the supported version for Microsoft Windows operating systems.

Note that Oracle is the exclusive reseller of the Micro Focus COBOL compiler for use with PeopleSoft applications.

See Also

PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers, My Oracle Support, Doc ID 747059.1

Using the Micro Focus COBOL Compiler on Microsoft Windows

Task 13A-2-1: Obtaining Installation Files for Micro Focus Net Express from Oracle Software Delivery Cloud

The Micro Focus Net Express 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 Net Express 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 the Micro Focus Net Express installation:

1. Log in to Oracle Software Delivery Cloud at https://edelivery.oracle.com.
2. Enter Micro Focus in the type-ahead Product field, and select Micro Focus International Ltd. Net Express COBOL for Windows.

   The product is added to the Download Queue.
3. Click Continue.
4. Click Continue.
5. Read the license agreement, select the check box to acknowledge that you accept the agreement, and then click Continue.
6. Click one of the filenames to download an individual zip file, or click Download All to obtain all of the files listed.

   The files include software, wrap packs, 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 *NE_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 13A-2-2: Installing Micro Focus Net Express Wrap Pack 6

The following procedure assumes that you saved the installation files from Oracle Software Delivery Cloud in the directory *NE_INSTALL*.

Note. Micro Focus Net Express Wrap Pack 6 is a full product release and does not require a previous version of the product to be installed.

To install Micro Focus Net Express Wrap Pack 6:

1. Double-click *NE_INSTALL/*nxp3251060079.exe.

    If a security screen appears, click Run to launch the installer.
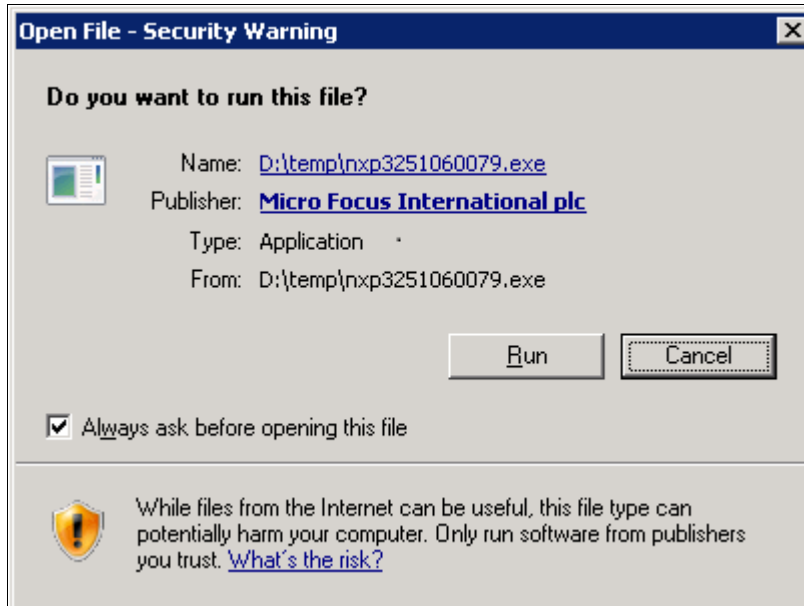
Open File - Security Warning for the Micro Focus installation executable

The Install Shield Wizard starts extracting files. This may take a few minutes until the files are extracted, and then the Installation Wizard dialog box appears.

2. Click Next on the welcome window.

The screen includes a button to open a Readme file.
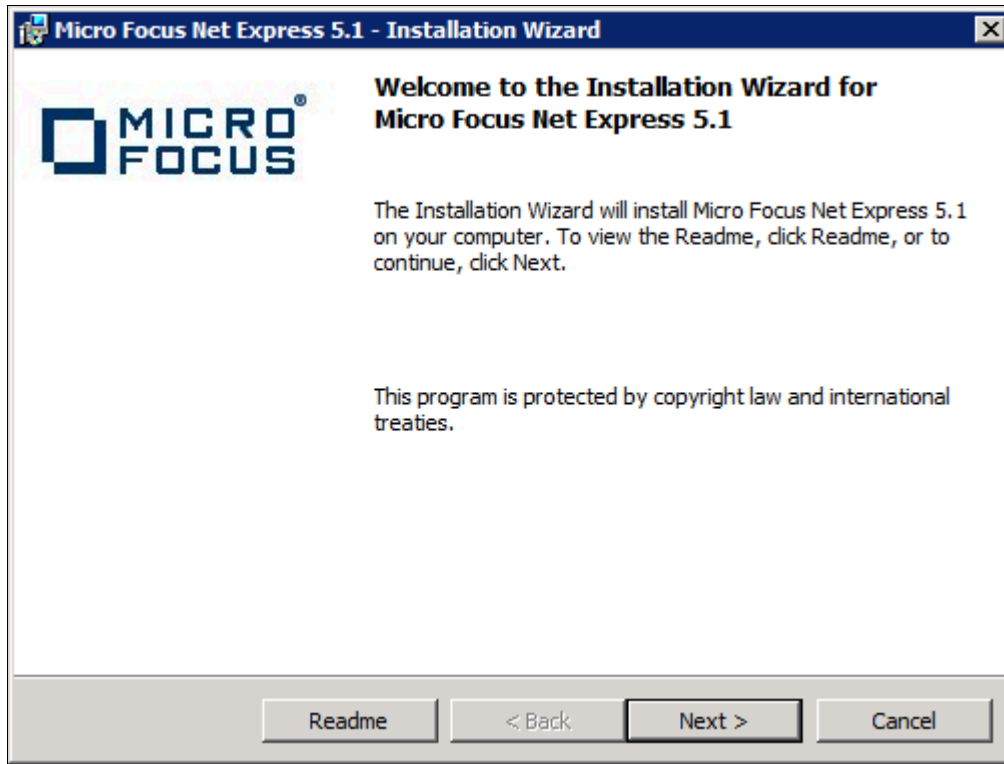
Micro Focus Net Express Installation Wizard Welcome window

3. Read the terms of the License Agreement, select the option to accept the terms, and click Next.
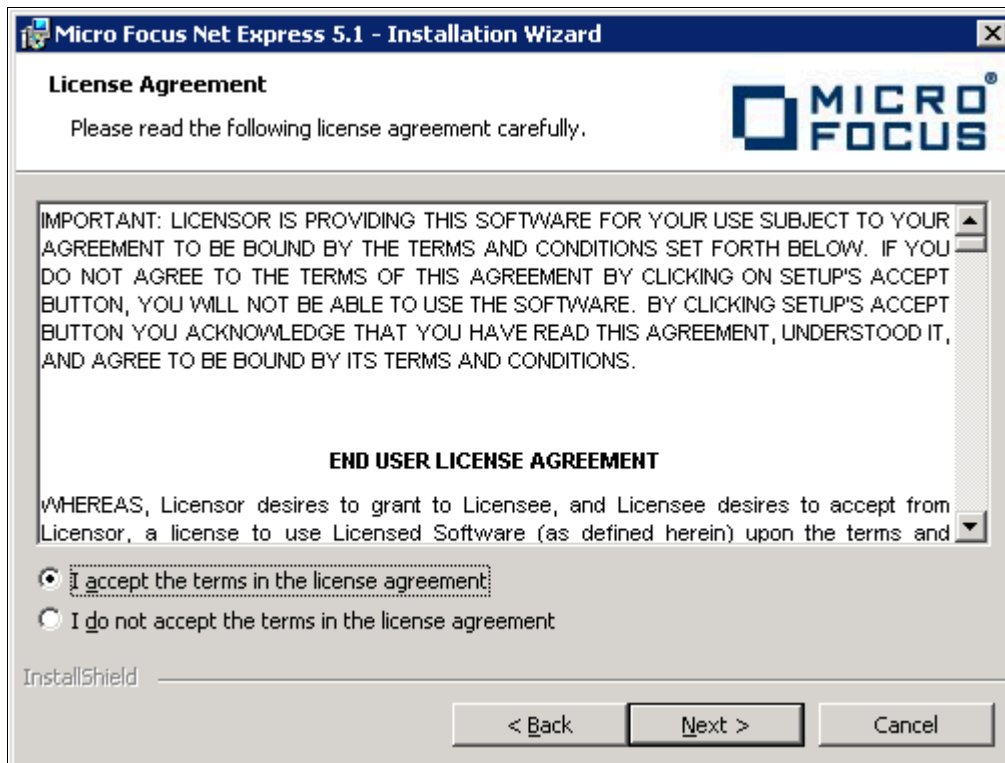
License Agreement window for Micro Focus Express

4. Complete the Customer Information window:

a. Enter your name in the User Name field, and enter your Company Name.

In the example shown below, the user name is USER NAME, and the Company Name is ORACLE.

b. Leave the Serial Number and W.O. Number fields blank. Oracle does not provide these numbers to you and they are not required.

Note. The message at the top of the window reads "We STRONGLY recommend you enter your Serial Number and Works Order (W.O.) number here. You will need them later to obtain a full license key." The example here leaves these fields blank.

c. Click Next.

Customer Information window

5. The Custom Setup window appears as in this example, with all of the options selected initially:
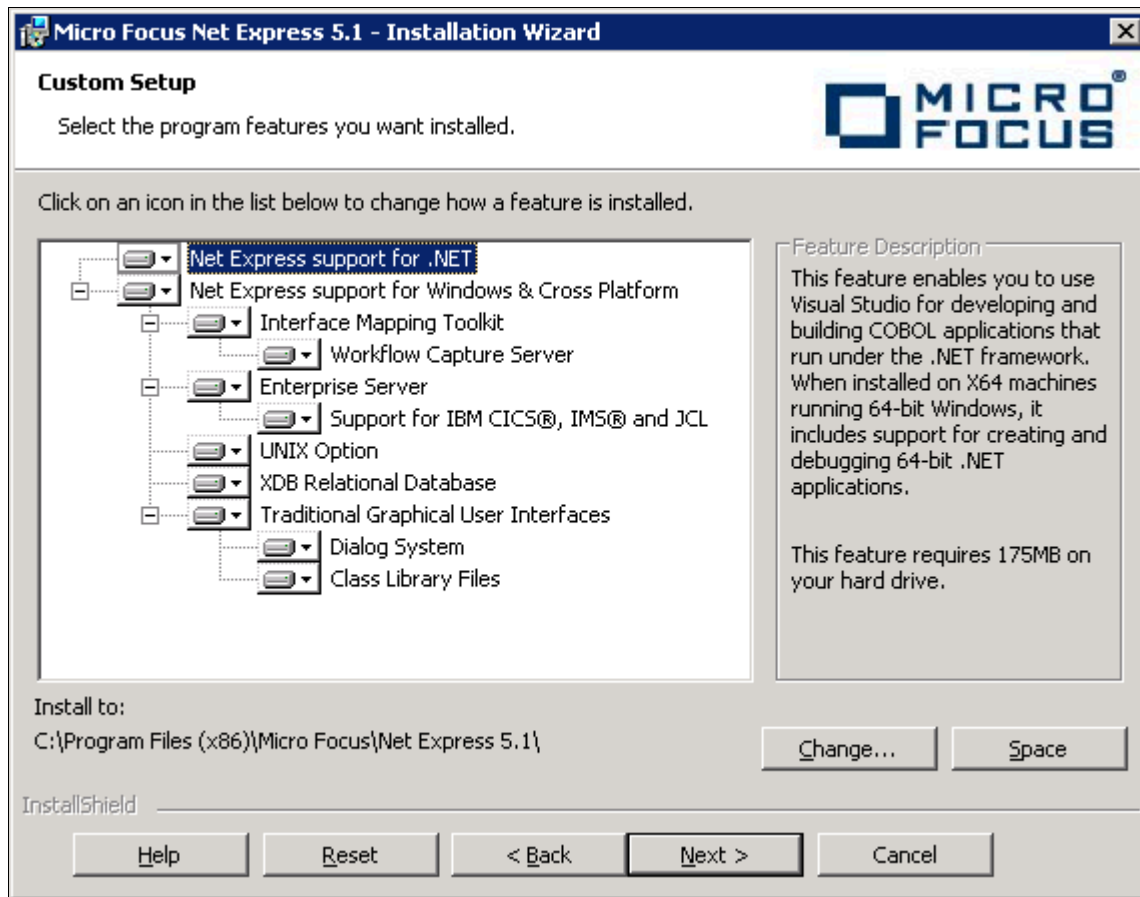
Custom Setup window before selecting features

6. You must clear several features on the Custom Setup window before proceeding.

    You can turn off a feature by clicking on the drop-down button beside the feature and selecting the option "X This feature will not be available," as shown in this example:
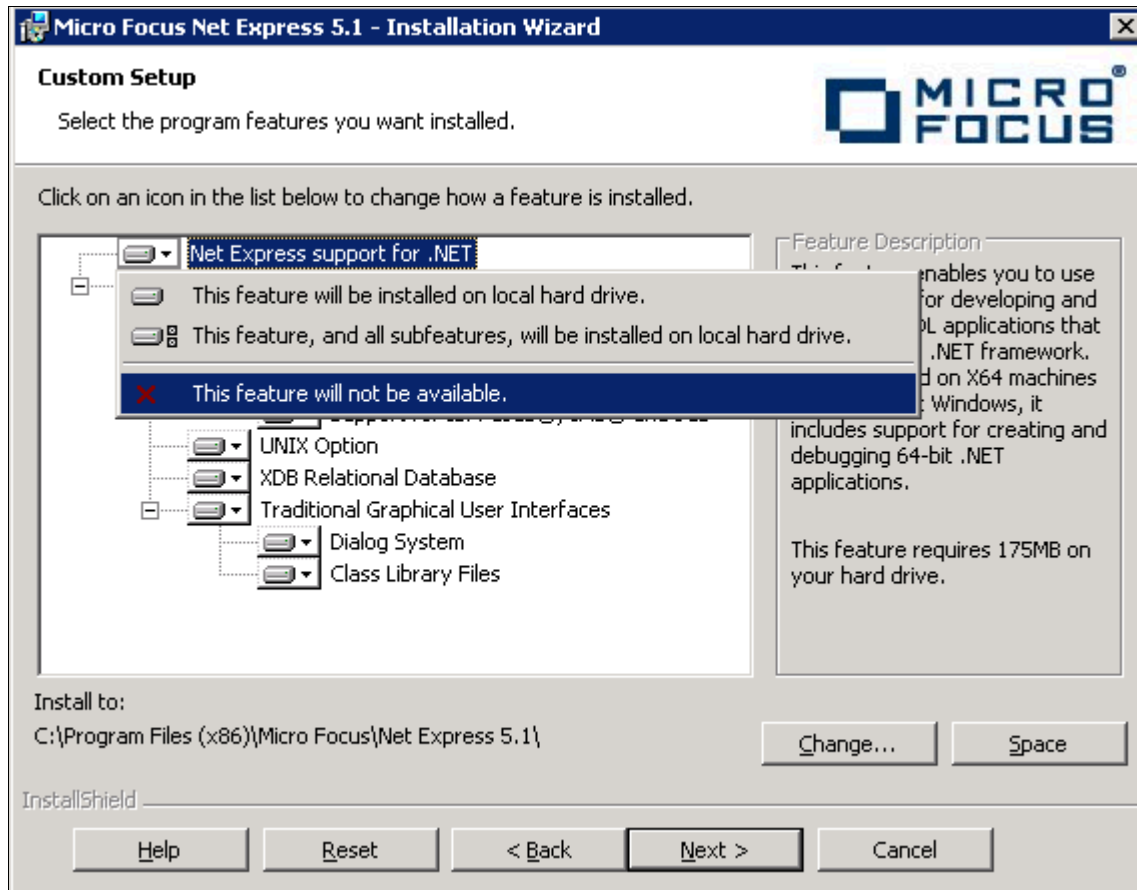
Custom Setup window displaying selection and deselection options

The Traditional Graphical User Interfaces feature is the only feature required for the PeopleSoft installation. (The Traditional Graphical User Interfaces feature also includes Dialog System and Class Library Files.) Clear the following features:

*   Net Express support for .NET

    Note. Microsoft .NET framework is not required for compiling and running COBOL applications in PeopleSoft architecture. Neither is .NET required for successful installation of MicroFocus Net Express 5.1.

*   Interface Mapping Toolkit

    When you clear this feature, the Workflow Capture Server option is automatically cleared also.

*   Enterprise Server

*   UNIX Option

*   XDB Relational Database

7. Verify that your final selection matches this example, with only Traditional Graphical User Interfaces, Dialog System, and Class Library Files, selected:
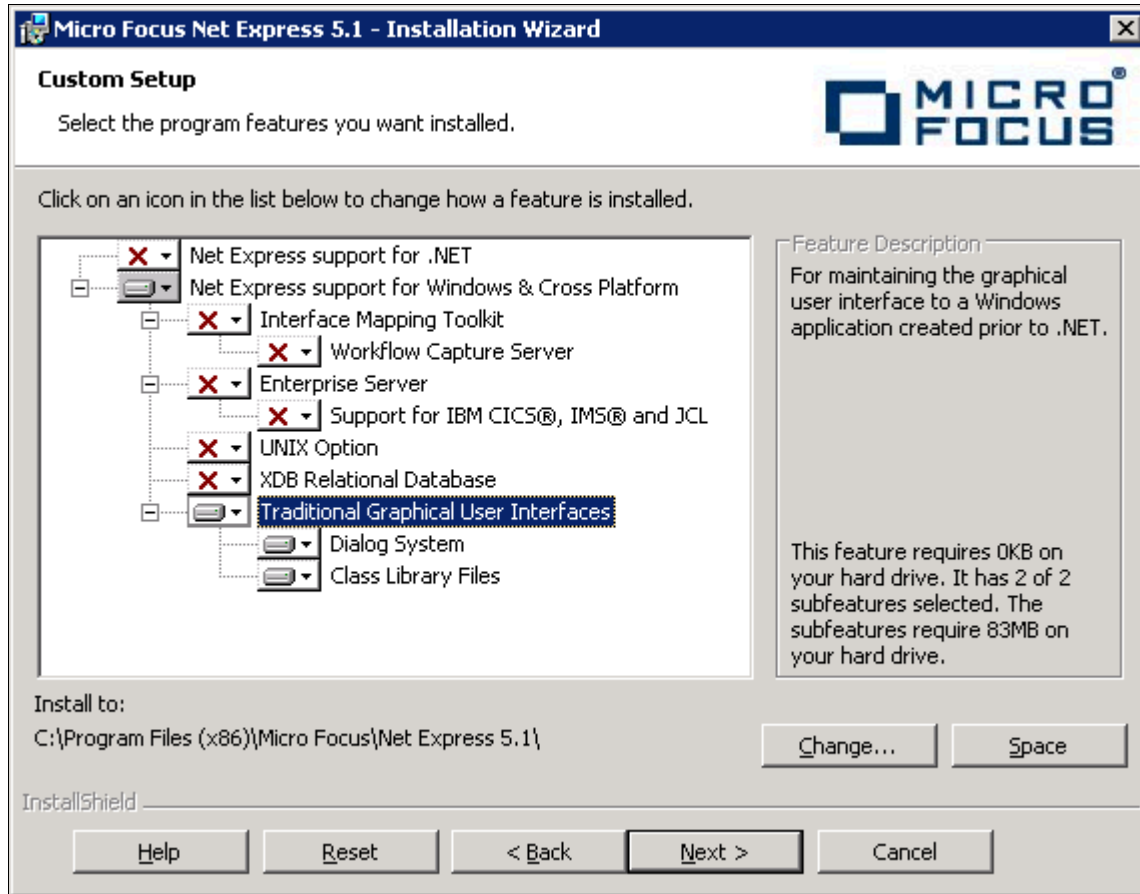
Custom Setup window with options selected for PeopleSoft applications

8. Highlight Traditional Graphical User Interfaces.

The installation directory is listed below the feature list. If you want to install to another location, click Change. If not, click Next.

This documentation refers to the installation directory as *NE_HOME*. The Micro Focus Net Express 5.1 default installation directory, for 64-bit systems, is:

C:\Program Files (x86)\Micro Focus\Net Express 5.1

9. Click Install.
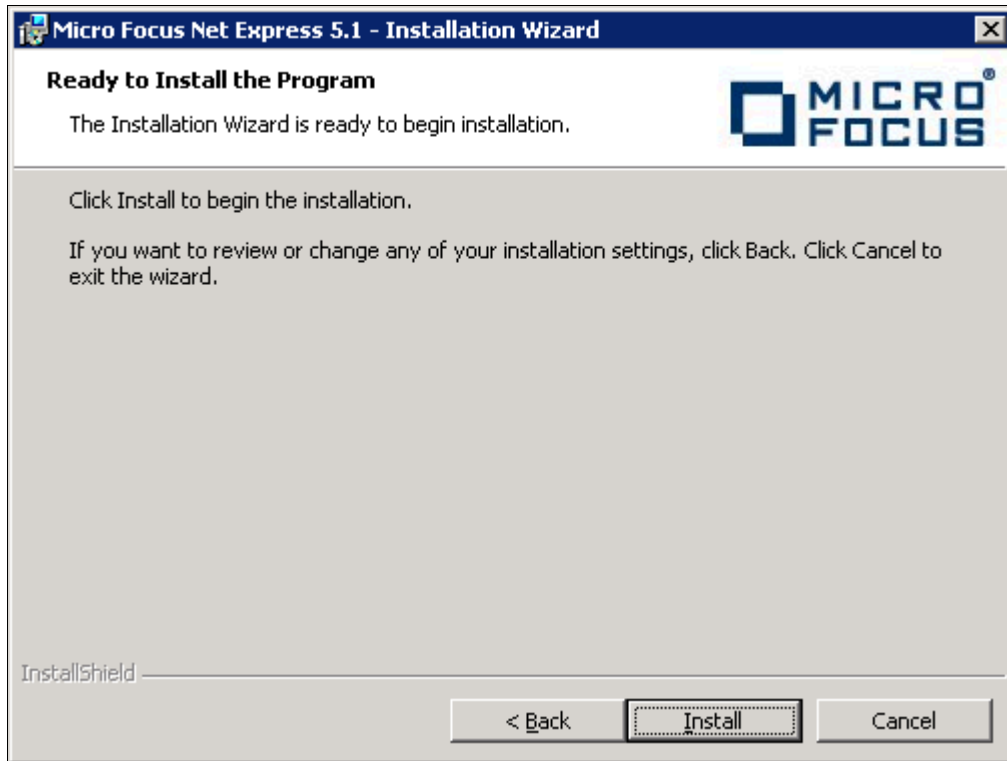
Micro Focus Net Express Installation window: Ready to Install the Program

The installation status window appears, tracking the installation progress.
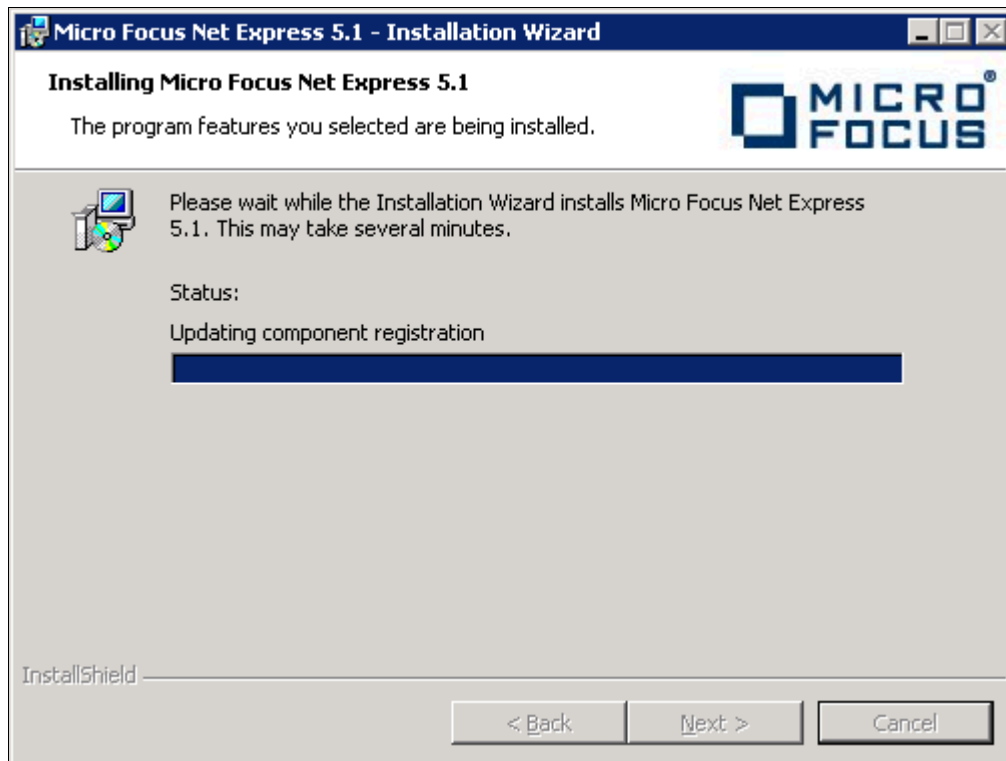
Installation status for the Micro Focus Net Express Installation

10. Click Finish.
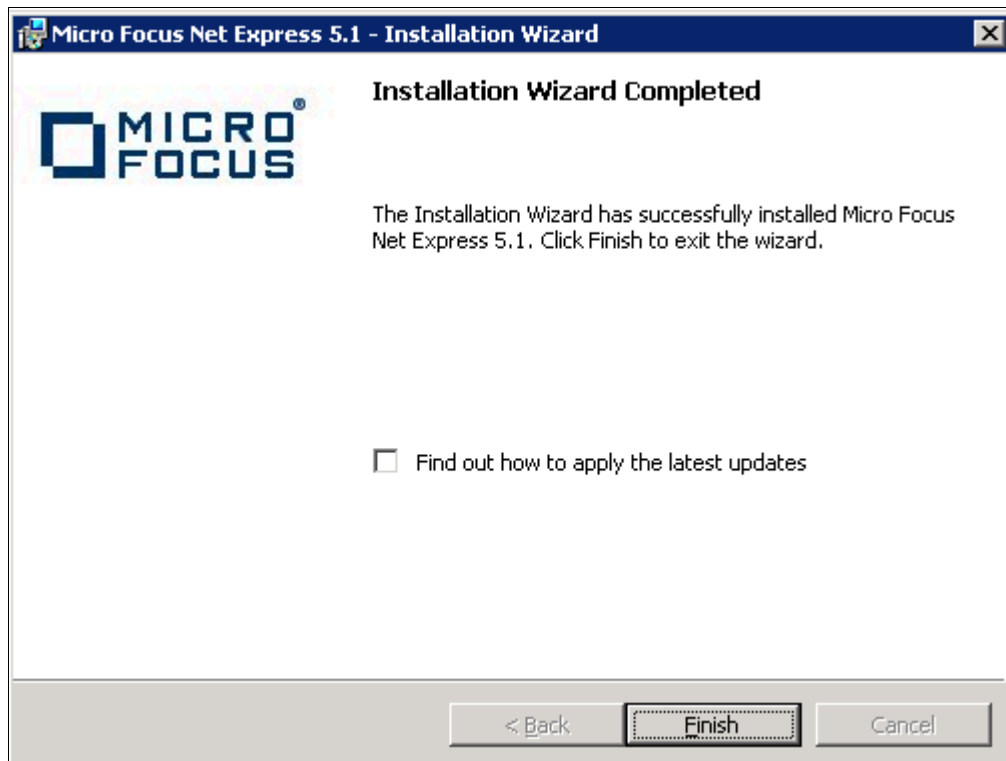
Installation Wizard Completed window

11. To confirm the installation, select Start, All Programs, Micro Focus Net Express 5.1, Net Express.
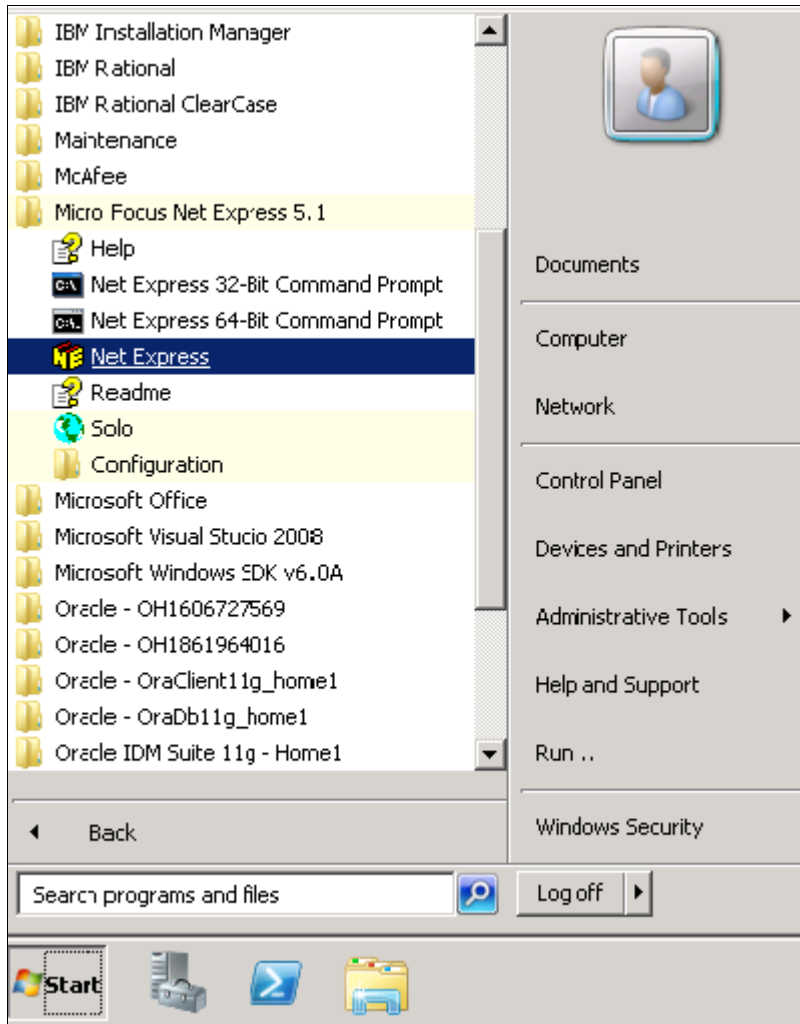
Selecting Micro Focus Net Express from the Microsoft Windows Start menu

The Net Express Integrated Development Environment (IDE) appears.

12. On the Micro Focus Management System dialog box, read the information under Current License Status, indicating that there is a 30-day license for the compiler that you installed.
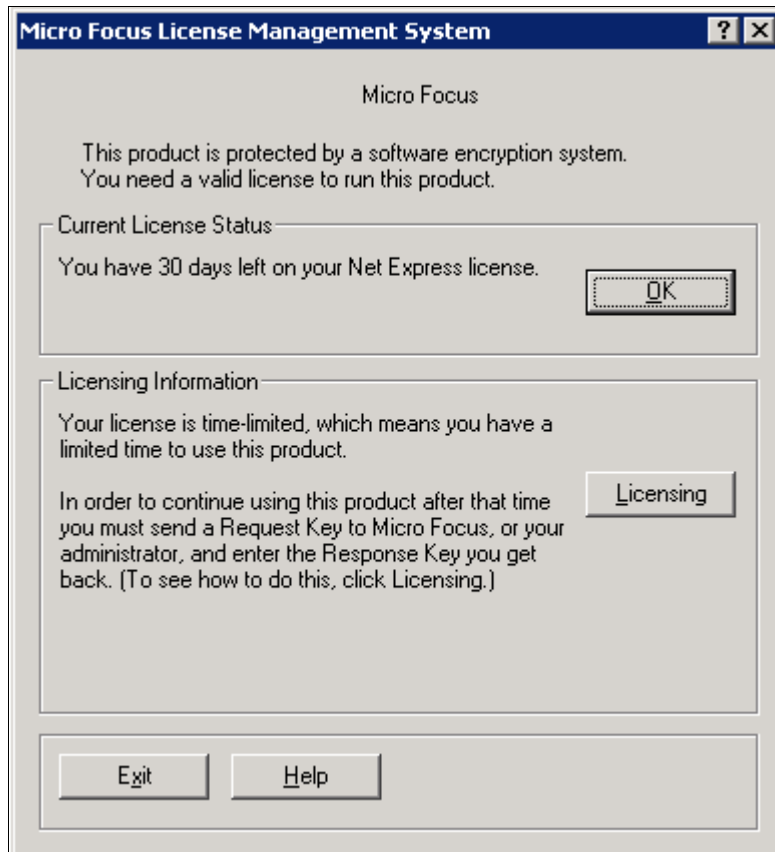
Micro Focus License Management System dialog box

13. Click Help, About Net Express.
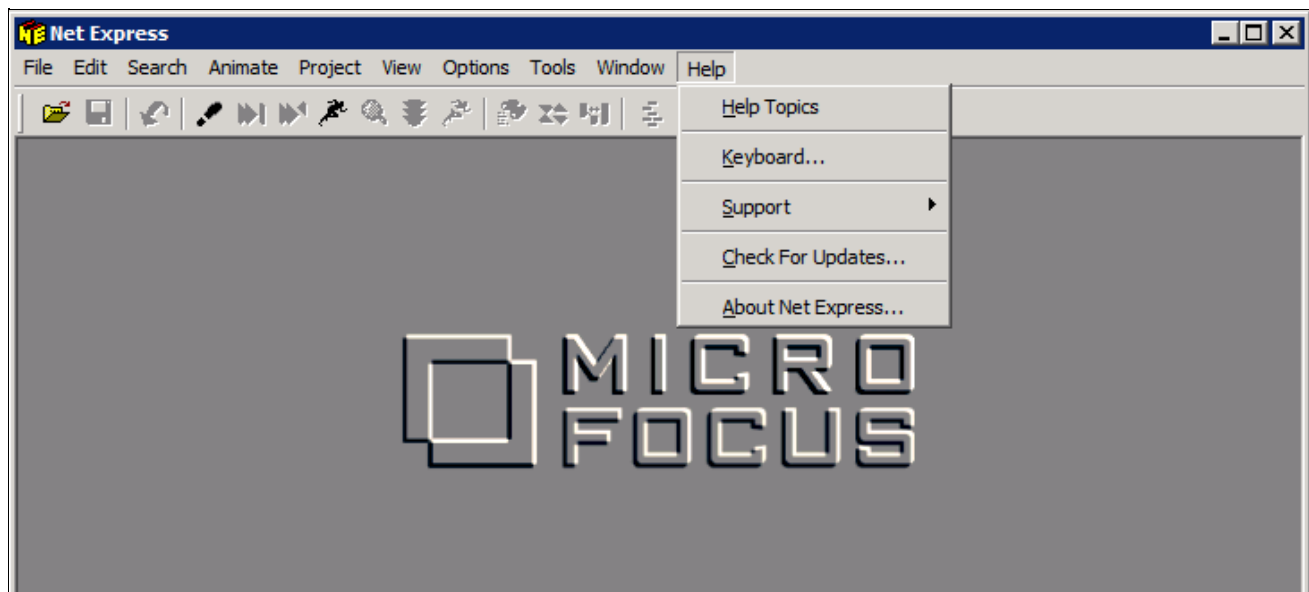
Micro Focus Net Express Integrated Development Environment Help menu

14. Verify that the following information is included on the message box that appears:

Net Express 5.1

Version: 5.106.0079
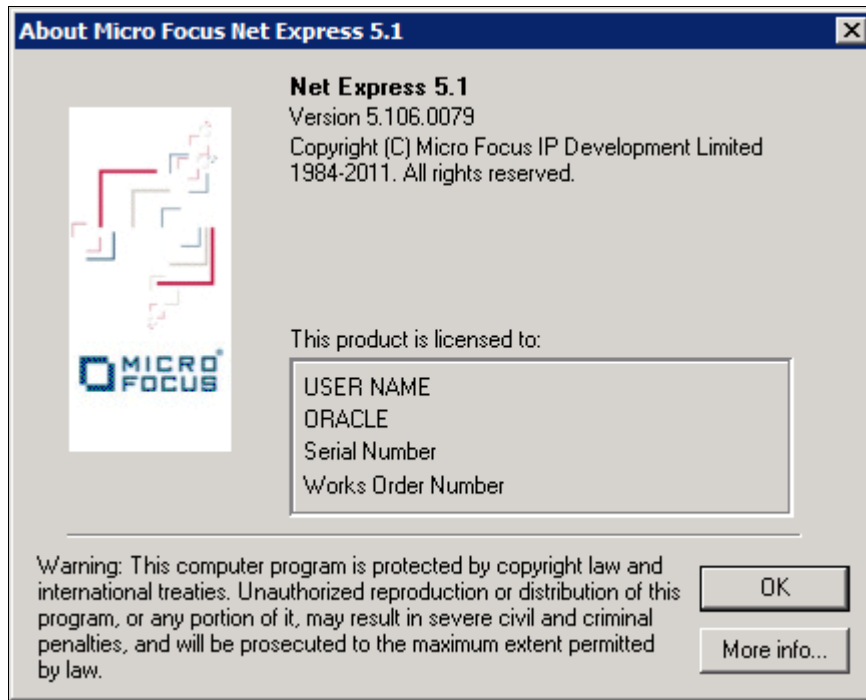
About Micro Focus Net Express window with version number

Task 13A-2-3: Installing Micro Focus Net Express Wrap Pack 14

The following procedure assumes that you saved the installation files from Oracle Software Delivery Cloud in the directory *NE_INSTALL,* and that Micro Focus Net Express Wrap Pack 6 or later is installed.

To update to Micro Focus Net Express Wrap Pack 14:

1. Double-click *NE_INSTALL/*nxp3251140045.msp.

   If a security screen appears, as in this example, click Open to launch the installer.
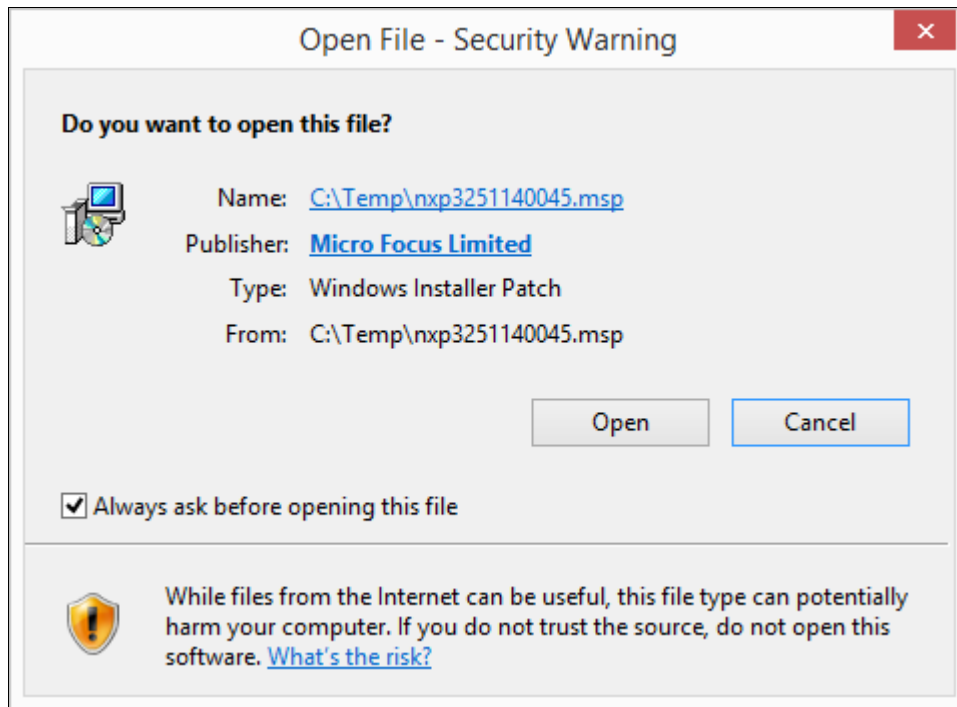
Open File - Security Warning dialog box

A Welcome window appears.

2. Click Update to continue, as in this example:
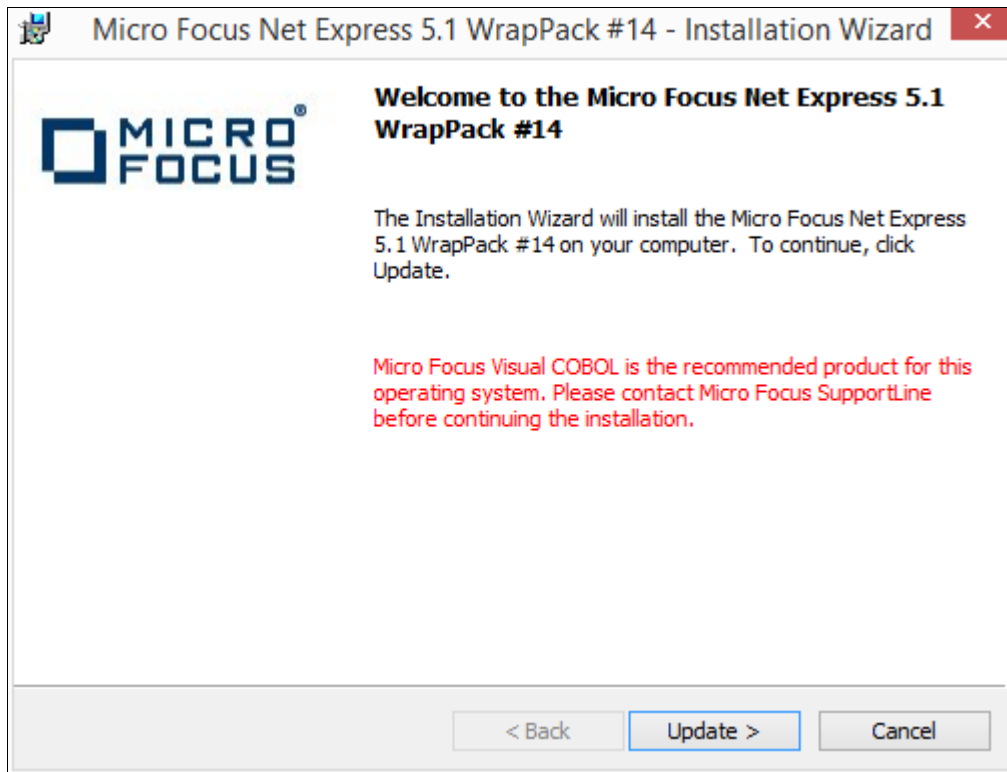
Welcome to the Micro Focus Net Express 5.1 WrapPack #14 window

You see a window indicating the progress of the installation.
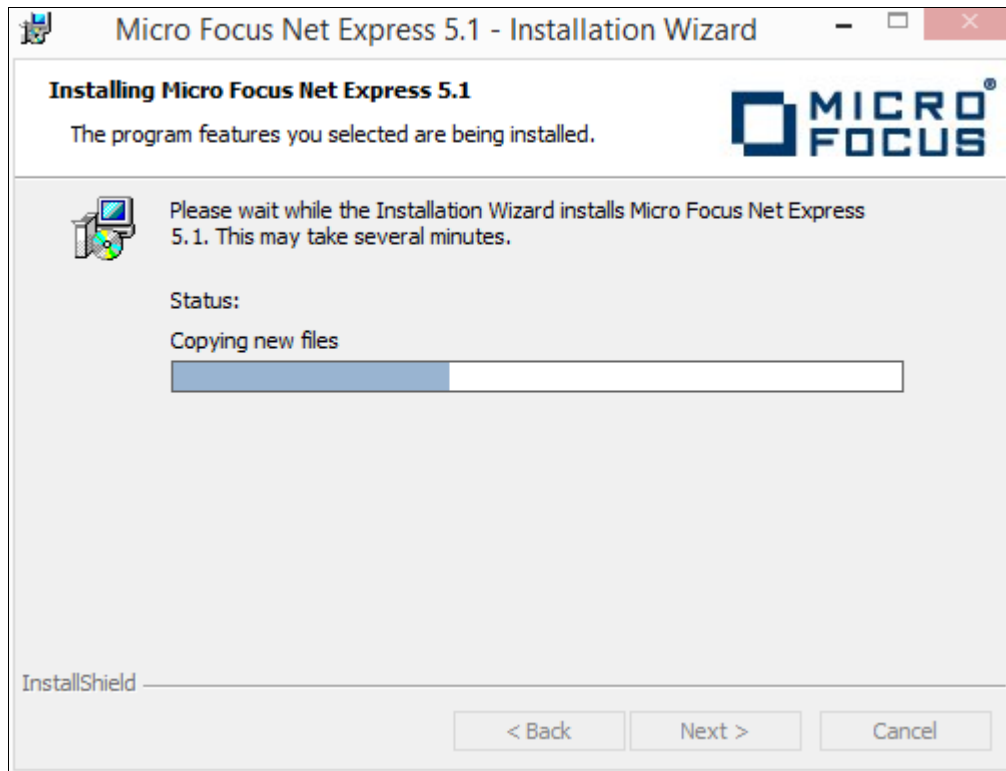
Micro Focus Net Express 5.1 Installation Wizard progress indicator

3. After the installation is complete, click Finish on the completion window, as in this example:
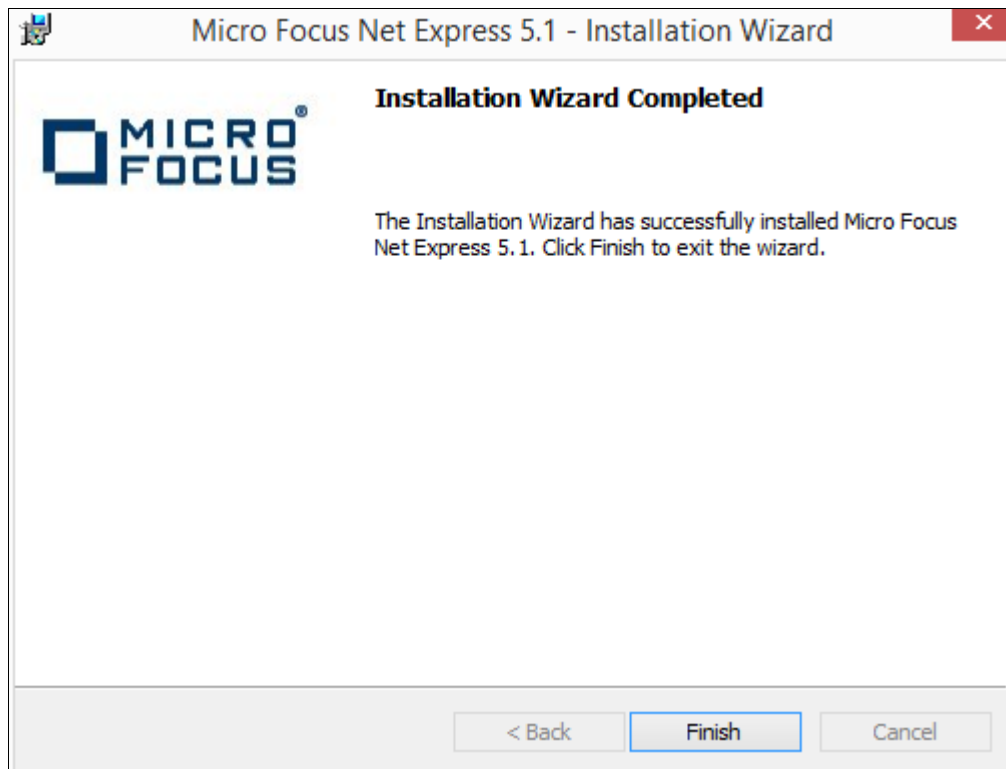
Installation Wizard Completed window

4. To verify the installation, select Start, All Programs, Micro Focus Net Express 5.1, Net Express.

    Alternatively, you can run *NE_HOME*\Base\Bin\MFNETX.EXE, where *NE_HOME* refers to the directory where you installed Micro Focus Net Express, such as C:\Program Files\Micro Focus.

    The Micro Focus Net Express 5.1 Integrated Development Environment (IDE) opens.

5. On the Micro Focus License Management System dialog box, read the information under Current License Status.

    In this example, the current license status indicates 29 days remaining on the license. Click OK.
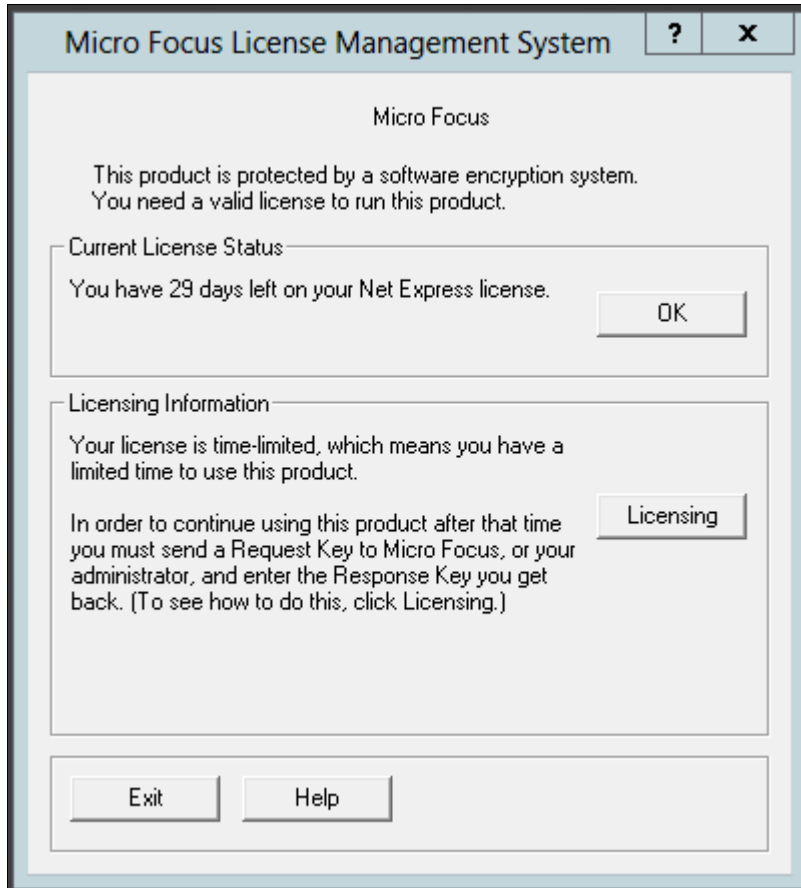
Micro Focus License Management System dialog box

6. Click Continue on the Welcome to Micro Focus Net Express window.

7. Select Help, About Net Express.

    Verify that the following information is included on the message box that appears:

    Net Express 5.1

    Version 5.114.0045
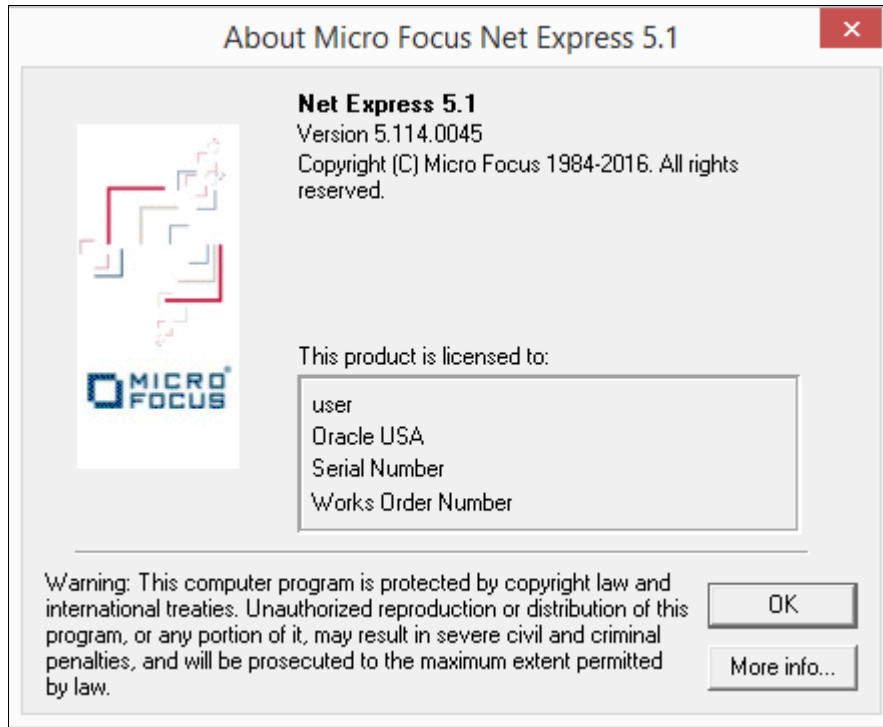
About Micro Focus Net Express 5.1 message box

Task 13A-3: Managing Micro Focus Net Express Compiler Licenses

This section discusses:

*   Understanding Micro Focus Net Express Compiler Licenses
*   Configuring a Full License with the License Server
*   Configuring a Timed License with the License Server
*   Revoking the License Using the License Management System
*   Revoking the License by Removing the Installation

Understanding Micro Focus Net Express Compiler Licenses

The Micro Focus Net Express 5.1 Wrap Pack 14 compiler can be licensed with a Micro Focus License Server or with the Request Key/Response Key mechanism. This section discusses the License Server method, which Oracle recommends because it is more flexible and licensing is immediate. For more details, see the Micro Focus documentation.

There are two types of Micro Focus Net Express licenses. Here is a brief comparison:

- Timed License

    - Timed Licenses expire after the specified duration and can be renewed over the network.

    - Timed Licenses are the default given by the license server.

    - There are two types of Timed Licenses; one is valid for seven days, and other for one day.
- Full License

    - Full Licenses do not expire.

    - The user can request and revoke Full Licenses using the License Management System.

It is a good idea to use Timed Licenses, unless you have a compelling demand. Mostly developers who work with COBOL on a daily basis should use a Full License. If you require COBOL for a few compiles, and only for some days, use a Timed License. When the Timed License expires, you can renew it again.

Task 13A-3-1: Configuring a Full License with the License Server

To configure a Full License for permanent use:

1. Select Start, All Programs, Micro Focus Net Express 5.1, Configuration, License Management System.

   Note. Alternatively, run *NE_HOME*\Base\Bin\protcfg.exe, where *NE_HOME* is the directory where you installed Micro Focus Net Express.

2. Select the option Use Network Licensing, and click Connection Wizard, as shown in this example:
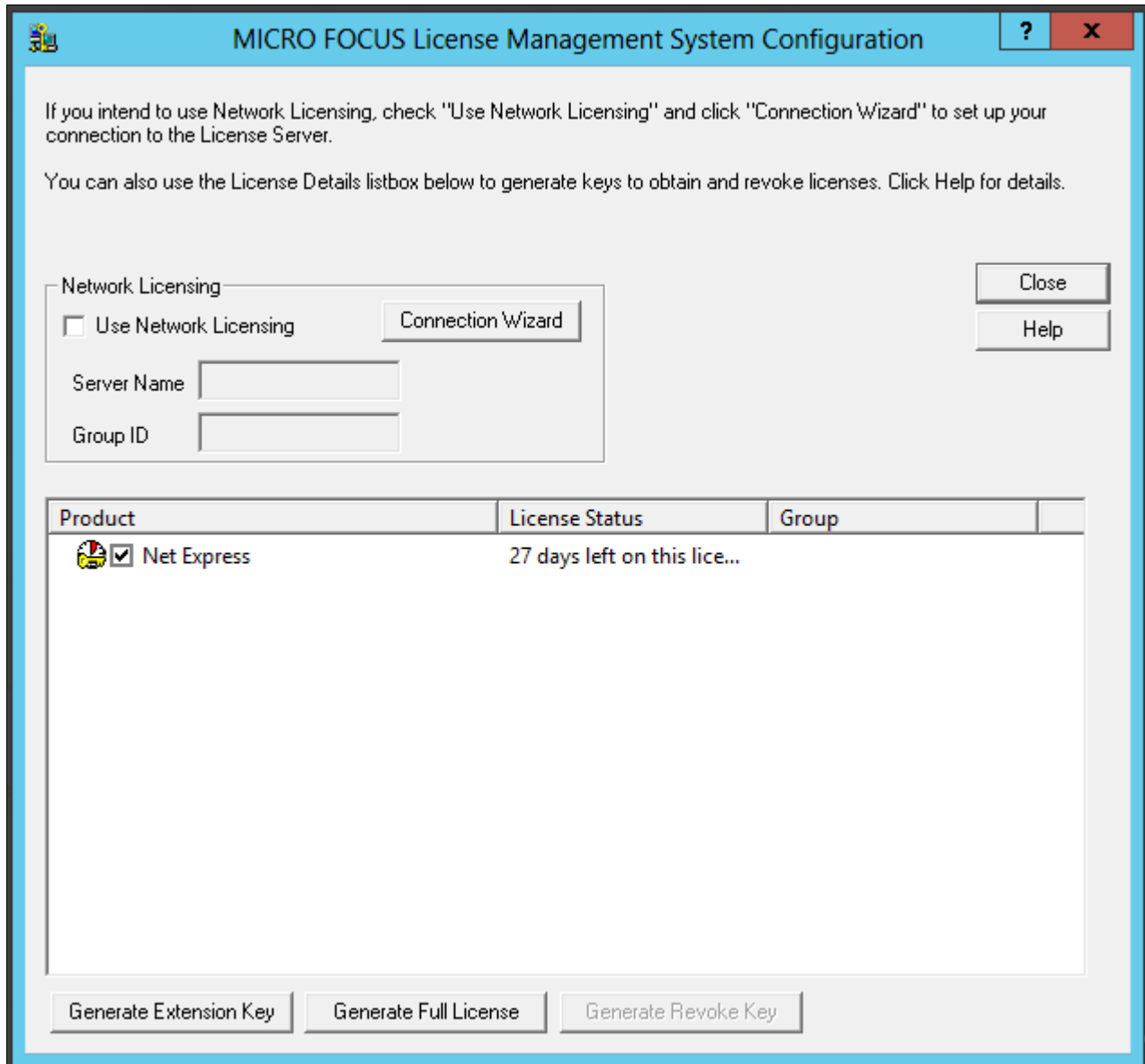
MICRO FOCUS License Management System Configuration window

3. Click Next on the License Server Connection Wizard window, shown in this example:

License Server Connection Wizard window

4. Enter information for the server location, and then click Next.
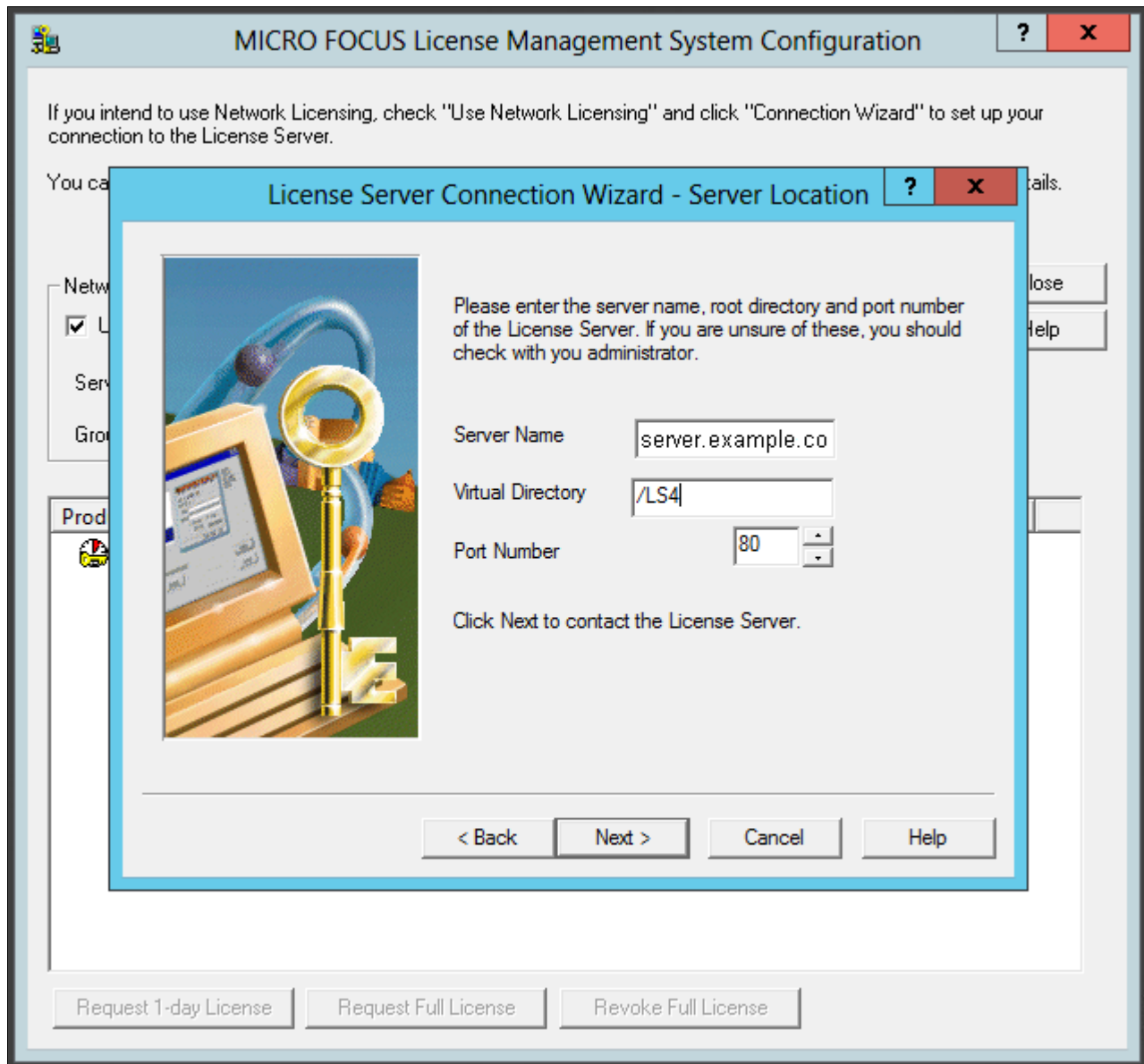
License Server Connection Wizard - Server Location window

- Server Name—Enter the name of the license server; for example, server.example.com.
- Virtual Directory; for example, /LS4.
- Port Number—The default is 80, as shown in the example.

   Select a port that is not in use by another application.

5. You see a message saying the wizard found the server, as in this example.

   Click Next.
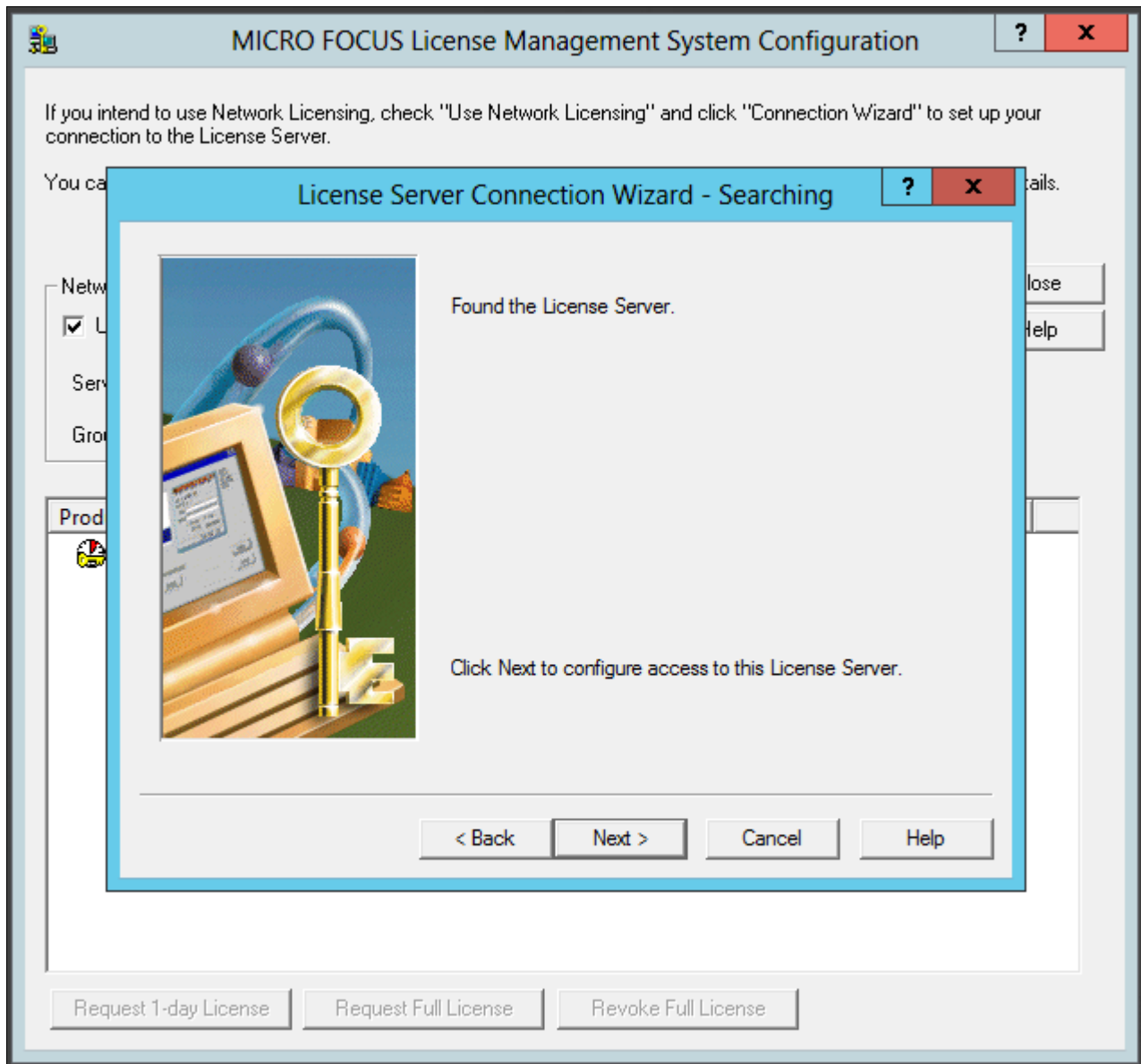
License Server Connection Wizard - Searching window

6. Enter your group ID, which is COBOL_GROUP_1 in this example, and 1 for the number of days before you have to renew the license.

Note. Although you enter one day here, you complete a step later that requests permanent license status.

Click Next.
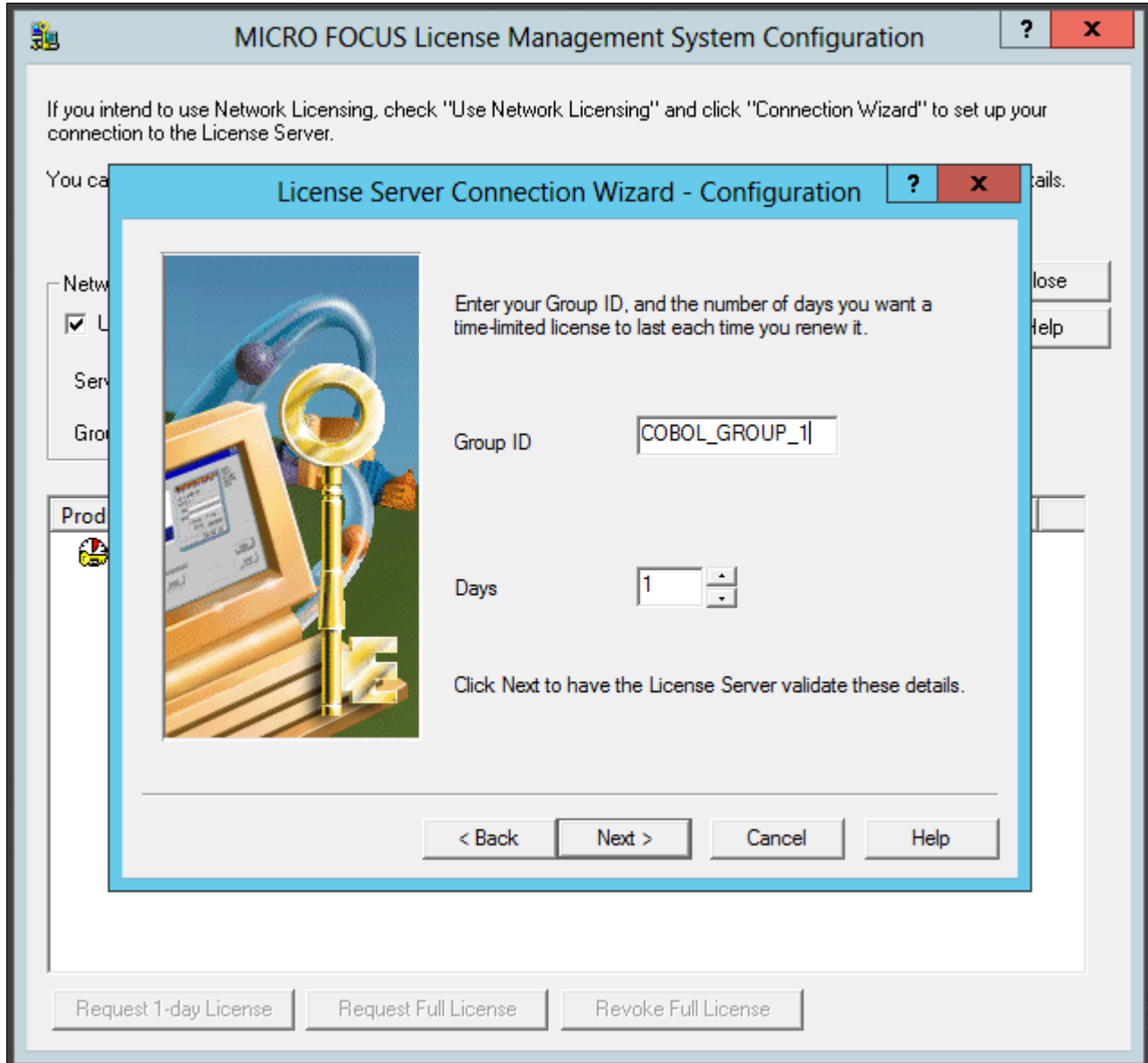
License Server Connection Wizard - Configuration window

7. Click Finish to exit the wizard, as shown in this example:
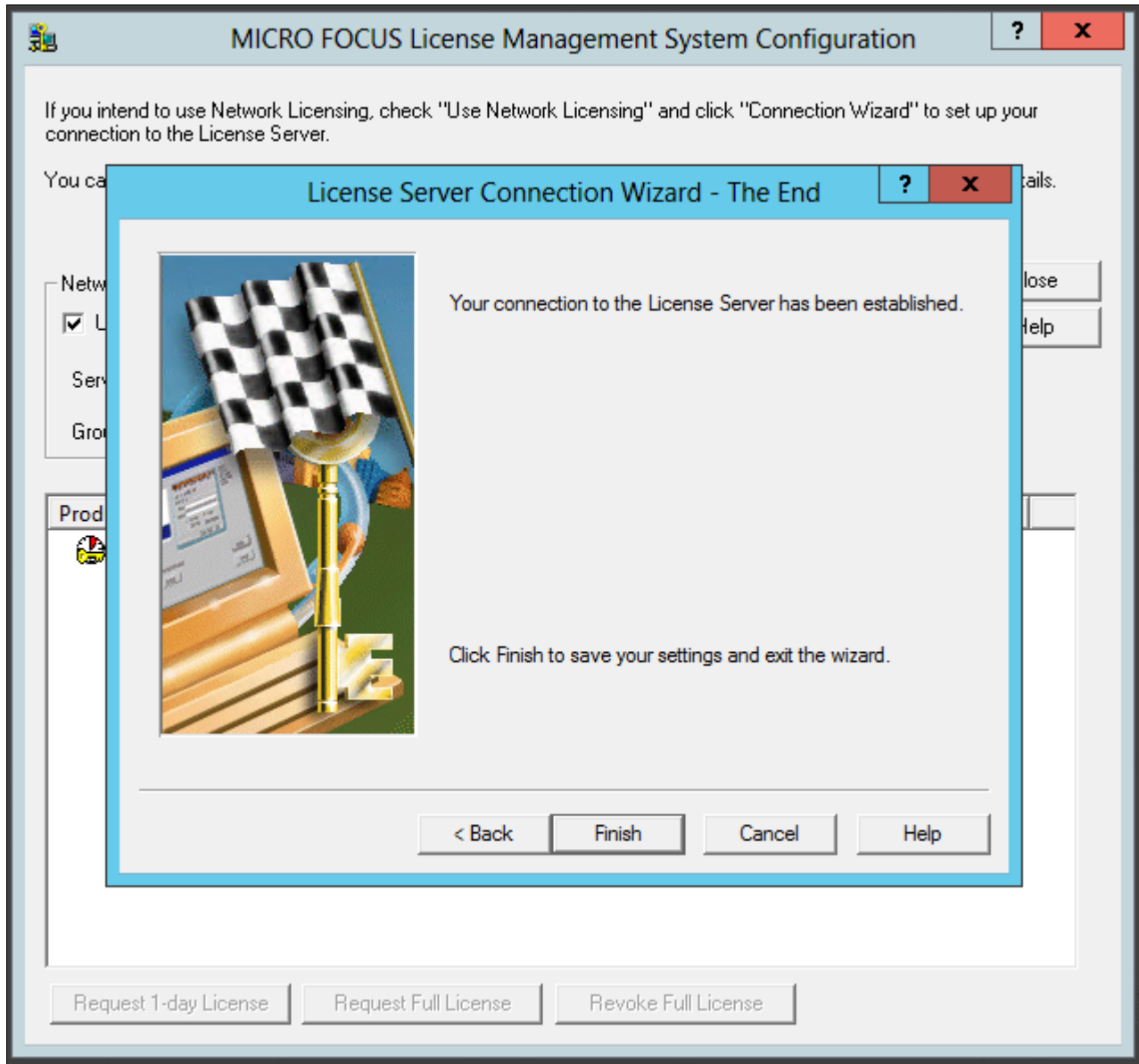
License Server Connection Wizard - The End window

8. In the details list on the MICRO FOCUS License Management System Configuration dialog box, select the check box for Net Express, and then click Request Full License, as shown in this example:
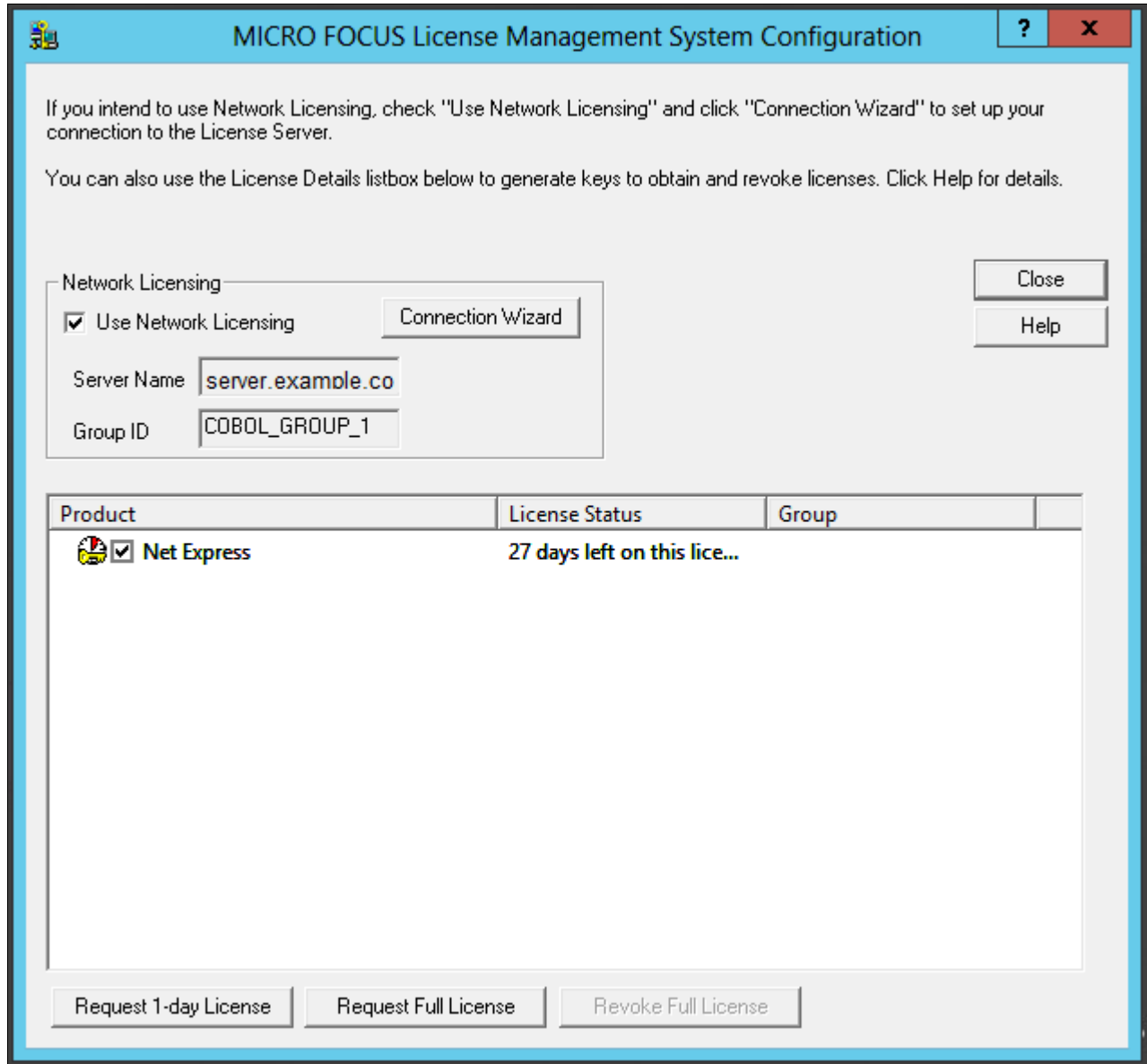
MICRO FOCUS License Management System Configuration window

9. Click Yes to confirm that you want to request a full license, as shown in this example.

The warning message says that requesting a full license permanently removes a license from the license server.
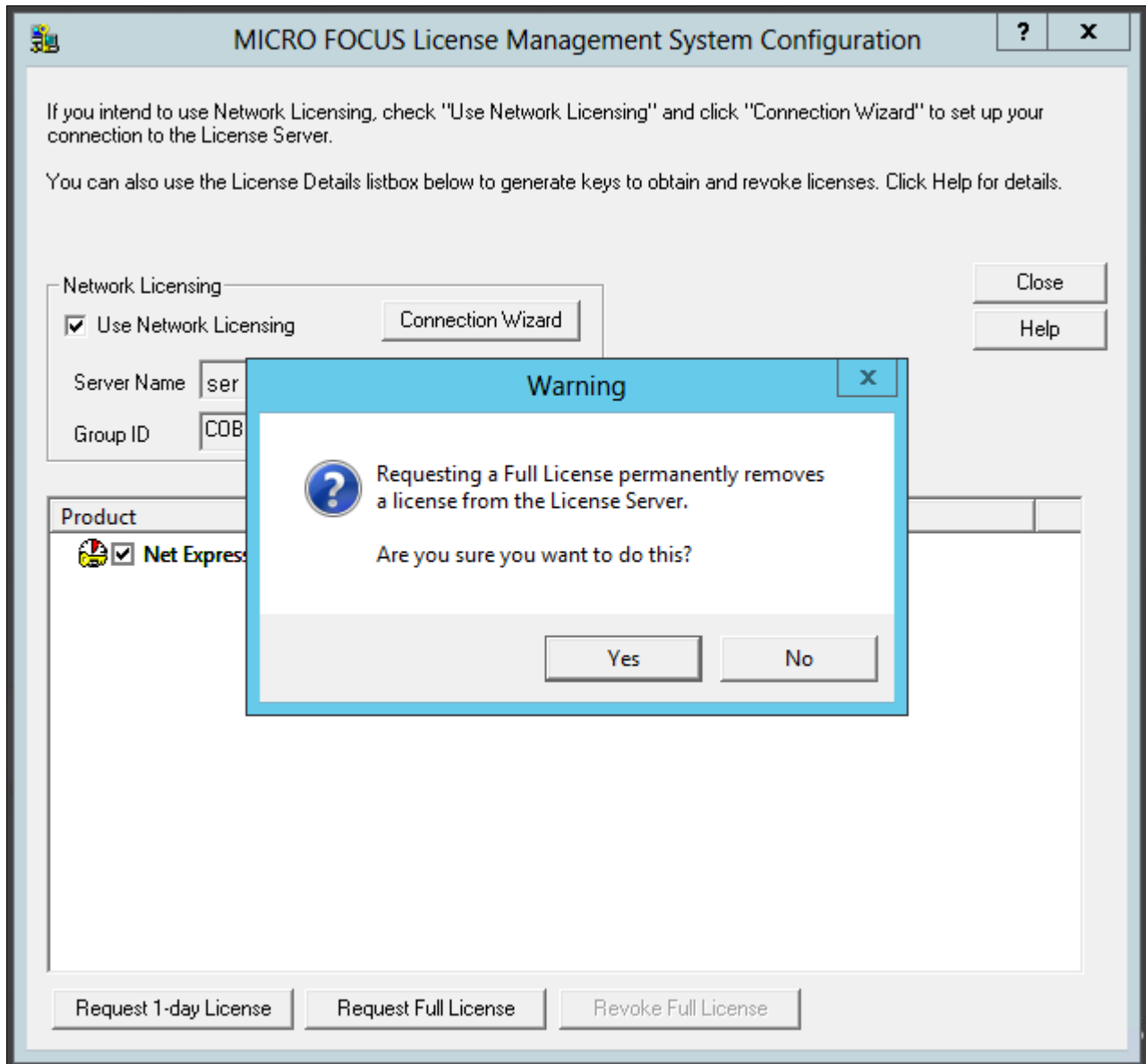
Warning message box when requesting a Full License

10. Click OK on the License Information dialog box.
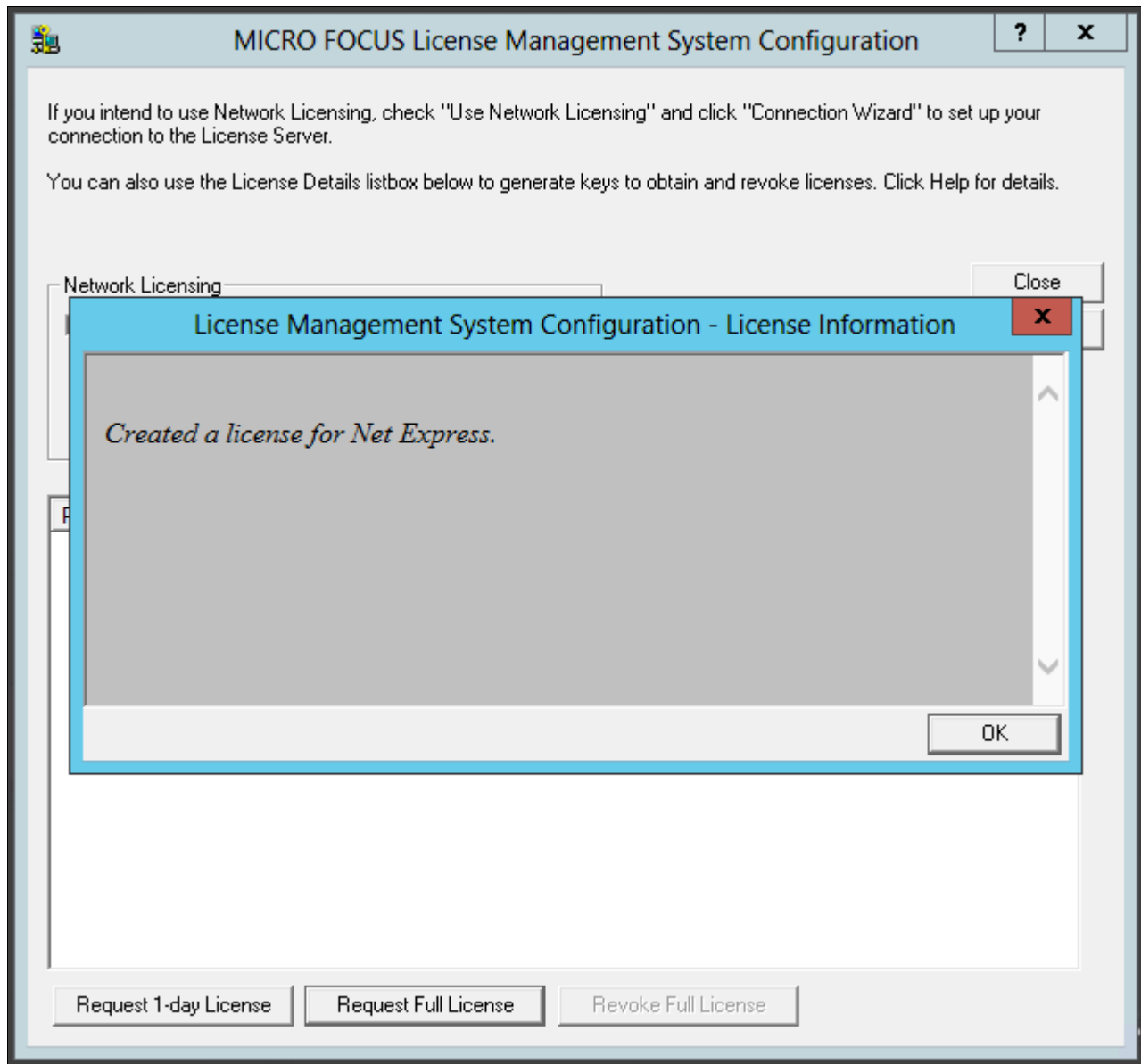
License Management System Configuration - License Information window

11. Verify that the License Status for Net Express has changed to Full License, as shown in this example, and click Close.
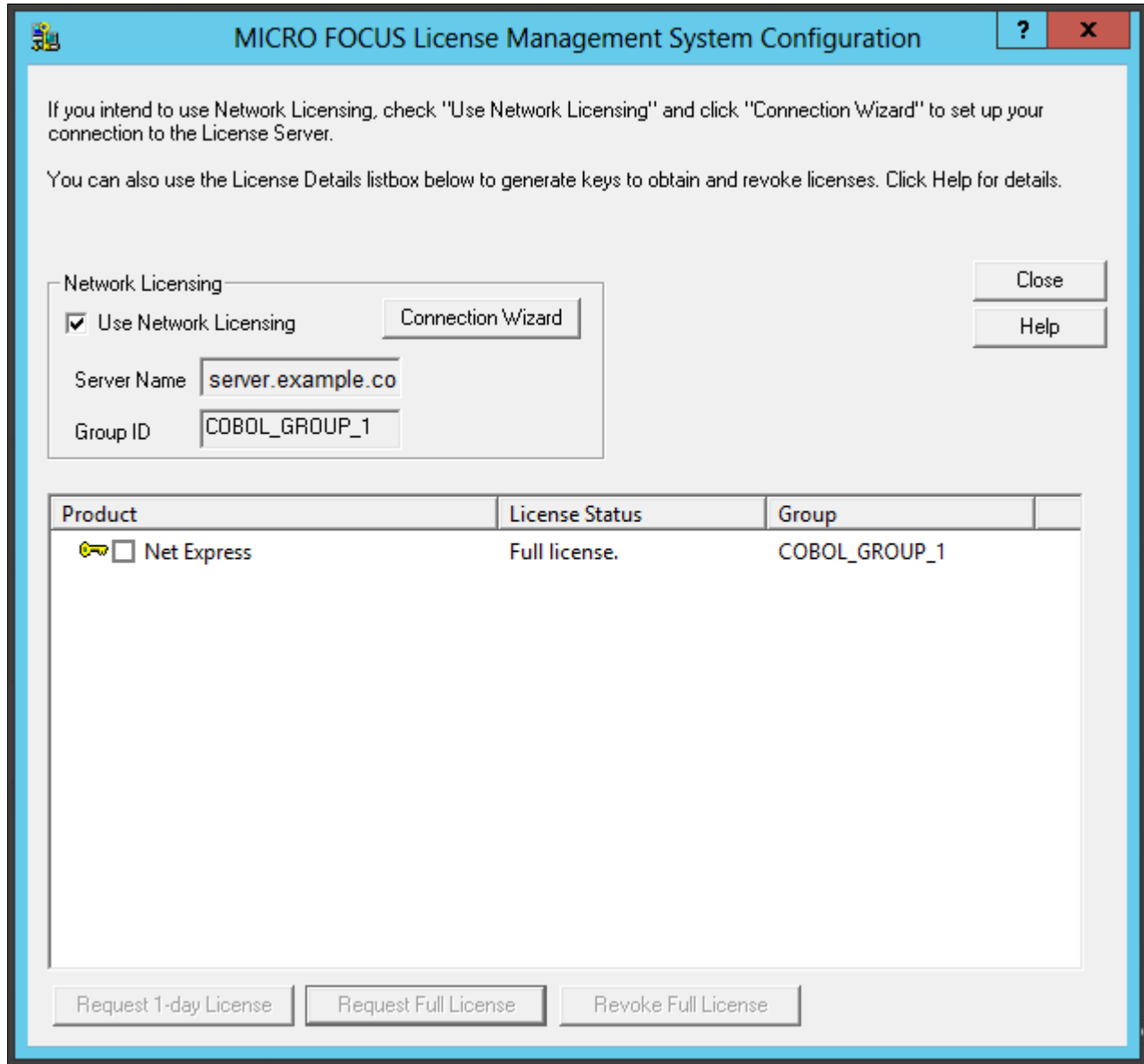
MICRO FOCUS License Management System Configuration window with Full License status

Task 13A-3-2: Configuring a Timed License with the License Server

To configure a Timed License for temporary use:

1. Select Start, All Programs, Micro Focus Net Express 5.1, Configuration, License Management System.

   Note. Alternatively, run *NE_HOME*\Base\Bin\protcfg.exe, where *NE_HOME* is the directory where you installed Micro Focus Net Express.

2. Select the option Use Network Licensing, and click Connection Wizard, as shown in this example:
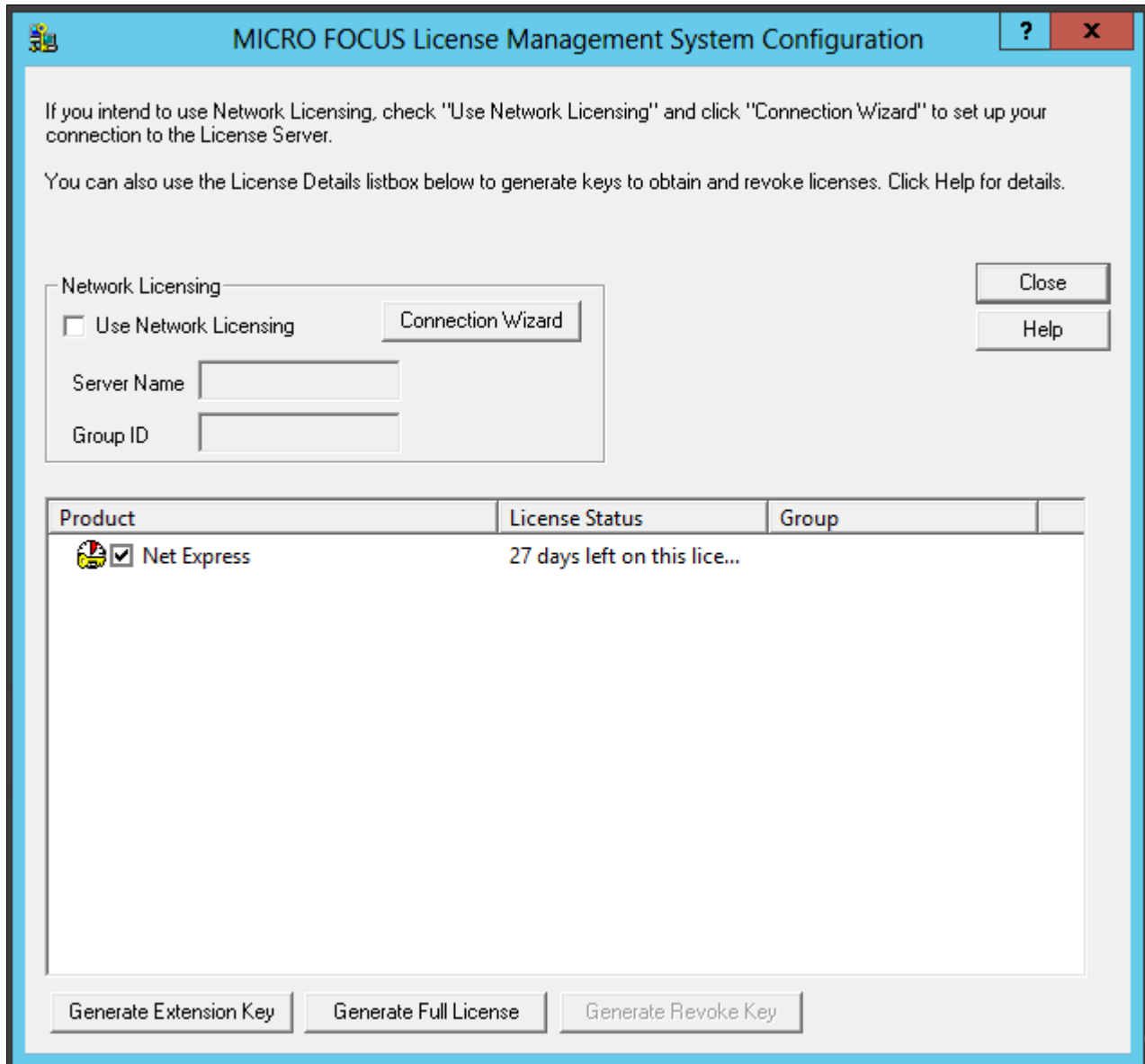
MICRO FOCUS License Management System Configuration window

3. Click Next on the License Server Connection Wizard window, shown in this example:

License Server Connection Wizard window

4. Enter information for the server location, and then click Next.
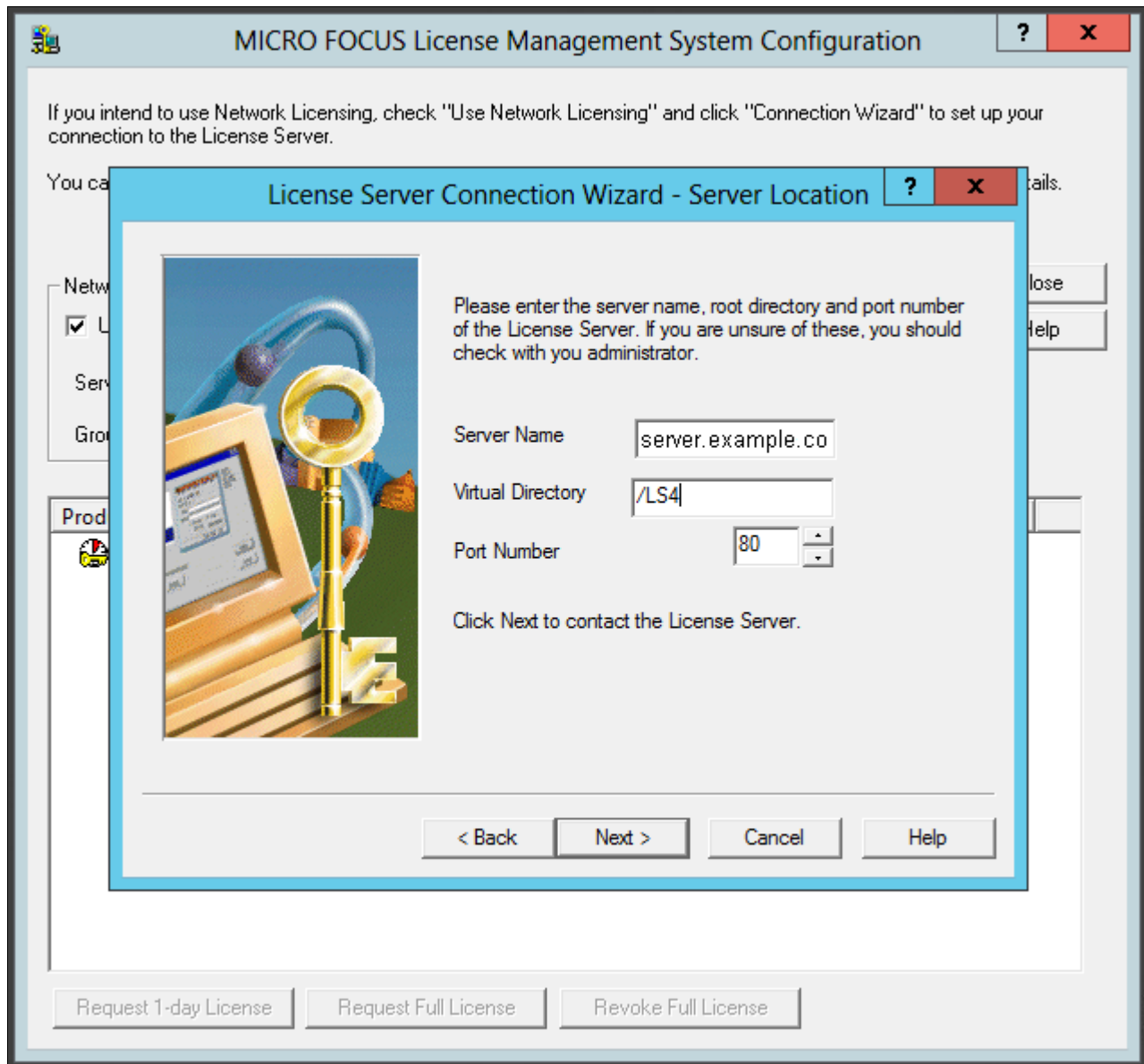
License Server Connection Wizard - Server Location

- Server Name—Enter the name of the license server; for example, server.example.com.
- Virtual Directory; for example, /LS4.
- Port Number—The default is 80, as shown in the example.

    Select a port that is not in use by another application.

5. You see a message saying the wizard found the server.

    Click Next.

6. Enter your group ID, which is COBOL_TEMP_1 in this example, and specify the number of days before you have to renew the license, which is 1 (one) day in this example.

    Click Next.
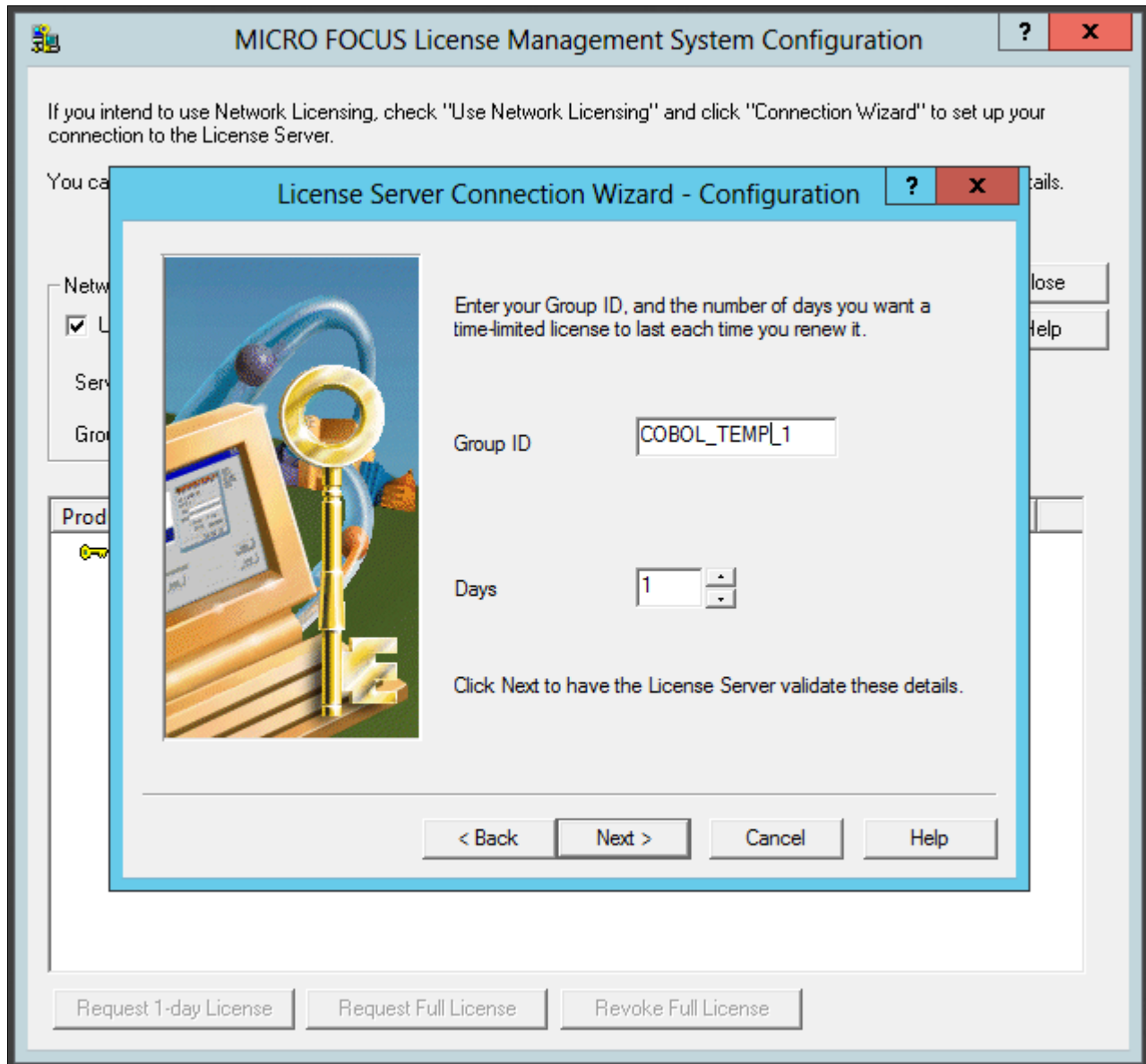
License Server Connection Wizard - Configuration window

7. Click Finish to exit the wizard.

8. In the details list on the MICRO FOCUS License Management System Configuration dialog box, select the check box for Net Express, and then click Request 1-day License.

9. Click Yes to confirm that you want to request a timed (temporary) license, as shown in this example.

The warning message says that the license will run out in one day. When you run the product after the license has expired, the License Server will be contacted automatically to renew the license for one day.
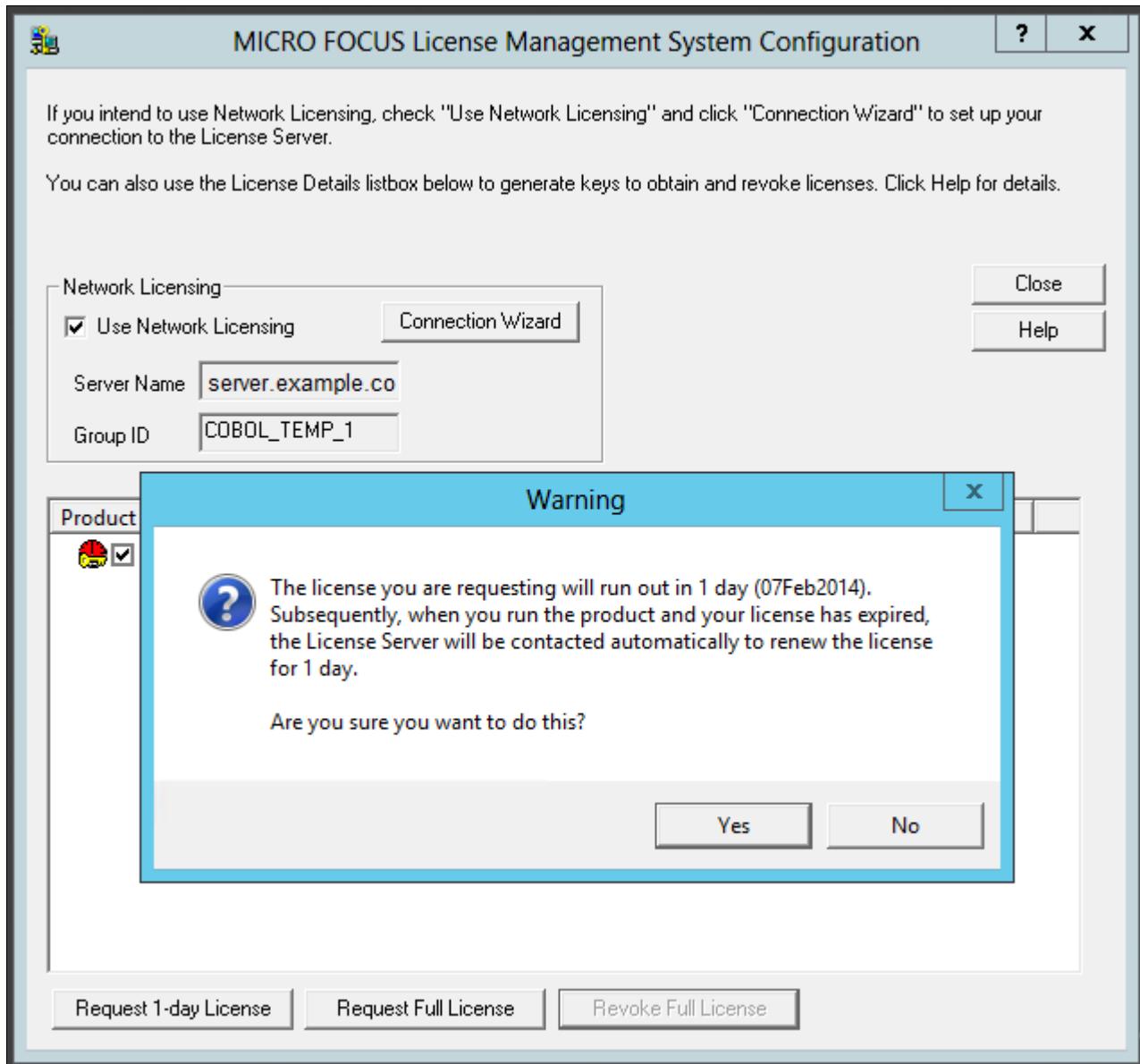
Warning message box when requesting a timed license

10. Click OK on the License Information message box.
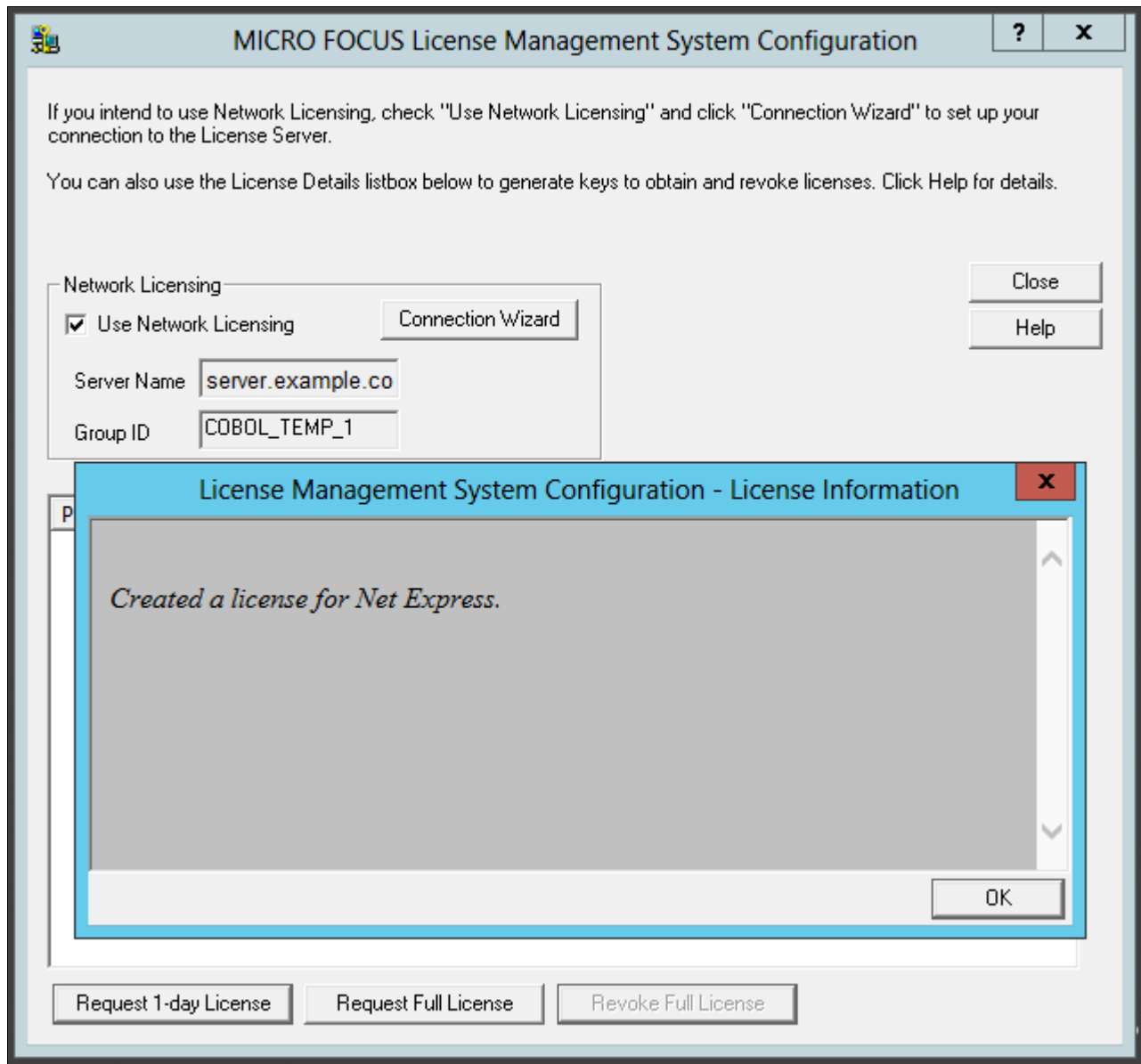
License Management System Configuration - License Information window

11. Verify that the license status has changed to "1 day left on this license," as shown in this example, and click Close.
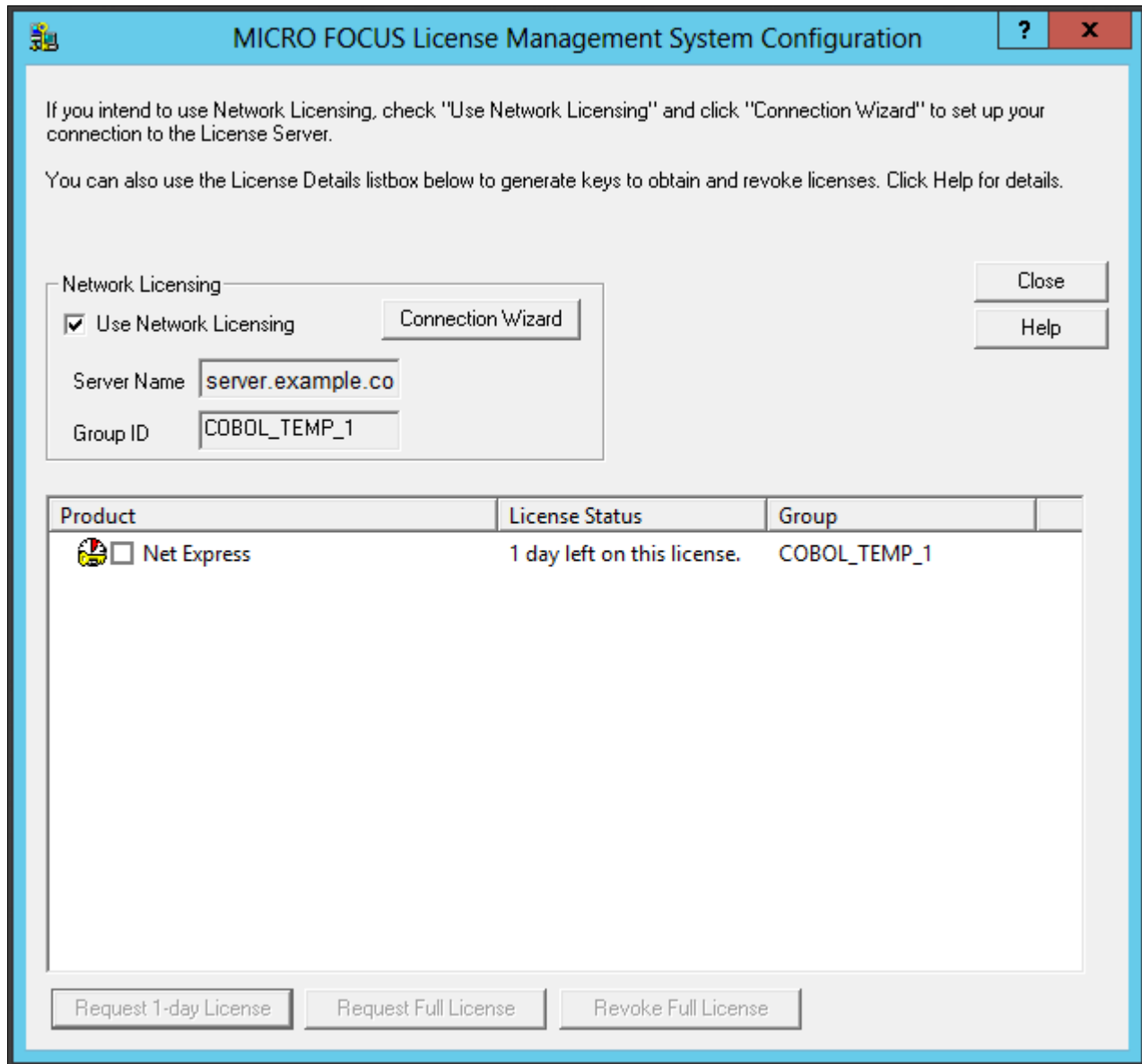
MICRO FOCUS License Management System Configuration window showing Timed License

Task 13A-3-3: Revoking the License Using the License Management System

Revoking (unallocating) the compiler license returns it to the license pool, and makes it available for re-use, either by you or another user. This section describes how to use the Micro Focus License Management System to revoke a compiler license. For information on revoking the license by completely removing the Micro Focus Net Express installation, see the following section.

See Revoking the License by Removing the Installation.

To revoke a Full License using the Micro Focus License Management System:

1. Select Start, All Programs, Micro Focus Net Express 5.1, Configuration, License Management System.

2. Select the check box for Net Express under Product in the details list, and click Revoke Full License.

3. Click Yes on the warning message box to confirm that you want to revoke a full license, as shown in this example.

   The warning message says that revoking a full license means that you will no longer have a valid license.
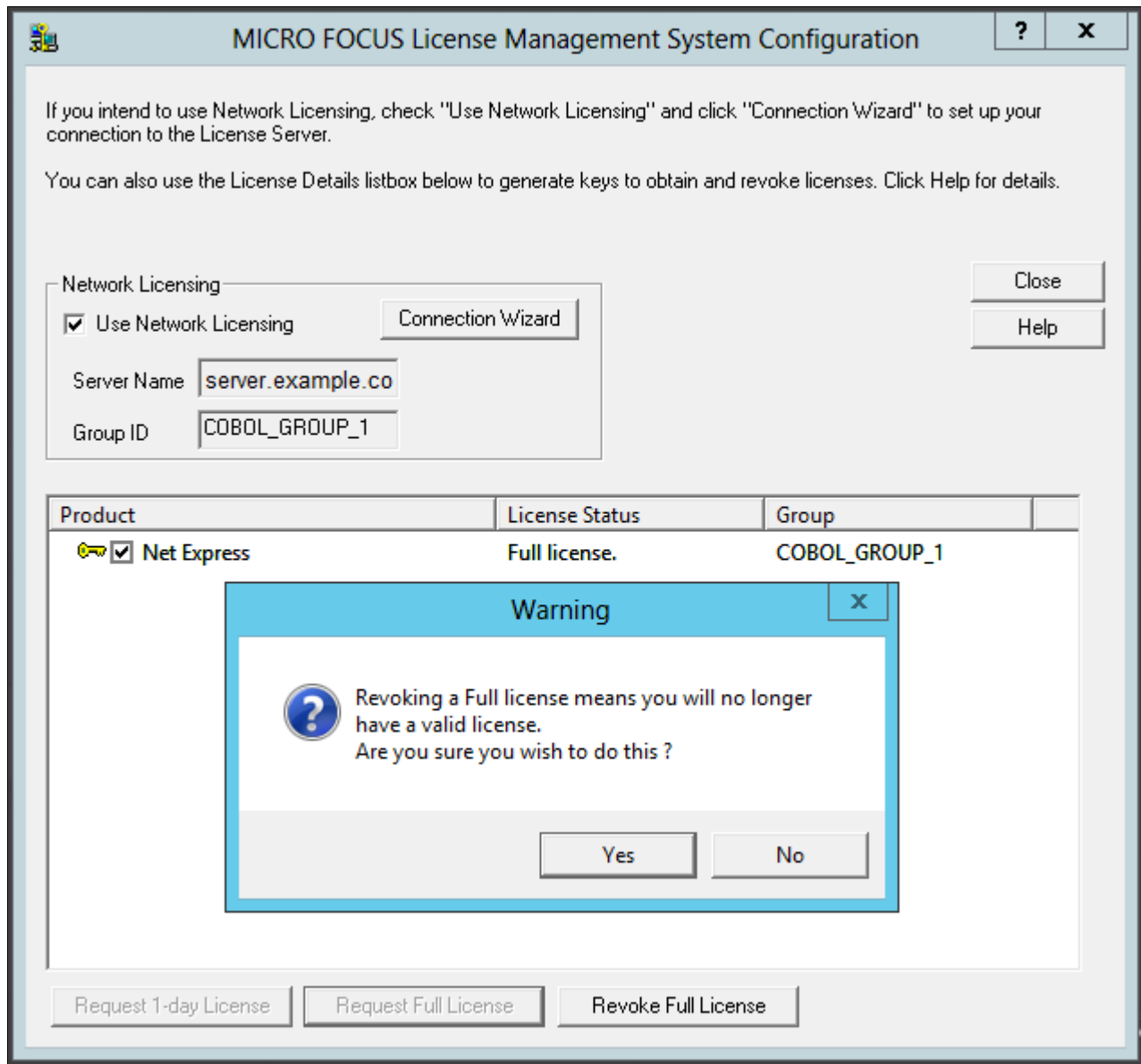
Warning message box on Revoking a Full License

4. Click OK.

The License Information message box says that the Net Express license has been revoked.
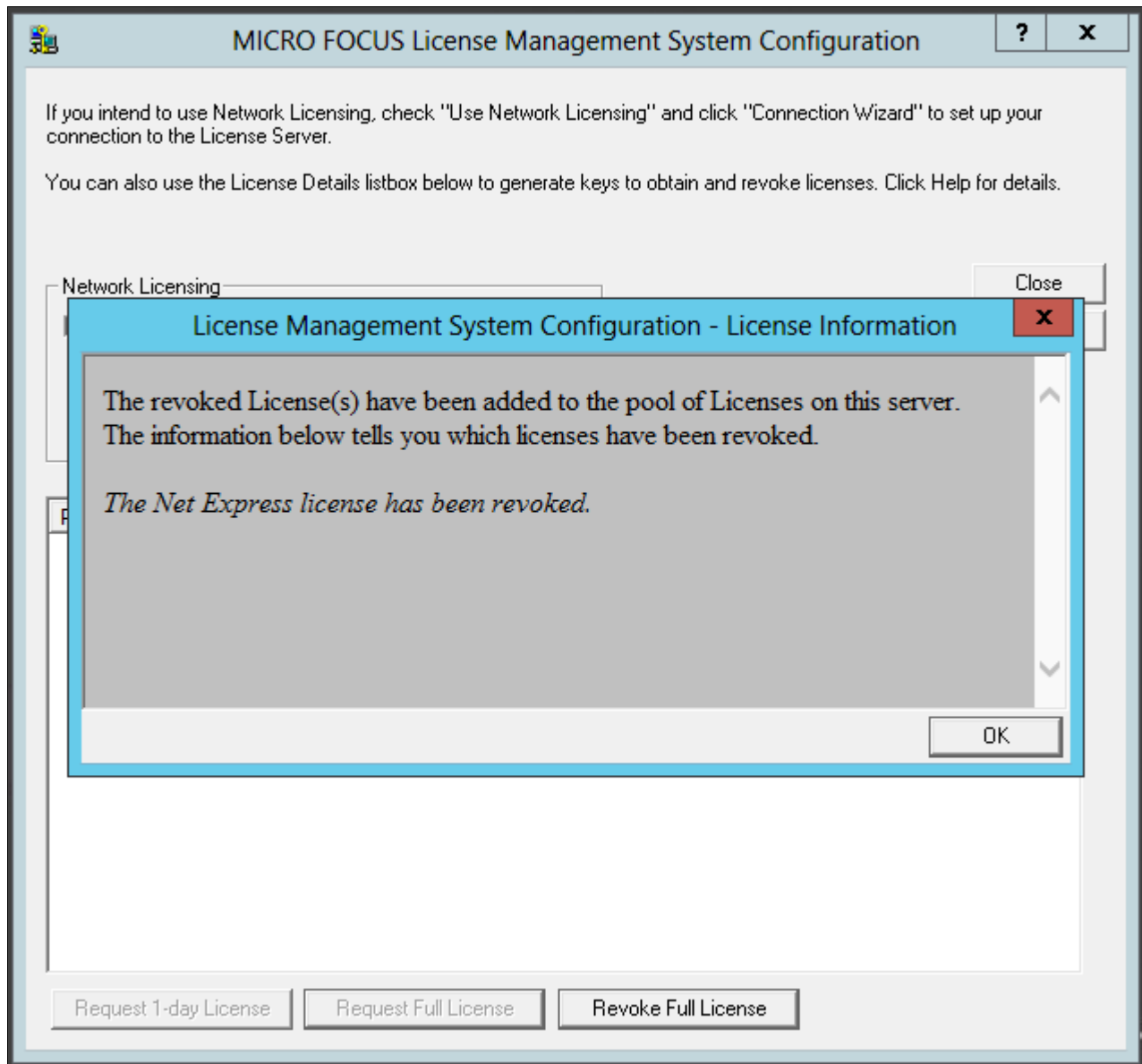
License Management System Configuration - License Information

5. Verify that the license status has changed to "license has expired" and click Close.

Task 13A-3-4: Revoking the License by Removing the Installation

Revoking (unallocating) the compiler license returns it to the license pool, and makes it available for re-use, either by you or another user. This section describes how to revoke the license by completely removing the Micro Focus Net Express 5.1 installation. For information on using the Micro Focus License Management System to revoke a compiler license, see the previous section.

See Revoking the License Using the License Management System.

To remove the installation and revoke the license:

1. Select Start, All Programs, All Control Panel Items, Programs and Features.

2. Highlight Micro Focus Net Express 5.1 in the list of programs.

3. Right-click and select Uninstall, as shown in this example:
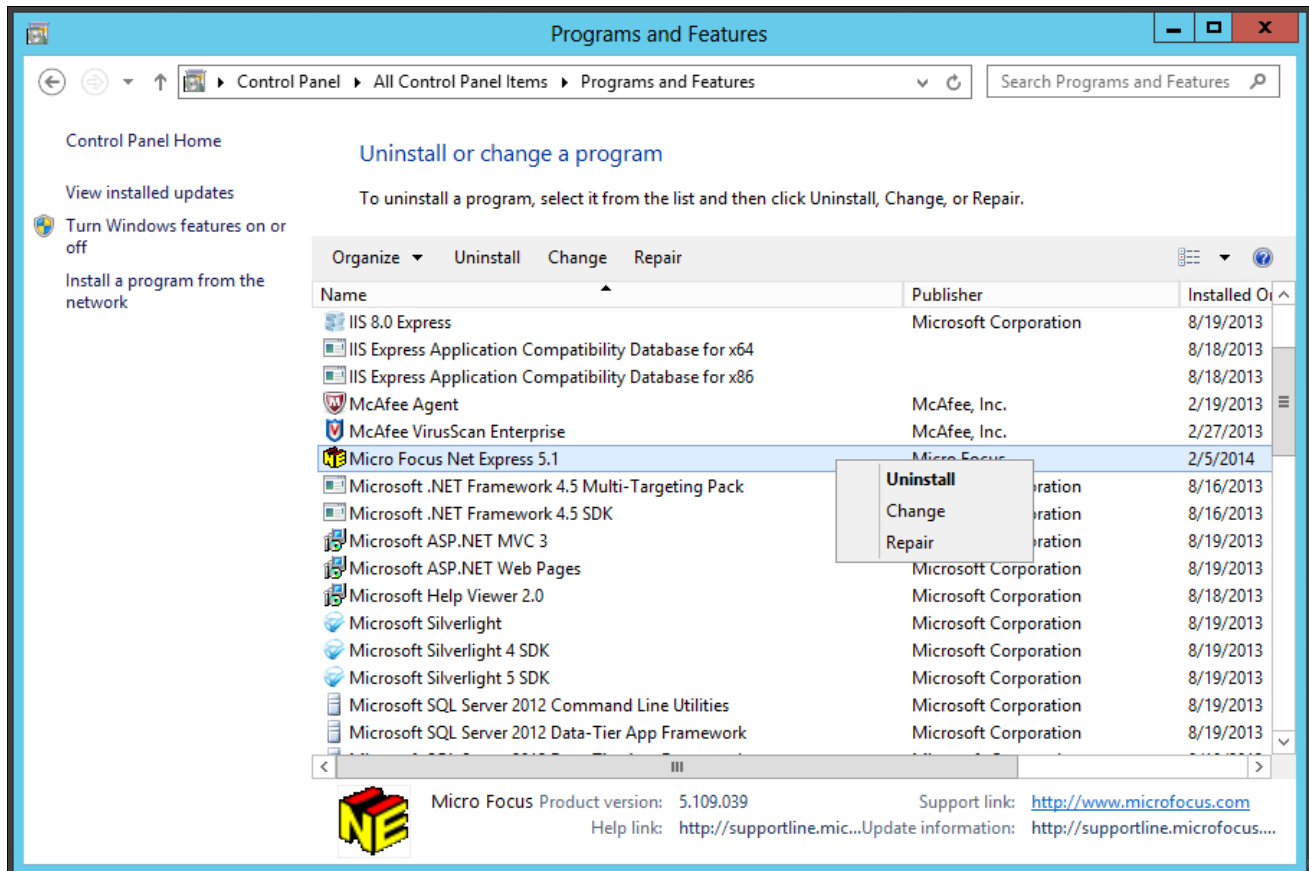
Microsoft Windows Control Panel Programs and Features

4. Click Revoke on the Uninstalling Product Warning message box, as shown in this example:
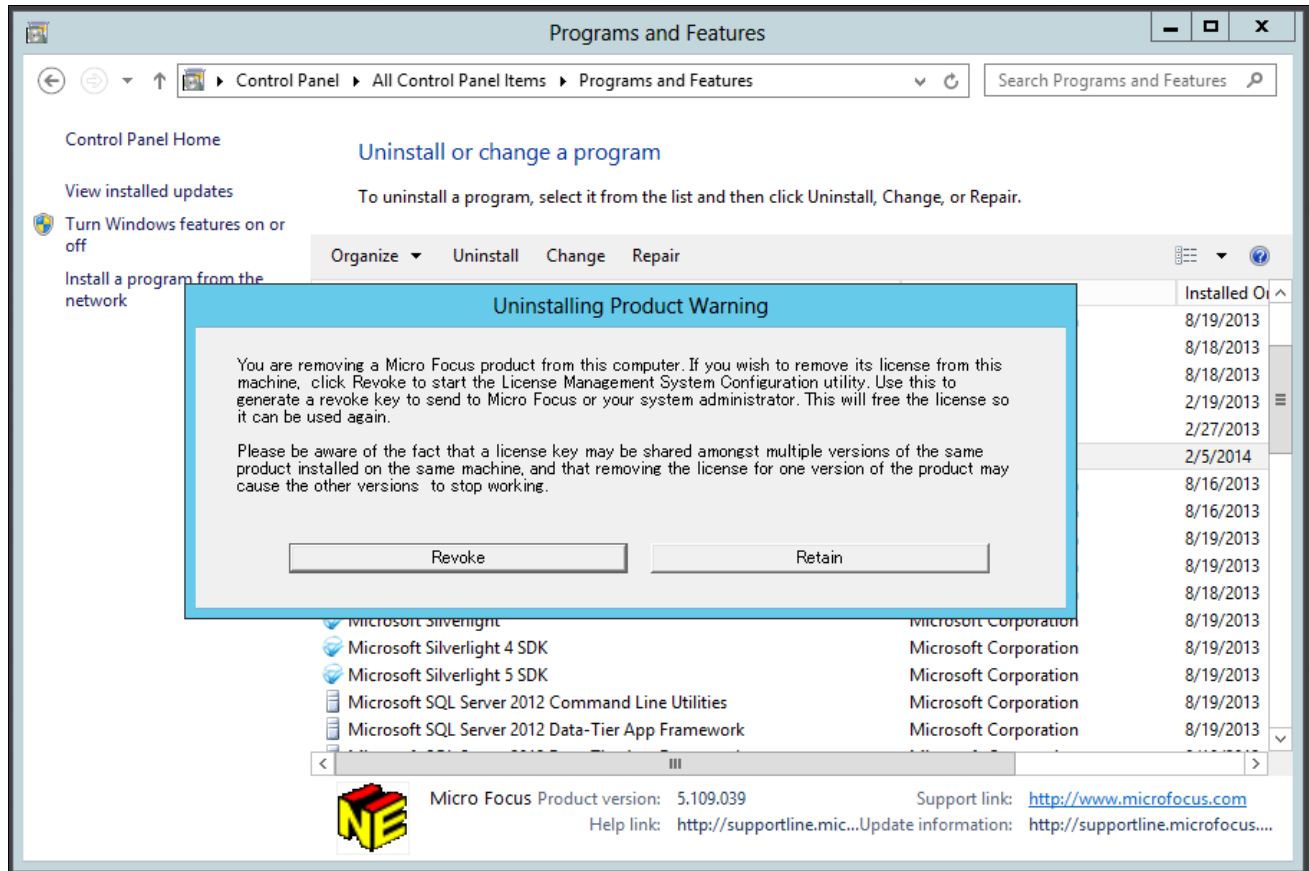
Uninstalling Product Warning message box

The MICRO FOCUS License Management System Configuration window appears.

5. Follow the instructions in the previous section to revoke the license.

See Revoking the License Using the License Management System.

6. When the process to revoke the license is complete, close the MICRO FOCUS License Management System Configuration window, and complete the process to remove Micro Focus Net Express 5.1.

Task 13A-4: Using the Micro Focus COBOL Compiler on Microsoft Windows

This section discusses:

- Understanding COBOL Compilation
- Compiling COBOL on Microsoft Windows with a PS_HOME Setup
- Compiling COBOL on Microsoft Windows with a PS_APP_HOME Setup
- Compiling COBOL on Microsoft Windows with a PS_CUST_HOME Setup
- Recompiling COBOL on Microsoft Windows
- Setting Up the Micro Focus Net Express Runtime

- Defining the GNT and INT Files

- Distributing COBOL Binaries

Understanding COBOL Compilation

With PeopleSoft PeopleTools 8.50 and higher, your COBOL always needs to be compiled on Microsoft Windows. (This is a change from previous versions of PeopleSoft PeopleTools, which delivered compiled COBOL for Microsoft Windows.) 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:

- *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 these sections:

   - Compiling COBOL on Microsoft Windows with a PS_HOME Setup

   - Defining the GNT and INT Files

- *PS_APP_HOME Setup*

   As described earlier, for PeopleSoft PeopleTools 8.52 and later, you have the option to install the PeopleSoft Application software to a location outside *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. There are also some new build options under certain environments which would be recognized if PS_APP_HOME is defined.

   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 these sections:

   - Compiling COBOL on Microsoft Windows with a PS_APP_HOME Setup

   - Defining the GNT and INT Files

- *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 your environment includes customized files in a *PS_CUST_HOME* directory, follow the instructions in these sections:

   - Compiling COBOL on Microsoft Windows with a PS_CUST_HOME Setup

   - 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 must install and license the Micro Focus Net Express Runtime.

See Setting Up the Micro Focus Net Express Runtime.

Make certain to check whether you need to apply any late-breaking patches.

See My Oracle Support, Patches & Updates.

See Also

"Preparing for Installation," Defining Installation Locations.

Task 13A-4-1: Compiling COBOL on Microsoft Windows with a PS_HOME Setup

This section discusses:

- Prerequisites
- Compiling with CBLBLD.BAT with a PS_HOME Setup
- Compiling with CBLMAKE.BAT with a PS_HOME Setup

Prerequisites

This section assumes that you installed both PeopleSoft PeopleTools and PeopleSoft Application software to *PS_HOME,* and that you have not set *PS_CUST_HOME.*

Compiling with CBLBLD.BAT with a PS_HOME Setup

To compile COBOL with CBLBLD.BAT:

1. Set up two environment variables, %PS_HOME% and %COBROOT%, on the machine from which you'll compile COBOL. (This should be either your file server or a machine that has access to your file server.)

   You can do this from a command prompt window. This table gives the environment variables and their purposes.

Environment Variable	Purpose
PS_HOME	PeopleSoft home directory—that is, the drive letter and high-level PeopleSoft directory where you installed PeopleTools and the application.
COBROOT	Drive letter and root directory of the COBOL compiler.

   For example, you could enter the following in the DOS command prompt:
   ```
   set PS_HOME=C:\HR92
   set COBROOT="C:\Program Files\Micro Focus\Net Express 5.1\base"
   ```

2. Open a command prompt window if you do not have one open already, and change directories to *PS_HOME* setup.

3. Execute CBLBLD.BAT as follows:
   ```
   cblbld <compile drive>  <compile directory>
   ```

   In this command, *<compile drive>* is the drive where the compile takes place, and *<compile directory>* is the temp directory where the compile takes place.

The CBLBLD.BAT file will create the compile directory for you if it does not already exist.

Note. *Make sure* to include a space between the *<compile drive>* and *<compile directory>* parameters; they are treated as two different parameters within the CBLBLD.BAT batch program. Also ensure that you have write permission to *<compile drive>* and *<compile directory>* as the compile process will take place there.

For example, the following command will take the COBOL source from *PS_HOME*\src\cbl and do the compile process under c:\temp\compile:

```
cblbld c: \temp\compile
```

Make note of the information that is displayed on the screen while the process is running; it provides the locations of important files that you will need to examine.

4. After you have successfully compiled your source code, all of the executables should have been placed in your *<PS_HOME>*\CBLBIN*<X>* directory (this directory will be named CBLBINA or CBLBINU, depending on whether you are using ANSI or Unicode). Make sure that all of the files were copied correctly to this directory.

5. If the files were copied correctly, you can delete the entire temporary compile directory to free space on your disk drive.

Note. You may want to keep the files in the compile directory for testing purposes. Make sure that you have enough space on the drive where *<compile directory>* is located. Estimate about three times the amount in the *<PS_HOME>*\CBLBIN*<X>* directory.

Note. If you chose the Unicode option while running the PeopleSoft Installer, the file UNICODE.CFG was created in the setup directory. UNICODE.CFG automatically triggers the batch file CBL2UNI.BAT when you run CBLBLD.BAT. Another batch file, CBLRTCPY.BAT, copies four DLLs (CBLINTS.DLL, CBLRTSS.DLL, CBLVIOS.DLL, COB32API.DLL) from the Microfocus compiler directory (identified by %COBROOT% setting) into the appropriate CBLBIN directory (CBLBINA or CBLBINU) when you run CBLBLD. These files are needed for COBOL to run; they can reside anywhere as long as they are in the path. You can run either of these BAT files independently from the command line (they reside in *PS_HOME*\setup). For CBLRTCPY.BAT you need to specify a target directory.

Compiling with CBLMAKE.BAT with a PS_HOME Setup

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. Unlike CBLBLD.BAT, however, CBLMAKE.BAT does not automatically trigger the batch file CBL2UNI.BAT or CBLRTCPY.BAT.

Here is the basic syntax for CBLMAKE.BAT:

```
CBLMAKE.BAT [] [ALL] [wildcard filename[ALL]] [wildcard filename |⇒
 wildcard⇒
 filename without extension[INT | GNT | EXE]] [LIST]
```

Note. The switches are well documented in the CBLMAKE.BAT file in the form of comments.

Note. If the change in the COBOL source is a copy member, you must compile all of the COBOL programs using CBLBLD.BAT. You know it is a copy member when the third letter in the file name is a *C,* as in PT*C* SQLRT.CBL.

The following table describes the various options for CBLMAKE.BAT.

Option	Purpose
Cblmake	Compiles all source
Cblmake all	Compiles all source
Cblmake PT*	Compiles all source files that start with PT
Cblmake PT* ALL	Compiles all source files that start with PT
Cblmake PT* INT	Generates INT files for all source files that start with PT
Cblmake PT* GNT	Generates GNT files for all source files that start with PT
Cblmake PT* EXE	Generates EXE files for all source files that start with PT
Cblmake PTPDBTST INT	Generates PTPDBTST.INT file
Cblmake PTPDBTST INT LIST	Generates PTPDBTST.INT and source listing file
Cblmake PTPDBTST GNT	Generates PTPDBTST.GNT file
Cblmake PTPDBTST EXE	Generates PTPDBTST.EXE file

The LIST option creates a source listing file under *<compile directory>\<filename>*.lis. The LIST option is useful when the compile fails during the debugging phase. The source listing files show exactly where an error occurred. This option is not recommended when the program compiles successfully because the .LIS files can grow to be quite large.

Note. By default, when the program fails to compile, the system will generate a .LIS file.

To compile with CBLMAKE.BAT:

1. Verify that the %PS_HOME% and %COBROOT% environment variables are set up correctly.

2. Open a command prompt window.

3. Make sure the compile directory exists; it may already exist if you've run CBLBLD.BAT. If it does exist, remove any files residing there—just as a safeguard. If it does not exist, you need to create it.

   Note. Make sure you have write permission to *<compile directory>* as the compile process will take place there.

4. Change to the *PS_HOME*\setup directory.

5. If the installation is Unicode, run CBL2UNI (with no parameters).

6. Execute the following command to copy all the COBOL source files from the *PS_HOME* directory to the compile directory:

   ```
   cblsrc <source directory>    <compile directory>
   ```

   where *<source directory>* is the drive and directory where the source resides (it should be the same as *PS_HOME*), and *<compile directory>* is the drive and directory to which the source files will be copied.

For example, the following command will take the COBOL source from *PS_HOME* and copy all the necessary files to the location where the compile process will take place.

```
cblsrc  PS_HOME  c:\temp\compile
```

If the COBOL source that will be compiled is different from the one under *PS_HOME,* copy that COBOL source to *<compile directory>*.

Note. The compile in the next step will generate a GNT file unless the exception file, CBLINT.*XX* already exists (the *XX* represents the Product ID). CBLINT.*XX* contains the list of files that need to be compiled to the INT file. Make sure the intended CBLINT.*XX* is located under *<compile directory>* before executing CBLMAKE.

---

7. After CBLSRC completes, change directories to the compile directory, and run CBLMAKE.BAT, using the basic syntax as well as the CBLMAKE table shown earlier as your guide.

8. After CBLMAKE.BAT completes, copy the EXE, GNT, or INT files to the appropriate *PS_HOME*\CBLBIN*X* directory (CBLBINA or CBLBINU).

```
copy *.exe PS_HOME\cblbina
copy *.gnt PS_HOME\cblbina
copy *.int PS_HOME\cblbina
```

Note. You have to copy these files to the appropriate cblbin directory manually when you use CBLMAKE; they are not copied automatically, as when you use CBLBLD.

Task 13A-4-2: Compiling COBOL on Microsoft Windows with a PS_APP_HOME Setup

This section discusses:

- Prerequisites
- Compiling with CBLBLD.BAT with a PS_APP_HOME Setup
- Compiling with CBLMAKE.BAT with a PS_APP_HOME Setup

Prerequisites

This section assumes that you installed PeopleSoft application software to a *PS_APP_HOME* directory that is different from the *PS_HOME* directory where you installed PeopleSoft PeopleTools. It also assumes that there is no separate *PS_CUST_HOME* directory with customized COBOL source files.

Compiling with CBLBLD.BAT with a PS_APP_HOME Setup

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 compiled.
- If the option is PS_APP_HOME, the COBOL source files placed under %PS_APP_HOME%\src\cbl will be compiled.
- 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 compiled one after the other.

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\Micro Focus\Net Express 5.1\base"
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

Compiling with CBLMAKE.BAT with a PS_APP_HOME Setup

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.

Note. The options for CBLMAKE.BAT are defined in a table in the previous section Compiling with CBLMAKE.BAT with a *PS_HOME* Setup.

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 (CBLINTS.DLL, CBLRTSM.DLL, CBLRTSS.DLL, CBLVIOM.DLL, CBLVIOS.DLL, COB32API.dll, MFLANGDF.lbr) 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
    ```

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_APP_HOME Setup.

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 (CBLINTS.DLL, CBLRTSM.DLL, CBLRTSS.DLL, CBLVIOM.DLL, CBLVIOS.DLL, COB32API.dll, MFLANGDF.lbr) 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
```

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 13A-4-3: Compiling COBOL on Microsoft Windows with a PS_CUST_HOME Setup

This section discusses:

• Prerequisites

• Compiling with CBLBLD.BAT with a PS_CUST_HOME Setup

• Compiling with CBLMAKE.BAT with a PS_CUST_HOME Setup

Prerequisites

This section assumes that you installed PeopleSoft application software to a *PS_APP_HOME* directory that is different from the *PS_HOME* directory where you installed PeopleSoft PeopleTools. It also assumes that you have set up a PS_CUST_HOME environment variable for customized COBOL source files.

Compiling with CBLBLD.BAT with a PS_CUST_HOME Setup

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 compiled.

• If the option is PS_APP_HOME, the COBOL source files placed under %PS_APP_HOME%\src\cbl will be compiled.

• If the option is PS_CUST_HOME, the COBOL source files placed under %PS_CUST_HOME%\src\cbl will be compiled.

• 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 compiled one after the other.

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 (if different from PS_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\Net Express 5.1\base"
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 a PS_CUST_HOME Setup

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_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 (if not the same as PS_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 (CBLINTS.DLL, CBLRTSM.DLL, CBLRTSS.DLL, CBLVIOM.DLL, CBLVIOS.DLL, COB32API.DLL, MFLANGDF.lbr) 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
    ```

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_APP_HOME Setup.

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 (CBLINTS.DLL, CBLRTSM.DLL, CBLRTSS.DLL, CBLVIOM.DLL, CBLVIOS.DLL, COB32API.DLL, MFLANGDF.lbr) 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
```

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 13A-4-4: Recompiling 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 a PS_HOME Setup, Compiling COBOL on Microsoft Windows with a PS_APP_HOME Setup, or Compiling COBOL on Microsoft Windows with a PS_CUST_HOME Setup.

Task 13A-4-5: Setting Up the Micro Focus Net Express Runtime

This section discusses:

- Understanding the Micro Focus Net Express Runtime
- Installing the Runtime Files and Setting Up the License
- Removing the Runtime License
- Troubleshooting

Understanding the Micro Focus Net Express Runtime

The Micro Focus Net Express 5.1 Runtime provides the COBOL runtime environment required for COBOL programs to run. Install and license the runtime on each system that will run PeopleSoft COBOL applications. Typically, PeopleSoft COBOL application programs are run on PeopleSoft application server systems and PeopleSoft batch (Process Scheduler) systems.

The Micro Focus Net Express 5.1 Runtime consists of the following components:

- Six DLLs

  - CBLINTS.DLL

  - CBLRTSM.DLL

  - CBLRTSS.DLL

  - CBLVIOM.DLL

  - CBLVIOS.DLL

  - COB32API.DLL

- A Microsoft Windows registry entry for ASLMF

  For 64-bit Microsoft Windows systems, the entry is:

  HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\MICRO FOCUS\ASLMF

- The directory that contains the runtime license database, C:\psft-mf-nx-as-license, which contains the following files:

  - mfasdb

  - prodfile

  - semfile

- The Application Server License Manager Service

The Micro Focus Net Express 5.1 Runtime DLLs installation is done automatically as part of the COBOL compilation process. When CBLBLD.bat is run, it invokes CBLRTCPY.bat to copy the COBOL runtime DLLs listed above, from the %COBROOT%\bin directory to %PS_HOME%\CBLBIN*x* directory.

CBLBIN*x* is CBLBINA, CBLBINE or CBLBINU, based on the compilation mode of ASCII, EBCDIC or Unicode respectively.

If you have already set up the Micro Focus Net Express COBOL compiler on a system, there is no explicit installation necessary for the runtime. For those systems where you only want to run COBOL, but have no need to compile it, use the following instructions in the section Installing the Runtime Files and Setting Up the License.

Installing the Runtime Files and Setting Up the License

The license files are included with the files that you downloaded from Oracle Software Delivery Cloud. The Micro Focus Net Express 5.1 Wrap Pack 14 Runtime Licensing files are contained in the self-extracting zip file, MFLicense_51WP14.exe. This executable provides the COBOL runtime system with unlimited runtime Net Express licenses specifically for PeopleSoft installations.

Always use the runtime files created for the version of the compiler that you used in compiling the COBOL files. For example, use the MFLicense_51WP14.exe runtime license file for the Micro Focus Net Express 5.1 Wrap Pack 14 compiler.

This section assumes that:

- You installed and compiled the PeopleSoft COBOL application files on the runtime system.

- You saved the files from Oracle Software Delivery Cloud in a directory referred to as *NE_INSTALL.*

To set up the runtime license:

1. Set the environment variable PS_HOME to the directory where your PeopleSoft software is installed.

   For example, use this command in a command prompt window:

   ```
   set PS_HOME=C:\HR92
   ```

2. Delete the following Microsoft Windows registry entry if it exists:

   \HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Micro Focus\ASLMF

3. Delete the directory C:\psft-mf-nx-as-license if it exists.

4. Go to *NE_INSTALL,* and run the self-extracting zip file MFLicense_51WP14.exe.

5. Specify the directory to save the files, for example C:\MFLicense-Extract-51WP14.

6. Change directory to C:\MFLicense-Extract-51WP14 and run the script setupMF.bat.

   This script makes the following changes:

   - Installs the Micro Focus Net Express Application Server License Database.

   - Creates the Microsoft Windows registry entry
     \HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Micro Focus\ASLMF, which point to the directory c:\psft-mf-nx-as-license.

   - Adds the files mfasdb, prodfile, and semfile to the directory C:\psft-mf-nx-as-license.

7. Run the command MFLMWin with the option to install, as follows:

   ```
   MFLMWin.exe -i
   ```

8. To verify that the Micro Focus license manager was installed, run Microsoft Windows Services.

   For example, run the following command in the command prompt window:

   ```
   services.msc
   ```

   You should see the service Micro Focus License Manager with status Started, and the Startup type should be Automatic.

Removing the Runtime License

To uninstall the runtime license:

*   Delete the Microsoft Windows registry key:

    \HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Micro Focus\ASLMF

*   Delete the C:\psft-mf-nx-as-license directory and its contents.

Troubleshooting

If you install the Micro Focus Net Express 5.1 Runtime License on a system where the Micro Focus Net Express 5.1 compiler is already installed, you see an error message that mentions that Runtime DLL CBLRRSS is not found. Use one of the following solutions:

*   If the system where you are installing the license will be used only for running COBOL programs, but not compiling, remove the Micro Focus Net Express 5.1 COBOL compiler installation, and then re-install the Micro Focus Net Express 5.1 Runtime License.

*   If the system where you are installing the license will be used for both compiling and running COBOL programs, just ignore the error message. The Net Micro Focus Express 5.1 COBOL compiler is already installed, and has an embedded runtime, which will be used to execute the COBOL programs. Thus there is no need to install and license the Micro Focus Net Express 5.1 Runtime.

If you see an error "ASLM: Errno 1000" it means the runtime license is not installed. Use the instructions in the earlier section to install the license.

See Installing the Runtime Files and Setting Up the License.

Task 13A-4-6: 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 13A-4-7: Distributing 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.*

*   *PS_HOME* Setup

    If the *PS_APP_HOME* location is the same as the *PS_HOME* location:

    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.

- *PS_APP_HOME* Setup

  If the *PS_APP_HOME* location is different than the *PS_HOME* location:

  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.

- *PS_CUST_HOME* Setup

  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. If *PS_APP_HOME* is different from *PS_HOME,* 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 13B

Installing and Compiling COBOL on UNIX

This chapter discusses:

- Understanding COBOL
- Prerequisites
- Preparing COBOL for a PeopleTools-only Upgrade
- Installing Micro Focus Server Express for UNIX and Linux
- Using the Micro Focus 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 Net Express COBOL compiler, sometimes referred to here as "Micro Focus COBOL", and the IBM COBOL compiler for IBM AIX, sometimes referred to here as "IBM COBOL."

See Also

"Preparing for Installation," Installing Supporting Applications

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

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

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 13B-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 Server Express COBOL, recompile and relink all COBOL programs for PeopleSoft PeopleTools and PeopleSoft applications, as described in a later section.

See Using the Micro Focus COBOL Compiler on UNIX.

Task 13B-2: Installing Micro Focus Server Express for UNIX and Linux

This section discusses:

- Understanding Micro Focus Server Express
- Prerequisites
- Obtaining the Installation Files for Micro Focus Server Express from Oracle Software Delivery Cloud
- Installing Micro Focus Server Express

Understanding Micro Focus Server Express

Micro Focus® Server Express™ 5.1 Wrap Pack 14 is the supported COBOL compiler on UNIX and Linux for the current PeopleSoft PeopleTools release. This section provides installation instructions for Micro Focus Server Express 5.1 Wrap Pack 14 COBOL compiler and the License Management Facility used to manage product licenses. These instructions are specifically for installing the Server Express COBOL compiler to use with PeopleSoft software. For more general installation instructions or other supporting documentation concerning Server Express, consult the documentation that comes with the installation software.

Note that Oracle is the exclusive reseller of the Micro Focus COBOL compiler for use with PeopleSoft applications.

See Also

PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers, My Oracle Support, Doc ID 747059.1

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

Server Express Documentation

Using the Micro Focus COBOL Compiler on UNIX

Prerequisites

You must install the Micro Focus Server Express COBOL compiler on any machine that will compile, execute, or run COBOL programs. The Micro Focus Server Express COBOL compiler includes an embedded runtime system. You can compile COBOL programs on those servers for which you have licenses, and copy the compiled programs to other servers, but to run the compiled programs, you must also install the compiler with the runtime system.

In addition, in order to execute COBOL programs that are created using a Server Express product and deployed in a Linux or UNIX environment, the Server Express compiler with the embedded runtime system, must be installed on the target runtime system, and the "Micro Focus Application Server runtime license" must also be installed on the target runtime system.

For information on obtaining licenses for Micro Focus COBOL compilers, see:

*   The documentation included with the software on Oracle Software Delivery Cloud.

    *   The Micro Focus Server Express Extras Install Documentation for PeopleSoft and Runtime Licenses, includes information on how to add development, Application Server, and unlimited license patch (ULP) licenses

    *   The Micro Focus COBOL for PeopleSoft Quick Reference Guide summarizes the delivered software and licensing requirements.

*   PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers, My Oracle Support, Doc ID 747059.1.

If you have a previous Micro Focus COBOL product installed we recommend that you make a backup of any COBOL systems files that you have changed. Examples include cobkeymp, ADISCTRL, cobopt and cobconfig. After you have installed Server Express you might want to apply to the new COBOL product the changes previously applied to these files.

If you want to maintain more than one COBOL installation, Oracle recommends that you do not install one version over another. Instead, use one of these suggested methods:

*   Remove (uninstall) the existing version before installing the new version

*   Leave the existing version in its current directory (do not move it) and install the new version in its own, different directory.

If you have installed, or plan to install, Micro Focus Application Server or any other Micro Focus product on the same machine as this product, you must install them in different directories.

This Micro Focus product is managed by a License Management Facility (LMF). This facility helps you keep track of the number of licenses you have for the product. In order to use this product it is necessary for you to install the License Management Facility (which is provided with the Server Express software). This software should not be installed in the same directory as Server Express. The default directory depends upon the operating system; for example:

*   /opt/lib/mflmf for HP-UX Itanium

*   /usr/lib/mflmf for RS/6000 and PowerPC systems running AIX

*   /opt/lib/mflmf on other systems

If /opt/lib does not exist, use /usr/lib/mflmf instead.

Task 13B-2-1: Obtaining the Installation Files for Micro Focus Server Express from Oracle Software Delivery Cloud

The Micro Focus Server Express installation files are available on Oracle Software Delivery Cloud. At this point you should have already downloaded the necessary files. This section includes additional information on finding and using the files for Micro Focus Server Express if necessary.

See "Preparing for Installation," Using Oracle Software Delivery Cloud to Obtain Installation Files.

To obtain the files for the Micro Focus Server Express installation:

1. Log in to Oracle Software Delivery Cloud at https://edelivery.oracle.com.

2. Enter Micro Focus in the type-ahead Product field, and select Micro Focus International Ltd. Server Express COBOL for UNIX from the drop-down list.

3. Click Select Platform, select the operating system you are running on, and then click Select.

4. Click Continue.

5. Click Continue.

6. Read the license agreement, select the check box to acknowledge that you accept the terms, and then click Continue.

7. Click one of the file names to download an individual zip file, or click Download All to obtain all of the files listed.

   The files include software, wrap packs, and documentation. Save the zip files to a temporary directory on your local system. You must extract (unzip) the file on the platform for which it is intended. For example, if you download the zip file for Oracle Solaris, you must unzip it on Oracle Solaris to avoid problems. If you unzip the file to a staging directory on a Microsoft Windows computer and copy the staging directory to an Oracle Solaris computer, the stage area files may be corrupt.

Task 13B-2-2: Installing Micro Focus Server Express

The following section is provided as an example installation and illustrates a typical Micro Focus Server Express 5.1 Wrap Pack 14 installation for PeopleSoft application, as outlined in the overview section above.

The answers to the prompts provided in the following example are recommended by Oracle for PeopleSoft installations, with the exception of the installation directory for the Micro Focus License Management Facility. For this step, you can use the default directory names or choose directory names based on your site's naming conventions.

It is recommended by Micro Focus and Oracle to install LMF in its own directory, instead of in a sub-directory of the Server Express install.

Important! Make sure to specify the *correct* bit mode for your UNIX platform. Enter *64* for all UNIX platforms.

The following example was done on a Red Hat Linux x86-64 operating system platform. Installation prompts will vary slightly with respect to specifics of the different UNIX platforms.

1. Log in as root.

2. Create a directory (if it does not exist) where you want to install the Micro Focus Server Express 5.1 Wrap Pack 14. For example:

```
$ mkdir -p /products/mf/svrexp-5.1_wp14-64bit
```

3. Change directory to the one you created in the previous step.

```
$ cd /products/mf/svrexp-5.1_wp14-64bit
```

4. Copy or ftp the Micro Focus Server Express 5.1 Wrap Pack 14 tar file that you obtained from Oracle Software Delivery Cloud to this directory.

   In this example, the file name is sx51_wp14_redhat_x86_64_dev.tar.

5. List the items in the directory with the following command:

```
$ ls -l /products/mf/svrexp-5.1_wp14-64bit
total 409600
-rwxr-xr-x   1 root    root      209295360 Feb 03 19:23 sx51_wp14_redhat_⇒
x86_64_dev.tar
```

6. Extract the tar file:

```
$ tar -xvf sx51_wp14_redhat_x86_64_dev.tar
```

7. List the items in the directory with the following command:

```
$ ls
ADISCTRL  bin     demo    dialog dynload    es        etc      ⇒
 install  lib   snmp  sx51_ws6_redhat_x86_64_dev.tar  xdb aslmf   ⇒
 cpylib  deploy  docs    dynload64 eslmf-mess  include  lang     lmf ⇒
 src    terminfo
```

8. To begin the installation, type:

```
$sh ./install
```

9. Read the text and follow the instructions to review the readme.txt file:

```
This script will install Micro Focus Server Express 5.1 on this⇒
 computer.

The readme.txt file included in this delivery contains details of new⇒
 features, enhancements and any restrictions of which you should be⇒
 aware. This file is located in :

 /products/mf/svrexp-5.1_wp14-64bit/docs

We strongly recommend you read this file once the installation is⇒
 complete.

Do you wish to continue (y/n): y
```

10. Read the following License Agreement and type *y* (yes) to accept it:

```
Before installing and using this software product you must agree to be⇒
 bound by the terms and conditions of the end user license agreement ⇒
("License Agreement") which accompanies this product. Please take⇒
 this time to read the License Agreement. If you are not in agreement⇒
 with the terms and conditions of the License Agreement, please return⇒
 the product to your Account Representative and your money will be⇒
 refunded.  If you require a replacement copy of the License Agreement,⇒
 please contact your Account Representative before proceeding with the⇒
```

```
   install process.
   Do you agree to the terms of the License Agreement? (y/n): y
```

11. If you are installing on an operating system platform that Micro Focus has not built the product on, you see the following message. Type *y* (yes) at the prompt:

```
                    Micro Focus Install

   This product was not built or tested on this version of the Operating⇒
    System.
   This product was built on Operating System:
   RedHatEnterpriseServer 2.6.18-348.el5 x86_64
   Red Hat Enterprise Linux Server release 5.9 (Tikanga)
   and you are installing it on Operating System:
   Linux 3.8.13-16.2.1.el6uek.x86_64

   Any product issues you report will only be corrected if they can be⇒
    reproduced on one of our systems running:
   RedHatEnterpriseServer 2.6.18-348.el5 x86_64
   Red Hat Enterprise Linux Server release 5.9 (Tikanga)
   OracleServer 3.8.13-35.3.5.el6uek.x86_64 x86_64
   Red Hat Enterprise Linux Server release 6.5 (Santiago)
   RedHatEnterpriseServer 2.6.18-398.el5 x86_64
   Red Hat Enterprise Linux Server release 5.11 (Tikanga)
   RedHatEnterpriseServer 2.6.32-504.el6.x86_64 x86_64
   Red Hat Enterprise Linux Server release 6.6 (Santiago)

   Please confirm that you want to continue with this installation (y/n): y
```

12. After reading the following information press ENTER to continue:

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

   Please press return when you are ready:
```

13. Type *y* (yes) to continue after reading the listing of the reference environment. For the sake of brevity, the text has been truncated, as indicated by [...].

```
   This product is certified on the following reference environment:
   The command(s) used to gather the information is given following each⇒
    entry.
   Operating System
   ----------------
   RedHatEnterpriseServer 2.6.18-348.el5 x86_64
   Red Hat Enterprise Linux Server release 5.9 (Tikanga)

   lsb_release -si
   uname -r
   uname -m
   cat /etc/redhat-release

   C Compiler
   ----------
   cc gcc version 4.1.2 20080704 (Red Hat 4.1.2-54)
```

```
gcc -v 2>&1 | tail -1

C++ Compiler
------------
/usr/bin/g++ gcc version 4.1.2 20080704 (Red Hat 4.1.2-54)

g++ -v 2>&1 | tail -1

Assembler
---------
as GNU assembler version 2.17.50.0.6-20.el5_8.3 (x86_64-redhat-linux)⇒
 using BFD version 2.17.50.0.6-20.el5_8.3 20061020

as -v 2>&1 < /dev/null

Linker
------
ld GNU ld version 2.17.50.0.6-20.el5_8.3 20061020

ld -V 2>&1 | head -1

Supported versions of Java
--------------------------
Java version = 1.6.0_15
Java vendor = Sun Microsystems Inc.
Java OS name = Linux
Java OS arch = amd64
Java OS version = 2.6.18-348.el5

Java version = 1.6.0_15
Java vendor = Sun Microsystems Inc.

Java OS name = Linux
Java OS arch = amd64
Java OS version = 2.6.18-348.el5

Java version = 1.7.0_05
Java vendor = Oracle Corporation
Java OS name = Linux
Java OS arch = i386
Java OS version = 2.6.18-348.el5

Java version = 1.7.0_05
Java vendor = Oracle Corporation
Java OS name = Linux
Java OS arch = amd64
Java OS version = 2.6.18-348.el5

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

Unicode
-------
Unicode mapping tables must be installed for J2EE and Web Services to
```

```
function correctly. These tables are required for converting between
any combination of UTF-16/UCS-2, UTF-8 and other installed locales.

[...]

Please confirm your understanding of the above reference environment⇒
 details (y/n): y
If you require this support, you will need to install the TCP/IP⇒
 Development System libraries prior to installation of your COBOL⇒
 system.
```

14. Answer *n* (no) to the following prompt:

```
Do you want to make use of COBOL and Java working together? (y/n): n
Skipping Java setup
Should you want to use Java with COBOL later on as super user, run the⇒
 command /products/mf/svrexp-5.1_wp14-64bit/bin/java_setup to select⇒
 the version of Java you want to use.
```

Note. PeopleSoft COBOL implementations do not require COBOL and Java to work together.

15. Answer *y* (yes) to the following prompt concerning the License Management Facility:

```
This product is protected using the Micro Focus License Management⇒
 Facility (LMF). Please refer to the Development System Licensing Guide⇒
 for information relating to the installation of the licensing system⇒
 and licenses.
If you do not have LMF installed or want to upgrade to the latest⇒
 version, we recommend that you install it now.

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

16. At the following prompt, enter the directory name where you want to install License Manager.

Note. Micro Focus and Oracle recommend that you install LMF in its own directory, instead of a sub-directory of the Server Express installation.

```
Enter the directory name where you wish to install License Manager.
(Press Enter for default directory /opt/microfocus/mflmf)

/products/mf/mflmf-svrexp-5.1_wp14-64bit
```

17. Enter *y* (yes) to restrict access to the License Admin System to the superuser account:

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

18. Enter *y* (yes) to start license manager automatically at boot time:

```
It is recommended that you let license manager autostart at boot time.
Do you want license manager to be automatically started at boot time? ⇒
(y/n) y
LMF installation complete.
```

19. If you want to consult the documentation on how to install licenses, follow the instructions in this prompt:

```
Please consult the Development Licensing Guide for detailed information⇒
 on how to install licenses.

This may be done by running the mflicense tool.
---------------------------------------------------------
To run your applications you need a deployment license installed using⇒
 Apptrack.
See your Deployment Licensing Guide for details.
Installing Apptrack...

Access permissions on directory /var/mfaslmf have changed on this⇒
 release
Write access permission has been removed except for superuser use
Apptrack installation complete
```

20. Enter *64* for the system default bit mode:

```
This product can be used in either 32-bit or 64-bit modes.
Please enter either 32 or 64 to set the system default mode: 64
System default COBMODE has been set to 64.
```

21. Wait for the documentation to be installed:

```
Installing documentation. Please wait...
```

22. Enter *n* (no) at the following prompt:

```
Enterprise Server provides a scalable, managed, and high-performance⇒
 transactional environment for the deployment of COBOL applications and⇒
 services, COBOL/J2EE applications and direct COBOL Web Services.

Your Enterprise Server requires configuration. You can either do it now⇒
 or later. To do it now, you need to know the alphanumeric user ID of⇒
 the Enterprise Server System Administrator.
To do it later, enter the following commands whilst logged in as root:

/products/mf/svrexp-5.1_wp14-64bit/bin/eslminstall
/products/mf/svrexp-5.1_wp14-64bit/bin/casperm

Do you wish to configure Enterprise Server now? (y/n): n
```

23. Review the information concerning setting the COBDIR, LD_LIBRARY_PATH, and PATH environment variables in the concluding prompt:

```
(Remember to set COBDIR to /products/mf/svrexp-5.1_wp14-64bit, include ⇒
/products/mf/svrexp-5.1_wp14-64bit/lib in LD_LIBRARY_PATH, and include ⇒
/products/mf/svrexp-5.1_wp14-64bit/bin on your PATH.)

WARNING: Any executables (whether a Run-Time System or an application)⇒
 must be relinked using this new release. Otherwise, the results of⇒
 running the older executables with this new release are undefined.

Installation completed successfully.
```

```
The COBOL system is ready to use.
```

Task 13B-3: Using the Micro Focus COBOL Compiler on UNIX

This section discusses:

- Understanding COBOL Compilation
- Setting Environment Variables
- Modifying the Liblist64 File (IBM AIX)
- Compiling COBOL on UNIX with a PS_HOME Setup
- Compiling COBOL on UNIX with a PS_APP_HOME Setup
- Compiling COBOL on UNIX with a PS_CUST_HOME Setup
- Linking COBOL
- Recompiling COBOL on UNIX

Understanding COBOL Compilation

On UNIX and Linux operating systems, 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.

The Micro Focus Server Express COBOL compiler includes an embedded runtime system, so the compiler must be installed on machines that will compile the COBOL programs and also on any machine where COBOL programs are to be executed or run.

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 from your file server to this designated server before carrying out the compile. You would also need to install the Server Express compiler on all servers, in order to have the embedded runtime system present.
- The second option is to compile on all servers. In this situation, all servers would need a COBOL compiler, and you would need to copy any patches and customizations from the file server to all of these servers before carrying out the compile.

Note. 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 Oracle Solaris 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:

- *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 PeopleSoft PeopleTools, follow the instructions in the section Compiling COBOL on UNIX with a PS_HOME Setup.

- *PS_APP_HOME Setup*

  As described earlier, for PeopleSoft PeopleTools 8.52 and later, you have the option to install the PeopleSoft Application software to a location outside *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. There are also some new build options under certain environments which would be recognized if PS_APP_HOME is defined.

  If you installed the PeopleSoft Application software to a *PS_APP_HOME* location that is different from the *PS_HOME* location where you installed PeopleSoft PeopleTools, follow the instructions in the section Compiling COBOL on UNIX 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 your environment includes customized files in a *PS_CUST_HOME* directory, follow the instructions in the section Compiling COBOL on UNIX with a PS_CUST_HOME Setup.

See Also

"Preparing for Installation," Defining Installation Locations.

Task 13B-3-1: Setting Environment Variables

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:

- $ORACLE_HOME must point to the correct Oracle installation; for example:

  ```
  ORACLE_HOME=/products/oracle/11.2.0;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 Server Express installation; for example:

  ```
  COBDIR=/products/mf/svrexp-51_wp14;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, source the script psconfig.sh. Enter the following command from the *PS_HOME* directory:

```
. ./psconfig.sh
```

Task 13B-3-2: Modifying the Liblist64 File (IBM AIX)

Understanding Liblist Modifications

If you are compiling 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 COBOL.

See My Oracle Support, Certifications.

Modifying the Liblist64 File for AIX

To modify the liblist64 file for AIX:

1. cd to $COBDIR/lib.

2. Add the following line to the liblist file:

```
x:*:s!t:-lC
```

The following listing shows where to make the changes (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 13B-3-3: Compiling COBOL on UNIX with a PS_HOME Setup

This section assumes that you installed the PeopleSoft Application software to a *PS_APP_HOME* directory that is the same as the *PS_HOME* directory where you installed PeopleSoft PeopleTools. It also assumes that there is no separate *PS_CUST_HOME* directory with customized COBOL source files.

To compile COBOL on UNIX:

1. If you haven't already done so, download all required patches to your file server, and from there FTP the contents of src\cbl\base and src\cbl\unix over to src/cbl on the relevant application or batch server.

   Note. When you copy patches over from the file server, the files need to have a lowercase cbl extension and an uppercase program name, as in PATCH.cbl.

2. Source the script psconfig.sh from *PS_HOME* to set up environment variables correctly on your application or batch server.

```
. ./psconfig.sh
```

3. Change to the *PS_HOME/*setup directory:

```
cd $PS_HOME/setup
```

4. To compile all the COBOL source dynamically, issue the command:

    ```
    ./pscbl.mak
    ```

    The dynamic compile creates INT, LST, and GNT files, which are copied to these locations:

File	Location
INT	*PS_HOME*/src/cbl/int
LST	*PS_HOME*/src/cbl/lst
GNT	*PS_HOME*/cblbin

Warning! Proposed ISO 2000 COBOL features are enabled. Please refer to documentation for details, and do not rely on these features being supported in future products from Micro Focus due to changes in the proposed COBOL standard.

Note. For Server Express, PeopleSoft sets the COBOL directive INTLEVEL to 4. Setting this directive to this value enables you to raise the significant digits of numeric fields from 18 to 31. This is in accordance with the ISO 2000 COBOL standard. During the compilation of each program, the vendor of Server Express will display a warning. This should not be considered a compilation error.

Task 13B-3-4: Compiling COBOL on UNIX with a PS_APP_HOME Setup

This section assumes that you installed the PeopleSoft Application software to a *PS_APP_HOME* directory that is different from the *PS_HOME* directory where you installed PeopleSoft PeopleTools. It also 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.
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
     pscbl.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 13B-3-5: Compiling COBOL on UNIX 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.

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. If *PS_APP_HOME* is different from *PS_HOME,* 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:

   ```
   ./pscbl.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 13B-3-6: Linking COBOL

This section discusses:

- Understanding COBOL Linking
- Linking COBOL Components on UNIX

Understanding COBOL Linking

PSRUN is the PeopleSoft procedure that connects the COBOL batch programs with the RDBMS API. 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 COBOL Components on UNIX

To link COBOL components on UNIX:

1. Change to the *PS_HOME/*setup directory:

    ```
    cd $PS_HOME/setup
    ```

2. For dynamic linking, run:

    ```
    ./psrun.mak
    ```

    The PSRUN.MAK script should return the UNIX prompt when done. If the compile completes without errors, the 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

If you are running on an Oracle 11.2.0.4 database platform, you may see the following error when you attempt to compile:

"Undefined symbol nzosSCSP_SetCertSelectionParams referenced in file /products/oracle/11.2.0.4.0-64bit/lib/libclntsh.so.11.1"

To resolve this problem:

1. Edit the LD_LIBRARY_PATH environment variable so that $ORACLE_HOME/lib comes before $TUXDIR/lib.

2. Execute psrun.mak again.

3. Reverse the change you made in step 1.

Task 13B-3-7: Recompiling 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 a PS_HOME Setup, Compiling COBOL on UNIX with a PS_APP_HOME Setup, or Compiling COBOL on UNIX with a PS_CUST_HOME Setup.

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 PS_HOME Setup: *PS_HOME/*src/cbl/int, *PS_HOME/*src/cbl/lst, and *PS_HOME/*cblbin

- For PS_APP_HOME Setup: *PS_APP_HOME/*src/cbl/int, *PS_APP_HOME/*src/cbl/lst, and *PS_APP_HOME/* cblbin

- For PS_CUST_HOME Setup: *PS_CUST_HOME/*src/cbl/int, *PS_CUST_HOME/*src/cbl/lst, and *PS_CUST_HOME/*cblbin

Note. You can also use pscbl.mak PTP*** to compile all source files that start with PTP.

Task 13B-4: Installing IBM COBOL on IBM AIX

This section discusses:

- Understanding the IBM COBOL for AIX Installation
- Prerequisites
- Installing IBM COBOL for AIX v4.1.1.1

Understanding the IBM COBOL for AIX Installation

The IBM COBOL for AIX compiler version 4.1.1.1 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 4.1.1.1, 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 4.1.1.1.

  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 installation instructions assume that you have the IBM installation files and installation documentation. Review the information on planning your installation, but use the instructions in this document to carry out the installation. Contact your IBM representative to obtain the software.

  See http://www-01.ibm.com/software/awdtools/cobol/aix/

  See http://www-01.ibm.com/software/awdtools/cobol/aix/library/

- 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.

- Documentation for IBM System Prerequisites

  Refer to the "System Prerequisites" section in the IBM Installation guide for COBOL for AIX 4.1, before installing and running the software.

Task 13B-4-1: Installing IBM COBOL for AIX v4.1.1.1

This procedure assumes that you obtained the installation file from your IBM vendor and saved the compressed installation file in a local directory, referred to here as *CBL_INSTALL*. The compressed installation file includes several filesets. All of the filesets listed must be installed. This table lists the filesets for IBM COBOL for AIX compiler v4.1.1.1, and the locations where they will be installed:

Fileset Name	Fileset Description	Installation Locations*	Required Fileset Level
cobol.cmp	IBM COBOL for AIX compiler	/usr/lpp/cobol/ /usr/lpp/cobol/bin/ /usr/lpp/cobol/samples/ /usr/lpp/cobol/include/ /usr/bin/	4.1.1.1
cobol.dbg	IBM COBOL for AIX debugger	/usr/lpp/cobol/lib /usr/lib/	4.1.1.1
cobol.lic	IBM COBOL for AIX license files	/usr/lpp/cobol/lib/	4.1.1.0
cobol.license	IBM COBOL for AIX license	NONE	4.1.1.0
cobol.man	IBM COBOL for AIX compiler manual pages	/usr/share/man/ /usr/lpp/cobol/man/	4.1.1.1
cobol.msg.*LANG*	IBM COBOL for AIX compiler messages	/usr/lpp/cobol/lib/nls/msg/*LANG/* *LANG* = [en_US, ja_JP, Ja_JP]	4.1.1.0
cobol.rte	IBM COBOL for AIX Runtime	/usr/lpp/cobol/ /usr/lpp/cobol/lib/ /usr/lib/ /etc/	4.1.1.0
cobol.rte.msg.LANG	IBM COBOL for AIX runtime messages	/usr/lpp/cobol/ /usr/lpp/cobol/lib/ /usr/lib/ /etc/	4.1.1.0
cobol.tools	IBM COBOL for AIX tools	/usr/lpp/cobol/	4.1.1.1

* If more than one location is listed, the fileset is copied into all the locations.

To extract and install:

1. Go to the location where you saved the compressed installation file:

    ```
    cd CBL_INSTALL
    ```

2. Uncompress and unpack the downloaded file with this command:

    ```
    zcat cobol.411.aix.GM.tar.Z | tar -xvf
    ```
    ```
    Note: The name of the compressed file you downloaded may be different⇒
     than what is mentioned above.
    ```

3. Change directory to *CBL_INSTALL/*usr/sys/inst.images, and use the inutoc command to generate a list of the files in this directory:

    ```
    cd usr/sys/inst.images
    inutoc .
    ```

4. Use the AIX command `installp` to install.

    For information on using the options for `installp`, see the IBM COBOL for AIX documentation. For example:

    *   To install all available filesets to the locations specified in the table at the beginning of this procedure, and write an installation log, use this command:

        ```
        installp -aXYgd <CBL_INSTALL>/usr/sys/inst.images -e <LOG_DIR/logfile_⇒
        name> all
        ```

    *   To install a specific fileset, and write an installation log, use this command:

        ```
        installp -aXYgd <CBL_INSTALL>/usr/sys/inst.images -e <LOG_DIR/logfile_⇒
        name>  <fileset_name>
        ```

5. Download the required maintenance packs for IBM COBOL 4.1.1.1 from the IBM web site:

    a. Go the IBM Support Fix Central web site: http://www-933.ibm.com/support/fixcentral/

    b. Select the Product Group as Rational, Product as COBOL for AIX, Installed Version as 4.1.1.0 and Platform as AIX. Click Continue.

    c. Select the Browse for fixes radio button. Click Continue.

    d. Select the fix pack 4.1.1.1 or higher. Click Continue.

    e. Download the fix pack using one of the download options available.

6. Install the filesets included in the fix pack using the `installp` command as described above.

    *   You must install all the available filesets for 4.1.1.1.

    *   For the fileset cobol.msg.*LANG* (where *LANG* = [en_US, ja_JP, Ja_JP]), choose to install only the filesets relevant to your desired language and location.

        Note. The LANG environment variable determines which message catalogs are used. The en_US (English) message catalogs are installed by default. If LANG is not defined or is assigned an unsupported locale, en_US message catalogs are used.

7. Use the lslpp command to check the status of the installed COBOL filesets:

    ```
    lslpp -L cobol*
    ```

Task 13B-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 13B-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	export PS_ENCODING=ansi
Unicode	export PS_ENCODING=unicode

   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

   ```
   pscblibm.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

   ```
   pscblibm.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:

   ```
   ./pscblibm.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)	*PS_HOME/*sdk/cobol/pscblpt/src
Human Capital Management	hcm	*PS_HOME/*sdk/cobol/pscblhrms/src
Financials/Supply Chain Management	fscm	*PS_HOME/*sdk/cobol/pscblfscm/src

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 13B-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/pscbl*apps* 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/pscblhcm

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	`export PS_ENCODING=ansi`
Unicode	`export PS_ENCODING=unicode`

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:

```
pscblibm.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:

```
pscblibm.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:

```
./pscblibm.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)	*PS_HOME/*sdk/cobol/pscblpt/src
Human Capital Management	hcm	*PS_APP_HOME/* sdk/cobol/pscblhrms/src
Financials/Supply Chain Management	fscm	*PS_APP_HOME/* sdk/cobol/pscblfscm/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 13B-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/pscblapps 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/pscblhcm

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	export PS_ENCODING=ansi
Unicode	export PS_ENCODING=unicode

   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:

     ```
     pscblibm.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:

     ```
     pscblibm.mak : ERROR : <PS_HOME>/setup/unicode.cfg does not EXIST,⇒
      but INCOMPATIBLE encoding of $PS_ENCODING was specified, EXITING!!!
     ```

   • Use this command to compile:

     ```
     ./pscblibm.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 13B-5-4: Troubleshooting the IBM COBOL Compiler

This section discusses:

- Understanding Troubleshooting for the IBM COBOL Compiler
- Reviewing Screen Output from pscblibm.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 pscblibm.mak

- erroribm.lst

  *PS_HOME/*setup/erroribm.lst

- LISTOUT.lst file

  <PS_HOME>/sdk/cobol/pscbl*<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/pscbl*<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:

```
./pscblibm.mak : Error : Critical program PTPPSRUN did not compile
./pscblibm.mak : Error : This error must be fixed prior to running any⇒
 cobol programs...

./pscblibm.mak : Error : Critical program PTPPSRMT did not compile
./pscblibm.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 pscblibm.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:

```
./pscblibm.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
./pscblibm.mak : The list of file(s) that failed to compile/link can be⇒
 found at /data1/home/easa/pt854/setup/erroribm.lst
./pscblibm.mak : The compilation log is generated at /data1/home/easa⇒
/pt854/sdk/cobol/pscblpt/src/LISTOUT.lst
./pscblibm.mak : The compile listing of the COBOL programs can be seen at ⇒
/data1/home/easa/pt854/sdk/cobol/pscblpt/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
ENPMMAIN 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/pscbl*<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 -qdynam -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/pscbl*<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:

```
pscblibm.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 13B-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 install the runtime filesets for IBM COBOL for AIX. You do not need to install the compiler. You must also configure the PeopleSoft Application Server and Process Scheduler domains.

This procedure assumes that you have downloaded the runtime filesets to *CBL_INSTALL,* and have set the environment variables as described earlier.

See Setting Environment Variables for IBM COBOL.

The runtime filesets will be installed into the locations as specified in this table:

Fileset Name	Fileset Description	Installation Locations	Fileset Level Required
cobol.rte	IBM COBOL for AIX runtime libraries	/usr/lpp/cobol/ /usr/lpp/cobol/lib/ /usr/lib/ /etc/	4.1.1.0
cobol.msg.*LANG*	IBM COBOL for AIX runtime messages *LANG* = [en_US, ja_JP, Ja_JP]	/usr/lib/nls/msg/*LANG*	4.1.1.0

To install the runtime filesets:

1. Use the AIX command `installp` to install these filesets. For example:

   ```
   installp -aYg -d CBL_INSTALL/usr/sys/inst.images cobol.rte cobol.msg.en_⇒
   US
   ```

2. Download the required maintenance packs for IBM COBOL 4.1.1.1 from the IBM support web site.

   http://www-933.ibm.com/support/fixcentral/

3. Install the filesets included in the maintenance packs using the `installp` command as described above.

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 13B-5-6: Removing the IBM COBOL Installation

Keep the following information in mind before removing the IBM COBOL compiler on IBM AIX:

• You must have root user access to uninstall this product.

• Some filesets may not be uninstalled if they are required by other installed products.

• As uninstalling dependent packages automatically may introduce problems, it is recommended that you preview uninstallation to ensure that all dependent filesets are no longer required.

    See the IBM COBOL compiler documentation for more information.

To remove the IBM COBOL compiler:

1. Run the following command:

    ```
    installp -u cobol*
    ```

    Here are typical responses:

    ```
    $ installp -u cobol*
    +-----------------------------------------------------------------------⇒
    ------+
                          Pre-deinstall Verification...
    +-----------------------------------------------------------------------⇒
    ------+
    Verifying selections...done
    Verifying requisites...done
    Results...
    WARNINGS
    --------
      Problems described in this section are not likely to be the source of⇒
     any
      immediate or serious failures, but further actions may be necessary or
      desired.
      Not Installed
      -------------
      No software could be found on the system that could be deinstalled⇒
     for the
      following requests:
        cobol.msg.Ja_JP
        cobol.msg.ja_JP
      (The fileset may not be currently installed, or you may have made a
       typographical error.)
      << End of Warning Section >>
    SUCCESSES
    ---------
      Filesets listed in this section passed pre-deinstall verification
      and will be removed.
      Selected Filesets
      -----------------
      cobol.cmp 4.1.1.0                                  # IBM COBOL for AIX⇒
     Compiler
      cobol.dbg 4.1.1.0                                  # IBM COBOL for AIX⇒
     Debugger
      cobol.lic 4.1.1.0                                  # COBOL for AIX Licence⇒
     Files
      cobol.license 4.1.1.0                              # COBOL for AIX License⇒
     Agreem...
      cobol.man 4.1.1.0                                  # IBM COBOL Set for AIX⇒
     Man Pages
      cobol.msg.en_US 4.1.1.0                            # IBM COBOL for AIX⇒
     Runtime Me...
      cobol.rte 4.1.1.0                                  # IBM COBOL for AIX⇒
     Runtime
      << End of Success Section >>
    ```

```
FILESET STATISTICS
------------------
    9  Selected to be deinstalled, of which:
        7  Passed pre-deinstall verification
        2  FAILED pre-deinstall verification
  ----
    7  Total to be deinstalled
```

+--⇒
------+
                        Deinstalling Software...
+--⇒
------+
```
installp:  DEINSTALLING software for:
        cobol.lic 4.1.1.0
Filesets processed:  1 of 7  (Total time:  0 secs).
installp:  DEINSTALLING software for:
        cobol.license 4.1.1.0
Filesets processed:  2 of 7  (Total time:  0 secs).
installp:  DEINSTALLING software for:
        cobol.dbg 4.1.1.0
Filesets processed:  3 of 7  (Total time:  1 secs).
installp:  DEINSTALLING software for:
        cobol.man 4.1.1.0
Filesets processed:
  4 of 7  (Total time:  1 secs).
installp:  DEINSTALLING software for:
        cobol.msg.en_US 4.1.1.0
Filesets processed:  5 of 7  (Total time:  2 secs).
installp:  DEINSTALLING software for:
        cobol.cmp 4.1.1.0
Filesets processed:  6 of 7  (Total time:  3 secs).
installp:  DEINSTALLING software for:
        cobol.rte 4.1.1.0
Finished processing all filesets.  (Total time:  5 secs).
```
+--⇒
------+
                            Summaries:
+--⇒
------+
```
Pre-installation Failure/Warning Summary
----------------------------------------
Name                         Level            Pre-installation Failure⇒
/Warning
----------------------------------------------------------------------⇒
-------
cobol.msg.Ja_JP                               Nothing by this name to⇒
 deinstall
cobol.msg.ja_JP                               Nothing by this name to⇒
 deinstall
Installation Summary
--------------------
```

```
Name                             Level         Part       Event     ⇒
 Result
----------------------------------------------------------------------⇒
-------
cobol.lic                        4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
cobol.license                    4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
cobol.dbg                        4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
cobol.man                        4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
cobol.msg.en_US                  4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
cobol.cmp                        4.1.1.0       ROOT       DEINSTALL ⇒
 SUCCESS
cobol.cmp                        4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
cobol.rte                        4.1.1.0       USR        DEINSTALL ⇒
 SUCCESS
```

2. To remove any currently unused modules in kernel and library memory, enter the following on the command line:

    ```
    slibclean
    ```

Chapter 14

Installing PeopleSoft Online Help

This chapter discusses:

- Understanding PeopleSoft Online Help (PeopleBooks)
- Using the PeopleSoft Online Help Web Site for Context-Sensitive Help
- Configuring Context-Sensitive Help with Local Installations

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 Web site, are developed for advanced users, administrators, and implementers of the application. End users should utilize embedded help or licensed UPK content for more specific help assistance.

PeopleSoft software applications will include translated embedded help. With the PeopleSoft 9.2 release, PeopleSoft documentation aligned with the other Oracle applications by 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 with PeopleSoft PeopleTools and every PeopleSoft application. You have several options for deploying PeopleSoft Online Help to benefit your organization. This chapter describes the methods for accessing, installing, and configuring PeopleSoft Online Help.

- *Hosted PeopleSoft Online Help Web site:* Use PeopleSoft Online Help over the Internet with the hosted content on the hosted PeopleSoft Online Help Web site.
- *Context-sensitive help:* Configure PeopleSoft PeopleTools to call PeopleSoft Online Help as context-sensitive help from both Internet applications 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.

- *PDF format*: You can download a PDF version of PeopleSoft Online Help, organized in the traditional PeopleBooks format, from the Oracle Technology Network (OTN).

See Also

Oracle Documentation, Oracle Technology Network,
http://www.oracle.com/technetwork/documentation/index.html

"Preparing for Installation," Planning Multilingual Strategy

PeopleTools: Applications User's Guide, "Accessing Embedded Help"

Task 14-1: Using the PeopleSoft Online Help Web Site for Context-Sensitive Help

This section discusses:

- Understanding the PeopleSoft Online Help Web Site
- Setting Up Context-Sensitive Help with the PeopleSoft Online Help Web Site
- Setting Up F1 Help with the PeopleSoft Online Help Web Site

Understanding the PeopleSoft Online Help Web Site

PeopleSoft Online Help is immediately available for use over the Internet at the PeopleSoft Online Help Web site. To configure context-sensitive help with the PeopleSoft Online Help web site, you must have an Internet connection available to your server where PeopleSoft PeopleTools is installed.

See PeopleSoft Online Help, www.peoplesoftonlinehelp.com.

Alternatively, you can install PeopleSoft Online Help to a file server hosting web server software, as described in the section Installing the PeopleSoft Online Help Locally.

Task 14-1-1: Setting Up Context-Sensitive Help with the PeopleSoft Online Help Web Site

You can configure your PeopleSoft server to use the hosted documentation from the PeopleSoft Online Help Web site for context-sensitive help. Each page in your PeopleSoft applications includes a Help icon that, when clicked, opens a new browser window displaying help topics that discuss that page. To enable the Help link from application pages:

1. Log in to your PeopleSoft application in a browser.

2. Select PeopleTools, Web Profile, Web Profile Configuration.

3. Click Search and select the Profile Name you specified during your PeopleSoft Pure Internet Architecture installation, for example, PROD.

4. On the General page in the Help URL field, enter the URL for one or more products.

   You can access the URLs from the PeopleSoft Online Help Web site. Under Setting Up Context-Sensitive Help, select the link Enabling the Help Link from the Application Pages.

   See PeopleSoft Online Help, http://docs.oracle.com/cd/E17566_01/epm91pbr0/eng/psbooks/EnablingtheHelpLinkfromApplicationPages.pdf.

   The URLs have the following format, where UlinkID1, UlinkID2, ...UlinkIDn refer to universal linking product line codes:

   http://www.oracle.com/pls/topic/lookup?id=%CONTEXT_ID%&ctx=UlinkID1&ctx=UlinkID2....&ctx=UlinkIDn

   The URL for the PeopleTools documentation must come before the URLs for PeopleSoft application documentation, as in this example:

   http://www.oracle.com/pls/topic/lookup?id=%CONTEXT_ID%&ctx=pt855pbr0&ctx=hcm92pbr7

   This example shows the Web Profile Configuration page with a sample help URL for PeopleSoft PeopleTools 8.55 and PeopleSoft HCM 9.2:

Web Profile Configuration General page with a sample PeopleSoft Hosted Documentation URL

5. Save and exit the Web Profile Configuration page.

6. Restart the following servers:

    •   If your PeopleSoft Pure Internet Architecture (PIA) is running on Oracle WebLogic, restart the PIA and admin web servers.

    •   If your PIA is running on IBM WebSphere, restart the PIA server.

    •   If the Help link does not appear in the next step, it may be necessary to also stop and restart the application server.

7. Test the help functionality by clicking the Help icon on a PeopleSoft application page.

Task 14-1-2: Setting Up F1 Help with the PeopleSoft Online Help Web Site

PeopleTools Application Designer also has context-sensitive help available through the user's F1 key. To enable this help functionality, the PeopleTools Options must be configured to access the hosted content on the PeopleSoft Online Help Web site as follows:

1. In your PeopleSoft application, select PeopleTools, Utilities, Administration, PeopleTools Options.

2. Scroll down to the Help Options group.

3. Enter the value for the F1 URL field.

    Specify the URL for the PeopleSoft PeopleTools online help for your release. The URL should be similar to the following:

    http://www.oracle.com/pls/topic/lookup?id=%CONTEXT_ID%&ctx=pt855pbr0

    You can access the URL from the PeopleSoft Online Help Web site. Under Setting Up Context-Sensitive Help, select the link Enabling the Help Link from the Application Pages.

    See PeopleSoft Online Help,
    http://docs.oracle.com/cd/E17566_01/epm91pbr0/eng/psbooks/EnablingtheHelpLinkfromApplicationPages.pdf.

4. Save and exit the PeopleTools Options page.

5. Stop and restart the application server each time you update the help URL.

6. Open Application Designer. Press F1 to display the online help content.

7. For context-sensitive help, open an object, such as a panel or PeopleCode, then press F1.

Task 14-2: Configuring Context-Sensitive Help with Local Installations

This section discusses:

*   Enabling the Help Link from the Application Pages with Local Installations
*   Enabling F1 Help with Local Installations
*   Creating the Help Index for Multi-Product Installations

Task 14-2-1: Enabling the Help Link from the Application Pages with Local Installations

You can configure your PeopleSoft installation so that each page in your PeopleSoft software applications includes a Help link. Clicking the Help link opens a new browser window displaying help topics that discuss that page. Use the instructions in this section to enable the Help link for locally-installed PeopleSoft Online Help only.

To enable the Help link from application pages:

1. In your PeopleSoft application, navigate to the PeopleTools, Web Profile, Web Profile Configuration page.

2. Click Search and select the Profile Name you specified during your PeopleSoft Pure Internet Architecture installation.

3. Specify the value for the Help URL field as follows:

```
http://<server_name>:<port_number>/<help_folder>/help.html?ContextID=⇒
%CONTEXT_ID%&LangCD=%LANG_CD%
```

Note. If you do not want the Help icon to display in your applications, clear the Help URL field value.

For example, if your web server is called myserver, you are using port 5080, and your *help_folder* is pt855pbr0, the Help URL value would be:

```
http://myserver:5080/pt855pbr0/help.html?ContextID=%CONTEXT_ID%&LangCD=⇒
%LANG_CD%
```

- Enter your web server name for *<server_name>*.
- Enter the web server port for *<port_number>*.
- Enter the folder where you installed the help system files for *<help_folder>*.
- The system resolves %CONTEXT_ID% to the page name from which you called help. The system resolves %LANG_CD% to the signon language of the user.

4. Save and exit the Web Profile Configuration page.

5. Before testing help functionality, purge the browser cache on the client and close all web browsers.

   Restart the application server and web server for PIA.

6. Test the help functionality by clicking the Help link on a PeopleSoft application page.

Task 14-2-2: Enabling F1 Help with Local Installations

This procedure describes how to enable F1 help for Application Designer, PeopleCode Editor, and other Microsoft Windows-based PeopleSoft programs.

To enable F1 help:

1. Sign on to your PeopleSoft application using your browser.

2. Select the PeopleTools, Utilities, Administration, PeopleTools Options page.

3. Enter the same URL as in the previous procedure (where *<server_name>, <port_number>,* and *<help_folder>* reflect your installation) into the F1 Help URL field:

```
http://<server_name>:<port_number>/<help_folder>/help.html?ContextID=⇒
%CONTEXT_ID%&LangCD=%LANG_CD%
```

   For example:

```
http://myserver:5080/pt855pbr0/help.html?ContextID=%CONTEXT_ID%&LangCD=⇒
%LANG_CD%
```

4. Save the page.

Task 14-2-3: Creating the Help Index for Multi-Product Installations

The PeopleSoft Online Help site contains a precompiled context-sensitive help index containing all context IDs for the product family. To have the help processor deliver help pages from other product families, you need to re-create this help index to include the context IDs for all applicable product families.

Note that this procedure does not support help sites for PeopleSoft 9.1 and PeopleTools 8.52 and earlier. To include help sites for those releases, select About This help in the PeopleSoft PeopleTools product documentation.

See *Managing Locally Installed PeopleSoft Online Help,* "Including Multiple Online Help Sites for PeopleSoft 9.1 and PeopleTools 8.52 and Earlier."

To re-create the context-sensitive help index follow the instructions "Creating Index for multi-domain online help site" described in the README.txt file included with the downloaded zip files.

See *Managing Locally Installed PeopleSoft Online Help,* "Including Multiple Online Help Sites for PeopleSoft 9.2 and PeopleTools 8.53 and Later."

Chapter 15

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 nVisionDrill 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 15-1: 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 15-1-1: 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 15-2: 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 PeopleSoft PeopleTools 8.50 and later releases, you are able to use the web service capability when drilling from summarized to detailed PS/nVision reports using the nVisionDrill VSTO add-in.

PeopleSoft PeopleTools supports 64-bit Microsoft Excel 2010 and Excel 2013 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 15-2-1: 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. For example, on Microsoft Internet Explorer 8 the SSL Root Certificate should be installed under Trusted Root Certification Authorities.

Task 15-3: 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 15-4: Setting Up PeopleSoft Integration Broker for Using Web Service Capability with nVisionDrill Add-in

To set up Integration Broker for using web service capability with PS/nVision DrillDown:

1. Select PeopleTools, Integration Broker, Configuration, 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:

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.
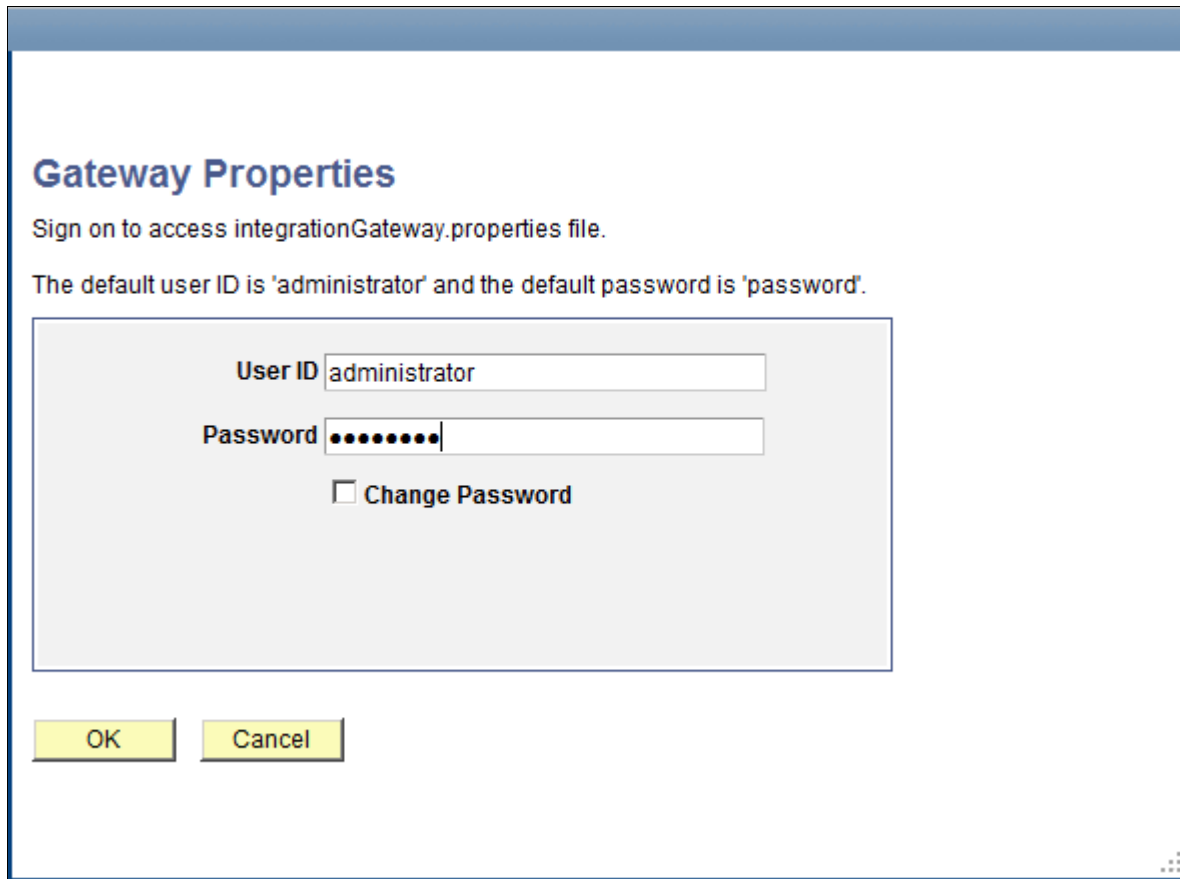
    You should be able to see at least three dispatchers under Dispatcher Status. This is required for running
    asynchronous requests through Integration Broker.

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, 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 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, Nodes. 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.*

Chapter 16

Installing Web Application Deployment Tools

This chapter discusses:

* Prerequisites
* Installing the Web Application Deployment Tool in Silent Mode
* Testing and Troubleshooting the Web Application Deployment

Prerequisites

This chapter includes instructions for installing the Web Application Deployment tool on Oracle WebLogic and IBM WebSphere. Complete the instructions for the web server you selected when you carried out the PeopleSoft PeopleTools installation. Typically, you would choose GUI mode for Microsoft Windows platforms and console mode for UNIX or Linux platforms.

When you install your PeopleSoft application, consult the product-specific installation guide to determine whether the Web Application Deployment tool is required. If the Web Application Deployment tool is not referenced in the product-specific installation guide, you can skip this chapter.

Before you install the Web Application Deployment tool, confirm that you have completed the following requirements.

If you use Oracle WebLogic as your web server, you must fulfill these requirements:

* Java 8 must be installed and working properly. Your PATH environment variable must include an entry for Java 8 (for example, *<java>/*bin). If you do not install Java 8 the deployment will fail due to the absence of a Java compiler.
* The PeopleSoft web server must be installed during the PeopleSoft PeopleTools installation.
* Oracle WebLogic 12.2.1 must be installed.

If you use IBM WebSphere as your web server, you must fulfill these requirements:

* Java 8 or above must be installed and working properly.
* The PeopleSoft web server must be selected for installation during the PeopleSoft PeopleTools installation.
* IBM WebSphere 9.0.0.0 must be installed. The web server must be up and running when you carry out the Web Application Deployment tool installation.
* The PeopleSoft Pure Internet Architecture must be installed on IBM WebSphere.
* If you are running on UNIX or Linux, run the Web Application Deployment installation with a user who owns IBM WebSphere, and who owns *PS_HOME.* Here are two examples:

  * If IBM WebSphere is owned by "root" and group "system", the Web Application Deployment installation must be run with "root" and group "system."

- If WebSphere is owned by user "wsadmin" and group "wsadmin", then the Web Application Deployment installation must be run with wsadmin and wsadmin as the user and group.

See Also

"Installing Web Server Products"

"Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode"

"Setting Up the PeopleSoft Pure Internet Architecture in Console Mode"

"Using the PeopleSoft Installer"

PeopleTools: System and Server Administration

PeopleSoft Customer Relationship Management Installation

Task 16-1: Installing the Web Application Deployment Tool in Silent Mode

This section discusses:

- Understanding the Web Application Deployment Tool Silent Mode Installation and the Response File
- Editing the Web Application Deployment Tool Response File to Deploy DES
- Running the Web Application Deployment Tool Silent Mode Installation to Deploy DES

Understanding the Web Application Deployment Tool Silent Mode Installation and the Response File

You can carry out a silent installation of the Web Application Deployment tool by providing all the required settings in a response file. With silent installation there is no user interaction after the installation begins. Silent mode installation of the Web Application Deployment tool is supported for both Microsoft Windows and UNIX operating systems platforms, and for both Oracle WebLogic and IBM WebSphere web servers.

Task 16-1-1: Editing the Web Application Deployment Tool Response File to Deploy DES

You need a response file to start the installer in silent mode. The Web Application Deployment tool installer comes with a response file template (responsefile.txt) that can be found under *PS_HOME* setup\PsMpWebAppDeployInstall. Modify the values in the response file according to your installation requirements. The response file should contain all the input parameters that are needed for deploying Web Application Deployment tool.

For information on the parameters in the response file, see the previous sections in this chapter on installing the Web Application Deployment tool.

The response file includes the following sections:

- Comments and instructions, including the command to run the silent installation.

- Parameters needed for the installations, such as PS_CFG_HOME, DOMAIN_NAME, SERVER_TYPE.

Sample response file template:

```
# ****************************************************************
#
# Response file for WebAppDeploy Installations
#
# 1. In Windows
#  use "\\" as file path seperator
#     Open a command prompt; go to PS_HOME\setup\PsMpWebAppDeployInstall⇒
 and run following commands
#     setup.bat -i silent -DRES_FILE_PATH=<path_to_response_file>
#
# 2. In UNIX
#  use "/" as file path seperator
#     Go to  PS_HOME/setup/PsMpWebAppDeployInstall and run following⇒
 commands
#     setup.sh -i silent -DRES_FILE_PATH=<path_to_response_file>
#
#
#*************************************************************************

# Set the below variable to the location where you want to install DES.
# PLEASE NOTE this variable could be ANY DIRECTORY on your machine. It⇒
 includes but is definitely not limited to PeopleTools Home.
PS_CFG_HOME=

# Domain Name
DOMAIN_NAME=

# Web server type. Possible values are "weblogic", "websphere"
SERVER_TYPE=weblogic

# WebLogic home, the location where Oracle WebLogic is installed (for Web⇒
Logic deployment only)
BEA_HOME=C:\\oracle

# WebSphere Home, the location where IBM WebSphere is installed (for Web⇒
Sphere deployment only)
#WS_HOME=

# admin console user id/password for securing WebLogic/WebSphere admin⇒
 console credential
USER_ID=system
USER_PWD=
USER_PWD_RETYPE=

HTTP_PORT=80
HTTPS_PORT=443

# DES support only NEW_DOMAIN , so please do not change the below variable.
DOMAIN_TYPE=NEW_DOMAIN

# DES support only CREATE_NEW_DOMAIN , so please do not change the below⇒
```

```
 variable.
INSTALL_ACTION=CREATE_NEW_DOMAIN

# Install type to specify whether the installation is a single server or⇒
 multi server deployment,
# possible valuses for INSTALL_TYPE are singleserver, multiserver,⇒
 distributedmanagedserver
INSTALL_TYPE=singleserver

# If your PeopleSoft Applications install is decoupled from PS_HOME then⇒
 PS_APP_HOME will be the actual path to PS_APP_HOME, else it should be the⇒
 path to PS_HOME.
PS_APP_HOME=

# Please enter the CRM specific DB information

# possible values for DB_TYPE are MSSQL,ORACLE,DB2UDB
DB_TYPE=MSSQL
DB_SERVER_NAME=
DB_PORT=1433
DB_SERVER_INSTANCE=
DB_USER=Admin
DB_PASSWORD=
```

Task 16-1-2: Running the Web Application Deployment Tool Silent Mode Installation to Deploy DES

To install the Web Application Deployment tool in silent mode, 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:

1. Open *PS_HOME*\setup\PsMpWebAppDeployInstall\responsefile.txt for editing.

2. Modify the file for your environment, and then save the file.

    *   If your web server is on Oracle WebLogic:

        Specify SERVER_TYPE=weblogic and the installation location for the Oracle WebLogic software, such as BEA_HOME=C:\\WLS1221.

    *   If your web server is on IBM WebSphere:

        Specify SERVER_TYPE=websphere and the installation location for the IBM WebSphere software, such as WS_HOME=C:\\IBM\\WebSphere\\AppServer. In addition, add a comment character (#, pound or hash sign) in front of the line BEA_HOME=.

    *   Enter values for the remaining installation parameters.

3. In a command prompt, go to *PS_HOME*\setup\PsMpWebAppDeployInstall.

4. On Microsoft Windows, run the following command, using "\\" as a separator in the file path:

    ```
    setup.bat -i silent -DRES_FILE_PATH=<path_to_response_file>
    ```

    For example:

    ```
    setup.bat -i silent -DRES_FILE_PATH=C:\\pt856\\setup\\PSMpWebAppDeploy⇒
    ```

```
Install
```

5. On UNIX or Linux, run the following command, using "/" as a separator in the file path:

```
setup.sh -i silent -DRES_FILE_PATH=<path_to_response_file>
```

For example:

```
setup.sh -i silent -DRES_FILE_PATH=/home/pt856/setup/PsMpWebAppDeploy⇒
Install
```

Task 16-2: Testing and Troubleshooting the Web Application Deployment

Check the log file for any problems encountered during installation. The log file is saved in the following location:

<WebAppDeploy_DIR>/webserv/webappinstall*<domain_name>*.log

The *WebAppDeploy_DIR* is the directory where the web server domain for the Web Application Deployment was installed. The *<domain_name>* is the name you specified for the Web Application Deployment web server domain, such as PSWebApp.

If you need to start or stop Oracle WebLogic or IBM WebSphere, use the commands given in the chapter on installing the PeopleSoft Pure Internet Architecture.

See Testing the PeopleSoft Pure Internet Architecture Installation in the chapters on setting up the PeopleSoft Pure Internet Architecture.

Appendix A

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 z/OS 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-24-31.2-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.

Describing Debugger Requirements for the z/OS Operating System

If you are installing on a z/OS platform, dbx comes with z/OS UNIX. Starting with z/OS v1r5, dbx requires the Common Debug Architecture (CDA) libraries to be present. They must be accessible by dbx in order for it to run. The libraries are as follows:

Library	Description
CDAEED	Amode31 ELF/DWARF library
CDAEQED	Amode64 ELF/DWARF library
CDAEDPI	Amode31 DDPI library
CDAEQDPI	Amode64 DDPI library

Note. CDAEDPI and CDAEQDPI are only present on a z/OS v1r7 and higher systems.

Depending on the size of the program you are debugging with dbx, plus how many others are also using dbx on your system, you may run out of SQA and/or CSA storage on your z/OS system, because this storage is global z/OS storage. Consult the z/OS initialization and tuning guide for information on how to modify the z/OS parameters.

When diagnosing crashes, be aware that a crash is more strictly defined on z/OS as a program check that is handled by z/OS UNIX as a fatal signal (for example, SIGSEGV for PIC4; 10, 11, or SIGILL for PIC1). A crash would also occur because of a fault in the JVM, or because of a fault in native (JNI) code that is being run inside the Java process.

When one of these fatal signals occurs, obtain the following documents to help you debug:

- a formatted LE dump (CEEDUMP)

  The CEEDUMP shows the C-Stack (or native stack). The traceback from a CEEDUMP shows where a failure

occurred for a C/C++ program

- a JVM trace snap dump

- a formatted JVM dump (javacore)

The default action of the z/OS UNIX signal handler is to produce a transaction dump (through the BCP IEATDUMP service), CEEDUMP, JVM dump javacore.

Appendix B

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."

For example, PeopleSoft PeopleTools is currently supported on Oracle 11g or Oracle 12c. 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 11g (11.2.0.x). This means PeopleSoft SQR will work right out of the box on Oracle 11g (no relink required).

Task B-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 B-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. Other operating system/database platform combinations work in a similar fashion.

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 __1cH__CimplKcplus_init6F_v_  -s -R/usr/ccs⇒
    /lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 crti.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 -lgen -ldl -lsched -lrt⇒
     -lc -laio -lposix4 -lpool -ladm -lefi
    /usr/ccs/bin/ld -o sqrp -u __1cH__CimplKcplus_init6F_v_  -s -R/usr/ccs⇒
    /lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 crti.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 -lgen -ldl -lsched -lrt -lc -⇒
    laio -lposix4 -lpool -ladm -lefi
    /usr/ccs/bin/ld -o sqrt -u __1cH__CimplKcplus_init6F_v_  -s -R/usr/ccs⇒
    /lib/sparcv9:/lib/sparcv9:/usr/lib/sparcv9 crti.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 -lgen -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/8.56/Sun/SunOS/Oracle/Apr 17 2017

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    as set forth in subparagraph (c) (1) (ii) of DFARS 52.227-7013 for⇒
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            or registered trademarks of their respective companies.

c. Enter this command:

    ```
    SQR for PeopleSoft V8.56
    ```

    ```
    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 browswer 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 $PS_HOME/sqr/xrfwin <ACCESS_ID>/<ACCESS_PSWD>@<DBNAME> -⇒
ZIF$PS_ ⇒
HOME/sqr/pssqr.unx
SQR for PeopleSoft V8.56
Database Name (Optional, Press ENTER to continue):
Process Instance (Optional, Press ENTER to continue):

SQR for PeopleSoft: End of Run.
st-sun06:$
```