

**ORACLE®**

PEOPLESOFT

---

# PeopleTools 8.56 Installation for DB2 for z/OS

---

**June 2017**

**ORACLE®**

## PeopleTools 8.56 Installation for DB2 for z/OS

Copyright © 2017, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

### Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

# Contents

## Preface

- About This Documentation ..... 19**
- Understanding This Documentation ..... 19
- Audience ..... 19
- Typographical Conventions ..... 20
- Products ..... 21
- Related Information ..... 22
- Comments and Suggestions ..... 22

## **Part I ..... 23**

- Mandatory Installation ..... 23

## Chapter 1

- Preparing for Installation ..... 25**
- Understanding the PeopleSoft Installation ..... 25
- Using Oracle Software Delivery Cloud to Obtain Installation Files ..... 27
- Considering Project Planning ..... 27
- Planning Your Initial Configuration ..... 27
  - Understanding Workstations ..... 28
  - Understanding PeopleSoft Servers and Clients ..... 29
  - Defining the PeopleTools Client ..... 29
  - Defining the File Server ..... 30
  - Defining the Database Server ..... 30
  - Defining the Application Server ..... 31
  - Defining the Batch Server ..... 31
  - Defining Installation Locations ..... 31
  - Defining the Web Server ..... 34
  - Using Laser Printers ..... 34
- Planning Database Creation ..... 34
  - Understanding Database Creation ..... 35
  - Using Multiple Databases ..... 35
  - Determining Databases and Database Names ..... 35
  - Using Standard Database Names ..... 36
  - Choosing Owner ID Processing Option ..... 36

Planning Multilingual Strategy .....	38
Understanding Multilingual Issues .....	39
Choosing a Base Language .....	40
Selecting Additional Languages .....	42
Selecting a Database Character Set .....	42
Preparing for the PeopleTools-Only Upgrade .....	43
Understanding the PeopleTools Only Upgrade .....	43
Reviewing the Upgrade Documentation .....	43
Shutting Down Servers .....	43
Reviewing Customized Configuration Files .....	44
Reviewing Patches and Updates Required at Installation .....	44
Verifying Database Server Sizing .....	45
Defining DB2 for z/OS Subsystem Configuration .....	45
Understanding DB2 Configuration Requirements .....	46
Defining EDM Pool Considerations .....	46
Defining Decimal Arithmetic .....	46
Using DSMAX .....	47
Using CMTSTAT/IDTHTOIN .....	47
Using CCSID and DB2 z/OS Database Storage Encoding Schemes .....	47
Using DECIMAL .....	47
Installing Supporting Applications .....	48
Setting Up Database Connectivity .....	49
Using Connect ID .....	50
Understanding Connect ID .....	50
Using Connect ID .....	50
Setting Up z/OS User IDs .....	52
Understanding User ID Setup .....	52
Creating PeopleSoft User IDs .....	52
Performing Backups .....	55
Using PeopleSoft Change Assistant and PeopleSoft Change Impact Analyzer .....	55

**Chapter 2**

<b>Installing Web Server Products .....</b>	<b>57</b>
Installing Oracle WebLogic Server .....	57
Understanding the Oracle WebLogic Installation .....	57
Reviewing Troubleshooting Tips .....	58
Obtaining Oracle WebLogic Installation Files from Oracle Software Delivery Cloud .....	59
Installing JDK .....	60
Installing Oracle WebLogic on Microsoft Windows .....	62
Installing Oracle WebLogic on Linux or UNIX in Silent Mode .....	72
Configuring JDK for Daylight Savings Time Change .....	75



Removing the Oracle WebLogic Installation on Microsoft Windows .....	76
Removing the Oracle WebLogic Installation on Linux or UNIX .....	80
Installing IBM WebSphere Application Server .....	81
Understanding IBM WebSphere Installation .....	82
Prerequisites .....	82
Obtaining IBM WebSphere Installation Files .....	83
Installing IBM WebSphere 9.0.0.0 ND .....	83
Installing IBM HTTP Server 9.0.0.0 .....	83
Installing IBM WebSphere Plug-ins 9.0.0.0 .....	83

### Chapter 3

<b>Installing Additional Components .....</b>	<b>85</b>
Reviewing Additional Components .....	85
Installing Oracle Tuxedo .....	86
Understanding Oracle Tuxedo .....	86
Prerequisites .....	87
Debugging the Oracle Tuxedo Installer .....	88
Obtaining the Oracle Tuxedo Installation Files from Oracle Software Delivery Cloud .....	88
Obtaining the Oracle Tuxedo Patches from My Oracle Support .....	89
Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional) .....	90
Designating the Application Server Administrator on Microsoft Windows .....	91
Installing Oracle Tuxedo on Microsoft Windows in GUI Mode .....	92
Installing the Oracle Tuxedo Patch on Microsoft Windows .....	108
Installing Oracle Tuxedo on Microsoft Windows in Silent Mode .....	110
Uninstalling the Oracle Tuxedo Patch on Microsoft Windows .....	111
Uninstalling Oracle Tuxedo in GUI Mode .....	112
Checking the Windows Service Account .....	113
Restricting Domain Process Privileges .....	114
Setting Up the Windows Services for Oracle Tuxedo .....	115
Verifying the Server Installation on Microsoft Windows .....	117
Removing Existing Oracle Tuxedo Installations from UNIX (Optional) .....	118
Completing the Preinstallation Checklist on UNIX .....	118
Designating the Oracle Tuxedo Owner on UNIX .....	119
Installing Oracle Tuxedo in Silent Mode on UNIX .....	120
Installing the Oracle Tuxedo Patch on UNIX .....	122
Uninstalling the Oracle Tuxedo Patch from UNIX .....	122
Uninstalling Oracle Tuxedo from UNIX Using Silent Mode .....	123
Verifying the Server Installation on UNIX .....	123
Ensuring that Oracle Tuxedo Coexists with Earlier Versions .....	123

**Chapter 4**

**Using the PeopleSoft Installer ..... 127**

Understanding the PeopleSoft Installer ..... 127

    Defining the PeopleSoft Installer ..... 127

    Defining Supported Server Combinations ..... 128

Prerequisites ..... 128

Obtaining the PeopleSoft Installation Files from Oracle Software Delivery Cloud ..... 129

Running the PeopleSoft Installer ..... 131

    Understanding the PeopleSoft Installer ..... 131

    Starting the PeopleSoft Installer ..... 132

    Installing PeopleSoft PeopleTools in GUI Mode ..... 133

    Installing PeopleSoft PeopleTools in Console Mode ..... 145

Verifying Necessary Files for Installation on Windows ..... 149

Installing PeopleSoft Application Software ..... 150

Installing the PeopleTools Client Files ..... 150

    Installing the PeopleTools Client Files Using the PeopleSoft Installer ..... 150

    Installing the PeopleTools Client Files in Silent Mode ..... 150

Binding Windows "SQR for PeopleSoft" DB2 Connect Packages ..... 152

Mapping a Drive on the Install Workstation ..... 153

**Chapter 5**

**Setting Up the Install Workstation ..... 155**

Understanding the Install Workstation ..... 155

Prerequisites ..... 155

Starting Configuration Manager ..... 156

Setting Startup Options ..... 156

Editing the Default Profile ..... 157

Running Client Setup ..... 159

**Chapter 6**

**Setting Up the Batch Environment on z/OS ..... 161**

Understanding COBOL and the Batch Environment ..... 161

Setting Up Your Batch Environment ..... 162

Completing the Preinstallation Worksheet ..... 162

Allocating z/OS Partitioned Datasets ..... 169

Using PeopleSoft Server Transfer ..... 169

    Understanding PeopleSoft Server Transfer ..... 170

    Running the PeopleSoft Server Transfer Program ..... 170

Transferring Files to Host Manually .....	173
Mapping PeopleSoft Installation Directories to z/OS .....	173
Setting up the USS Environment Variables and Granting Access to USS Files .....	175
Installing SQR for z/OS .....	175
Binding the SQR DB2 Plan .....	176
Assembling PeopleTools Programs .....	176
Compiling and Link-Editing DB2 COBOL .....	176
Compiling and Link-Editing COBOL .....	177
Changing the IBM Enterprise COBOL Compiler Version .....	177
<b>Chapter 7</b>	
<b>Creating a Database .....</b>	<b>179</b>
Understanding Database Creation .....	180
Planning Your Installation .....	180
Using %UpdateStats .....	180
Using Temporary Tables .....	181
Transferring DDL Scripts to z/OS .....	182
Creating PS.PSDBOWNER Table .....	183
Granting Privileges on PS.PSDBOWNER .....	184
Granting Privileges to Owner ID .....	184
Creating DB2 Databases, Storage Groups, and Tablespaces .....	184
Understanding DB2 Databases, Storage Groups, and Tablespaces .....	184
Customizing the Database Name .....	185
Working with Tablespaces .....	187
Creating Tables .....	190
Configuring the DB2 Connect Gateway .....	191
Creating Data Mover Import Scripts .....	191
Understanding Data Mover Import Scripts .....	191
Working with Multilingual Databases .....	192
Running Database Setup to Create Data Mover Import Scripts .....	192
Running Data Mover Import Scripts .....	199
Understanding Data Mover Import Scripts .....	199
Populating Tables in the PeopleSoft Database .....	200
Checking the Log Files and Troubleshooting .....	200
Checking the Log Files .....	201
Running Data Mover .....	201
Troubleshooting .....	201
Improving Performance .....	203
Improving Execution .....	203
Creating Indexes .....	204
Reviewing Patch Application .....	205

Updating Database to Latest PeopleTools Release .....	205
Understanding Database Updates .....	206
Cleaning Up Data .....	206
Deleting Object Permission Data .....	207
Deleting Performance Monitor System Default Data .....	207
Creating New PeopleTools Tablespaces .....	207
Updating PeopleTools System Tables .....	207
Updating Select PeopleTools Database Objects .....	211
Deleting Select PeopleTools Database Objects .....	213
Updating Select PeopleTools Patch Database Objects .....	215
Merging the PeopleTools Projects .....	215
Altering PeopleTools Tables .....	216
Updating PeopleTools Database Objects .....	219
Deleting Obsolete PeopleTools Database Objects .....	221
Applying Patched PeopleTools Database Objects .....	223
Migrating Records to New Tablespaces .....	223
Updating PeopleTools System Data .....	229
Running PeopleTools Conversions .....	233
Converting Integration Broker .....	238
Running Additional PeopleTools Conversions .....	240
Running the DB2 RUNSTATS Utility .....	240
Creating PeopleSoft Views .....	240
Understanding PeopleSoft Views .....	240
Creating Views in Data Mover .....	241
Creating Views in Application Designer .....	241
Building Temporary Tables .....	244
Understanding Temporary Tables .....	245
Running SQR SETSPACE.SQR .....	245
Correcting Invalid Database/Tablespace Combinations .....	246
Setting the Number of Temporary Tables .....	247
Using the Volatile Table Attribute .....	247
Building the Temporary Tables and Their Indexes .....	248
Creating PeopleSoft Triggers .....	251
Understanding PeopleSoft Triggers .....	251
Creating Triggers in Data Mover .....	251
Creating Triggers in Application Designer .....	251
Running Additional Data Mover Scripts .....	254
Cleaning Up Orphaned Language Data .....	255
Running SQR Reports .....	255
Understanding Running SQR Reports .....	255
Binding the dbcalls.bnd .....	256
Running SQRs on the Client Workstation .....	256

Creating a Shortcut to Run SQRs .....	258
Updating PeopleSoft System Tables .....	259
Understanding PeopleSoft System Tables .....	259
Updating PeopleSoft System Tables .....	259
Binding DB2 Plans .....	259
Running VERSION Application Engine Program .....	260
Changing the Base Language .....	260
Checking the Database .....	260
Running Alter Audit .....	261
Disabling %UpdateStats .....	266

## Chapter 8A

<b>Configuring the Application Server on Windows .....</b>	<b>267</b>
Understanding the Application Server .....	267
Prerequisites .....	268
Creating a Wallet for the SSL/TLS Setup .....	269
Using the Delivered Wallet .....	269
Creating a Wallet with OpenSSL .....	269
Preparing the Application Server File System for a PeopleTools-Only Upgrade .....	273
Setting Up COBOL for Remote Call .....	273
Verifying Database Connectivity .....	273
Creating, Configuring, and Starting an Initial Application Server Domain .....	273
Creating, Configuring, and Starting the Application Server Domain .....	274
Testing the Three-Tier Connection .....	279
Importing an Existing Application Server Domain Configuration .....	280
Setting Up a Custom Application Server Domain Configuration .....	283
Troubleshooting Common Errors .....	285

## Chapter 8B

<b>Configuring the Application Server on UNIX .....</b>	<b>287</b>
Understanding the Application Server .....	287
Understanding the Application Server Domain Processes .....	288
Prerequisites .....	288
Creating a Wallet for the SSL/TLS Setup .....	289
Using the Delivered Wallet .....	289
Creating a Wallet with OpenSSL .....	289
Preparing the Application Server File System for a PeopleTools-Only Upgrade .....	293
Setting Environment Variables .....	293
Setting Up COBOL for Remote Call .....	294
Verifying Database Connectivity .....	294

Creating, Configuring, and Starting an Initial Application Server Domain ..... 294

    Creating, Configuring, and Starting the Application Server Domain ..... 294

    Testing the Three-Tier Connection ..... 299

    Importing an Existing Application Server Domain Configuration ..... 301

    Setting Up a Custom Application Server Domain Configuration ..... 303

    Troubleshooting Common Errors ..... 305

**Chapter 9A**

**Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode ..... 307**

Understanding PeopleSoft Pure Internet Architecture ..... 307

Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation ..... 309

Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade ..... 310

Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in GUI Mode ..... 310

    Prerequisites ..... 311

    Installing the PeopleSoft Pure Internet Architecture on a New Oracle WebLogic Domain ..... 311

    Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain ..... 326

    Uninstalling the PeopleSoft Pure Internet Architecture on Oracle WebLogic ..... 342

Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in GUI Mode ..... 342

    Prerequisites ..... 343

    Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere ..... 343

    Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere ..... 362

Testing and Administering the PeopleSoft Pure Internet Architecture Installation ..... 363

    Verifying the PeopleSoft Pure Internet Architecture Installation ..... 363

    Starting and Stopping Oracle WebLogic ..... 364

    Starting and Stopping IBM WebSphere Application Servers ..... 365

    Using PSADMIN to Start and Stop Web Servers ..... 368

    Accessing the PeopleSoft Signon ..... 370

Completing Post-Installation Steps ..... 372

    Using Fluid User Interface ..... 372

    Setting Options for Multilingual Databases ..... 375

    Updating PeopleTools Options ..... 376

    Updating Time Zone Information ..... 376

    Updating Database Information ..... 377

**Chapter 9B**

**Setting Up the PeopleSoft Pure Internet Architecture in Console Mode ..... 379**

Understanding PeopleSoft Pure Internet Architecture ..... 379

Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation ..... 381

Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade ..... 382

Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in Console Mode ..... 382

Prerequisites .....	383
Installing the PeopleSoft Pure Internet Architecture on a New Oracle WebLogic Domain in Console Mode . 383	
Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain in Console Mode .....	388
Uninstalling the PeopleSoft Pure Internet Architecture from Oracle WebLogic .....	394
Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in Console Mode .....	394
Prerequisites .....	394
Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server ND .....	395
Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere .....	399
Installing the PeopleSoft Pure Internet Architecture in Silent Mode .....	400
Understanding the Silent Installation and the Response File .....	400
Editing the Response File .....	400
Running the Silent Mode Installation .....	403
Testing and Administering the PeopleSoft Pure Internet Architecture Installation .....	403
Verifying the PeopleSoft Pure Internet Architecture Installation .....	404
Starting and Stopping Oracle WebLogic .....	404
Starting and Stopping IBM WebSphere Application Servers .....	405
Using PSADMIN to Start and Stop Web Servers .....	408
Accessing the PeopleSoft Signon .....	410
Completing Post-Installation Steps .....	412
Using Fluid User Interface .....	412
Setting Options for Multilingual Databases .....	415
Updating PeopleTools Options .....	416
Updating Time Zone Information .....	416
Updating Database Information .....	417
<b>Chapter 10A</b>	
<b>Setting Up Process Scheduler on Windows .....</b>	<b>419</b>
Prerequisites .....	419
Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade .....	420
Setting Up Process Scheduler Security .....	420
Understanding Process Scheduler Security .....	420
Changing User Account to Start ORACLE ProcMGR V12.2.2.0.0_VS2015 .....	421
Granting Process Scheduler Administrative Rights .....	423
Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository .....	424
Understanding Report Distribution .....	425
Setting Up Single Signon to Navigate from PIA to Report Repository .....	427
Determining the Transfer Protocol .....	427
Starting the Distribution Agent .....	428
Setting Up the Report Repository .....	428
Setting Up the Distribution for Your Process Scheduler Server .....	445

Setting Up Sending and Receiving of Report Folders in the Report Manager ..... 446

Setting Environment Variables ..... 446

Setting Up Process Scheduler Server Agent ..... 446

    Understanding Process Scheduler Server Agent ..... 447

    Creating and Configuring a Process Scheduler Server ..... 447

    Reconfiguring a Process Scheduler Server ..... 452

    Verifying the Process Scheduler Server Status ..... 454

Starting Process Scheduler as a Windows Service (Optional) ..... 455

Configuring the Process Scheduler for Microsoft Word (Optional) ..... 458

    Configuring Process Scheduler ..... 458

    Executing Winword on Mapped Drive ..... 460

Configuring Setup Manager ..... 461

Installing Products for PS/nVision ..... 462

    Understanding the PS/nVision Setup ..... 463

    Installing Products for PS/nVision in Excel Automation Mode ..... 463

    Installing Microsoft .NET Framework 4.6.1 ..... 463

    Installing Microsoft Open XML SDK for PS/nVision ..... 464

**Chapter 10B**

**Setting Up Process Scheduler on UNIX ..... 469**

Prerequisites ..... 469

Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade ..... 470

Setting Up Process Scheduler Security ..... 470

    Understanding Process Scheduler Security ..... 470

    Granting Process Scheduler Administrative Rights ..... 470

Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository ..... 471

    Understanding Report Distribution ..... 472

    Setting Up Single Signon to Navigate from PIA to Report Repository ..... 474

    Determining the Transfer Protocol ..... 474

    Starting the Distribution Agent ..... 475

    Setting Up the Report Repository ..... 475

    Setting Up the Distribution for Your Process Scheduler Server ..... 490

    Setting Up Sending and Receiving of Report Folders in the Report Manager ..... 491

Setting Up Process Scheduler Server Agent ..... 491

    Understanding Process Scheduler Server Agent ..... 491

    Changing the Default Operating System ..... 492

    Creating and Configuring a Process Scheduler Server ..... 492

    Reconfiguring a Process Scheduler Server ..... 497

    Verifying the Process Scheduler Server Status ..... 499



**Chapter 10C**

<b>Setting Up Process Scheduler on z/OS .....</b>	<b>501</b>
Prerequisites .....	501
Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade .....	502
Granting Required Authorization in DB2 and UNIX System Services .....	502
Setting UNIX System Services Authorization .....	503
Setting DB2 Authorization .....	504
Setting Up Process Scheduler Security .....	505
Understanding Process Scheduler Security .....	505
Granting Process Scheduler Administrative Rights .....	505
Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository .....	506
Understanding Report Distribution .....	507
Setting Up Single Signon to Navigate from PIA to Report Repository .....	509
Determining the Transfer Protocol .....	509
Starting the Distribution Agent .....	510
Setting Up the Report Repository .....	510
Setting Up the Distribution for Your Process Scheduler Server .....	520
Setting Up Sending and Receiving of Report Folders in the Report Manager .....	521
Setting Up Process Scheduler Server Agent .....	521
Understanding Process Scheduler Server Agent .....	522
Changing the Default Operating System .....	522
Setting Up Your Environment .....	522
Validating and Editing the ODBC Initialization File .....	523
Creating a Process Scheduler Server .....	523
Configuring Process Scheduler Server .....	524
Working with Shell JCL Templates .....	529
Starting a Process Scheduler Server .....	535
Verifying the Process Scheduler Server Status .....	536
Stopping the Process Scheduler Server .....	536

<b>Part II .....</b>	<b>539</b>
Discretionary Installation .....	539

**Chapter 11A**

<b>Installing and Compiling COBOL on Windows .....</b>	<b>541</b>
Understanding COBOL .....	541
Prerequisites .....	542
Preparing COBOL for a PeopleTools-only Upgrade .....	542

Installing Micro Focus Net Express on Microsoft Windows .....	542
Prerequisites .....	542
Obtaining Installation Files for Micro Focus Net Express from Oracle Software Delivery Cloud .....	543
Installing Micro Focus Net Express Wrap Pack 6 .....	544
Installing Micro Focus Net Express Wrap Pack 14 .....	555
Managing Micro Focus Net Express Compiler Licenses .....	560
Understanding Micro Focus Net Express Compiler Licenses .....	560
Configuring a Full License with the License Server .....	561
Configuring a Timed License with the License Server .....	571
Revoking the License Using the License Management System .....	578
Revoking the License by Removing the Installation .....	580
Using the Micro Focus COBOL Compiler on Microsoft Windows .....	582
Understanding COBOL Compilation .....	583
Compiling COBOL on Microsoft Windows with a PS_HOME Setup .....	583
Compiling COBOL on Microsoft Windows with a PS_CUST_HOME Setup .....	587
Recompiling COBOL on Microsoft Windows .....	592
Setting Up the Micro Focus Net Express Runtime .....	592
Defining the GNT and INT Files .....	594
Distributing COBOL Binaries .....	595
<b>Chapter 11B</b>	
<b>Installing and Compiling COBOL on UNIX .....</b>	<b>597</b>
Understanding COBOL .....	597
Prerequisites .....	598
Preparing COBOL for a PeopleTools-only Upgrade .....	598
Installing Micro Focus Server Express for UNIX and Linux .....	598
Understanding Micro Focus Server Express .....	598
Prerequisites .....	599
Obtaining the Installation Files for Micro Focus Server Express from Oracle Software Delivery Cloud .....	600
Installing Micro Focus Server Express .....	600
Using the Micro Focus COBOL Compiler on UNIX .....	606
Understanding COBOL Compilation .....	606
Modifying the Liblist64 File (IBM AIX) .....	607
Compiling COBOL on UNIX with a PS_HOME Setup .....	607
Compiling COBOL on UNIX with a PS_CUST_HOME Setup .....	608
Linking COBOL .....	609
Recompiling COBOL on UNIX .....	610
Installing IBM COBOL on IBM AIX .....	610
Understanding the IBM COBOL for AIX Installation .....	610
Prerequisites .....	611
Installing IBM COBOL for AIX v4.1.1.1 .....	611

Using the IBM COBOL Compiler on IBM AIX ..... 613

    Setting Environment Variables for IBM COBOL ..... 613

    Compiling COBOL on AIX with a PS\_HOME Setup ..... 614

    Troubleshooting the IBM COBOL Compiler ..... 615

    Setting Up the IBM COBOL Runtime ..... 619

    Removing the IBM COBOL Installation ..... 623

**Chapter 12**

**Installing PeopleSoft Change Assistant ..... 627**

Understanding PeopleSoft Change Assistant ..... 627

Removing or Upgrading PeopleSoft Change Assistant Installations ..... 628

    Removing PeopleSoft Change Assistant Installations from Previous Releases ..... 628

    Removing PeopleSoft Change Assistant Instances in the Current Release ..... 628

    Upgrading PeopleSoft Change Assistant Instances ..... 632

Installing PeopleSoft Change Assistant in GUI Mode ..... 636

Installing PeopleSoft Change Assistant in Silent Mode ..... 643

    Understanding Silent Mode for PeopleSoft Change Assistant ..... 644

    Using the Silent Mode Script ..... 644

Configuring and Using PeopleSoft Change Assistant ..... 645

    Verifying the Path Variable ..... 645

    Specifying Options ..... 645

    Scanning the Workstation ..... 646

    Exporting Jobs to XML, HTML, or Microsoft Excel Format ..... 646

Validating Change Assistant Settings ..... 646

**Chapter 13**

**Installing PeopleSoft Change Impact Analyzer ..... 649**

Prerequisites ..... 649

Removing PeopleSoft Change Impact Analyzer Installations ..... 649

Installing PeopleSoft Change Impact Analyzer ..... 652

Installing and Removing PeopleSoft Change Impact Analyzer in Silent Mode ..... 658

    Understanding Silent Mode for PeopleSoft Change Impact Analyzer ..... 658

    Installing PeopleSoft Change Impact Analyzer in Silent Mode ..... 659

    Removing the PeopleSoft Change Impact Analyzer Installation in Silent Mode ..... 660

    Removing and Installing PeopleSoft Change Impact Analyzer in Silent Mode ..... 660

**Chapter 14**

**Adding New Product Modules ..... 663**

Adding New Modules to PeopleSoft 8.4 Installations ..... 663

**Chapter 15**

**Installing and Configuring DB2 Connect ..... 665**

Understanding DB2 Connect ..... 665

Verifying Supported Versions ..... 666

Defining DB2 Connect Architecture ..... 666

    Understanding DB2 Connect Architecture ..... 666

    Using DB2 Connect Enterprise Edition ..... 667

    Using DB2 Connect Personal Edition ..... 668

    Defining PeopleSoft Three-Tier Configuration with DB2 Connect ..... 668

Setting Up DDF on the Mainframe ..... 669

Configuring TCP/IP on the Client ..... 670

Configuring the DB2 Connect Gateway on Windows ..... 671

    Configuring Database Connectivity on Clients with DB2 Connect Version 9.x or Earlier ..... 672

    Configuring Database Connectivity on Clients with DB2 Connect Version 10.x or Later ..... 682

    Configuring an ODBC Data Source for Connectivity on Microsoft Windows (Optional) ..... 683

Binding DB2 Connect Packages for an EBCDIC Installation ..... 684

Binding DB2 Connect Packages for a Unicode Installation ..... 688

Binding DB2 Connect Packages for DB2 Connect Version 10 or later ..... 697

Setting DB2CodePage for a Unicode Database ..... 697

Setting Up the DB2 Connect Gateway on UNIX ..... 698

Confirming DB2 Connect/ODBC Settings ..... 698

Setting CLI/ODBC Trace with the Client Configuration Assistant ..... 700

**Chapter 16**

**Installing PeopleSoft Online Help ..... 703**

Understanding PeopleSoft Online Help (PeopleBooks) ..... 703

Using the PeopleSoft Online Help Web Site for Context-Sensitive Help ..... 704

    Understanding the PeopleSoft Online Help Web Site ..... 704

    Setting Up Context-Sensitive Help with the PeopleSoft Online Help Web Site ..... 704

    Setting Up F1 Help with the PeopleSoft Online Help Web Site ..... 707

Configuring Context-Sensitive Help with Local Installations ..... 707

    Enabling the Help Link from the Application Pages with Local Installations ..... 707

    Enabling F1 Help with Local Installations ..... 708

    Creating the Help Index for Multi-Product Installations ..... 708

**Chapter 17**

**Installing Software for PS/nVision Drilldowns ..... 711**

Understanding PS/nVision DrillDown Add-ins ..... 711

Installing the DrillToPIA Add-In .....	712
Understanding Drilldown with DrillToPIA Add-in .....	712
Installing the DrillToPIA Add-in on the Microsoft Excel Environment .....	712
Installing the nVisionDrill Add-In .....	713
Understanding PS/nVision DrillDown Using Web Services .....	713
Understanding Security for DrillDown Using nVisionDrill VSTO Add-in .....	713
Installing the nVisionDrill Add-in for Microsoft Excel .....	713
Installing the nVisionDrill Add-Ins for Multi-Language Installations .....	714
Setting Up PeopleSoft Integration Broker for Using Web Service Capability with nVisionDrill Add-in .....	714

## Chapter 18

<b>Installing Web Application Deployment Tools .....</b>	<b>719</b>
Prerequisites .....	719
Installing the Web Application Deployment Tool on Oracle WebLogic in GUI Mode .....	720
Installing the Web Application Deployment Tool on IBM WebSphere in GUI Mode .....	733
Installing the Web Application Deployment Tool on Oracle WebLogic in Console Mode .....	745
Installing the Web Application Deployment Tool on IBM WebSphere in Console Mode .....	749
Installing the Web Application Deployment Tool in Silent Mode .....	753
Understanding the Web Application Deployment Tool Silent Mode Installation and the Response File .....	753
Editing the Web Application Deployment Tool Response File to Deploy DES .....	754
Running the Web Application Deployment Tool Silent Mode Installation to Deploy DES .....	755
Testing and Troubleshooting the Web Application Deployment .....	756

## Chapter 19

<b>Setting Up a Unicode Database .....</b>	<b>757</b>
Prerequisites .....	757
Defining Conversion Pages for Unicode Conversion Services .....	757
Fulfilling Connectivity Requirements .....	758

## Appendix A

<b>Extracting DDL for PTSYS Database .....</b>	<b>759</b>
Understanding the PTGENDDL.DMS Script .....	759
Using the PTGENDDL.DMS Script .....	759

## Appendix B

<b>Using the PeopleSoft Tablespace DDL Automation Assistance Tool .....</b>	<b>769</b>
Understanding the PeopleSoft Tablespace DDL Automation Assistance Tool .....	769
Understanding PSTAAT Workstation Requirements .....	770

Understanding the PSTAAT Graphical User Interface ..... 770

Understanding the Various PSTAAT Input and Output Files ..... 781

Using PSTAAT to Create TBDDL and IXDDL ..... 785

Using PSTAAT to Customize DDL ..... 790

    Understanding How PSTAAT Assigns an Object Naming Convention ..... 790

    Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database ..... 790

    Using the New Name Parameter to Override Tablespace Name ..... 791

    Customizing DDL Scripts ..... 792

    Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation With PSTAAT ..... 793

    Using PSTAAT to Override the Default Bufferpool Assignment ..... 795

    Using PSTAAT to Override the Default Segment Size ..... 796

    Validating Input ..... 797

Using PSTAAT to Reassign Temporary Tables to Additional Tablespaces ..... 799

Using PSTAAT to Isolate Other Tables to Individual Tablespaces ..... 803

Using PSTAAT to Convert EBCDIC DDL to Unicode DDL ..... 804

    Understanding the EBCDIC DDL to Unicode DDL Conversion ..... 804

    Creating Database, Tablespace, and Table Shell DDL for an EBCDIC to Unicode Database Conversion ... 805

Using PSTAAT to Install PeopleSoft Databases ..... 809

**Appendix C**

**Describing Debugger Requirements ..... 811**

Describing Debugger Requirements for the AIX Operating System ..... 811

Describing Debugger Requirements for the HP-UX Operating System ..... 811

Describing Debugger Requirements for the Linux Operating System ..... 811

Describing Debugger Requirements for the Oracle Solaris Operating System ..... 812

Describing Debugger Requirements for the z/OS Operating System ..... 812

# About This Documentation

This preface discusses:

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

## Understanding This Documentation

---

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

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

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.
<i>Italics</i>	Indicates field values, emphasis, and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example:  Enter the letter <i>O</i> .  Italics are also used to indicate user-supplied information. For example, the term <i>domain</i> is used as a placeholder for the actual domain name in the user's environment. When two such placeholders are used together, they may be set apart with angle brackets. For example, the path <code>&lt;PS_CFG_HOME&gt;/appserv/&lt;domain&gt;</code> includes two placeholders that require user-supplied information.
Initial Caps	Field names, commands, and processes are represented as they appear on the window, menu, or page.
lower case	File or directory names are represented in lower case, unless they appear otherwise on the interface.
Menu, Page	A comma (,) between menu and page references indicates that the page exists on the menu. For example, "Select Use, Process Definitions" indicates that you can select the Process Definitions page from the Use menu.
Cross-references	Cross-references that begin with <i>See</i> refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation.  Cross-references under the heading <i>See Also</i> refer you to additional documentation that has more information regarding the subject.



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.
<b>Note.</b> Note text.	Text that begins with <i>Note</i> . indicates information that you should pay particular attention to as you work with your PeopleSoft system.
<b>Important!</b> Important note text.	A note that begins with <i>Important!</i> is crucial and includes information about what you need to do for the system to function properly.
<b>Warning!</b> Warning text.	A note that begins with <i>Warning!</i> contains 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 Installation
- Using Oracle Software Delivery Cloud to Obtain Installation Files
- Considering Project Planning
- Planning Your Initial Configuration
- Planning Database Creation
- Planning Multilingual Strategy
- Preparing for the PeopleTools-Only Upgrade
- Reviewing Patches and Updates Required at Installation
- Verifying Database Server Sizing
- Defining DB2 for z/OS Subsystem Configuration
- Installing Supporting Applications
- Setting Up Database Connectivity
- Using Connect ID
- Setting Up z/OS User IDs
- Performing Backups
- Using PeopleSoft Change Assistant and PeopleSoft Change Impact Analyzer

## **Understanding the PeopleSoft Installation**

---

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

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

---

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

---

- Use the My Oracle Support Certifications area to determine the latest certified versions of additional components, such as Oracle Tuxedo or IBM WebSphere, which are supported for the PeopleSoft PeopleTools release you are installing.
- If you will be upgrading your current release after you perform this installation, you also need to install Change Assistant. The page on My Oracle Support containing your upgrade documentation and files includes information on which tool you need.
- For critical issues related to the installation process, see the My Oracle Support web site. Be sure to read the "Required for Installation or Upgrade" incidents on the Patches and Updates page for the PeopleSoft PeopleTools version that you are installing.
- For online technical support information, use the My Oracle Support web site. My Oracle Support includes tools for self-directed searches of information including reference documents and problem resolutions, as well as service request management tools.  
See My Oracle Support, <https://support.oracle.com>.
- To download software and documentation, use the Oracle Software Delivery Cloud portal, and the Oracle Technology Network.  
See Oracle Software Delivery Cloud, <http://edelivery.oracle.com>.  
See Oracle Technology Network, <http://www.oracle.com/technetwork/index.html>.
- Be aware that not all application releases are certified and supported to run on all PeopleSoft PeopleTools releases. Check the PeopleSoft policy information in article ID 1348959.1 on My Oracle Support for further details on the support policy for your particular application. If you are planning to do a PeopleTools-Only upgrade, do not continue until you have verified that your application is supported on the target PeopleSoft PeopleTools release.
- This installation guide may refer you to other PeopleSoft documentation resources for more information or instructions. You can access Oracle's PeopleSoft Hosted Documentation online during the installation process. For PeopleSoft PeopleTools 8.53 and later, you also have the option to install PeopleSoft Online Help documentation, a dynamic, interactive, accessible HTML version of the documentation formerly known as "PeopleBooks."
- Oracle recommends that you use the PeopleSoft deployment packages (DPKs) for your PeopleSoft installation. The DPKs deliver pre-installed PeopleSoft components, which can be installed on virtualization platforms as well as directly on traditional, non-virtual machines ("bare-metal").

## See Also

"Installing PeopleSoft Online Help"

Oracle's PeopleSoft Hosted Documentation, <http://www.peoplesoftonlinehelp.com>

"Installing PeopleSoft Change Assistant"

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

---

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

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

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

---

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

---

### See Also

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

## Task 1-2: Considering Project Planning

---

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

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

## Task 1-3: 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 Batch Server

- Defining Installation Locations
  - Defining the Web Server
  - Using Laser Printers
- 

**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

This section discusses:

- Using the PeopleTools Development Environment (Microsoft Windows-Based Clients)
  - Using Workstations Equipped with Supported Web Browsers
- 

**Note.** With the PeopleSoft Pure Internet Architecture, Microsoft Windows-based clients are primarily used as a development environment. End users can use any machine equipped with a supported web browser.

---

### 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 1-3-1: 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.

The PeopleSoft installer for the PeopleTools Client is included as part of the PeopleSoft PeopleTools installation. 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 "Using the PeopleSoft Installer," Installing the PeopleTools Client Files.

## Task 1-3-2: 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.

---

For DB2 z/OS, the file server is used as a staging location to FTP files to the z/OS batch server only. If you are installing a file server on DB2 z/OS, when running the PeopleSoft Installer, you need to select *all* PeopleSoft Servers. This will ensure that all of the files needed by Server Transfer are installed to the PeopleSoft File Server.

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 1-3-3: 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.

---

**Note.** If possible, you may want to separate your PeopleSoft applications into their own subsystem away from other applications. Most sites have separate subsystems for production, development, and testing.

---

## Task 1-3-4: 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.

When installing the PeopleSoft software on the z/OS mainframe, you must install one or more dedicated UNIX or Windows application servers. You should plan to connect the application server to the database using the highest bandwidth connection available.

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 1-3-5: Defining the 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.

For the DB2 z/OS batch server on the mainframe, the SQR and COBOL files must be transferred from the file server, and COBOL source files must be compiled.

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

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

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

### See Also

*PeopleTools: Process Scheduler*

## Task 1-3-6: Defining Installation Locations

This section discusses:

- Understanding Installation Locations
- Defining PS\_HOME
- Defining PS\_CFG\_HOME

- Defining PS\_CUST\_HOME
- Defining PIA\_HOME

## 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 PS\_HOME

The *PS\_HOME* directory holds the PeopleSoft PeopleTools files. The way that you specify the other installation locations discussed in the following sections will determine whether other files are installed in *PS\_HOME* or elsewhere.

See "Using the PeopleSoft Installer."

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.
- An administrator can do an installation where all PeopleTools, PeopleSoft application, and customized files reside in the same location. That is, the paths for *PS\_HOME*, *PS\_APP\_HOME*, and *PS\_CUST\_HOME* are the same. The administrator can then copy and paste *PS\_HOME* to different locations with no requirement to duplicate the original file path. This scenario requires a *PS\_CFG\_HOME* location that is separate from *PS\_HOME*, *PS\_APP\_HOME* and *PS\_CUST\_HOME*.
- Several Application Server, PIA, and Process Scheduler domains can use the same *PS\_HOME*.

## 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

When you use the PSADMIN utility, the system creates the *PS\_CFG\_HOME* directory based upon environment variables associated with the current user. This table lists the user environment variable and default directory by operating system:

Operating System	User Environment Variable	PS_CFG_HOME Default Location
UNIX	HOME	\$HOME/psft/pt/<peopletools_version>
Microsoft Windows	USERPROFILE	%USERPROFILE%\psft\pt\ <peopletools_version>

For example, if USERPROFILE is C:\Documents and Settings\asmith and the PeopleTools version is 8.56, by default *PS\_CFG\_HOME* would be C:\Documents and Settings\asmith\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.

---

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. To take advantage of this flexibility, you have the option to specify a different location by setting a *PS\_CFG\_HOME* environment variable. Before doing so, however, see the *PeopleTools: System and Server Administration* product documentation for a more complete explanation of working with *PS\_CFG\_HOME*.

## Defining PS\_CUST\_HOME

The *PS\_CUST\_HOME* location holds customized file system objects.

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\_HOME* upon which it is based. For example, when you install your PeopleSoft application, the directory structure includes SQR scripts in *PS\_HOME/sqr*. If you have customized SQR scripts, you would place them in *PS\_CUST\_HOME/sqr*.

If a value is not assigned for the *PS\_CUST\_HOME* environment variable it assumes the default value of *PS\_HOME*. This location is sometimes referred to as "Cust Home."

For information on setting up and using *PS\_CUST\_HOME*, see the information on working with *PS\_CUST\_HOME* in the product documentation *PeopleTools: System and Server Administration*.

## 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 setting the environment variable *PS\_CFG\_HOME*.

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

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

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 1-3-7: 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

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 1-3-8: Using Laser Printers

Along with the printer you will need a Windows printer driver to print the online reports that produce 180-character-wide reports using the HP LinePrinter font. Your printer must be configured with sufficient memory (typically 1.5 MB) to produce graphics images for page printouts.

### See Also

My Oracle Support, Certifications

## Task 1-4: Planning Database Creation

---

This section discusses:

- Understanding Database Creation
- Using Multiple Databases
- Determining Databases and Database Names
- Using Standard Database Names
- Choosing Owner ID Processing Option

## 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.

The System and Demo PeopleSoft databases are installed using a *multiple-database strategy*, where the "logical" PeopleSoft database actually comprises multiple "physical" databases that share a common DB2 *owner ID*. This is explained in more detail in the following section.

### Task 1-4-1: Using Multiple Databases

To facilitate optimal performance and minimal use of shared mainframe resources, Oracle employs a multiple-database strategy on DB2 z/OS. Oracle uses multiple DB2 databases for installing both Demo and System PeopleSoft databases.

This multiple-database strategy provides the following benefits:

- Reducing database descriptor (DBD) size improves performance by easing virtual storage constraints.
- Avoids exceeding the DB2 restriction limiting DBD size to no more than 25 percent of environmental descriptor manager (EDM) pool size.
- Improves DDL concurrency in certain PeopleSoft operations.

For instance, when Process Scheduler is invoked, it holds share locks on the DBD of the database where the Process Scheduler tables are located. Isolating these tables to their own database avoids potential lockouts of other processes running concurrently with Process Scheduler.

The installation process creates all of the DB2 objects with the same DB2 owner ID. The PeopleSoft reference to this owner ID equates to the CREATOR field found in the SYSIBM SYSTABLES Catalog table. A PeopleSoft database is a logical concept that includes all of the PeopleSoft objects and application data belonging to a single PeopleSoft product line sharing the same owner ID, distributed across multiple physical DB2 databases. The owner ID common to all of these objects is stored in the PeopleSoft PeopleTools tables PS.PSDBOWNER and PSSTATUS. The DB2 owner ID and its use in the PeopleSoft system is discussed in the section Choosing Owner ID Processing Options.

Oracle defines a standard set of DB2 databases for each product line in a DDL script that you will be instructed to edit and run in the "Creating a Database" chapter.

### Task 1-4-2: 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 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.

The PeopleSoft System and Demo databases are delivered with a seven-character database name that serves two functions. It serves as:

- The name of the PeopleSoft logical database (which, for the System and Demo databases is actually composed of multiple DB2 databases).
- The seven-character name of the "root" physical DB2 database, from which the names of the additional physical DB2 databases that comprise the single PeopleSoft logical database are derived.

The DB2 database naming convention is explained in more detail in the following section, Using Standard Database Names.

### Task 1-4-3: Using Standard Database Names

The PeopleSoft database naming convention for DB2 z/OS uses one seven-character DB2 database name for a database containing all of the PeopleSoft system tables except for tables used by Process Scheduler. We refer to this database as the *root* database. A second database name with an eighth character of *T* is reserved just for Process Scheduler due to persistent share locks. The remaining DB2 database names have an eighth character, appended to the root database name, identifying a specific application group within a PeopleSoft product line.

Later in this guide, you will run a Data Mover Import script that requires you to select a database name to identify this PeopleSoft database. This database name is actually nothing more than a label that serves two purposes. It enables the DB2 Connect connectivity software to identify the appropriate configuration to connect to your DB2 subsystem, and it is the high-level key on the table PS.PSDBOWNER from which the owner ID of the objects in the PeopleSoft database is derived during the sign-on process. When users sign on to a PeopleSoft database from a client workstation, they enter this database name in the PeopleSoft sign-on panel. The database name must be catalogued in the IBM DB2 Connect connectivity software in order to complete the database connection.

See "Creating a Database."

### Task 1-4-4: Choosing Owner ID Processing Option

This section discusses:

- Understanding Owner ID Processing
- Using Primary Authorization ID Processing
- Using Secondary Authorization ID Processing

### Understanding Owner ID Processing

This section summarizes the relationship between the PeopleSoft access ID and the DB2 owner ID. Other PeopleSoft IDs, such as the connect ID, are discussed later in this chapter. For more information on the various PeopleSoft authorization IDs, see the *PeopleTools: Security Administration* product documentation. The owner ID is a DB2 z/OS concept and owns the DB2 tables and views. For information on DB2 z/OS security, see the IBM DB2 documentation.

---

**Note.** Refer to the DB2 z/OS 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.

---

Each PeopleSoft database that you create must have a valid DB2 owner ID. All of the objects in a PeopleSoft database will share the same owner ID. Besides being found in the CREATOR field of the SYSIBM system catalog tables, such as SYSIBM.SYSTABLES, this value is stored in the OwnerID field of the PS.PSDBOWNER and PSSTATUS PeopleSoft PeopleTools tables.

Oracle recommends that you not use an owner ID used by a non-PeopleSoft application, because this can create problems when auditing your database.



There are two security-related processing options to choose from when establishing the owner ID:

- Primary authorization ID processing
- Secondary authorization ID processing

The PeopleSoft installation uses various authorization IDs and passwords to control user access, including user ID, access ID, and connect ID. The PeopleSoft access ID is directly linked to the decision to use primary or secondary authorization ID processing. Functionally, this is the ID that has the DB2 access and authorities to perform the bulk of the SQL processing within the PeopleSoft database. Individual PeopleSoft user IDs would not be granted the level of DB2 authority that the access ID possesses. There will either be a direct relationship between the name of the PeopleSoft access ID and the DB2 owner ID, or an indirect one, depending on which authorization method is chosen.

## Using Primary Authorization ID Processing

The primary authorization ID is the simplest implementation of table ownership. The primary authorization ID and the DB2 owner ID of the PeopleSoft database objects are the same ID. In this option, the owner ID defined in DB2 will be the same name as the PeopleSoft access ID defined in the PeopleSoft PeopleTools tables. The PeopleSoft access ID is the DB2 owner ID.

The following table summarizes the roles and authorities of the DB2 owner ID, primary and secondary authorization IDs and the access IDs for primary authorization ID processing:

Roles and Authorities	Primary Authorization ID	Secondary Authorization ID
Same ID as DB2 Object Owner ID (CREATOR)	Yes	NA
Database Log On Access	Yes	NA
DB2 Object Access	Yes	NA
Same ID as PeopleSoft Access ID	Yes	NA
SET CURRENT SQLID statement required?	No	NA

## Using Secondary Authorization ID Processing

Most PeopleSoft customers use secondary authorization ID processing to establish an owner ID.

The DB2 owner ID of the PeopleSoft database objects is established as an external security system group, referred to as a "secondary authorization ID," rather than a primary authorization ID. A secondary authorization ID is not given direct logon access to the database, but because it is the DB2 owner ID, it has direct access to the PeopleSoft database objects. Logon access is generally granted to a primary authorization ID, but with secondary authorization ID processing, the primary authorization ID has no direct access to the PeopleSoft database objects.

A primary authorization ID can "transform" itself into the secondary authorization ID by issuing the following SQL command:

```
SET CURRENT SQLID = <secondary authorization ID>
```

Running this command enables the primary authorization ID to acquire all of the database object permissions owned by the secondary authorization ID. The mainframe security maintenance package (for example, RACF, Top Secret, or ACFII) keeps track and monitors what secondary authorization IDs can be used by a primary authorization ID.

When setting up a PeopleSoft application using secondary authorization ID processing, the access ID is established as a primary authorization ID that has the authority to issue a SET CURRENT SQLID statement setting itself equal to the secondary authorization ID.

The following table summarizes the roles and authorities of the DB2 owner ID, primary and secondary authorization IDs and the access IDs for secondary authorization ID processing:

Roles and Authorities	Primary Authorization ID	Secondary Authorization ID
Same ID as DB2 Object Owner ID (CREATOR)	No	Yes
Database Log On Access	Yes	No
DB2 Object Access	No	Yes
Same ID as PeopleSoft Access ID	Yes	No
SET CURRENT SQLID statement required?	Yes	NA

In secondary authorization ID processing, at sign on, PeopleSoft PeopleTools, under authorization of the access ID, issues the SET CURRENT SQLID statement to the DB2 owner ID. This also occurs when you run COBOL on either the client or the host, or when you run SQR on the client or host.

---

**Note.** The access ID *does not* need SYSADM authority to the DB2 subsystem.

---

With SYSADM authority, the access ID may issue a SET CURRENT SQLID statement to any authorization ID. If you do not have SYSADM authority, you may issue SET CURRENT SQLID only to your valid authorization IDs. Your DB2 owner ID has a certain profile in the mainframe security maintenance package (RACF or its equivalent) and that profile contains all your assigned secondary authorization groups, which are used as valid authorization IDs. You can issue SET CURRENT SQLID only to the authorization IDs assigned to you.

The PeopleSoft installation is delivered with secondary authorization groups that are equal to the owner of the tables. The access ID is added to this secondary authorization group, and thus the access ID can issue a SET CURRENT SQLID statement only to the owner of the tables (remember owner = RACF group). Using this approach, it is not necessary to grant SYSADM authority to the access ID. The bottom line is that the access ID must have proper security to issue SET CURRENT SQLID to the owner of the PeopleSoft tables but this does not require SYSADM authority to the DB2 subsystem.

See E-DB2: Mainframe Security and PeopleSoft, My Oracle Support, Doc ID 1060956.1.

## **Task 1-5: Planning Multilingual Strategy**

---

This section discusses:

- Understanding Multilingual Issues
- Choosing a Base Language

- Selecting Additional Languages
- Selecting a Database Character Set

## Understanding Multilingual Issues

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

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

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

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

See [Selecting a Database Character Set](#).

Language Code	Language	Database Character Set
ARA	Arabic	Unicode only
CFR	Canadian French	Unicode recommended
CZE	Czech	Unicode only
DAN	Danish	Unicode recommended
DUT	Dutch	Unicode recommended
ENG	US English	Unicode recommended
FIN	Finnish	Unicode recommended
ESP	Spanish	Unicode recommended
FRA	French	Unicode recommended
GER	German	Unicode recommended

Language Code	Language	Database Character Set
HUN	Hungarian	Unicode only
ITA	Italian	Unicode recommended
JPN	Japanese	Unicode only
KOR	Korean	Unicode only
NOR	Norwegian	Unicode recommended
POL	Polish	Unicode only
POR	Portuguese	Unicode recommended
ROM	Romanian	Unicode only
RUS	Russian	Unicode only
SVE	Swedish	Unicode recommended
THA	Thai	Unicode only
TUR	Turkish	Unicode only
UKE	United Kingdom English	Unicode recommended
ZHS	Simplified Chinese	Unicode only
ZHT	Traditional Chinese	Unicode only

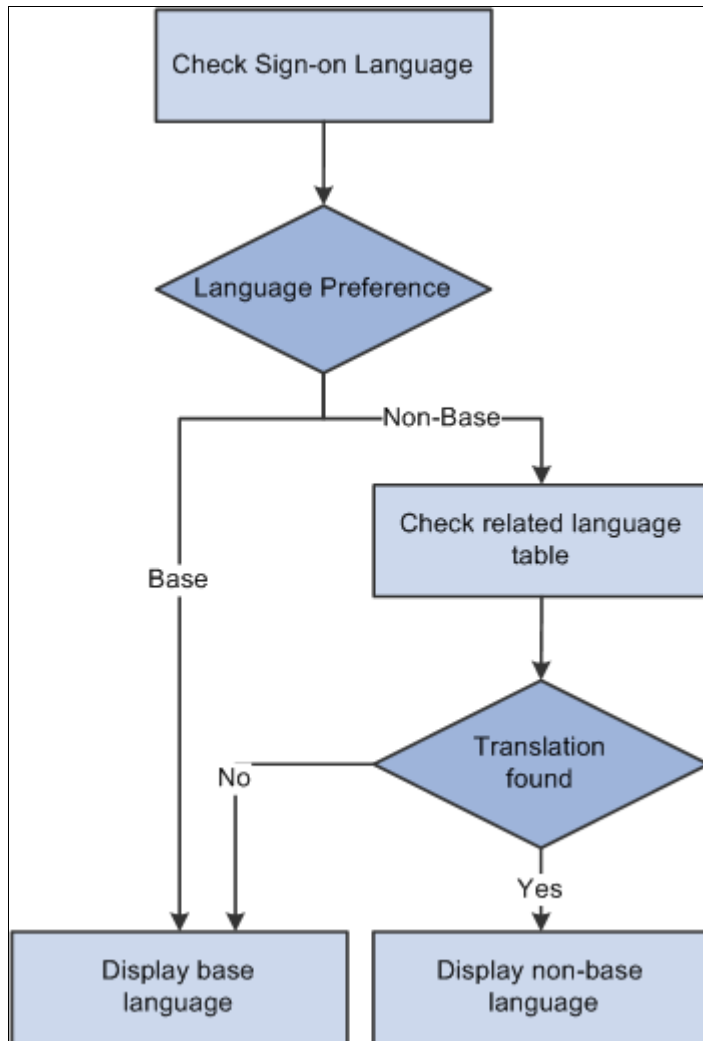
## See Also

*PeopleTools: Global Technology*

## Task 1-5-1: Choosing a Base Language

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

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



Language selection process using the base language and the preferred language

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

## Task 1-5-2: Selecting Additional Languages

Oracle provides translations of all end-user objects with the Global Multi-Language installation files. It is much easier to install additional languages upon initial database creation than to add them later in your implementation process, so we recommend that you choose which additional languages may be required now. There is no limit to the number of languages that can coexist in a single PeopleSoft database; however, remember that each language will require additional storage space, primarily for PeopleSoft PeopleTools objects.

## Task 1-5-3: Selecting a Database Character Set

This section discusses:

- Understanding Character Sets
- Using Unicode Databases

### Understanding Character Sets

Oracle recommends Unicode, but also supports non-Unicode (legacy) code sets, in PeopleSoft databases. Please refer to the discussion of CCSID later in this chapter for further information regarding character sets. See Defining DB2 for z/OS Subsystem Configuration.

The following table lists a selection of the CCSIDs and languages that the PeopleSoft software supports for DB2 for z/OS:

CCSIDs	Languages Supported
CCSID 37	EBCDIC English
CCSID 500	EBCDIC International
CCSID UNICODE	Unicode

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

### Using Unicode Databases

In addition to supporting several legacy character sets, the PeopleSoft software supports creating Unicode databases using DB2 for z/OS New Function Mode. Unicode enables you to maintain data in virtually any modern language in a single database. Prior to Unicode, many languages could not coexist in one database, as they did not share a common character set.

See "Setting Up a Unicode Database."

To create a DB2 for z/OS Unicode database, you must specify the CCSID UNICODE option of the CREATE DATABASE statement.

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

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

See Understanding Multilingual Issues.

See Understanding Character Sets.

## **Task 1-6: Preparing for the PeopleTools-Only Upgrade**

---

This section discusses:

- Understanding the PeopleTools Only Upgrade
- Reviewing the Upgrade Documentation
- Shutting Down Servers
- Reviewing Customized Configuration Files

### **Understanding the PeopleTools Only Upgrade**

As part of a PeopleTools-only upgrade, you will need to use files included in the new PeopleSoft PeopleTools release. For PeopleSoft PeopleTools 8.54 and later, you must install a separate PeopleTools codeline *PS\_HOME* that is different than your old release *PS\_HOME* for use in performing the upgrade. When performing a PeopleTools-only upgrade, prior to the installation of the new release codeline, you will need to perform the tasks described in this section.

### **Task 1-6-1: Reviewing the Upgrade Documentation**

Review *Getting Started on Your PeopleTools Upgrade*, located on the PeopleTools Upgrade Home Page for your new PeopleSoft PeopleTools release. The installation of the new PeopleTools codeline is only part of the upgrade process. After installing the PeopleTools codeline, you will apply the PeopleTools upgrade Change Package to complete the database portion of the upgrade.

#### **See Also**

PeopleSoft PeopleTools Upgrade Home Page for your new release, My Oracle Support

*PeopleTools: Change Assistant and Update Manager*

### **Task 1-6-2: Shutting Down Servers**

Shut down any application servers, web servers, and Process Scheduler servers. Make sure that there are no lingering domain processes from any Application Server domains. Such threads can interfere with successfully installing new application server files. If there are any threads remaining after you shut down the domains, you must manually remove them.

---

**Note.** For IBM AIX, run the *slibclean* utility as the root user to remove unused shared libraries from memory.

---

### Task 1-6-3: Reviewing Customized Configuration Files

If you have any customized configuration files (such as `psappsrv.cfg`, `psconfig.sh`, `pscbl.mak`, `psrun.mak`, and so on), organize and save them in order to have them ready for configuring your new release system. This enables you to preserve any tuned variables. If after finishing the upgrade, you want to install and use a different `PS_HOME` than the one used during the upgrade, then make sure that these customized configuration files are available for use in configuring your new release system.

### Task 1-7: Reviewing Patches and Updates Required at Installation

Before beginning the installation, check the Patches and Updates page on My Oracle Support to identify any patches, updates, or fixes required at installation that you will need to apply, based on the products, product version, and PeopleSoft PeopleTools version that you are installing. Additional instructions for applying the patches and updates may be included within each patch..

Make note of all the patches and updates, and plan to apply them at appropriate stages during the installation procedure. For example, a replacement for a PeopleTools executable would be applied after installing the media pack to the appropriate server, and so on.

---

**Note.** For any patches and updates that require database changes, be sure to read the section on deciding when to apply patches.

See "Creating a Database," Reviewing Patch Application.

---

The following procedure describes how to access the Patches & Updates database. Contact Oracle if you don't have a user ID and password for My Oracle Support.

---

**Note.** The My Oracle Support interface is updated periodically. For information on using the Patches & Updates area, select the Help link at the top of the page.

---

To review patches and updates required at installation:

1. Go to My Oracle Support at <https://support.oracle.com>.
2. Enter your user name and password to log in.

---

**Note.** Be sure to log on, or you will not see all of the menu options.

3. Select Patches & Updates.
4. In the Patch Search section, select the Product or Family (Advanced) link.  
The Search page includes several search filters. Click the plus sign to add additional filters.
5. In the Product drop-down list, select *PeopleSoft Enterprise PT PeopleTools*.

---

**Note.** PeopleSoft products begin with the word *PeopleSoft*.

6. In the Release drop-down list, select the appropriate PeopleSoft PeopleTools release for the patch search.
7. Select Install/Upgrade (PeopleSoft) as a search filter, and select Required at Install from the drop-down list beside it.

---

**Note.** This search filter is only available when you select PeopleSoft products.

8. Click the Search button (Patch Search).



9. Note any PeopleTools patches and updates that apply to your installation.

Open the Read Me documentation to view information about the patch that you choose for your installation.

10. Return to the Patch Search page (or click Edit Search on the results page) and search for any PeopleSoft application-related incidents by selecting the appropriate product or product family, release, and language.

It is strongly recommended that you include Language as a search filter for PeopleSoft application patch searches.

Make sure the Required for Install option is selected and click the Search button (Patch Search).

11. Note any PeopleSoft application-specific patches and updates that apply to your installation.

---

**Note.** Keep in mind that your installation will require additional software components, including web server, report generation, and search software. Be sure to check for updates and patches for any additional component software you install on your environment. Later chapters cover this topic in detail.

---

After this installation, you can upgrade your Java Runtime Engine (JRE) to a newer version without upgrading PeopleTools, as long as the new JRE is certified.

## See Also

PeopleSoft PeopleTools Patches Home Page, My Oracle Support, Doc ID 2062712.2

"Installing Web Server Products"

"Installing Additional Components"

PeopleTools Certifications - Suggested Fixes, My Oracle Support, (search for the article title)

Operating System, RDBMS, and Additional Component Patches Required for Installation PeopleTools, My Oracle Support, (search for the article title)

PeopleSoft Enterprise PeopleTools Certification Table of Contents, My Oracle Support, (search for the article title)

## **Task 1-8: Verifying Database Server Sizing**

---

On your database server, the direct access storage device (DASD) volume(s) making up your storage group(s) should have sufficient space for the demo database. If you plan to substantially increase the size of tables in your demo database, ensure that these volumes have plenty of space, or add additional volumes, so that your file systems have ample space to accommodate growth. You must also alter the primary and secondary quantities of the tablespaces and indexes that you expect to expand. In addition to space requirements, the Database Administrator should verify that ample VTOC directory space is available to avoid problems during installation.

---

**Note.** Because many PeopleSoft tables are delivered empty, they take up no physical space in the tablespace, whereas indexes, even those created on an empty table, require a minimum of one track each.

---

## **Task 1-9: Defining DB2 for z/OS Subsystem Configuration**

---

This section discusses:

- Understanding DB2 Configuration Requirements
- Defining EDM Pool Considerations

- Defining Decimal Arithmetic
- Using DSMAX
- Using CMTSTAT/IDTHTOIN
- Using CCSID and DB2 z/OS Database Storage Encoding Schemes
- Using DECIMAL

## Understanding DB2 Configuration Requirements

The following information provides recommendations for the configuration of the DB2 subsystem that will house the PeopleSoft database. We recommend dedicating a DB2 subsystem to your PeopleSoft application. This will allow you to customize the DB2 ZPARM settings for the subsystem without having an impact on your existing applications.

### Task 1-9-1: Defining EDM Pool Considerations

The PeopleSoft installation procedure places all tables for the product you are installing into multiple physical databases using a shared tablespace methodology. Depending on the applications you are installing, the DB2 subsystem could have a minimum EDM Pool Size of 10 to 30 MB.

If the pool size is too small, the database administrator should either increase it or manually edit the DDL scripts provided to create additional databases. If you use DB2 Dynamic SQL Cache, you will need to increase the EDM pool size. It is difficult to recommend an optimum size for the EDM pool. Like buffer pools, there is a tradeoff between performance and memory usage. It also depends very heavily on the mix of transactions versus batch processes executing at a point in time. Customers traditionally allocate between 50 and 100 MB when Dynamic SQL Cache is enabled.

Place the DB2 Dynamic SQL Cache in a Data Space. This will allow for separating the cache from the EDM pool, which and results in less competition for EDM space. It also allows for a larger Dynamic SQL Cache (up to 2 GB).

### Task 1-9-2: Defining Decimal Arithmetic

Arithmetic operations involving decimal numbers in the PeopleSoft system require a greater decimal precision than earlier versions of PeopleSoft software. DEC31 rules allow a maximum precision of 31 digits in a result rather than only 15. This allows for a greater number of digits in the scale (digits to the right of the decimal), resulting in more accurate calculations, particularly when the "unrestricted" result contains many digits to the right of the decimal. DB2 truncates any digits beyond the calculated scale of the result, without rounding. For example, the number 1.45697, the result of multiplying or dividing another number by 1.456 (assume a scale of 3) will be significantly different from 1.4569 (assume a scale of 4). In addition, in further support of greater accuracy in decimal operations, the PeopleSoft system is utilizing new functionality that permits calculation of a minimum scale of 6 digits in decimal division operations. In prior releases, 3 digits was the maximum, minimum scale.

In past releases, the PeopleSoft system had specific requirements for the DB2 zparms DECARTH, DECDIV3 and MINDVSCL. Through a joint development effort with IBM, functionality has been enhanced to enable control of the functionality provided by these zparms at the DB2 connection level, without impact to other applications running within the same DB2 subsystem.

PeopleSoft code executes the statement *SET CURRENT PRECISION = "D31,6"* for each connection into the database, which will have the effect of running the application in a DB2 subsystem with zparm settings of DECARTH=31 and MINDVSCL=6, overriding what the actual zparm settings may be. DECDIV3 is overridden by MINDVSCL so whether DECDIV3 is YES or NO has no impact on the PeopleSoft application.

### Task 1-9-3: Using DSMAX

To reduce the open and close activity of data sets, it is important to set DSMAX correctly. DSMAX should be larger than the maximum number of data sets that are open and in use at one time. For best performance, leave enough margin in your specification of DSMAX that frequently used CLOSE YES data sets can remain open after they are no longer referenced. If data sets are opened and closed frequently, such as every few seconds, you can improve performance by increasing DSMAX. The maximum value for DSMAX is 100000.

See Important PTFs for PeopleSoft on DB2 for z/OS, My Oracle Support, (search for the article title).

### Task 1-9-4: Using CMTSTAT/IDTHTOIN

We recommend setting the CMTSTAT parameter to INACTIVE and setting the IDTHTOIN parameter to 0 (i.e. the IDTHTOIN zparm is ignored when CMTSTAT=INACTIVE). PeopleSoft two-tier and three-tier environments will function properly regardless of the values of CMTSTAT and IDTHTOIN. CMTSTAT is set in DSNTIPR and it specifies whether to make a thread active or inactive after it successfully commits or rolls back and holds no database locks or cursors. ACTIVE threads use memory resources as well as contributing to the MAXDBAT limit.

### Task 1-9-5: Using CCSID and DB2 z/OS Database Storage Encoding Schemes

PeopleSoft PeopleTools supports only EBCDIC and Unicode data storage encoding schemes (*not* ASCII) on the z/OS database server. Be careful to set the default system encoding scheme (SCCSID as specified in DSNHDECP) in your subsystem for valid EBCDIC translation. PeopleTools Unicode installations will override the SCCSID value by explicitly specifying Unicode as the CCSID when creating the individual databases that will compose a Unicode installation. Consult the DB2 z/OS Installation and SQL Reference guides for assistance in setting the default CCSID for your subsystem.

Note that unexpected results may occur when a binary sort is deployed from, or when the collating sequence on a remote machine is different from the host—such as when running COBOL from a Windows or UNIX based platform, and accessing DB2 for z/OS. In house, PeopleSoft has tested with CCSIDs of 37 and 500. For more information, and especially if you use a CCSID other than 37, consult the *PeopleTools: Global Technology* and *PeopleTools: System and Server Administration* product documentation for more details about the use of %BINARYSORT and PSOPTIONS.

Also, never change the CCSID in your subsystem without first consulting IBM technical support. Corruption and loss of data could result.

### Task 1-9-6: Using DECIMAL

PeopleSoft PeopleTools supports zparm settings of both DECIMAL=PERIOD and DECIMAL=COMMA. The PeopleTools API is able to identify the zparm value on your particular subsystem. For those subsystems with zparm DECIMAL=PERIOD, no additional logic is invoked. For those subsystems with DECIMAL=COMMA, a parsing routine is invoked to "reformat" any necessary SQL statements to avoid confusion by the DB2 parser in distinguishing a decimal point from a comma. For COBOL programs running on the mainframe, a message is displayed in the job log indicating whether the parsing routine has been activated. Customers running with zparm DECIMAL=COMMA should verify that the parsing function has indeed been activated. Customers running with zparm DECIMAL=PERIOD, should verify that the parsing function *is not* activated, as it is unnecessary and could have negative performance implications.

While PeopleSoft PeopleTools fully supports either setting for zparm DECIMAL, not all product lines support both settings. SQR does not go through the PeopleTools API interface, and therefore each program must be inspected for compliance. Product lines that do not use SQR would support both zparm DECIMAL settings by default (for example, CRM). Product lines that only support one setting will support DECIMAL=PERIOD. Refer to the product line specific Installation addenda for information on whether your product line supports zparm DECIMAL=COMMA.

## **Task 1-10: 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.
- For z/OS servers, install the appropriate version of IBM Enterprise COBOL for z/OS and OS/390.
- 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.

### *JRE*

- z/OS customers should install the appropriate IBM z/OS Java to support JDK/JRE requirements for PeopleSoft software.
- The minimum support level required for PeopleSoft PeopleTools 8.56 is JRE 1.8.xx.

### *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 1-11: Setting Up Database Connectivity**

---

As part of preparation, you may wish to set up database connectivity components on the mainframe, set up TCP/IP on database clients (including application servers and any dedicated batch servers), and install software for the DB2 Connect Gateway.

However, it makes sense to wait until after the PeopleSoft database has been created before configuring the DB2 Connect Gateway—using either Client Configuration Assistant (Microsoft Windows) or the Command Line Processor (UNIX)—so that the connection to the database can be tested.

---

**Note.** The LDAP client (FMID HRSL180) is required for PSAE on z/OS. On z/OS, the LDAP client resides as a DLL named GLDCLDAP in /usr/lib. Note that /usr/lib must be part of the LIBPATH environment variable.

---

**Note.** Before you can run the Process Scheduler from z/OS UNIX System Services, the DB2 systems programmer must have installed DB2 ODBC.

---

## **See Also**

"Creating a Database"

"Installing and Configuring DB2 Connect"

*IBM DB2 Connect documentation*

*IBM DB2 Installation Guide (for DB2 ODBC)*

## Task 1-12: Using Connect ID

---

This section discusses:

- Understanding Connect ID
- Using Connect ID

### Understanding Connect ID

All two-tier connections use the PeopleSoft PeopleTools connect ID feature.

Two-tier connections include both client workstations and application servers. The connect ID feature allows customers to associate multiple PeopleSoft operators with the same connect ID. The connect ID is granted 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 PeopleSoft user ID to control access to objects in the database. The PeopleSoft sign-on process validates the connect ID on the database server, rather than the user ID. Connect ID simplifies database security maintenance. It is not necessary to define and maintain individual user IDs within the database server security. For DB2 z/OS implementations, only the connect ID must be defined in the z/OS security management software (for example, RACF, ACF2, TopSecret), with logon capabilities. The connect ID option eliminates the need to set up each user ID as a valid z/OS ID. One z/OS ID can be created and then many PeopleSoft operators can use this ID as the connect ID to sign on to the PeopleSoft system. This arrangement may be an appropriate choice at customer sites where the PeopleSoft user's only required access to the mainframe is to use the PeopleSoft applications.

The connect ID is granted access using the following steps:

- Define the connect ID as an ID with logon capabilities to the z/OS server in the z/OS security management software.
- Execute script Grant.sql against the database, after the table objects have been created. Grant.sql grants SELECT access to the PeopleTools tables PS.PSDBOWNER, PS.STATUS, PS.ACCESSPROFILE, and PS.PRDEFN.

In addition, the connect ID and connect ID password must be defined in either the Configuration Manager setting to allow a two-tier connection from the client workstation, or in the application server configuration setting, to allow connection to the database from the application server.

### See Also

*PeopleTools: System and Server Administration*, "Using PeopleSoft Configuration Manager"

### Task 1-12-1: Using Connect ID

As an example, when logging into a PeopleSoft database in two-tier mode, the user enters a database name, PeopleSoft user (operator) ID, and password in the PeopleSoft Signon dialog box.

After making the initial connection to the database, the sign-on process performs SELECT statements against a series of PeopleTools tables to obtain data required for sign-on and security. The PeopleSoft user ID and password are validated against the PS.PRDEFN table, regardless of the sign-on option. The access ID and password, which are encrypted, are obtained from the PS.ACCESSPROFILE table.

The sign-on process disconnects, and then connects again as the access ID, which has all Data Manipulation Language (DML) authorities and certain DDL authorities on the PeopleSoft database. If you are using the Secondary Authorization ID option, the sign-on process then sets the current SQLID equal to the DB2 owner ID obtained from the PS.PSDBOWNER table.

The example below details the logon and connection process to the PeopleSoft database on z/OS. This example uses the following parameter values:

- Database Name: PT84
- User ID/Pswd: PSUSER1/PSUSER1
- Connect ID/Pswd: PSCONCT/PSCONCT
- Access ID/Pswd: PSACCES1/PSACCESS1
- Object Owner ID: PSDBOWNR

Activity	Parameter Value and/or Underlying Statements
User initiates logon by entering the database name, user ID and password.	PT84/PSUSER1/PSUSER1
The connection is established to DB2 z/OS using the database name, the connect ID (not the user ID), and the password.	Connect to PT84 user PSCONCT using PSCONCT
Get PeopleSoft Database owner ID.	<pre>SELECT OWNERID FROM PS.PSDBOWNER WHERE DBNAME = :1 :1 = PT84, value returned for OWNERID = PSDBOWNR</pre>
Check PSSTATUS.	<pre>SELECT OWNERID, TOOLSREL, LASTREFRESHDTM, LASTCHANGEDTTM FROM PSDBOWNR.PSSTATUS</pre>
Validate the user ID and password.	<pre>SELECT VERSION, OPERPSWD, ENCRYPTED, SYMBOLICID, ACCTLOCK FROM PSDBOWNR.PSOPRDEFN WHERE OPRID = :1 :1 = PSUSER1. The OPERPSWD retrieved is validated against the value entered when the user initiated the log on.</pre>
Get the access ID and password.	<pre>SELECT ACCESSID, ACCESSPSWD, ENCRYPTED FROM PSDBOWNR.PSACCESSPRO FILE WHERE SYMBOLICID = :1 The ACCESSID and ACCESSPSWD retrieved into the buffer are PSACCES1/PSACCESS1</pre>
The current connection with the connect ID is disconnected.	Disconnect
A new connection is established, logging on with the access ID.	Connect to PT84 USER PSACCES1 USING PSACCES1

Activity	Parameter Value and/or Underlying Statements
The "Set Current SQLID" statement is issued to permit access to the PeopleSoft tables via the access ID without requiring explicit qualification of the SQL statements with the Object Owner ID (PSDBOWNR).	Set CURRENT SQLID = :1 :1 = PSDBOWNR

At this point, access within the PeopleSoft application is governed by PeopleSoft security, based on the permissions defined in the PeopleTools security tables for the user ID that was entered when the logon was initiated (PSUSER1).

## Task 1-13: Setting Up z/OS User IDs

This section discusses:

- Understanding User ID Setup
- Creating PeopleSoft User IDs

### Understanding User ID Setup

Once you have determined your sign-on strategy, as described in the preceding task, you are ready to create a set of z/OS user IDs required for the PeopleSoft PeopleTools sign-on process and database table access.

**Note.** All IDs that you create must be in UPPERCASE.

### Task 1-13-1: Creating PeopleSoft User IDs

Use this procedure to create new user IDs for the application. To create PeopleSoft user IDs:

1. Create a mainframe user ID for connecting to the PeopleSoft database. This mainframe user ID needs to match the PeopleSoft connect ID.

**Note.** Once your PeopleSoft connect ID is created, you can specify the ID in either the Configuration Manager Startup tab for Windows client connections or the Startup section in the application server configuration file for application server connections. This is done so the client or the application server pass the correct ID to connect to the database.

**Note.** The connect ID password must be 30 characters or less. Connect ID password should not contain any forward-slash characters (/) (Windows) or percent characters (%) (UNIX).

You must explicitly grant SELECT authority to this mainframe user ID on specific PeopleSoft PeopleTools tables, before attempting to connect to the PeopleSoft database.

2. Create a second mainframe user ID to be used as the PeopleSoft access ID.

The access ID, which is stored in encrypted form in the PeopleSoft database, should either be granted all DML authorities and certain DDL authorities on the PeopleSoft database if using Primary Authorization ID access, or associated with a Secondary Authorization ID with this access, if using Secondary Authorization ID access (the next step). The access ID and access password must be tightly controlled. Both are encrypted in the PeopleSoft database.



---

**Note.** The access ID password must be 30 characters or less.

---

Oracle recommends that you set up the access ID in z/OS with a non-expiring password. If company standards mandate that you periodically change the access ID's password, or if the access ID is set up in the z/OS security system with a password that will expire, special processing will be necessary. You must ensure that PeopleSoft databases are updated with the access ID's new password before the password changes in the z/OS security system. The PeopleSoft Security Administrator provides the functionality to change the access ID's password stored in the security tables.

If the mainframe password for the access ID has expired or has been changed before the PeopleSoft database has been updated with the new password, no one will be able to access the PeopleSoft online system.

3. If you are using the Secondary Authorization ID option, set up an external security system group as the owner ID. Make the access ID a member of this group, with authority to SET CURRENT SQLID = <Owner ID>.

4. Grant SELECT authority to owner ID on SYSIBM DB2 catalog tables.

There are certain PeopleSoft processes that perform queries against the SYSIBM DB2 catalog tables. For this reason you must grant SELECT authority on these catalog tables to the owner ID that you choose for the PeopleSoft database. The following table lists DB2 catalog tables used by the PeopleSoft system, with corresponding PeopleSoft processes or utilities.

Table	PeopleSoft Process or Utility
SYSIBM.SYSTABLES	Application Designer DDDAUDIT.SQR SETDBNAM.SQR SETSPACE.SQR SETTMPIN.SQR %UpdateStats MetaSQL function
SYSIBM.SYSTABLESPACE	SETSPACE.SQR SETDBNAM.SQR
SYSIBM.SYSTRIGGERS	Application Designer DDDAUDIT.SQR
SYSIBM.SYSCOLUMNS	Application Designer
SYSIBM.SYSINDEXES	Application Designer DDDAUDIT.SQR SETBUFF.SQR
SYSIBM.SYSKEYS	Application Designer
SYSIBM.SYSINDEXPART	SETINDEX.SQR
SYSIBM.SYSDATABASE	NA
SYSIBM.SYSVIEWS	NA

If the Owner ID does not have proper authority to the SYSIBM tables, 551 SQL codes will result and it will mostly occur when you are attempting to SQL Create or Alter a table using Application Designer. If you are running the listed SQRs outside the PeopleSoft environment, the ID used to run the SQR will need SELECT access to the listed tables.

**See Also**

"Creating a Database"

*PeopleTools: Portal Technology*

*PeopleTools: Data Management*

## Task 1-14: 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.

## Task 1-15: Using PeopleSoft Change Assistant and PeopleSoft Change Impact Analyzer

---

After you have completed the tasks in this book to install PeopleSoft PeopleTools, including installing any necessary patches and fixes, you need to install PeopleSoft Change Assistant. PeopleSoft Change Assistant is a standalone application that enables you to assemble and organize all of the steps necessary to apply patches and fixes for maintenance updates.

PeopleSoft Change Assistant gathers all the necessary information for a maintenance update from the Environment Management Hub and uploads it to My Oracle Support. With the environment data available, My Oracle Support can determine what updates are applicable to your environment. PeopleSoft Change Assistant carries out the following tasks:

- Coordinates with Environment Management Framework to monitor information specific to your PeopleSoft implementation.
- Finds required updates
- Downloads updates
- Creates change packages

---

**Note.** Beginning with PeopleSoft PeopleTools 8.53, use the PeopleSoft Update Manager from PeopleSoft Change Assistant to use a tailored search to find patches, as well as create and apply change packages.

---

- Applies all change packages

You can also install PeopleSoft Change Impact Analyzer, either as part of the PeopleSoft Change Assistant installation, or separately from the installation executable provided with PeopleSoft PeopleTools. PeopleSoft Change Impact Analyzer is a Microsoft Windows-based tool that you can use to evaluate the effect of changes you make on your installation.

### See Also

"Installing PeopleSoft Change Assistant"

"Installing PeopleSoft Change Impact Analyzer"

*PeopleTools: Change Assistant and Update Manager*

*PeopleTools: Change Impact Analyzer*



## Chapter 2

# Installing Web Server Products

This chapter discusses:

- Installing Oracle WebLogic Server
- Installing IBM WebSphere Application Server

## **Task 2-1: Installing Oracle WebLogic Server**

---

This section discusses:

- Understanding the Oracle WebLogic Installation
- Reviewing Troubleshooting Tips
- Obtaining Oracle WebLogic Installation Files from Oracle Software Delivery Cloud
- Installing JDK
- Installing Oracle WebLogic on Microsoft Windows
- Installing Oracle WebLogic on Linux or UNIX in Silent Mode
- Configuring JDK for Daylight Savings Time Change
- Removing the Oracle WebLogic Installation on Microsoft Windows
- Removing the Oracle WebLogic Installation on Linux or UNIX

### **Understanding the Oracle WebLogic Installation**

PeopleSoft PeopleTools 8.56 supports Java 8 enabled 64-bit Oracle WebLogic Server 12.2.1. You must install an operating-system specific Java Developers Kit (JDK) before beginning the Oracle WebLogic installation.

See Installing JDK for Oracle WebLogic.

To familiarize yourself with the most current support information and information about any required Oracle WebLogic service packs based on operating system platform or PeopleSoft PeopleTools versions, consult the Certifications area of My Oracle Support.

### **See Also**

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

My Oracle Support, Certifications

Clustering and High Availability for PeopleTools, My Oracle Support, (search for the article title)

Operating System, RDBMS, and Additional Component Patches Required for Installation PeopleTools, My Oracle Support, (search for the article title and release number)

Oracle WebLogic Server 12.2.1 documentation, <http://docs.oracle.com/middleware/1221/wls/index.html>

## Reviewing Troubleshooting Tips

If you have trouble with the installation, review these tips:

- It can require up to 800 MB space to install Oracle WebLogic. If there is not enough space, the installer displays an error with information about the space limitation. You will need to exit the installation and create some space under your home directory before starting over.
- The Oracle WebLogic installer makes use of the default system temporary space. It will stop and display an error message if the temporary space is not sufficient. Clean up the default system temp space and try again. If you do not have the privilege to clean up that directory and need to proceed, the workaround is to set aside a directory under your Home directory and use it as the temporary space. This can be achieved by setting `-Djava.io.tmpdir` in the command for launching the installer.

The following command is a sample Linux command for silent mode installation, which uses the "temp" directory under your Home directory. *RESPONSE\_DIR* refers to the location of the silent mode response file, and *INVENTORY\_DIR* refers to the location of the Oracle inventory file.

See *Installing Oracle WebLogic on Linux or UNIX in Silent Mode*.

```
$JAVA_HOME/bin/java -jar -Djava.io.tmpdir=~/.temp ./fmw_12.2.1.0.0_>
wls.jar -silent -responseFile RESPONSE_DIR/res.rsp -invPtrLoc INVENTORY_>
DIR/oraInst.loc
```

---

**Note.** This workaround may not be applicable on all platforms. If you tried and the installer still errors out due to the amount of temporary space, contact your system administrator to clean up the system temporary space before proceeding.

---

- If the installation fails, and the Middleware Home directory that you specified for the Oracle WebLogic 12.2.1 installation is one in which other Oracle products have been installed in previous releases, (for example `c:\oracle` folder in Microsoft Windows), it may indicate corruption in the `registry.xml` file inside your existing Middleware Home. Pick a different location for the Oracle WebLogic 12.2.1 installation directory and try the installation again.
- If you are installing onto an UNIX or Linux environment, in case of installation failure, refer to the log file `Wls1221Install.log` under the installation logs directory to view the events that occurred.
- If you encounter the following error message while running in console mode on a Microsoft Windows operating system, it means an environment variable `_JAVA_OPTIONS` has been set in your system. It causes the Java process initiated by the Oracle WebLogic installer to fail.

```
ERROR: JVMPI, an experimental interface, is no longer supported.
Please use the supported interface: the JVM Tool Interface (JVM TI).
```

To resolve the problem, remove the environment variable `_JAVA_OPTIONS` from your system and rerun the installation.

- If you encounter the following error message while installing on an Oracle Solaris operating system, it means there is a problem with access to the temporary directory:

```
*sys-package-mgr*: can't write cache file
```

This message appears because the Oracle WebLogic installer creates a temporary directory (for example, on Oracle Solaris it is `/var/tmp/wlstTemp`) that is shared by all users, and it is unable to differentiate between users. As a result, access to the directory is blocked when the user accessing the directory is not the one who originally created the directory. The workaround for this problem is to remove the installation and install it again after manually adjusting the temporary directory permissions. A user with superuser privileges can use

the following command to adjust the permissions:

```
chmod -R 777 /var/tmp/wlstTemp
```

For more information, search the Oracle documentation for Oracle WebLogic.

## Task 2-1-1: Obtaining Oracle WebLogic Installation Files from Oracle Software Delivery Cloud

At this point you should have already downloaded the necessary files from Oracle Software Delivery Cloud. If not, this section includes additional information on finding and using the files for Oracle WebLogic if necessary.

See "Preparing for Installation," Using Oracle Software Delivery Cloud to Obtain Installation Files.

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

To obtain the files for Oracle WebLogic installation:

1. After logging in to Oracle Software Delivery Cloud, read the information about export restrictions, and then click Accept.
2. Enter Oracle WebLogic in the Product field, and select Oracle WebLogic Server Enterprise Edition (FMW, WLS, WebLogic Server 12c), from the drop-down list.

---

**Note.** The Enterprise Edition includes Oracle WebLogic Server and Oracle Coherence, as well as other items.

---

3. Click Select Platform, select the operating system you are running on, and click Select.

The following operating systems are supported:

- IBM AIX
- HP-UX Itanium
- Linux
- Microsoft Windows
- Oracle Solaris on SPARC
- Oracle Solaris on x86-64

4. Click Continue.
5. On the page listing the selected product, click Continue.

---

**Note.** Click the arrow to view the list of products included.

---

6. Read the license agreements, and select the check box to acknowledge that you accept the agreement, and then click Continue.
7. Click Continue on the Download Queue page.
8. On the File Download window, download the zip files for Oracle WebLogic Server and Oracle Coherence.

Download the files you need by clicking a file name to download an individual file, or click Download All to obtain all of the files listed.

Save the zip files to a temporary directory on your local system. The directory where you save the zip file is referred to in this documentation as *WLS\_INSTALL*. You must extract (unzip) the file on the platform for which it is intended. For example, if you download the zip file for 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, the stage area files may be corrupt.

9. Extract the files into *WLS\_INSTALL*.

The Oracle WebLogic installer file is `fmw_12.2.1.0.0_wls.jar`.

---

**Note.** If you need to FTP the downloaded file, make sure to FTP it in Binary mode.

---

## Task 2-1-2: Installing JDK

This section discusses:

- Understanding the JDK Requirement for Oracle WebLogic
- Installing JDK for IBM AIX
- Installing JDK for HP-UX Itanium
- Installing JDK for Linux
- Installing JDK for Microsoft Windows
- Installing JDK for Oracle Solaris on SPARC
- Installing JDK for Oracle Solaris on x86-64

### Understanding the JDK Requirement for Oracle WebLogic

Before beginning the Oracle WebLogic installation you must install the 64-bit Java 8 JDK. The specific JDK required depends upon the operating system and vendor, as described in this table:

Operating System Platforms	JDK Version Supported	64-bit or Mixed Mode*
IBM AIX	IBM JDK 8.0	64-bit
HP-UX Itanium	Hewlett-Packard JDK 8.0	Mixed mode Use "-d64" to run in 64-bit mode.
Linux	Oracle JDK 1.8.0_65+	64-bit
Microsoft Windows	Oracle JDK 1.8.0_65+	64-bit
Oracle Solaris on SPARC	Oracle JDK 1.8.0_65+	64-bit
Oracle Solaris on x86-64	Oracle JDK 1.8.0_65+	64-bit

\* The mixed mode installer runs in 32-bit by default. The parameter `-d64` is required to run them in 64-bit mode.

### Installing JDK for IBM AIX

To install 64-bit IBM JDK for IBM AIX:

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

<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, your AIX support personnel should be able to help.

---



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 Oracle WebLogic server.

The directory where you install the JDK is referred to in this documentation as *JAVA\_HOME*.

---

**Note.** Spaces are not allowed in the *JAVA\_HOME* name.

---

## Installing JDK for HP-UX Itanium

To install Hewlett-Packard JDK on HP-UX Itanium:

1. Go to the Hewlett-Packard Downloads and Documentation site.  
See JDK/JRE 8.0.x Downloads and Documentation,  
<https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPUXJDKJRE80>.
2. Select the link for Version 8.0.08 or higher.
3. Provide the required information to sign in.
4. Click Next and download JDK.
5. Install the JDK on the computer where you will install the Oracle WebLogic server, following the instructions in the Hewlett-Packard documentation.

The directory where you install the JDK is referred to in this documentation as *JAVA\_HOME*.

---

**Note.** Spaces are not allowed in the *JAVA\_HOME* name.

---

## Installing JDK for Linux

To install 64-bit JDK on Linux:

1. Go to the Oracle Java download site:  
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>
2. Download Oracle Java 8 64-bit JDK version 1.8.0\_65 or higher for Linux x86-64.  
Refer to the JDK installation instructions at the following link:  
[http://docs.oracle.com/javase/8/docs/technotes/guides/install/linux\\_jdk.html#BJFGGEFG](http://docs.oracle.com/javase/8/docs/technotes/guides/install/linux_jdk.html#BJFGGEFG)
3. Install the JDK on the computer where you will install the Oracle WebLogic server. The directory where you install the JDK is referred to in this documentation as *JAVA\_HOME*.

**Note.** Spaces are not allowed in the *JAVA\_HOME* name.

---

## Installing JDK for Microsoft Windows

To install 64-bit JDK on Microsoft Windows:

1. Go to the Oracle JDK download site:  
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>
2. Download Oracle Java 8 64-bit JDK version 1.8.0\_65 or higher for Microsoft Windows x86-64.  
Refer to the JDK installation instructions at the following link:

[http://docs.oracle.com/javase/8/docs/technotes/guides/install/windows\\_jdk\\_install.html#CHDEBCCJ](http://docs.oracle.com/javase/8/docs/technotes/guides/install/windows_jdk_install.html#CHDEBCCJ)

3. Install the JDK on the computer where you will install the Oracle WebLogic server. The directory where you install the JDK is referred to in this documentation as *JAVA\_HOME*.

---

**Note.** Spaces are not allowed in the *JAVA\_HOME* name.

---

## Installing JDK for Oracle Solaris on SPARC

To install JDK on Oracle Solaris on SPARC (64-bit):

1. Go to the Oracle JDK download site:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

2. Download the Oracle Java 8 64-bit JDK version 1.8.0\_65 or higher for Solaris SPARC.

Refer to the installation instructions at the following link:

[http://docs.oracle.com/javase/8/docs/technotes/guides/install/solaris\\_jdk.html#CHDBJEFD](http://docs.oracle.com/javase/8/docs/technotes/guides/install/solaris_jdk.html#CHDBJEFD)

3. Install the JDK on the computer where you will install the Oracle WebLogic server.

The directory where you install the JDK is referred to in this documentation as *JAVA\_HOME*.

---

**Note.** Spaces are not allowed in the *JAVA\_HOME* name.

---

## Installing JDK for Oracle Solaris on x86-64

To install JDK for an Oracle WebLogic installation on Oracle Solaris on x86-64:

1. Go to the Oracle JDK download site:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

2. Download the Sun Java 8 64-bit JDK version 1.8.0\_65 or higher for both Oracle Solaris x86 and Oracle Solaris x64.

Refer to the installation instructions at the following link:

[http://docs.oracle.com/javase/8/docs/technotes/guides/install/solaris\\_jdk.html#CHDBJEFD](http://docs.oracle.com/javase/8/docs/technotes/guides/install/solaris_jdk.html#CHDBJEFD)

3. Install the JDK on the computer where you will install the Oracle WebLogic server.

The directory where you install the JDK is referred to in this documentation as *JAVA\_HOME*.

---

**Note.** Spaces are not allowed in the *JAVA\_HOME* name.

---

## Task 2-1-3: Installing Oracle WebLogic on Microsoft Windows

The following procedure assumes that you saved the installation file `fmw_12.2.1.0.0_wls.jar` from Oracle Software Delivery Cloud in the directory *WLS\_INSTALL*. Installation in GUI mode is normally used for Microsoft Windows operating systems. You should have installed the appropriate JDK to *JAVA\_HOME* before beginning this installation.

See Installing JDK for Oracle WebLogic.

---

**Note.** Previous releases of Oracle WebLogic Server, such as 9.2 MPX, and 10.3.X, can coexist with 12.2.1 on a single machine. The best practice is to install Oracle WebLogic 12.2.1 into an empty directory, or at least one that does not contain other Oracle WebLogic (previously BEA) products.

If you choose, however, to install this version of Oracle WebLogic in an existing *WLS\_HOME* directory (for example, *c:\oracle*), you must shut down all instances of Oracle WebLogic Server running in that *WLS\_HOME* before performing this installation.

---

To install Oracle WebLogic Server 12.2.1:

1. Open a command prompt and change directory to *WLS\_INSTALL*.

---

**Note.** If you are running on a Microsoft Windows operating system, you must run the command prompt as administrator.

---

2. Set the environment variable *JAVA\_HOME* to be the location where you installed the Oracle Java JDK 1.8.

For example, if you installed JDK to *D:\jdk1.8.0\_65* use this command:

```
set JAVA_HOME=D:\jdk1.8.0_65
```

3. Use the following command to launch the installer:

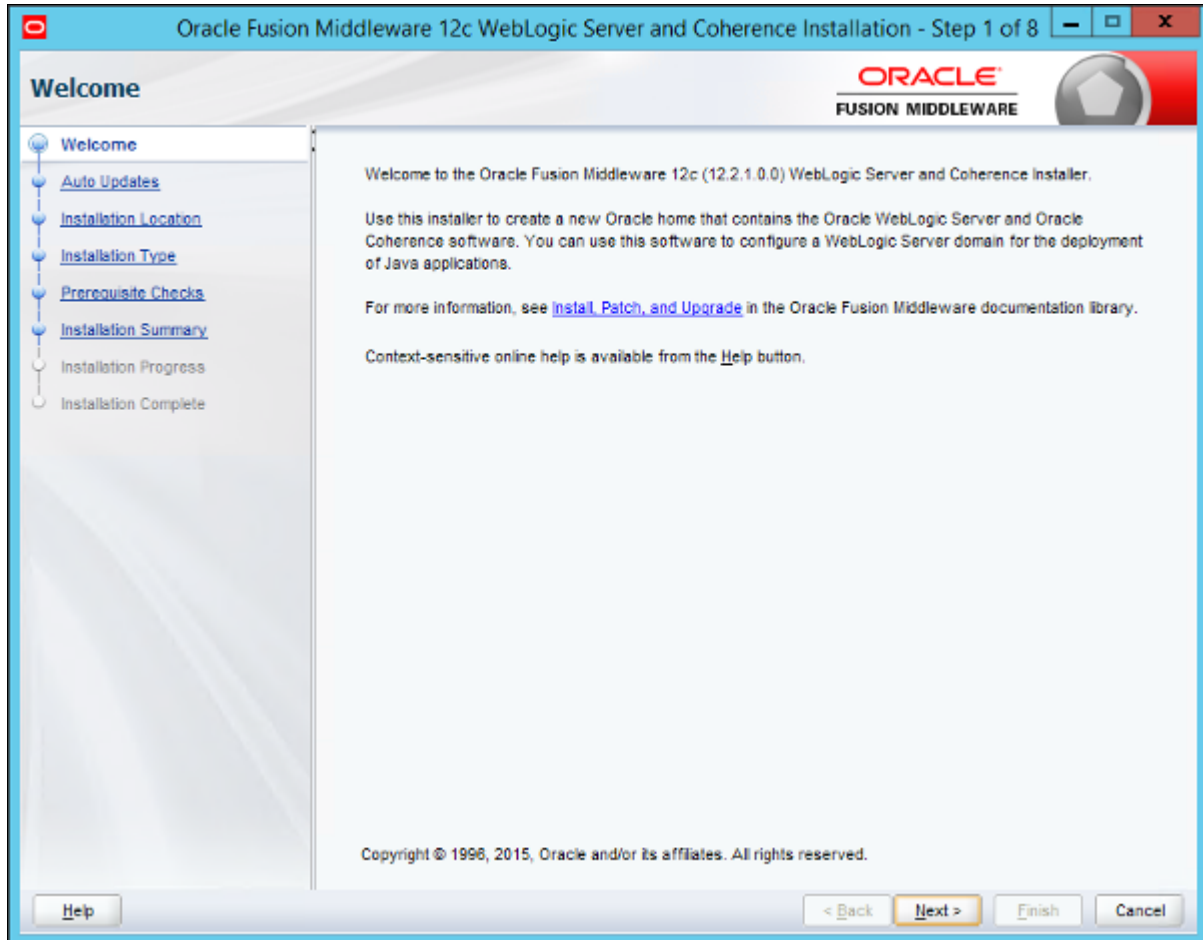
```
%JAVA_HOME%\bin\java -jar fmw_12.2.1.0.0_wls.jar
```

---

**Note.** It may take up to five minutes to extract the installer. You see system check messages during the extraction process. The Welcome window appears when the extraction is complete.

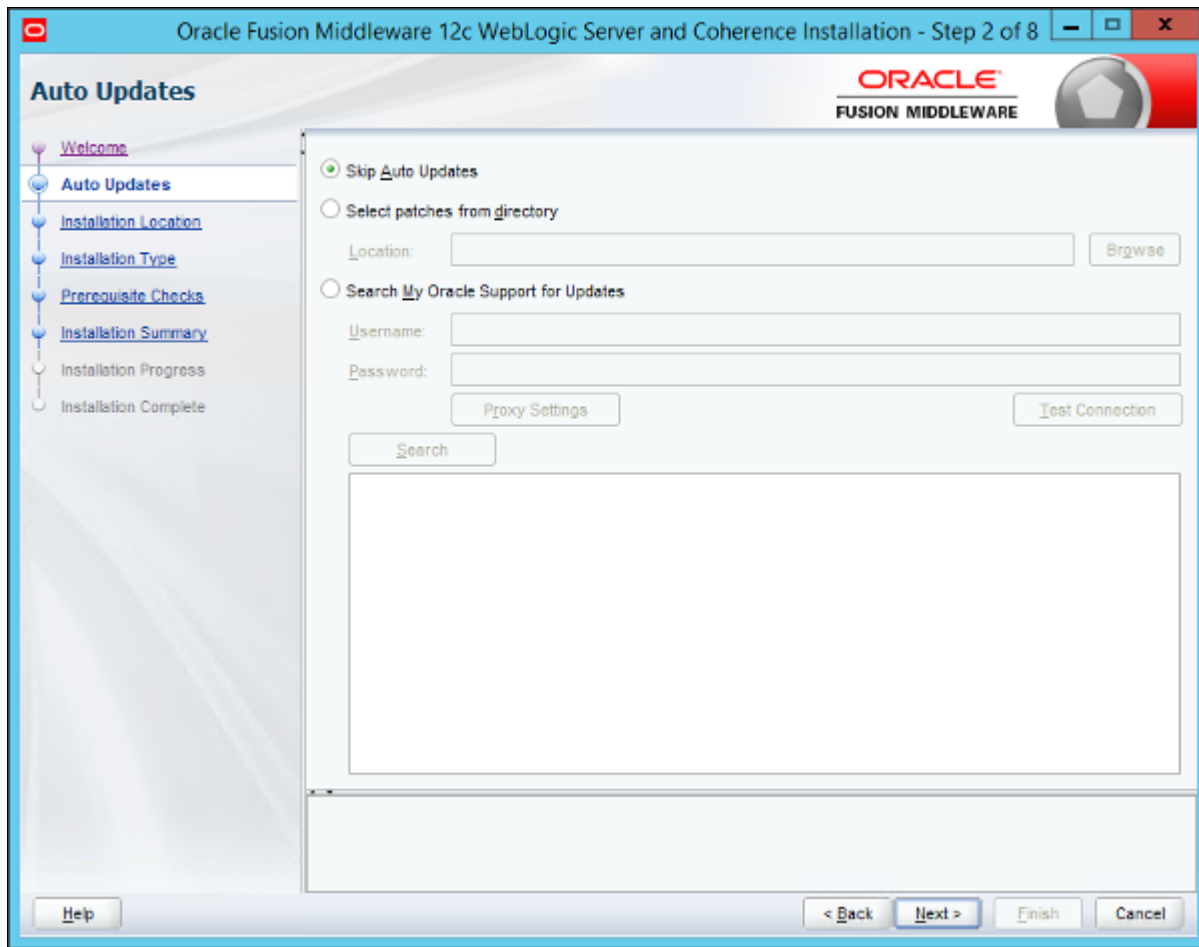
---

4. Click Next on the Welcome window for Oracle Fusion Middleware 12c (12.2.1.0.0) WebLogic Server and Coherence Installer.



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 1 of 8

- 5. Select the Skip Auto Updates radio button.

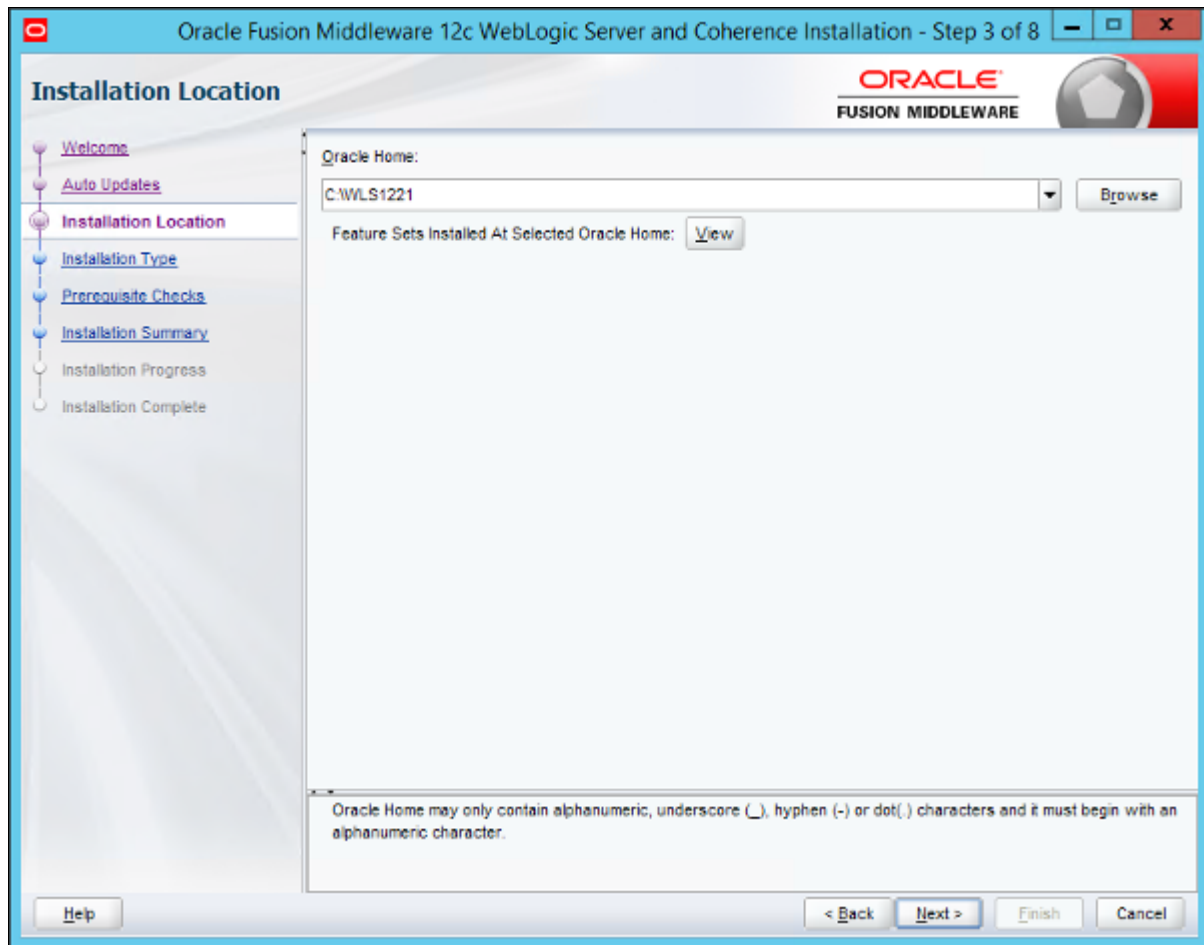


Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 2 of 8

6. On the Installation Location window, enter a location for the Oracle Home, or browse to an existing directory. Do not choose a directory that contains an existing installation of Oracle WebLogic.

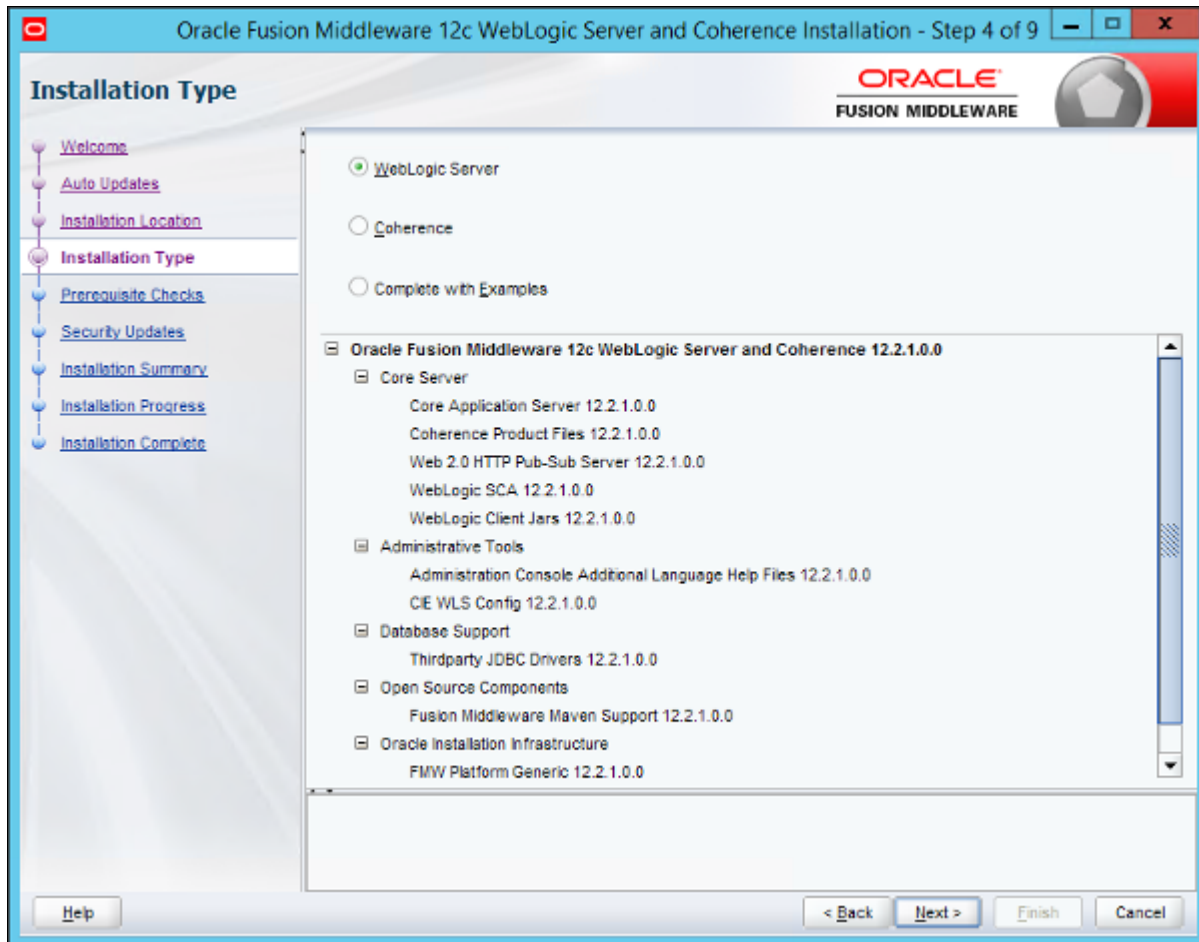
If the directory does not exist, the Oracle WebLogic installer creates it. The directory where you install Oracle WebLogic is referred to as *WLS\_HOME* in this documentation. In this example *WLS\_HOME* is C:\WLS1221.

Click Next to continue.



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 3 of 8

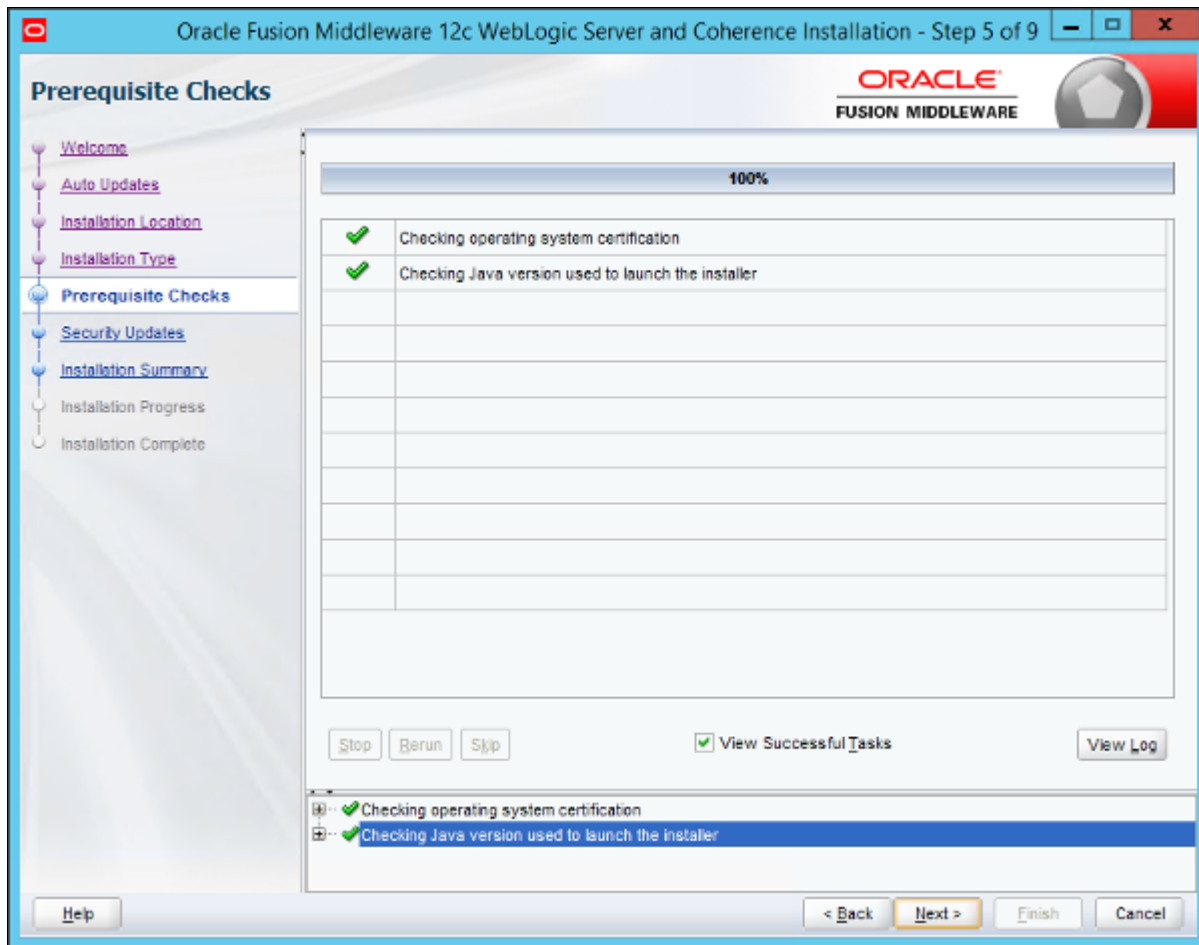
7. Accept the default WebLogic Server installation option on the Installation Type window, for WebLogic Server Installation, and then click Next.



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 4 of 9

- Wait while the installer carries out prerequisite checks, and then click Next.

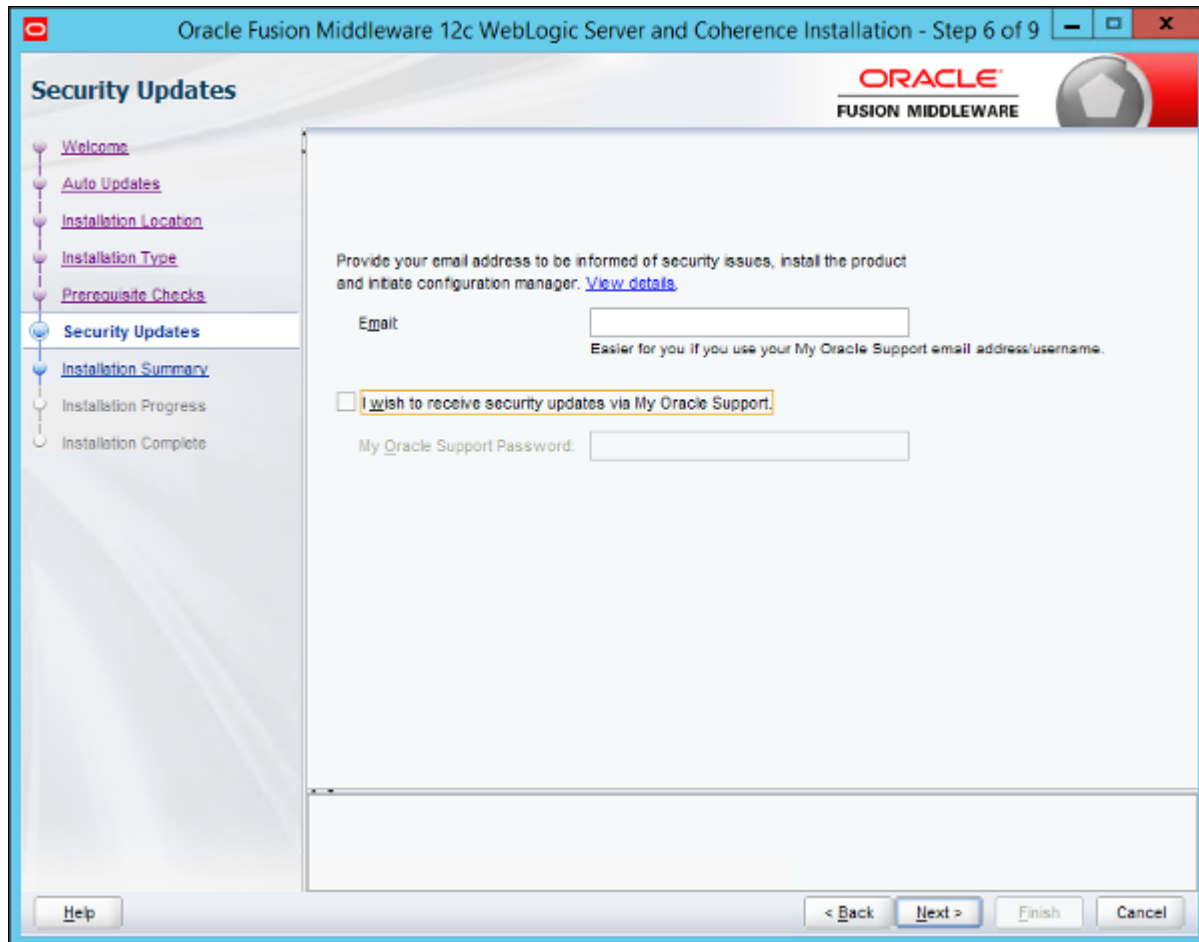
In this example the system passed the prerequisite checks.



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 5 of 9

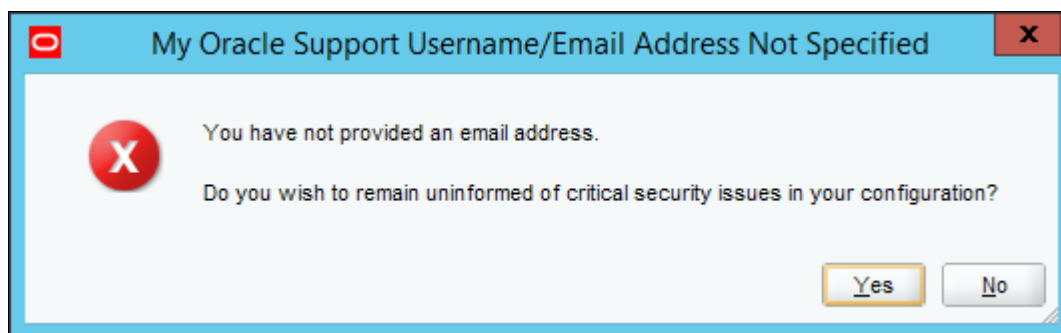


9. Clear the option I wish to receive security updates via My Oracle Support on the Specify Security Updates window, as shown in this example.



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 6 of 9

10. A dialog box labelled "My Oracle Support Username/Email Address Not Specified" appears; click Yes to confirm that you wish to remain uninformed of critical security issues in your configuration:

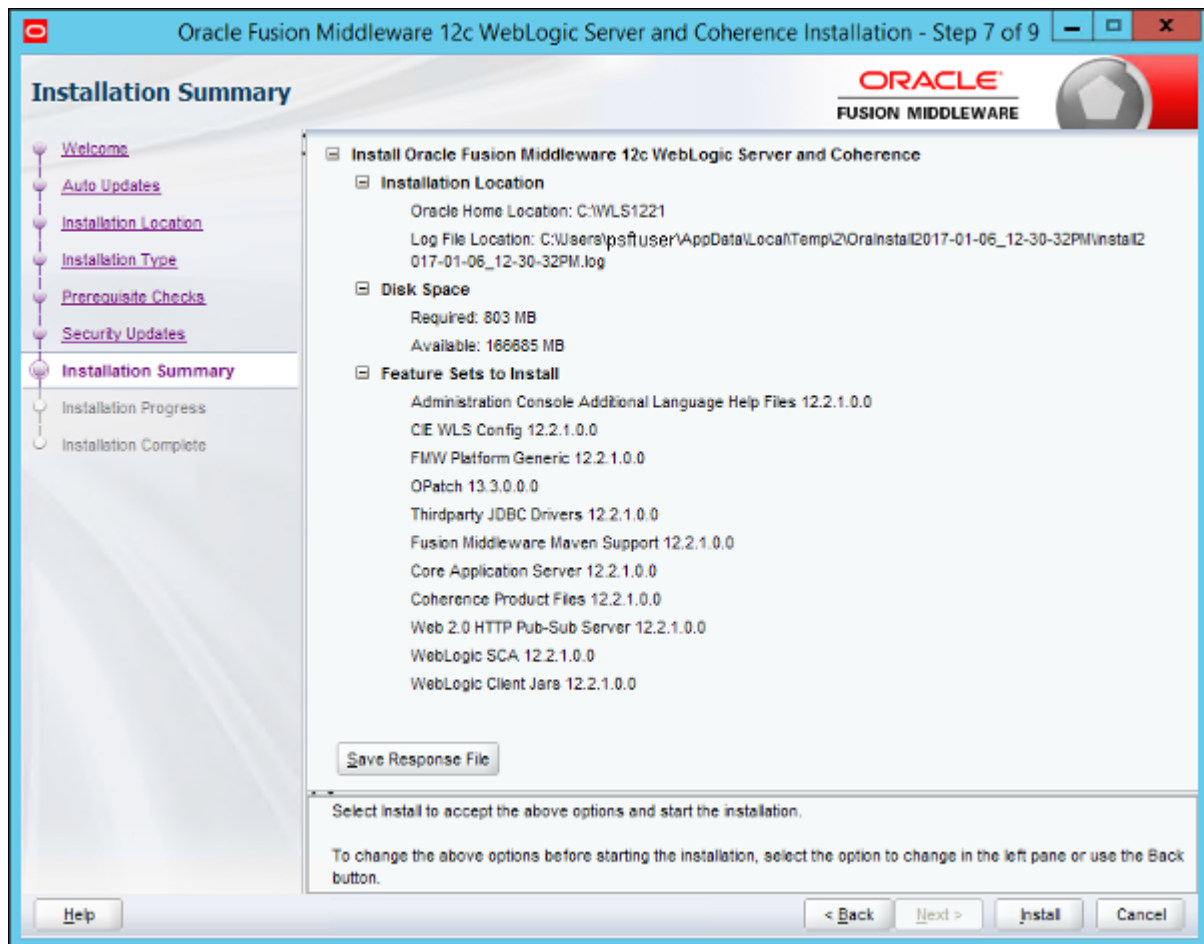


My Oracle Support Username/Email Address Not Specified dialog box

11. Verify your choices in the installation summary, such as the installation location and features to install.

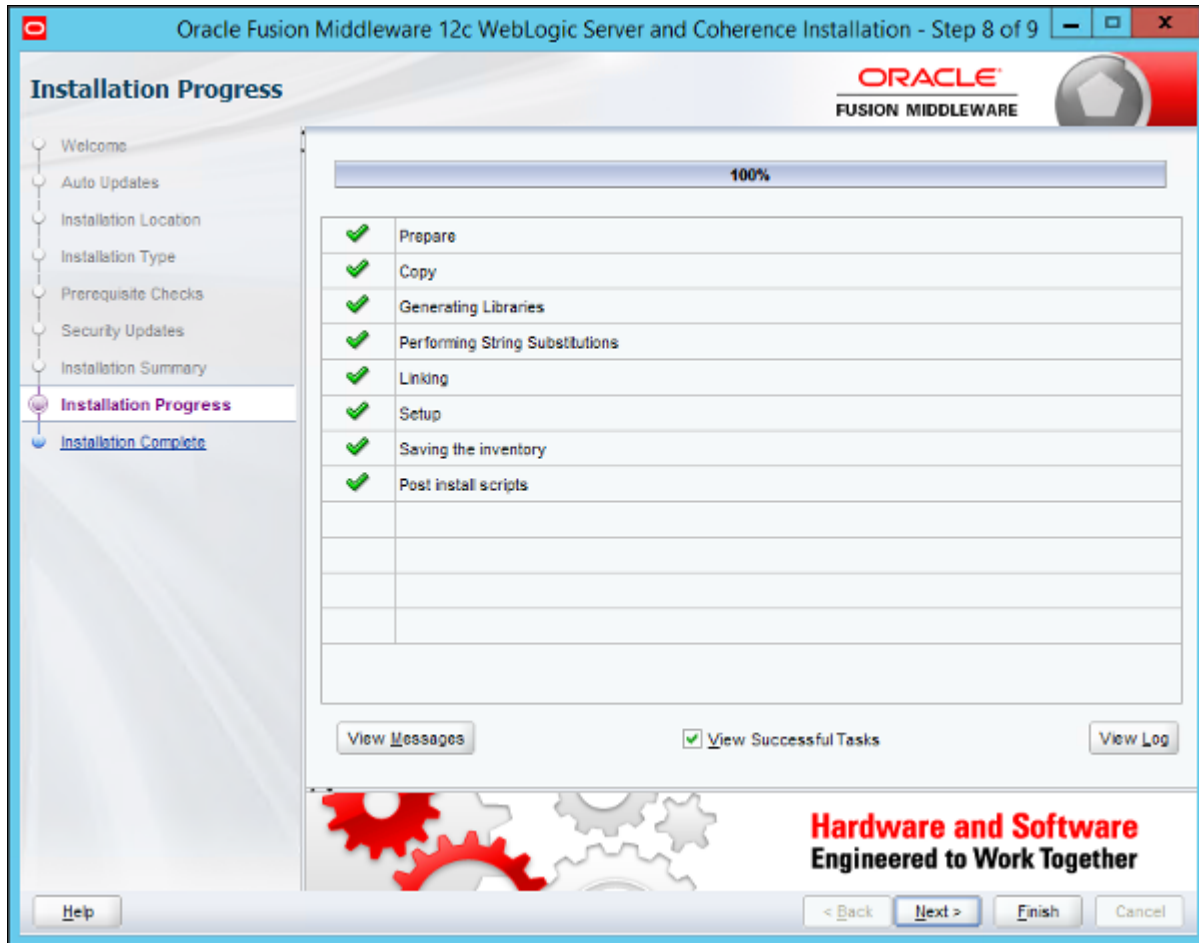
If you want to save a response file to be used in silent installation, click Save Response File and provide a location.

Click Install to begin the installation.



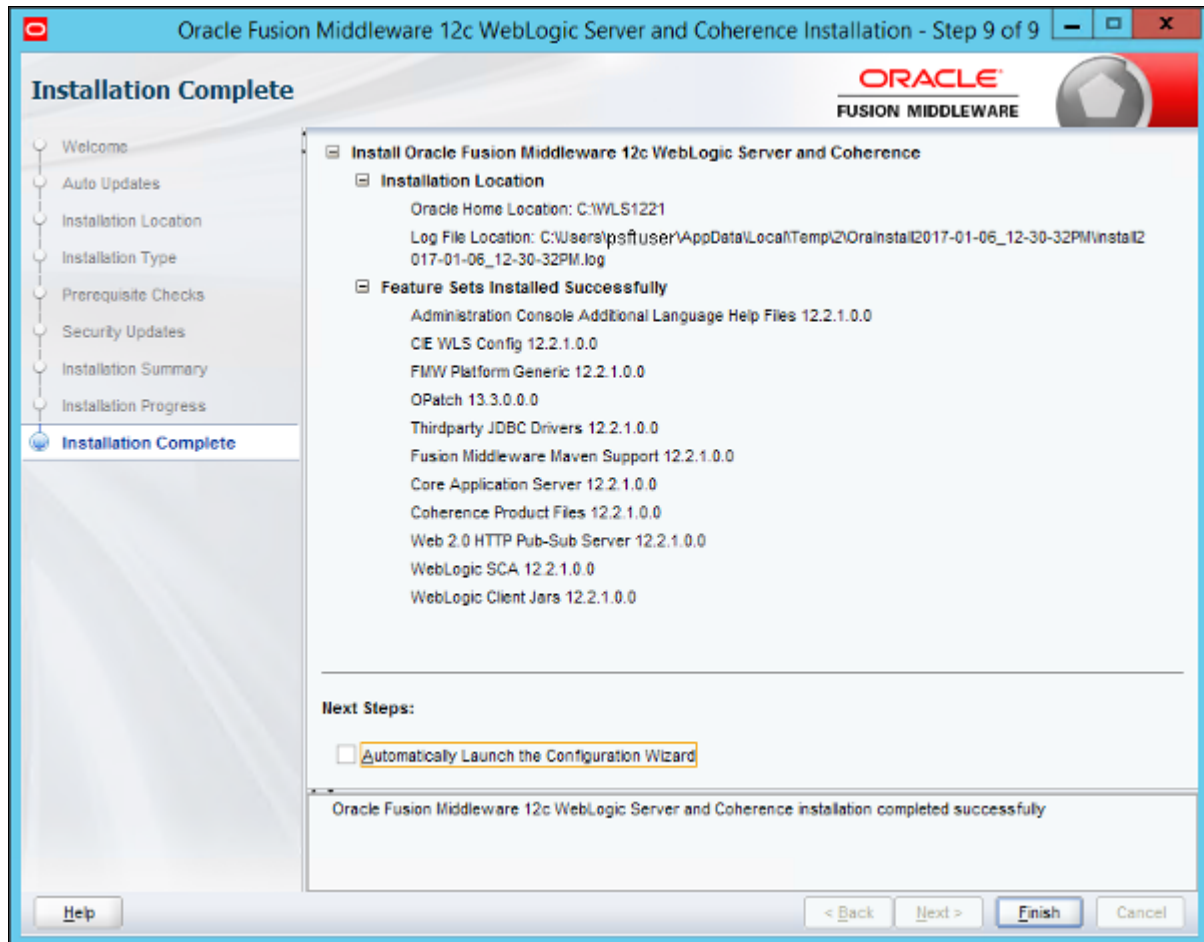
Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 7 of 9

A progress indicator appears. Click Next when the tasks are complete, as shown in this example:



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 8 of 9

12. When the installation has completed successfully, clear the Automatically Launch the Configuration Wizard option, and click Finish.



Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 9 of 9

## Task 2-1-4: Installing Oracle WebLogic on Linux or UNIX in Silent Mode

Use these instructions for silent mode installation for Linux and UNIX operating systems.

**Note.** Console mode installation is not supported for Oracle WebLogic 12.2.1.

See the information on silent installation for Oracle WebLogic in the Oracle Middleware documentation.

The following procedure assumes that you saved the installation file `fmw_12.2.1.0.0_wls.jar` from Oracle Software Delivery Cloud in the directory `WLS_INSTALL`. You should have installed the appropriate JDK to `JAVA_HOME` before beginning this installation.

**Note.** If you downloaded the zip file for the Oracle WebLogic installation from Oracle Software Delivery Cloud to a Microsoft Windows computer, FTP the zip file in binary mode to your Linux or Oracle Solaris computer before unzipping it into `WLS_INSTALL`.

To run the Oracle WebLogic installation in silent mode:

1. Change directory to `WLS_INSTALL` and make the installer file executable using the following command:  

```
chmod a+x fmw_12.2.1.0.0_wls.jar
```

2. In a shell window, change directory to *WLS\_INSTALL*:

```
cd WLS_INSTALL
```

3. Set *JAVA\_HOME* to be the location where you installed the JDK.

For example, if the JDK is installed under *"/home/jdklnk8u65"*, use the following command:

```
export JAVA_HOME=/home/jdklnk8u65
```

4. If it does not exist, use a text editor, such as "vi", to create the central inventory location file, named *oraInst.loc*, in a directory referred to in this documentation as *INVENTORY\_DIR*.

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

```
inventory_loc=/home/psftuser/oraInventory
inst_group=wlsgrp
```

The *oraInst.loc* file contains the following information:

- *inventory\_loc* — Specify the full path to the directory where you want the installer to create the inventory directory. The location in the example is */home/psftuser/oraInventory*. Use any directory other than the *WLS\_INSTALL* directory where you placed the *fmw\_12.2.1.0.0\_wls.jar* file.
  - *oui\_install\_group* — Specify the name of the group whose members have write permissions to this directory. The group name in the example is *wlsgrp*.
5. Copy the following content into a text editor and save it as *res.rsp*.

This is the silent response file. The directory where you save it is referred to here as *RESPONSE\_DIR*.

```
[ENGINE]
```

```
#DO NOT CHANGE THIS.
```

```
Response File Version=1.0.0.0.0
```

```
[GENERIC]
```

```
#Set this to true if you wish to skip software updates
DECLINE_AUTO_UPDATES=true
```

```
#
MOS_USERNAME=
```

```
#
MOS_PASSWORD=<SECURE VALUE>
```

```
#If the Software updates are already downloaded and available on your⇒
local system, then specify the path to the directory where these⇒
patches are available and set SPECIFY_DOWNLOAD_LOCATION to true
AUTO_UPDATES_LOCATION=
```

```
#
SOFTWARE_UPDATES_PROXY_SERVER=
```

```
#
SOFTWARE_UPDATES_PROXY_PORT=
```

```
#
```

```

SOFTWARE_UPDATES_PROXY_USER=

#
SOFTWARE_UPDATES_PROXY_PASSWORD=<SECURE VALUE>

#The oracle home location. This can be an existing Oracle Home or a new⇒
Oracle Home
ORACLE_HOME=

#Set this variable value to the Installation Type selected. e.g. Web⇒
Logic Server, Coherence, Complete with Examples.
INSTALL_TYPE=WebLogic Server

#Provide the My Oracle Support Username. If you wish to ignore Oracle⇒
Configuration Manager configuration provide empty string for user name.
MYORACLESUPPORT_USERNAME=

#Provide the My Oracle Support Password
MYORACLESUPPORT_PASSWORD=<SECURE VALUE>

#Set this to true if you wish to decline the security updates. Setting⇒
this to true and providing empty string for My Oracle Support username⇒
will ignore the Oracle Configuration Manager configuration
DECLINE_SECURITY_UPDATES=true

#Set this to true if My Oracle Support Password is specified
SECURITY_UPDATES_VIA_MYORACLESUPPORT=false

#Provide the Proxy Host
PROXY_HOST=

#Provide the Proxy Port
PROXY_PORT=

#Provide the Proxy Username
PROXY_USER=

#Provide the Proxy Password
PROXY_PWD=<SECURE VALUE>

#Type String (URL format) Indicates the OCM Repeater URL which should⇒
be of the format [scheme[Http/Https]]://[repeater host]:[repeater port]
COLLECTOR_SUPPORTHUB_URL=

```

6. Use a text editor to enter the full path for ORACLE\_HOME; for example:

```

#The oracle home location. This can be an existing Oracle Home or a new⇒
Oracle Home
ORACLE_HOME=/home/wls1221

```

Oracle WebLogic will be installed into the ORACLE\_HOME directory entered here. This must be a new directory; do not enter a directory that has been used previously.

7. If this is the first time you are installing on your system (meaning there is no pre-existing Oracle inventory location), use the following commands to perform a silent installation.

These commands use `res.rsp` as the name for the response file.

- For IBM AIX, Linux, or Oracle Solaris (on SPARC or x86-64):

```
$JAVA_HOME/bin/java -jar ./fmw_12.2.1.0.0_wls.jar -silent -response⇒
File RESPONSE_DIR/res.rsp -invPtrLoc INVENTORY_DIR/oraInst.loc
```

- For HP-UX Itanium, the JVM parameter "-d64" is required:

```
$JAVA_HOME/bin/java -d64 -jar ./fmw_12.2.1.0.0_wls.jar -silent -⇒
responseFile RESPONSE_DIR/res.rsp -invPtrLoc INVENTORY_DIR/ora⇒
Inst.loc
```

8. If you have previously installed an Oracle product on your system and do not need to specify an Oracle inventory location, use the following commands to perform a silent installation:

- For IBM AIX, Linux, or Oracle Solaris (on SPARC or x86-64):

```
$JAVA_HOME/bin/java -jar ./fmw_12.2.1.0.0_wls.jar -silent -response⇒
File RESPONSE_DIR/res.rsp
```

- For HP-UX Itanium, the JVM parameter "-d64" is required:

```
$JAVA_HOME/bin/java -d64 -jar ./fmw_12.2.1.0.0_wls.jar -silent -⇒
responseFile RESPONSE_DIR/res.rsp
```

9. After you enter the appropriate command from the previous steps, the installer is launched in silent mode, and a progress indicator tracks the installation.

When the installation is complete, you should see a completion message such as "The installation of Oracle Fusion Middleware 12c WebLogic Server and Coherence 12.2.1.0.0 completed successfully."

## Task 2-1-5: Configuring JDK for Daylight Savings Time Change

The version of JDK mentioned in the previous section Installing JDK for Oracle WebLogic includes the Daylight Saving Time (DST) rules available at the time of packaging. If new rules are implemented after this time, you should use the instructions in this section to update the time zone definition files.

You can skip this section unless a change to the DST rules has happened near or after the general availability date of Oracle WebLogic or PeopleSoft PeopleTools. Consult the information on configuring PeopleSoft time zone definitions in the *PeopleTools: Global Technology* product documentation.

This section provides an example of how the time zone updater utility (TZUPDATER), which is supplied by the JDK vendors, can be used to update the time zone definition files contained in the JDK used by Oracle WebLogic server.

1. Identify and shut down any JVM processes that are using the JDK that you will be updating.
2. For future reference or restoration, back up the location where the targeted JDK is located.

The JDK being used for different operating systems is different. For Oracle WebLogic 12.2.1.0.0, refer to the `commBaseEnv.cmd` (for Microsoft Windows), or `commBaseEnv.sh` (for UNIX) file under `WLS_HOME\oracle_common\common\bin` to determine the setting for `JAVA_HOME` and the exact name and location for the JDK being used by your Oracle WebLogic server. `WLS_HOME` is the directory where Oracle WebLogic is installed.

3. Download the appropriate updater utility for your operating system from the JDK vendor.

Each tzupdater provided by the vendor comes with instructions (typically in a readme file) describing how to:

- Locate the correct JDK.
- Apply classes using the tzupdater or provided scripts.
- Check tzupdater versions.

Read the instructions carefully as the steps and instructions are vendor-specific. Keep in mind that these instructions and versions may be updated when the vendor finds it necessary.

---

**Note.** After successfully running the TZUPDATER to update a JDK location, the changes will take effect only for newly started Java processes from that location. In the event that you did not identify and stop all Java processes running from this location, it will be necessary to stop and restart these for the changes to take effect.

---

## See Also

Timezone Updater Tool, Oracle Technology Network, <http://www.oracle.com/technetwork/java/javase/tzupdater-readme-136440.html>

## Task 2-1-6: Removing the Oracle WebLogic Installation on Microsoft Windows

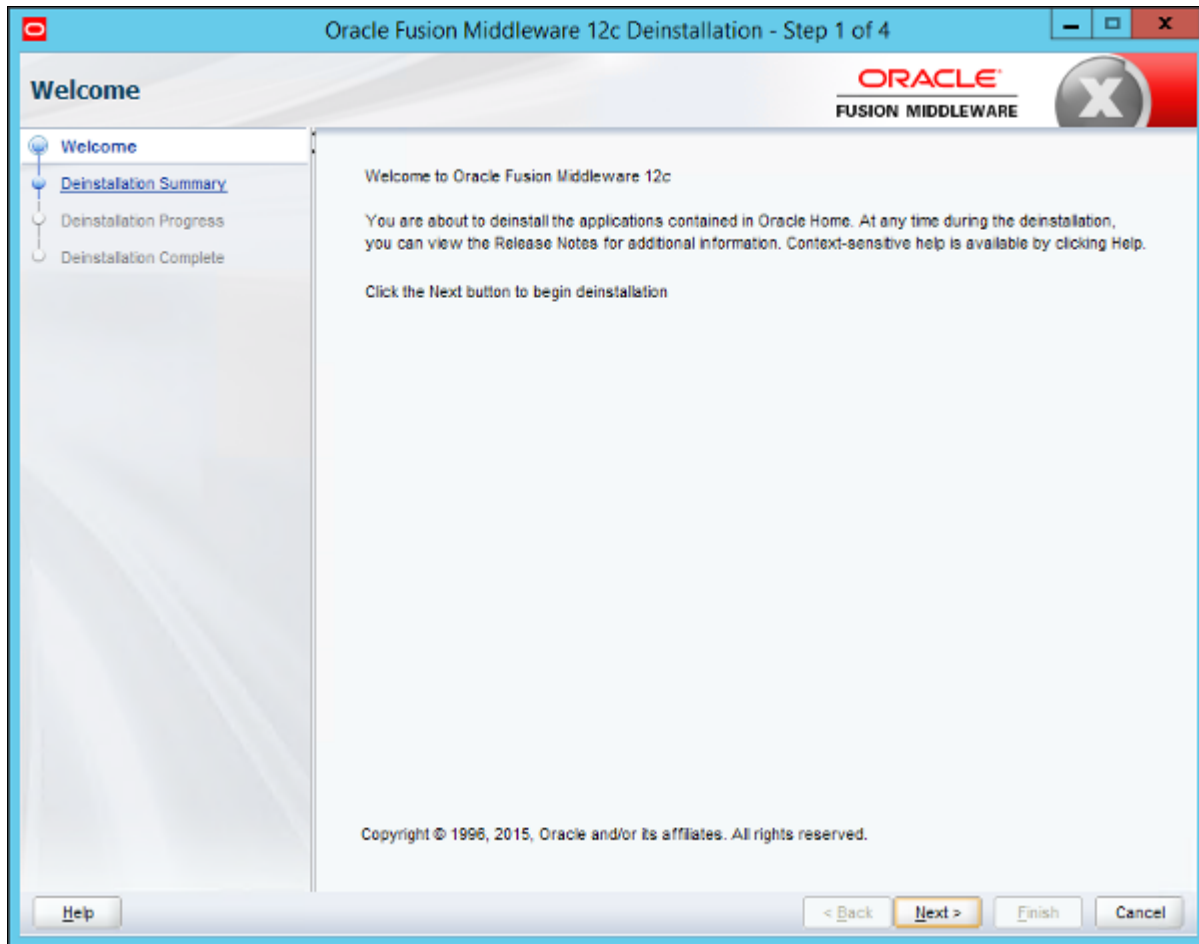
To remove the Oracle WebLogic installation on Microsoft Windows (GUI mode):

1. Before running the deinstaller, stop all servers and processes associated with the Oracle home you are going to remove.



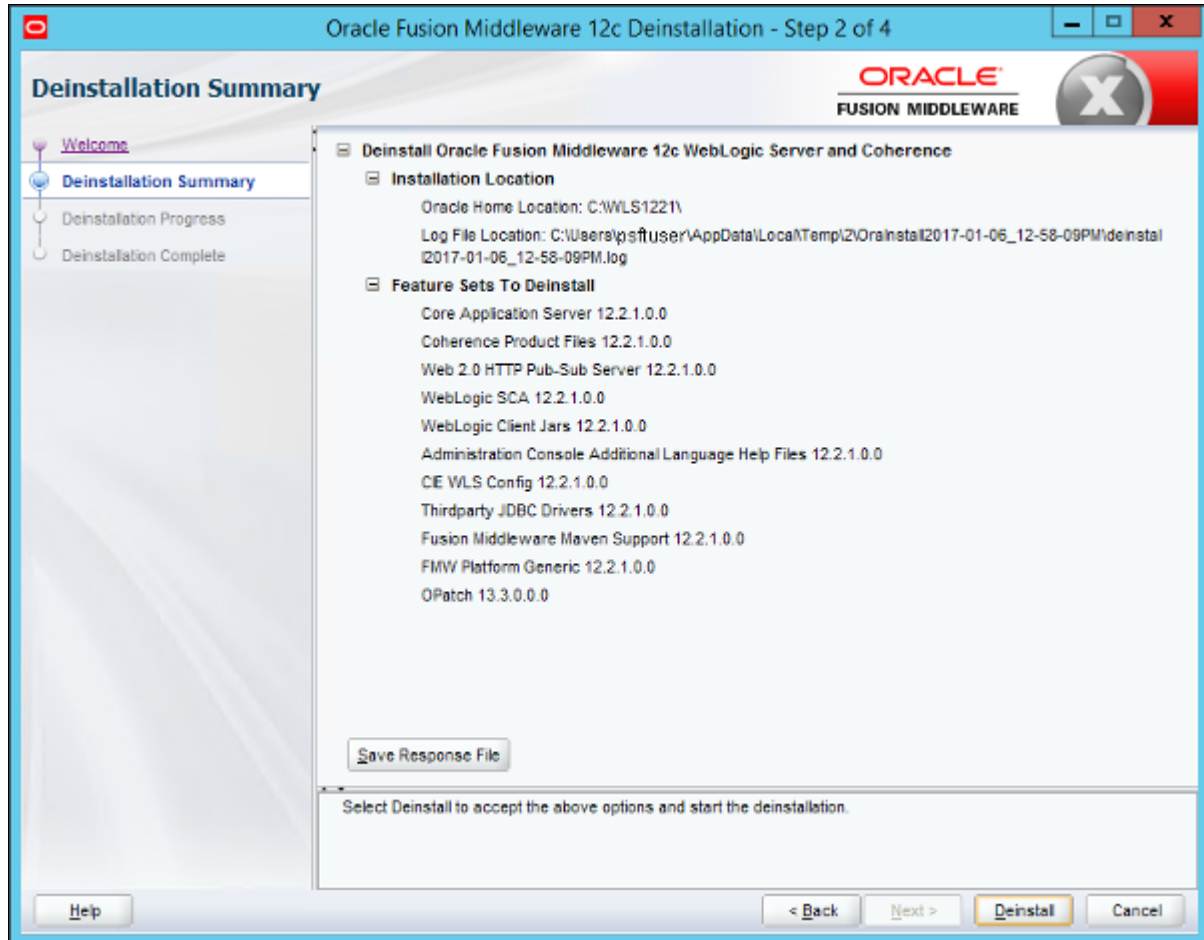
2. Change directory to the `WLS_HOME\oui\bin` folder and run the `deinstall.cmd` script.

`WLS_HOME` is the location where you installed your Oracle WebLogic 12.2.1.0.0, for example `C:\WLS1221`. Click Next on the Welcome window.



Oracle Fusion Middleware 12c Deinstallation - Step 1 of 4

3. Verify the components that you want to uninstall on the summary page (by default all components are selected as shown in this example).

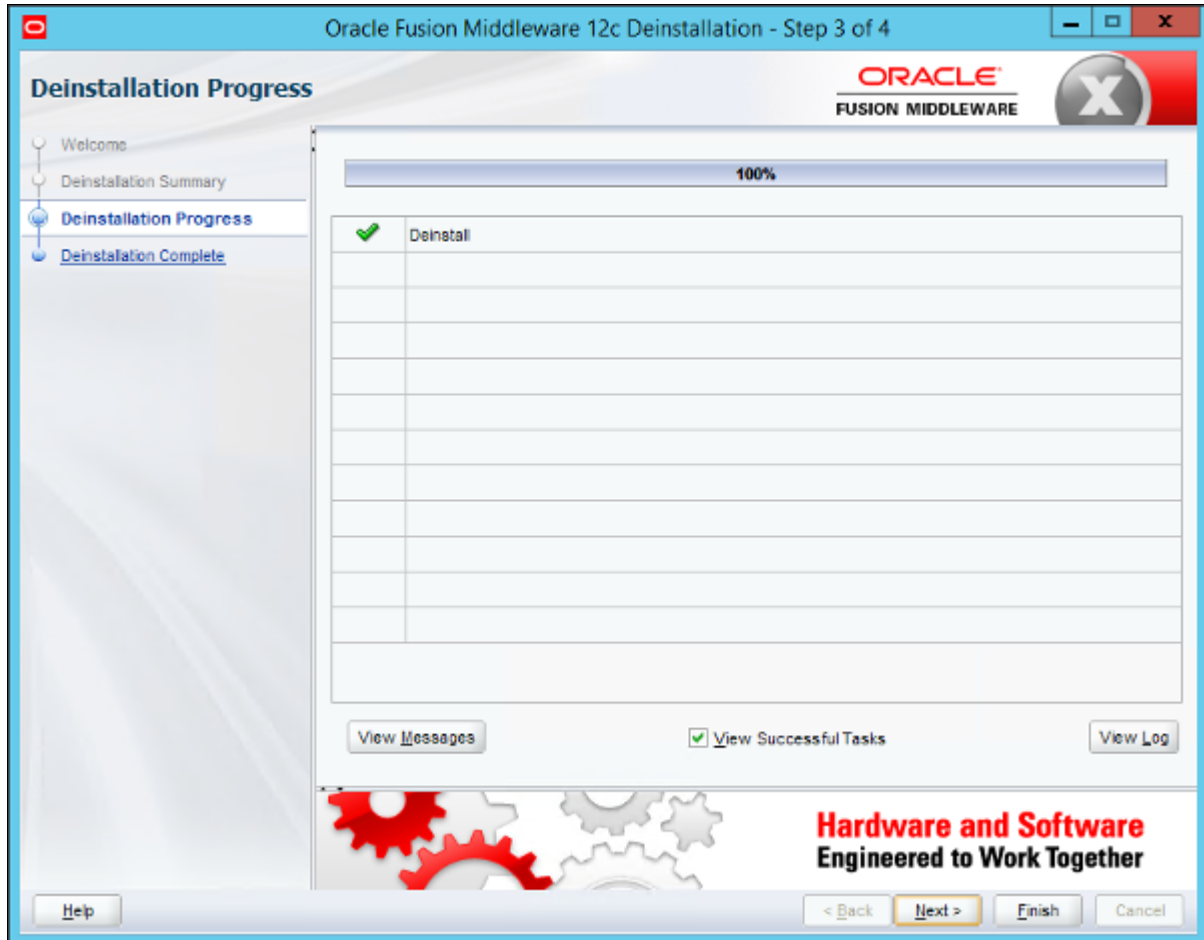


Oracle Fusion Middleware 12c Deinstallation - Step 2 of 4

- 4. Click the Save Response File button and browse to a location to save the file, which you can use for a silent mode deinstallation.

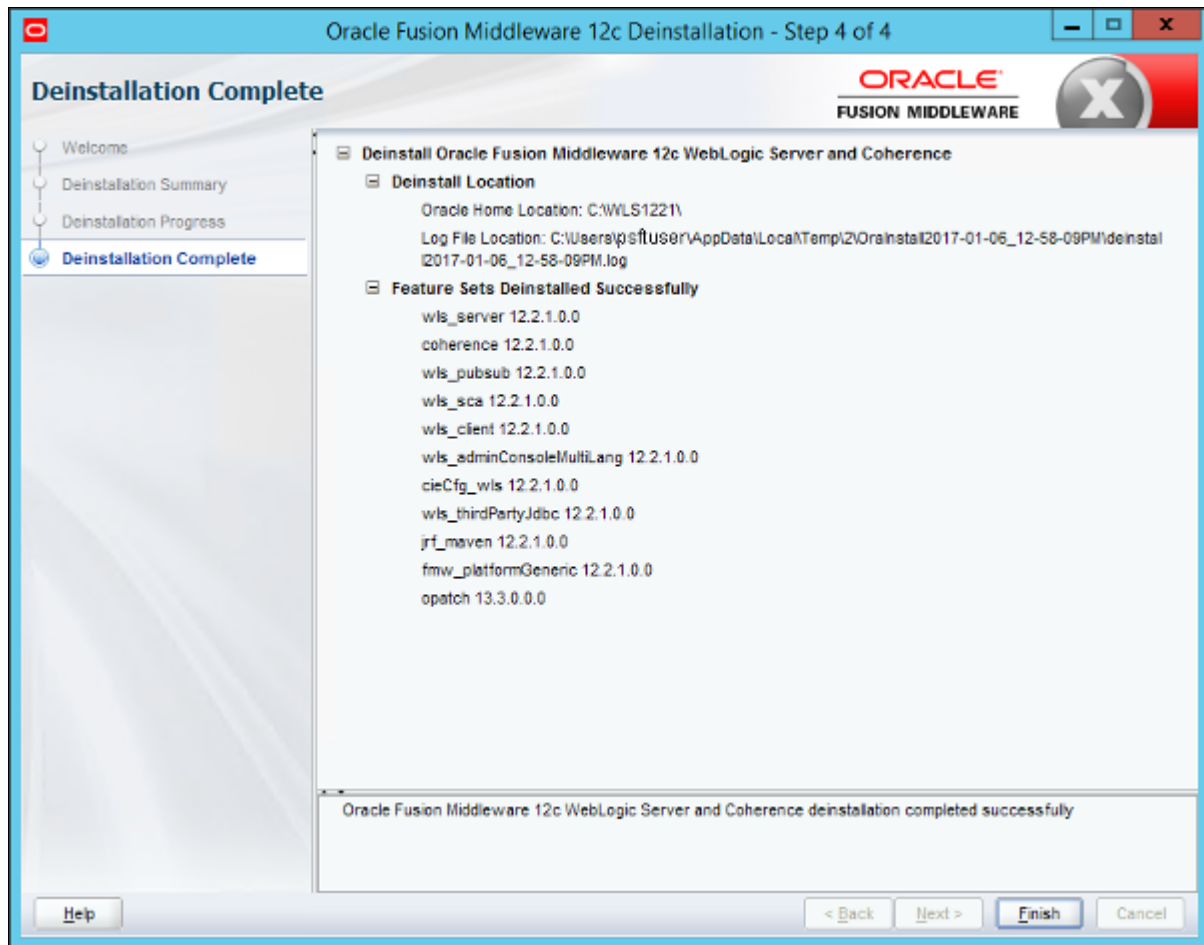
See Removing the Oracle WebLogic Installation on UNIX or Linux.

Click Deinstall. A progress indicator appears. Click Next when the tasks are complete, as shown in this example.



Oracle Fusion Middleware 12c Deinstallation - Step 3 of 4

- Click Finish on the Deinstallation Complete window.



Oracle Fusion Middleware 12c Deinstallation - Step 4 of 4

- Remove the *WLS\_HOME* directory manually after the deinstallation.

## Task 2-1-7: Removing the Oracle WebLogic Installation on Linux or UNIX

To remove the installation on Linux or UNIX, you run in console mode, and use a response file.

**Note.** The previous section, Removing the Oracle WebLogic Installation on Microsoft Windows, included a step in which you saved a response file. You can edit and use this response file for different operating system platforms.

To remove the Oracle WebLogic installation on UNIX or Linux in silent mode:

- Before running the deinstaller, stop all servers and processes associated with the Oracle home you are going to remove.
- If you need to create a response file, copy the following content into a text editor and save it.

This is the silent response file, referred to here as *RESPONSE\_DIR/response.txt*.

```
[ENGINE]
```

```
#DO NOT CHANGE THIS.
```

```
Response File Version=1.0.0.0.0
```

```
[GENERIC]
```

```
#This will be blank when there is nothing to be de-installed in⇒  
distribution level
```

```
SELECTED_DISTRIBUTION=WebLogic Server~12.2.1.0.0
```

```
#The oracle home location. This can be an existing Oracle Home or a new⇒  
Oracle Home
```

```
ORACLE_HOME=
```

3. Edit the `ORACLE_HOME` line to add the location where you installed Oracle WebLogic 12.2.1.0.0; for example:

```
#The oracle home location. This can be an existing Oracle Home or a new⇒  
Oracle Home
```

```
ORACLE_HOME=/home/wls1221
```

4. Change directory to `WLS_HOME/oui/bin` and locate the `deinstall.sh` script.

`WLS_HOME` is the location where you installed your Oracle WebLogic 12.2.1.0.0.

5. Run the following command.

For `INVENTORY_DIR`, specify the full directory path containing the Oracle installer inventory file, `oraInst.loc`.

See *Installing Oracle WebLogic on Linux or UNIX in Silent Mode*.

```
./deinstall.sh -silent -response RESPONSE_DIR/response.txt -invPtrLoc ⇒  
INVENTORY_DIR/oraInst.loc
```

6. An indicator shows the progress of the removal process, followed by a completion message such as "The uninstall of Oracle Fusion Middleware 12c WebLogic Server and Coherence 12.2.1.0.0 completed successfully."
7. Remove the `WLS_HOME` directory manually to complete the deinstallation.

## **Task 2-2: Installing IBM WebSphere Application Server**

---

This section discusses:

- Understanding IBM WebSphere Installation
- Prerequisites
- Obtaining IBM WebSphere Installation Files
- Installing IBM WebSphere 9.0.0.0 ND
- Installing IBM HTTP Server 9.0.0.0
- Installing IBM WebSphere Plug-ins 9.0.0.0

## Understanding IBM WebSphere Installation

Oracle supports 64-bit IBM® WebSphere® Application Server Network Deployment 9.0.0.0 (referred to as IBM WebSphere ND in this documentation) for PeopleSoft PeopleTools 8.56. The IBM WebSphere ND requires IBM Runtime Environment, Java Technology Edition 8.

IBM WebSphere Application Server supports IBM HTTP server (IHS) as a HTTP Reverse Proxy server. IBM WebSphere Application Server alone cannot act as a proxy server for PeopleSoft PeopleTools REN Server. You must also install PeopleSoft Pure Internet Architecture, as well as installing the IBM HTTP server. Consult My Oracle Support for information on the versions of IHS certified for use with PeopleSoft PeopleTools.

This section includes guidelines for installing IBM WebSphere ND, the Web server plug-ins for IBM WebSphere Application Server, and IHS. For detailed installation instructions, see the IBM documentation.

### See Also

My Oracle Support, Certifications

Clustering and High Availability for PeopleTools, My Oracle Support, (search for the article name)

IBM WebSphere Application Server Information Center,  
<http://pic.dhe.ibm.com/infocenter/wasinfo/v8r5/index.jsp>

### Prerequisites

IBM WebSphere ND is certified for PeopleSoft PeopleTools 8.56 on the following operating systems:

- IBM AIX
- HP-UX Itanium
- Linux
- Microsoft Windows
- Oracle Solaris

The full lists of prerequisites for IBM WebSphere Application Server Network Deployment 9.0.0.0 are available on the IBM website:

See <http://www-01.ibm.com/support/docview.wss?uid=swg27006921#9.0>

In addition, review the following prerequisites before beginning your installation:

- Both IBM WebSphere ND and PeopleSoft Pure Internet Application (PIA) need to be installed and deployed using the same user ID. Following this requirement avoids security and profile management issues.
- On Microsoft Windows operating systems, if you are not using the built-in administrator account to run the commands, you will need stronger user account privileges to carry out the installation of IBM Installation Manager.

To set the appropriate privileges, right-click the installer and select Run as administrator. Do the same thing for the installation of IBM Installation Manager.

- On UNIX platforms, the /var file system is used to store all the security logging information for the system. Therefore it is critical that you maintain free space in /var for these operations.
- When you carry out the GUI mode installation on UNIX, executing the installation wizard launches a GUI window. You must run this command from an X-Windows client window (for example, Reflection-X).
- PeopleSoft PeopleTools 8.56 supports the IBM HTTP Server (IHS) 9.0.0.0 that is bundled with the IBM

WebSphere 9.0.0.0 installation. Use of an external remote proxy server (RPS) is optional.

## Task 2-2-1: Obtaining IBM WebSphere Installation Files

For the current PeopleSoft PeopleTools release, the installation files for IBM WebSphere are not packaged with PeopleSoft PeopleTools on Oracle Software Delivery Cloud. To download the necessary files for the IBM WebSphere installation, contact IBM. The installation of IBM WebSphere 9.0.0.0 requires the download of the following components:

- IBM Installation Manager V1.8.5 or later
- WebSphere Application Server Network Deployment V9.0.0.0 64-bit
- Application Client for WebSphere Application Server
- IBM HTTP Server V9.0.0.0 64-bit
- Plug-ins V9.0.0.0 64-bit
- IBM SDK V8.0.3.10

The distribution is provided as operating-system-specific zip files. Download and extract the appropriate zip files for your operating system. The base binaries of IBM WebSphere 9.0.0.0, IHS 9.0.0.0, and Plug-in 9.0.0.0 have to be downloaded by providing an IBM partner ID and password.

## Task 2-2-2: Installing IBM WebSphere 9.0.0.0 ND

For detailed information on installing IBM WebSphere 9.0.0.0 ND, see the documentation on the IBM web site. See the previous section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system. The installation of IBM WebSphere Application Server Network includes the following steps:

1. Install IBM Installation Manager V1.8.5 or later
2. Install IBM WebSphere 9.0.0.0 64-bit
3. Install IBM WebSphere SDK Java (TM) Technology Edition V8.0.3.10

## Task 2-2-3: Installing IBM HTTP Server 9.0.0.0

For detailed information on installing IHS 9.0.0.0, see the documentation on the IBM web site. See the previous section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system.

To install IHS 9.0.0.0 64-bit, use IBM Installation Manager.

## Task 2-2-4: Installing IBM WebSphere Plug-ins 9.0.0.0

For detailed information on installing the Web server plug-ins for IBM WebSphere Application Servers, see the documentation on the IBM web site. See the earlier section, Obtaining IBM WebSphere Installation Files, for the installation file names for your operating system.

To install the IBM Plug-ins 9.0.0.0 64-bit for IBM WebSphere Application Servers, use IBM Installation Manager.





## Chapter 3

# Installing Additional Components

This chapter discusses:

- Reviewing Additional Components
- Installing Oracle Tuxedo

## Reviewing Additional Components

---

Depending upon your PeopleSoft installation environment, you may need to install and configure software components that are not included with the PeopleSoft PeopleTools installation files, or which you acquire from vendors other than Oracle. Some of the components that are discussed in this installation guide include:

- Oracle Tuxedo

The installation of Oracle Tuxedo is required for a basic PeopleSoft PeopleTools installation, and is covered in this chapter.

- COBOL

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

See "PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and COBOL Compilers," My Oracle Support, Doc ID 747059.1.

See "PeopleSoft Enterprise Frequently Asked Questions About PeopleSoft and the IBM COBOL Compiler," My Oracle Support, Doc ID 1211907.1.

The installation and configuration of Micro Focus and IBM COBOL compilers are covered in later chapters.

See "Installing and Configuring COBOL on UNIX."

See "Installing and Configuring COBOL on Windows."

- Elasticsearch

Elasticsearch is the search engine for the PeopleSoft Search Framework for the current release. Oracle provides Elasticsearch as deployment packages (DPKs) for Microsoft Windows and Linux that deliver the required Elasticsearch software version, Java-based plug-ins needed for integration with PeopleSoft environments, and customized code where required. Be sure to obtain and use the Elasticsearch DPKs provided for use with the PeopleSoft installation.

See Elasticsearch Home Page, My Oracle Support, Doc ID 2205540.2.

---

**Note.** Oracle Secure Enterprise Search (SES) and Verity are not supported for the current release.

---

**Note.** Use the My Oracle Support Certifications area to determine the latest certified versions of additional components that are supported for the PeopleSoft PeopleTools release you are installing.

---

## Task 3-1: Installing Oracle Tuxedo

---

This section discusses:

- Understanding Oracle Tuxedo
- Prerequisites
- Debugging the Oracle Tuxedo Installer
- Obtaining the Oracle Tuxedo Installation Files from Oracle Software Delivery Cloud
- Obtaining the Oracle Tuxedo Patches from My Oracle Support
- Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional)
- Designating the Application Server Administrator on Microsoft Windows
- Installing Oracle Tuxedo on Microsoft Windows in GUI Mode
- Installing the Oracle Tuxedo Patch on Microsoft Windows
- Installing Oracle Tuxedo on Microsoft Windows in Silent Mode
- Uninstalling the Oracle Tuxedo Patch on Microsoft Windows
- Uninstalling Oracle Tuxedo in GUI Mode
- Checking the Windows Service Account
- Restricting Domain Process Privileges
- Setting Up the Windows Services for Oracle Tuxedo
- Verifying the Server Installation on Microsoft Windows
- Removing Existing Oracle Tuxedo Installations from UNIX (Optional)
- Completing the Preinstallation Checklist on UNIX
- Designating the Oracle Tuxedo Owner on UNIX
- Installing Oracle Tuxedo in Silent Mode on UNIX
- Installing the Oracle Tuxedo Patch on UNIX
- Uninstalling the Oracle Tuxedo Patch from UNIX
- Uninstalling Oracle Tuxedo from UNIX Using Silent Mode
- Verifying the Server Installation on UNIX
- Ensuring that Oracle Tuxedo Coexists with Earlier Versions

### Understanding Oracle Tuxedo

The PeopleSoft application server uses the Oracle® Fusion Middleware product, Oracle Tuxedo, to perform transaction management, messaging, and administration. This task guides you through the installation of Oracle Tuxedo on your server. It is essential that you install Oracle Tuxedo 64-bit, version 12c Release 2 (12.2.2.0), which is available on Oracle Software Delivery Cloud. You need to install Oracle Tuxedo before you go any further in setting up your application server and your PeopleSoft Pure Internet Architecture. After you perform the installation described here, you will configure the application server environment to incorporate Oracle Tuxedo with the PeopleSoft components.

Oracle supports Oracle Tuxedo 12c Release 2 (64-bit) for Linux or UNIX, and Oracle Tuxedo 12c Release 2 (64-bit) with MS Visual Studios 2015 for Microsoft Windows, with PeopleSoft PeopleTools 8.56.

The minimum patch level certified for running Oracle Tuxedo 12c Release 2 with PeopleSoft PeopleTools 8.56 is Rolling Patch 16 (RP016). These installation instructions include the installation of the base Oracle Tuxedo 12c Release 2, followed by the patch installation.

---

**Note.** Oracle Tuxedo 12c Release 2 for Linux operating systems supports Exalogic optimizations.

For PeopleSoft customers running on Oracle Exalogic Elastic Cloud, we strongly recommend the use of the Exalogic OVM Template for PeopleSoft.

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

---

**Note.** For the sake of brevity and convenience, this documentation shortens "Oracle Tuxedo 12c Release 2 (64-bit)" to "Oracle Tuxedo 12cR2" and "Oracle Tuxedo 12c Release 2 (64-bit) with MS Visual Studios 2015" to "Oracle Tuxedo 12cR2\_VS2015."

---

If you have a previous version of Oracle Tuxedo installed, you need to install the new version of Oracle Tuxedo, and re-create your application server domains. (You must create your domains using PSADMIN; you cannot migrate existing domains.) You can also use the PSADMIN domain import utility.

You can install Oracle Tuxedo once for each release on a machine, regardless of the number of PeopleSoft applications or databases the server supports. For example, if you installed Oracle Tuxedo 10gR3 for an earlier release of your PeopleSoft application, you may install Oracle Tuxedo 12cR2 on the same machine in a separate directory. For example:

On Microsoft Windows, you may install into C:\oracle\tuxedo10gR3\_VS2008 and C:\oracle\tuxedo12.2.2.0.0\_VS2015.

On UNIX, you may install into /home/oracle/tuxedo10gR3 and /home/oracle/tuxedo12cR2.

If more than one PeopleSoft application uses the same Oracle Tuxedo version (that is, the same patch level), then it is recommended that you have a single installation of Oracle Tuxedo to serve all the supported PeopleSoft applications. A single Oracle Tuxedo installation simplifies future maintenance (such as applying patches). However, if you choose to have more than one Oracle Tuxedo installation (this scenario is possible only on UNIX systems, as Oracle Tuxedo does not allow multiple installations of the same version of Oracle Tuxedo on Microsoft Windows), you must install and maintain the same Oracle Tuxedo version more than once in different directories.

## See Also

Oracle Tuxedo Documentation on Oracle Technology Network,  
<http://www.oracle.com/technetwork/middleware/tuxedo/documentation/index.html>

*PeopleTools: Portal Technology*

*PeopleTools: System and Server Administration*

Operating System, RDBMS, and Additional Component Patches Required for Installation PeopleTools, My Oracle Support (search for article name and select the release)

Clustering and High Availability for PeopleTools, My Oracle Support (search for title)

Using OVM Templates for PeopleSoft on Exalogic, My Oracle Support (search for title)

## Prerequisites

Before you begin to install Oracle Tuxedo, make sure that you have the following resources in place:

- Before beginning the Oracle Tuxedo installation you must install 64-bit Java 8 JDK.

The specific JDK required depends upon the operating system and vendor. Follow the instructions given earlier to install Java 8 JDK for your operating system.

See Installing JDK for Oracle WebLogic.

- TCP/IP connectivity (required for PeopleSoft PeopleTools 8.50 or higher) between the client machine and the application server
- For UNIX, you must have root access.
- Enough free disk space on the application server to install the product.

The disk space requirements vary by operating system. For free disk space requirements, see the Oracle Tuxedo documentation.

The Oracle Tuxedo installer uses the default system temporary space. If there is not enough space for installation, it will stop with an error. To specify a different temporary directory on Microsoft Windows, use the following command before starting the installer:

```
set IATEMPDIR=Complete_Path_Temp_Dir
```

Replace *Complete\_Path\_Temp\_Dir* with the full path to the temporary directory that you want to use for the installation.

If you are sure you have enough space, but the installer still gives an error about low disk space (this usually happens on Linux), run the following command before starting the installer:

```
unset BLOCKSIZE
```

## Debugging the Oracle Tuxedo Installer

If the Oracle Tuxedo installation fails with no error message, open a command prompt and enter the following command:

```
set LAX_DEBUG=1
```

After entering this command, start the installer again. If you are using GUI mode on Microsoft Windows, you must start the installer using the same command prompt.

## Task 3-1-1: Obtaining the Oracle Tuxedo Installation Files from Oracle Software Delivery Cloud

You can obtain the files needed to install Oracle Tuxedo 12cR2 or 12cR2\_VS2012 from the Oracle Software Delivery Cloud portal. At this point you should have already downloaded the necessary files. If you have not yet downloaded the files, this section includes additional information on finding and using the files for Oracle Tuxedo if necessary.

See "Preparing for Installation," Using Oracle Software Delivery Cloud to Obtain Installation Files.

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

1. After logging in to Oracle Software Delivery Cloud, read the export restrictions, and then click Accept.
2. Enter Oracle Tuxedo in the Product field, and select Oracle Tuxedo 12.2.2.0.0 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. Read the license agreement and select the check box to acknowledge that you accept the agreement.
6. Click Continue.

7. Click the filenames to download.

Save the zip file to a temporary directory on your local system, referred to in this documentation as *TUX\_INSTALL*.

8. After you download the installation files from Oracle Software Delivery Cloud, if it is necessary, transfer the files to a UNIX computer using FTP. Unzip the file and change the permissions of the unzipped file to make it an executable, for example using the `chmod +x` command.
9. Extract the files into *TUX\_INSTALL*.

After you extract, you see a Disk1 folder with two subfolders, `install` and `stage`.

---

**Note.** For the PeopleTools Client, install Oracle Tuxedo 12cR2\_VS2015 for Microsoft Windows (64-bit) to run with PeopleSoft PeopleTools 8.56.

---

## Task 3-1-2: Obtaining the Oracle Tuxedo Patches from My Oracle Support

You can download the latest patch for Oracle Tuxedo 12cR2\_VS2015 for Microsoft Windows or Oracle Tuxedo 12cR2 for Linux or UNIX from My Oracle Support.

---

**Note.** To obtain older Oracle Tuxedo patches, raise a service request through My Oracle Support.

---

To obtain the latest Oracle Tuxedo patch:

1. Sign in to My Oracle Support with your account name and password:  
<https://support.oracle.com>
2. Select the Patches & Updates tab.
3. Under Patch Search, select Product or Family (Advanced Search).
4. Select *Oracle Tuxedo* from the product drop-down list.
5. Select *Oracle Tuxedo 12.2.2.0.0* from the release drop-down list.
6. Select your platform.

---

**Note.** For detailed supported platform information, see the certifications area on My Oracle Support.

---

The supported platforms are:

- AIX
  - HP-UX Itanium
  - Linux
  - Microsoft Windows
  - Oracle Solaris on SPARC
7. Click Search.

Download the necessary files from the list of results. For installation on Microsoft Windows operating systems, make sure your rolling patch (RP) description has "VS2015" or "Visual Studio 2015" in the description.

---

**Note.** To begin a new search, select Edit Search in the top right of the results page.

---

8. Download the patch file for your operating system platform to a convenient directory, referred to here as *TUX\_INSTALL*.

9. After you install a patch, use these steps to verify the installation:
  - a. In a command prompt, change directory to *TUXDIR*\bin (where *TUXDIR* is the Oracle Tuxedo installation location).
  - b. Execute the following command:
 

```
tmadmin -v
```

The command displays the patch level. For example:

```
INFO: Oracle Tuxedo, Version 12.2.2.0.0_VS2015, 64-bit, Patch Level=>
016
```

### Task 3-1-3: Removing Existing Oracle Tuxedo Installations from Microsoft Windows (Optional)

You may already have prior versions of Oracle Tuxedo installed on your system from an earlier version of PeopleSoft PeopleTools. If you are completely upgrading to PeopleSoft PeopleTools 8.56 from an earlier version of PeopleSoft PeopleTools, then you may uninstall the existing version and patches.

---

**Note.** It is not mandatory to uninstall the existing version of PeopleSoft PeopleTools, as Oracle Tuxedo 12cR2\_VS2015 can coexist with prior versions on the same machine.

If you wish to use two versions of PeopleSoft PeopleTools that depend on different versions of Oracle Tuxedo, you should read the section "Ensuring that Oracle Tuxedo Coexists with Earlier Versions" before continuing.

---

You may have to uninstall Oracle Tuxedo for these reasons:

- You are having problems starting Oracle Tuxedo and decide to reinstall.
- You no longer need Oracle Tuxedo on a machine.

To uninstall Oracle Tuxedo from Microsoft Windows:

1. Using PSADMIN, shut down any application server, Process Scheduler, and Search server domains that may be running on the machine.
2. Stop the processes for the Tuxedo Monitor and the Tuxedo Administrative Web Server (wlisten and tuxwsvr), if applicable.
  - a. Right-click on the task bar and select Task Manager.
  - b. Highlight wlisten, and click the End Task button.
  - c. Highlight tuxwsvr and click the End Task button.
  - d. Exit Task Manager.
3. Stop and set the TListen *VERSION* service to manual, if applicable.
 

Replace *VERSION* with the version number for the existing service. For example, this would be TListen 9.1 or TListen 10gR3.

  - a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services icon.
  - b. Select TListen *VERSION* and click the Stop button.
  - c. Choose the Startup Type and set to Manual.
4. Stop and set the ORACLE ProcMGR *VERSION* (or BEA ProcMGR *VERSION* for earlier releases) service to manual.
  - a. Select Start, Settings, Control Panel. Double-click Administrative Tools, and double-click the Services

- icon.
- b. Select ORACLE ProcMGR *VERSION* and click the Stop button.
  - c. Choose the Startup Type and set to Manual.
5. Reboot your machine.
  6. Uninstall Oracle Tuxedo in one of the following ways:
    - Using the Oracle Tuxedo *VERSION* installation CD provided by Oracle for PeopleSoft installations, open a Command Window, navigate to the root of the CD, and enter `psstuxinstall rmall`. This will remove Oracle Tuxedo *VERSION* plus any delivered Oracle Tuxedo patches from your system.
    - Using the Add/Remove Programs dialog, in sequence remove: Oracle Tuxedo*VERSION* RP and then Oracle Tuxedo *VERSION*.
  7. Go to the Control Panel, double-click on the System icon, and then perform the following actions:
    - a. Make sure `TUXDIR\bin` is deleted from the PATH environment variable definition.  
*TUXDIR* refers to the Oracle Tuxedo installation directory.
    - b. Delete the environment variable `TUXDIR`.
    - c. Make sure you click on Apply and OK to save your changes.
  8. Using Explorer, delete the Tuxedo home directory, such as `C:\bea\tuxedo8.1`.  
If you are unable to delete any files, reboot your machine and retry.

### Task 3-1-4: Designating the Application Server Administrator on Microsoft Windows

Before beginning the installation, you need to designate an existing user—or create a new user such as TUXADM or some other account—to be the Application Server Administrator. The Application Server Administrator, not the Windows Administrator, will install Oracle Tuxedo.

The designated user must be a local Microsoft Windows administrator and must have full system privileges. The Oracle Tuxedo installation program creates a new service for Microsoft Windows—called ORACLE ProcMGR V12.2.2.0.0\_VS2015—for which you need administrator privileges. This service was developed to port Oracle Tuxedo from UNIX to Microsoft Windows. Administrator rights are required since system registry settings are updated. Once this new service is created, you must reboot to start it.

When you configure your application server domain in a read-only *PS\_HOME* environment, the user ID designated to be the Application Server Administrator must have read-only access to *PS\_HOME*, read and write access to *PS\_CFG\_HOME*, and read-only access to the Oracle Tuxedo installation directory, *TUXDIR*, (for example, `C:\oracle\tuxedo12.2.2.0.0_VS2015`). Otherwise, in a scenario where `<PS_CFG_HOME> = <PS_HOME>`, the Application Server Administrator must have read and write access to *PS\_HOME* and read-only access to *TUXDIR*.

See "Configuring the Application Server on Windows."

See "Preparing for Installation," Defining Installation Locations.

To designate the Application Server Administrator:

1. Add the user ID by selecting Start, Administrative Tools, Computer Management, Local Users and Groups.  
Keep in mind that you can also use an existing account if you do not care to create a new one. You can set this to the system account or an account that is a domain administrator (if there is a need to access files on the domain).
2. Expand Local Users and Groups.

3. If the user ID does not yet exist, highlight the Users folder, and select Action, New User.
4. On the New User dialog box, specify the information for the new account.  
Make sure to deselect the User must change password at next logon check box.
5. Expand the Groups folder.
6. Right-click the Administrators group, and select All Tasks, Add to Group, Add.
7. Click Locations to select the local machine or the network domain in which you created the new user.
8. Enter the new user name you created in the object names box.
9. Click OK, and click Apply and OK again to accept the changes.

### **Task 3-1-5: Installing Oracle Tuxedo on Microsoft Windows in GUI Mode**

The following procedure assumes that you saved and extracted the installation files from Oracle Software Delivery Cloud in the directory *TUX\_INSTALL*. Installation in GUI mode is normally used for Microsoft Windows operating systems.

---

**Note.** Oracle Tuxedo 12cR2\_VS2015 can coexist on a machine with other versions of Oracle Tuxedo.

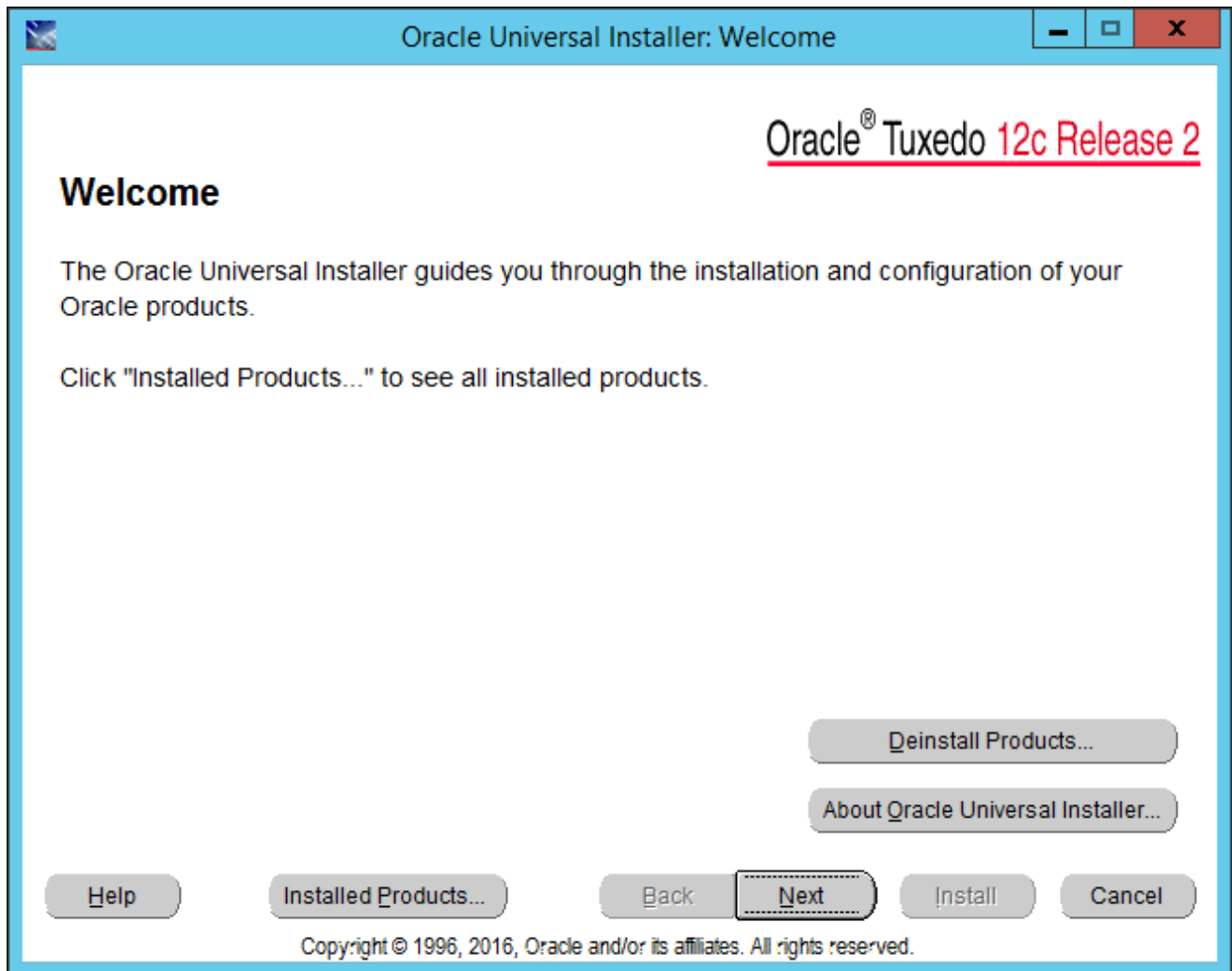
---

To install Oracle Tuxedo on Microsoft Windows:



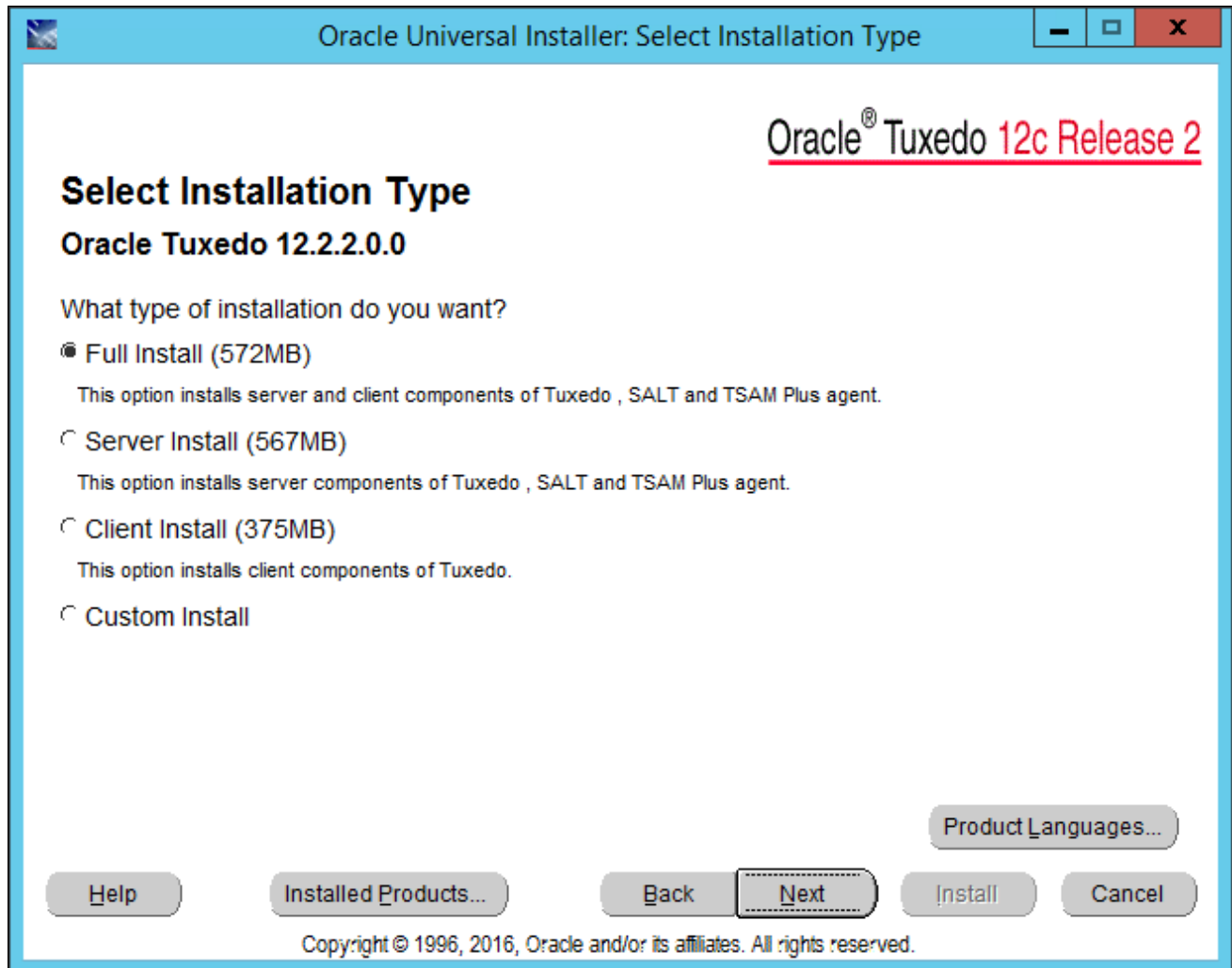
1. Double-click `TUX_INSTALL\Disk1\install\setup.bat` to begin the installation process.

Click OK on the Welcome window, shown in this example:



Oracle Universal Installer: Welcome window for Oracle Tuxedo 12c Release 2

2. Accept the default option, Full Install, on the Select Installation Type window, as shown in this example, and click Next.



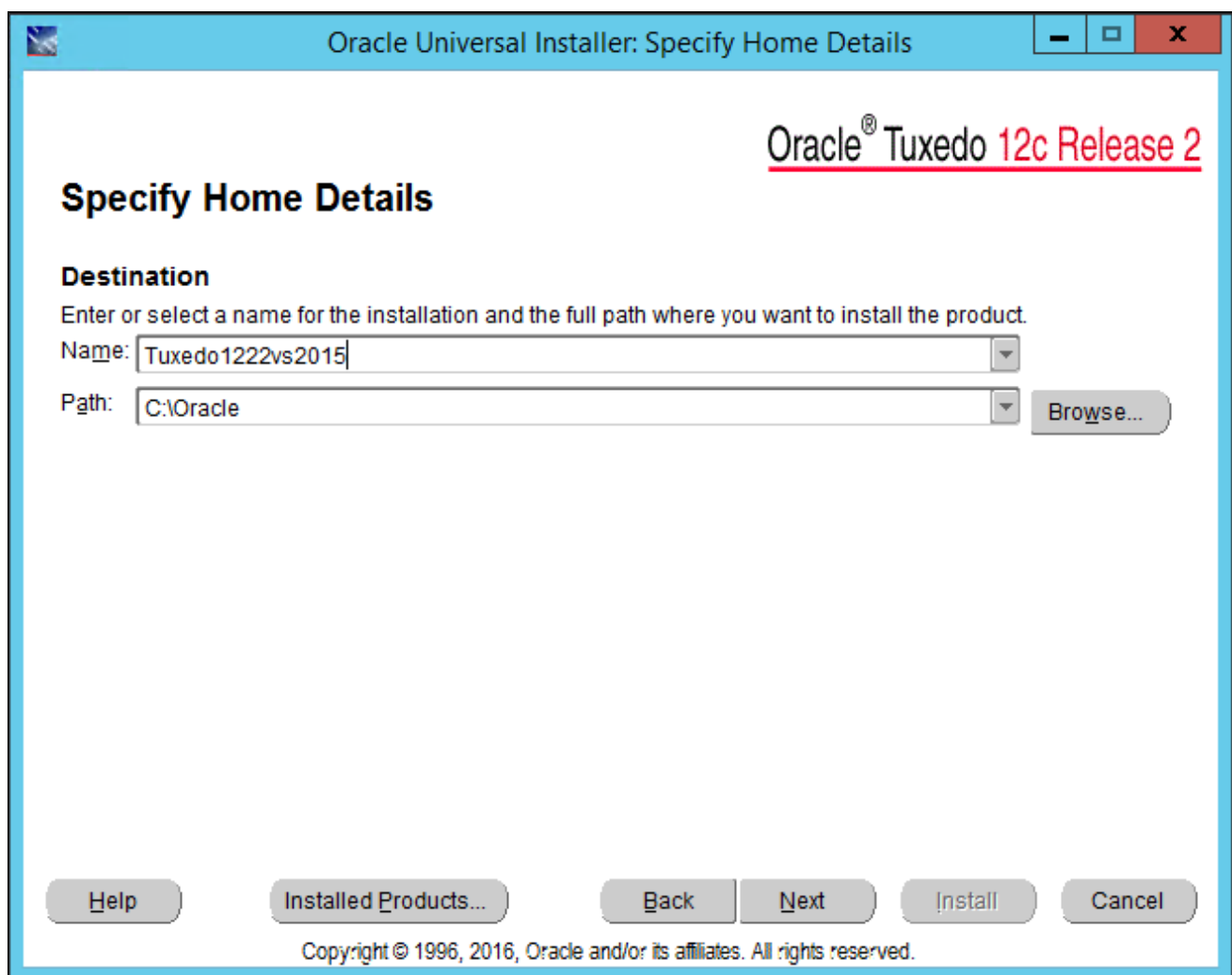
Oracle Universal Installer: Select Installation Type window

3. Specify a name and the home directory path for the installation.

You can enter a new name, or choose an existing name from the drop-down list. The name that you supply will be used to identify this Oracle Tuxedo installation in the Oracle Universal Installer, when reviewing the Installed Products list. In this example, the name is `tuxedo1222vs2015`.

Specify the full path for the home directory. You can choose an existing path from the drop-down list. The Path refers to the location where the Oracle Tuxedo will be installed. The default is `ORACLE_HOME\tuxedo12.2.2.0.0_VS2015`. In this example, the path is `C:\oracle`, which is the recommended location, so the software will be installed to `C:\oracle\tuxedo12.2.2.0.0_VS2015`. The installation directory is referred to in this documentation as *TUXDIR*.

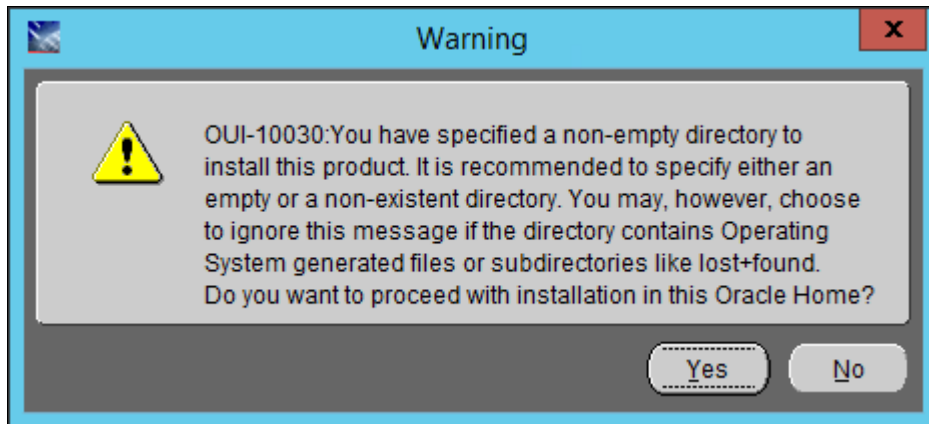
**Note.** In previous Oracle Tuxedo and PeopleSoft PeopleTools releases, the installation directory was referred to as *BEA\_HOME*, and the default was `C:\bea`. You may see installation directories from previous releases displayed here, and if so, you can select one.



Oracle Universal Installer: Specify Home Details window

4. If you select an existing directory that is not empty, you may see a warning message.

The message recommends that you install to an empty directory unless the directory contains Operating System generated files or subdirectories like lost+found. Click Yes to close the message and continue.

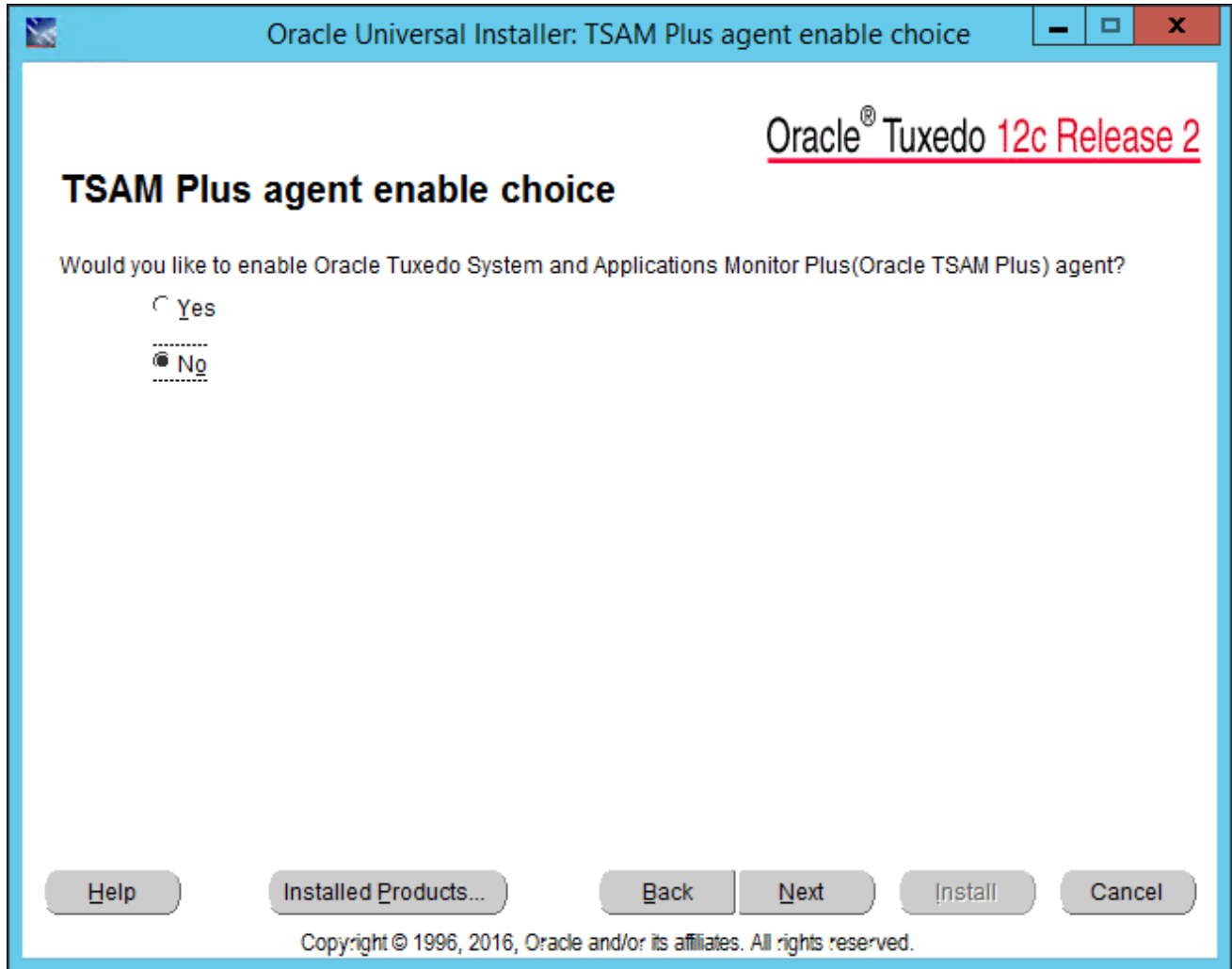


Warning message for a non-empty directory

5. If you have other versions of Oracle Tuxedo on your system, you may get a warning that earlier versions were detected, and with a recommendation that you exit and remove the earlier versions.

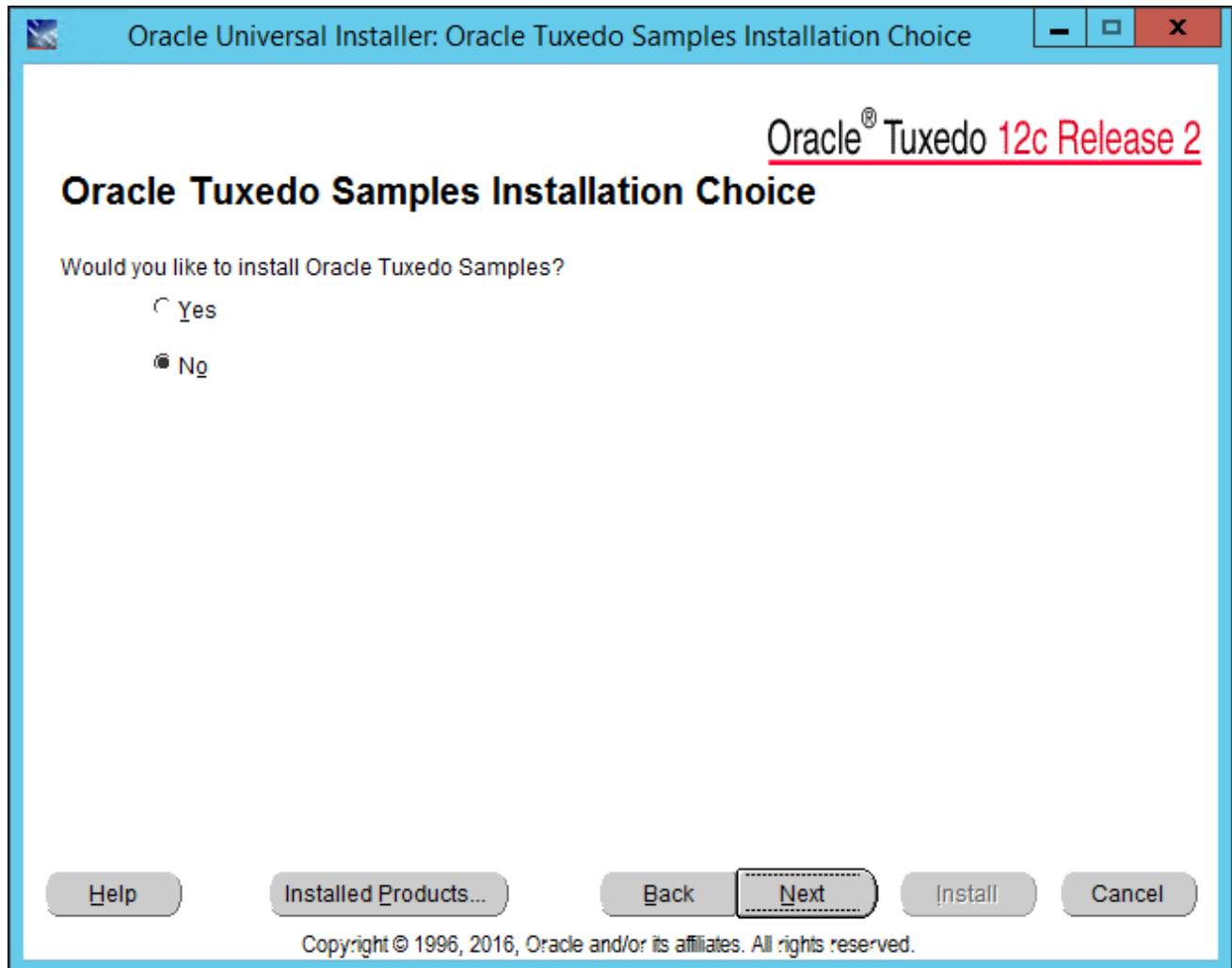
You can either quit and remove the earlier version, or install to a different directory if you want to maintain more than one version of the software. The message directs you to the earlier Installation Guide for instructions for using more than one version of the software. Click Next to continue.

- 6. Select No on the TSAM Plus agent enable choice window, as shown in this example, and then click Next. This indicates that you do not want to enable Oracle Tuxedo System and Applications Monitor Plus (Oracle TSAM Plus) agent.



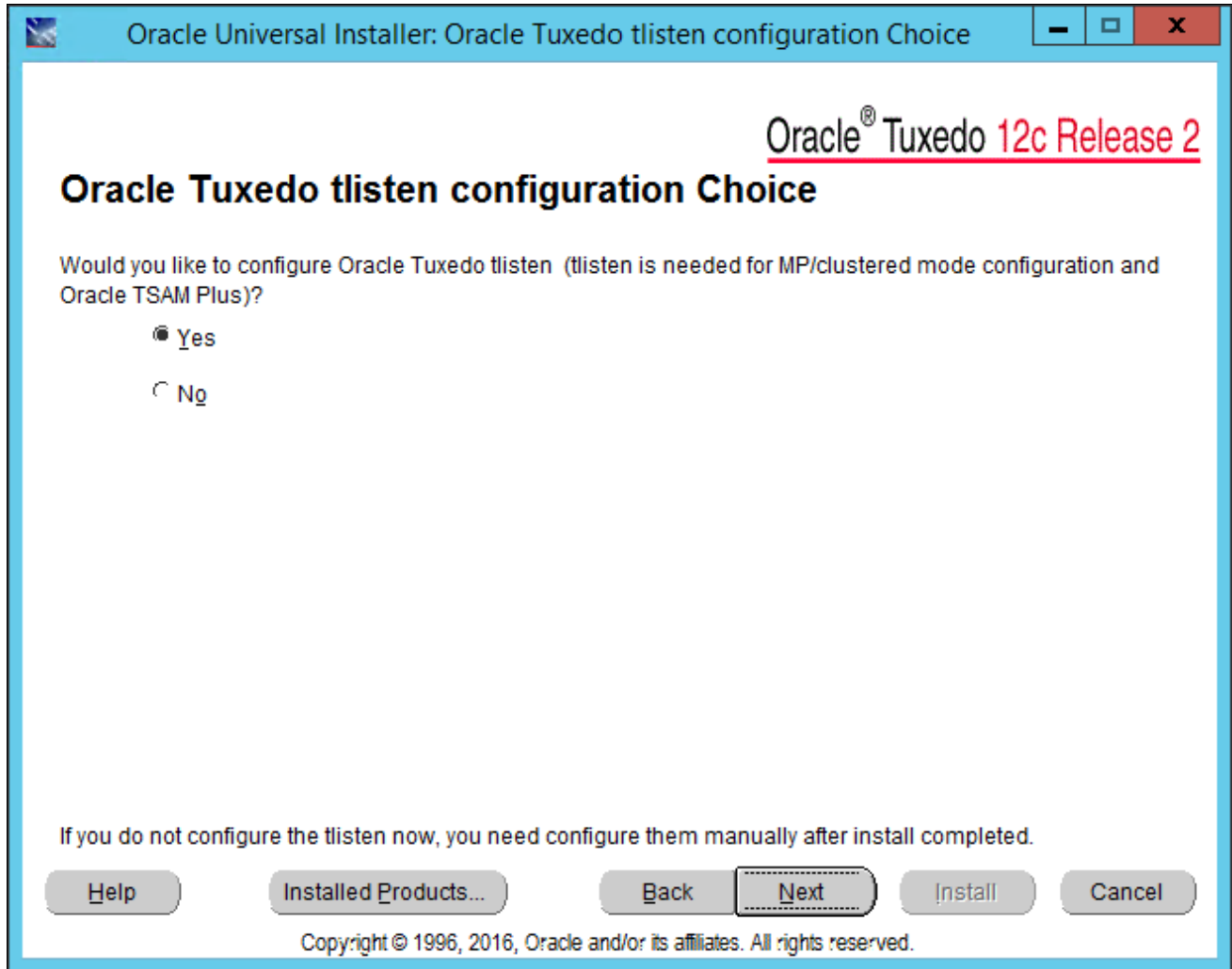
Oracle Universal Installer: TSAM Plus agent enable choice window

7. Select No to indicate that you do not want to install Oracle Tuxedo Samples, as shown in this example, and then click Next.



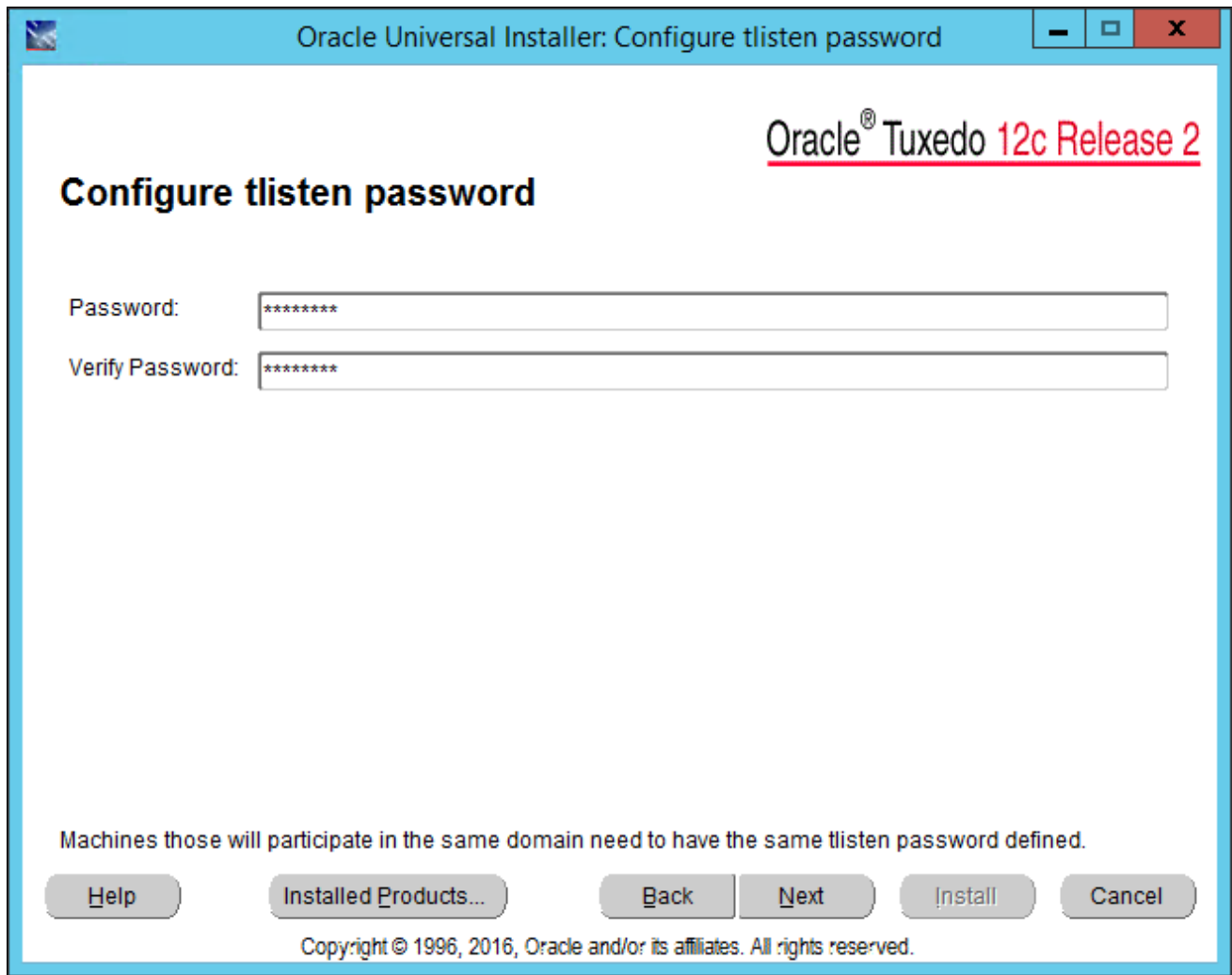
Oracle Universal Installer: Oracle Tuxedo Samples Installation Choice window

- 8. Select Yes to indicate that you want to configure Oracle Tuxedo tlisten, as shown in this example, and then click Next.



Oracle Universal Installer: Oracle Tuxedo tlisten configuration Choice window

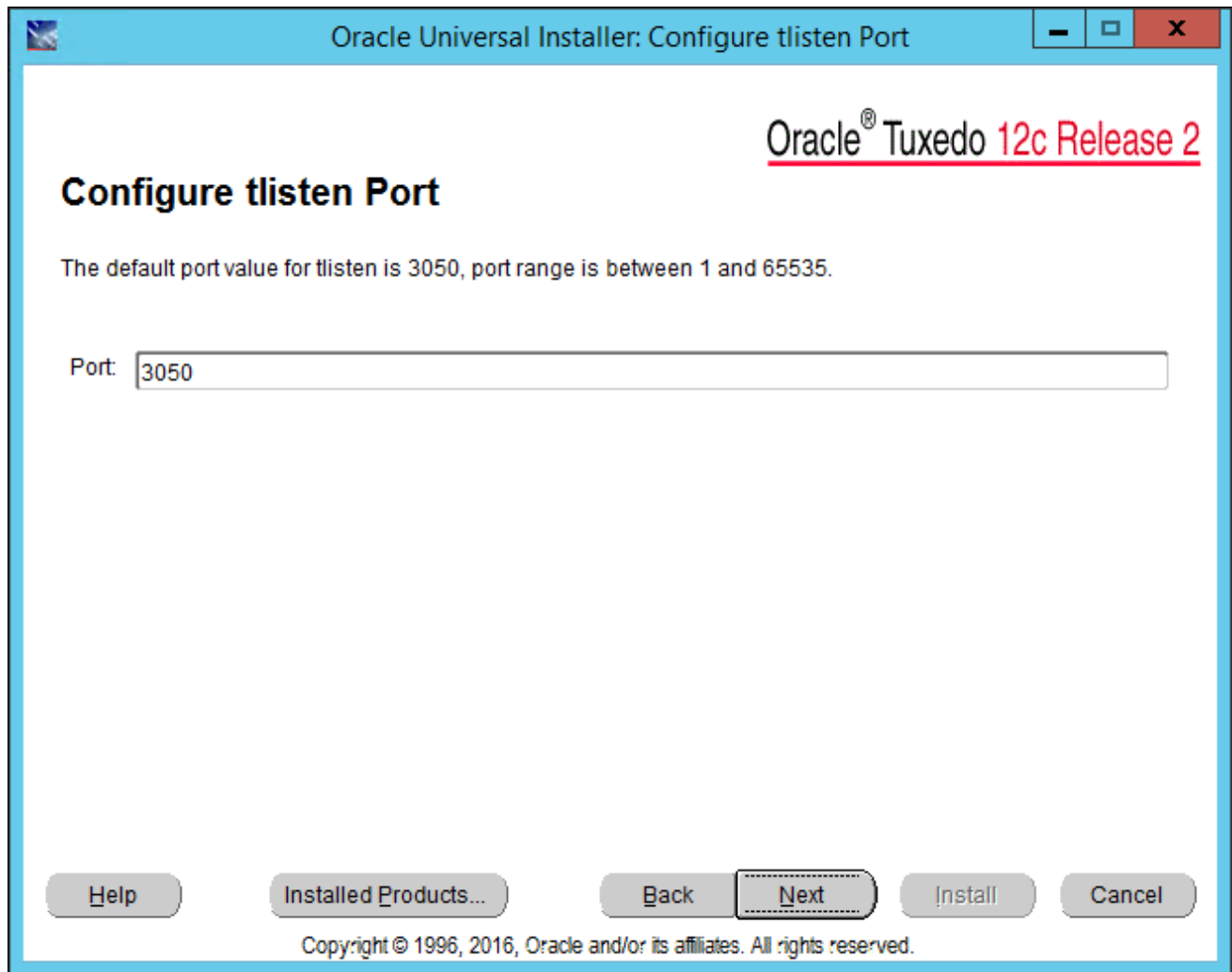
- 9. Enter a password for Oracle Tuxedo tlisten.



Oracle Universal Installer: Configure tlisten password window

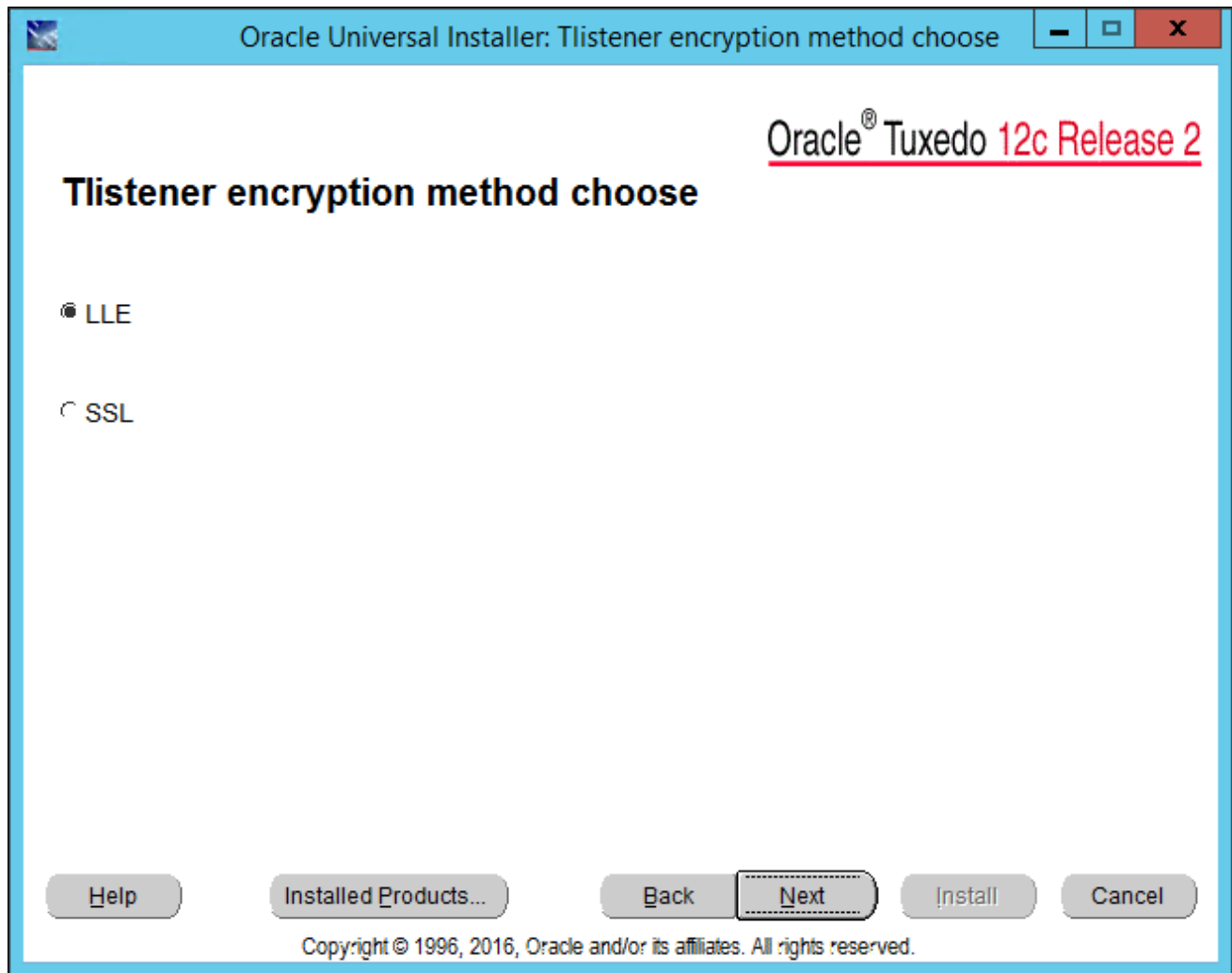


10. Accept the default tlisten port, 3050, or enter another port number.



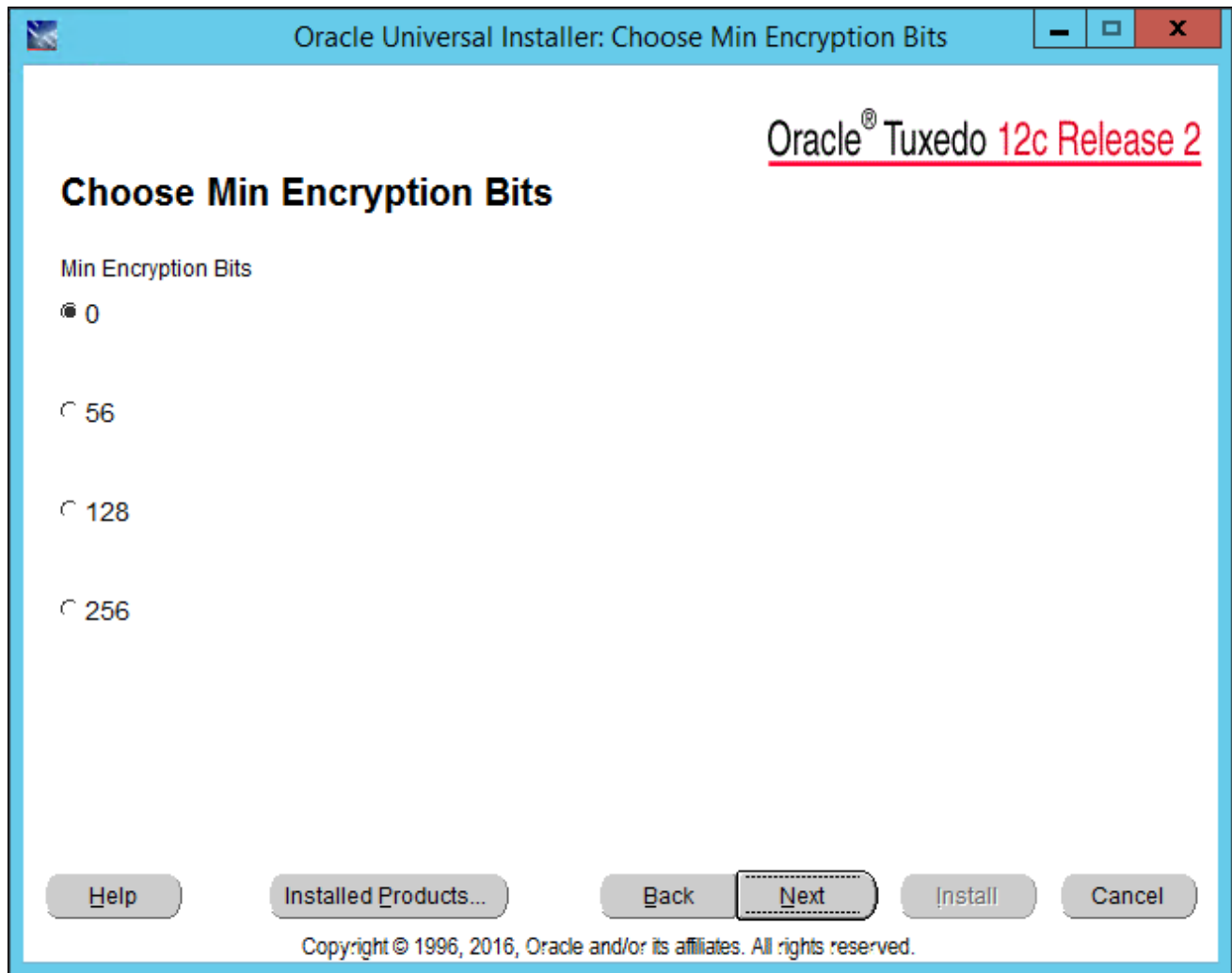
Oracle Universal Installer: Configure tlisten Port window

11. Select LLE as the Tlistener encryption method.



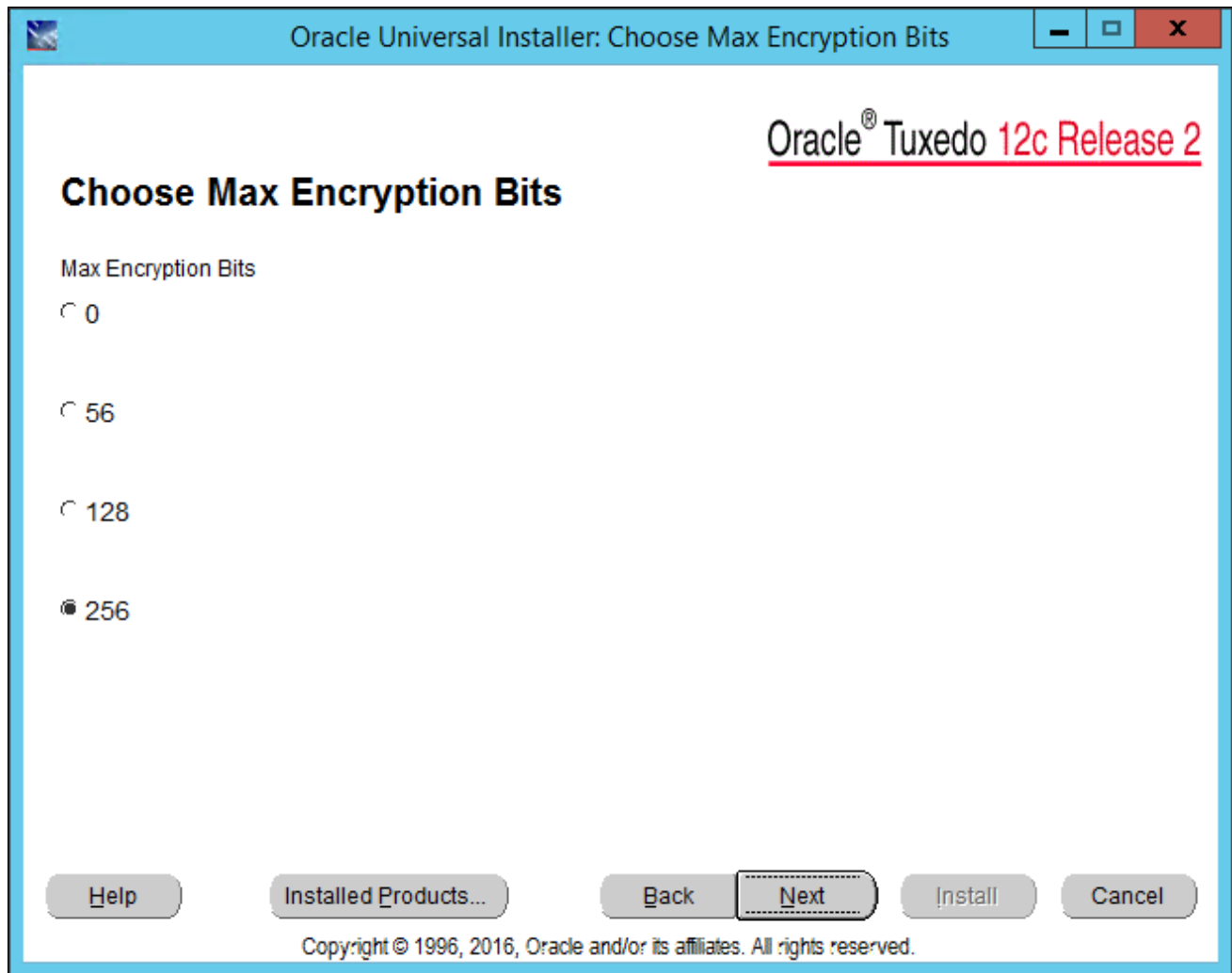
Oracle Universal Installer: Tlistener encryption method choose window

12. Accept the default value of 0 (zero) for the minimum encryption bits.



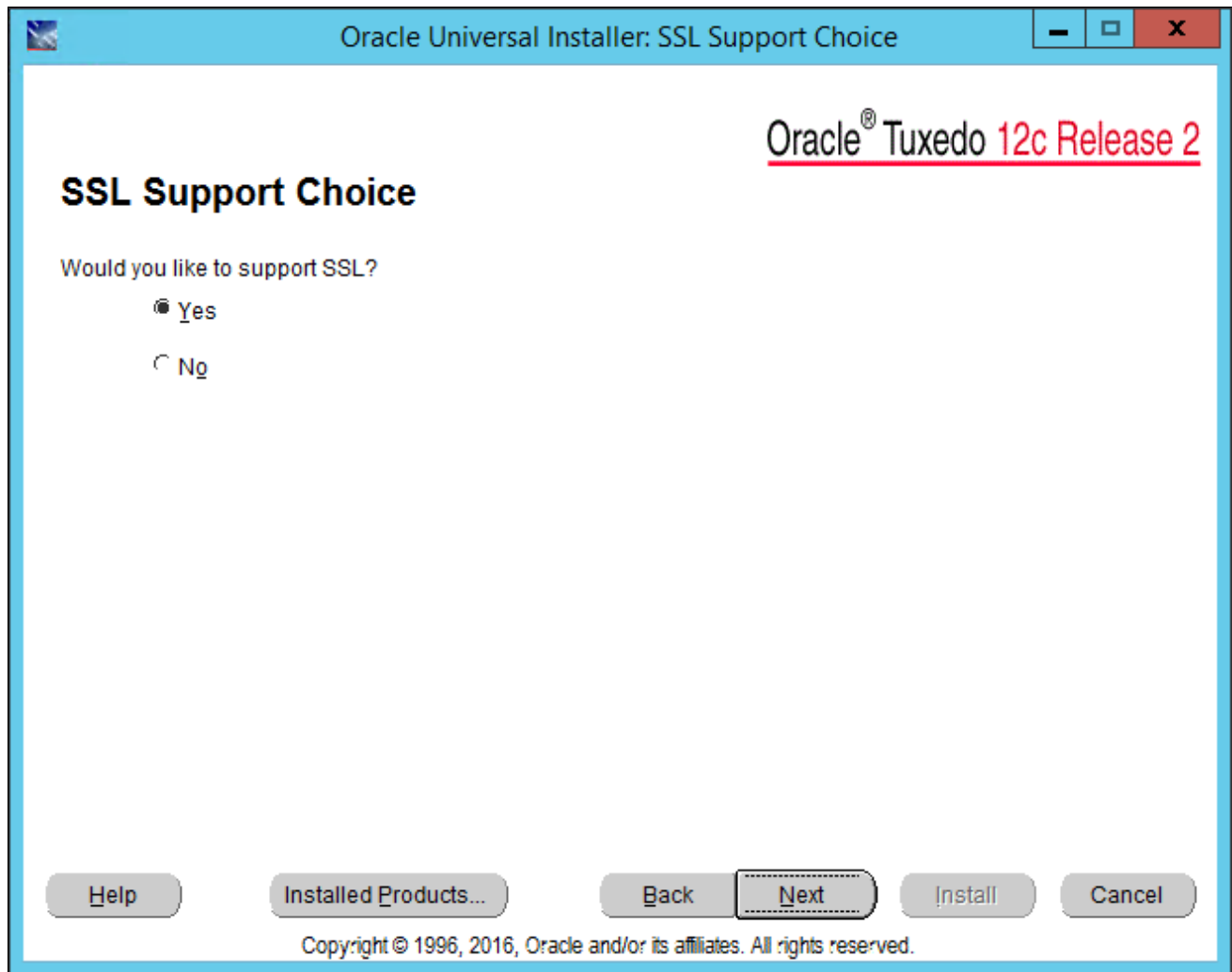
Oracle Universal Installer: Choose Min Encryption Bits window

13. Accept the default value of 256 as the default value of maximum encryption bits.



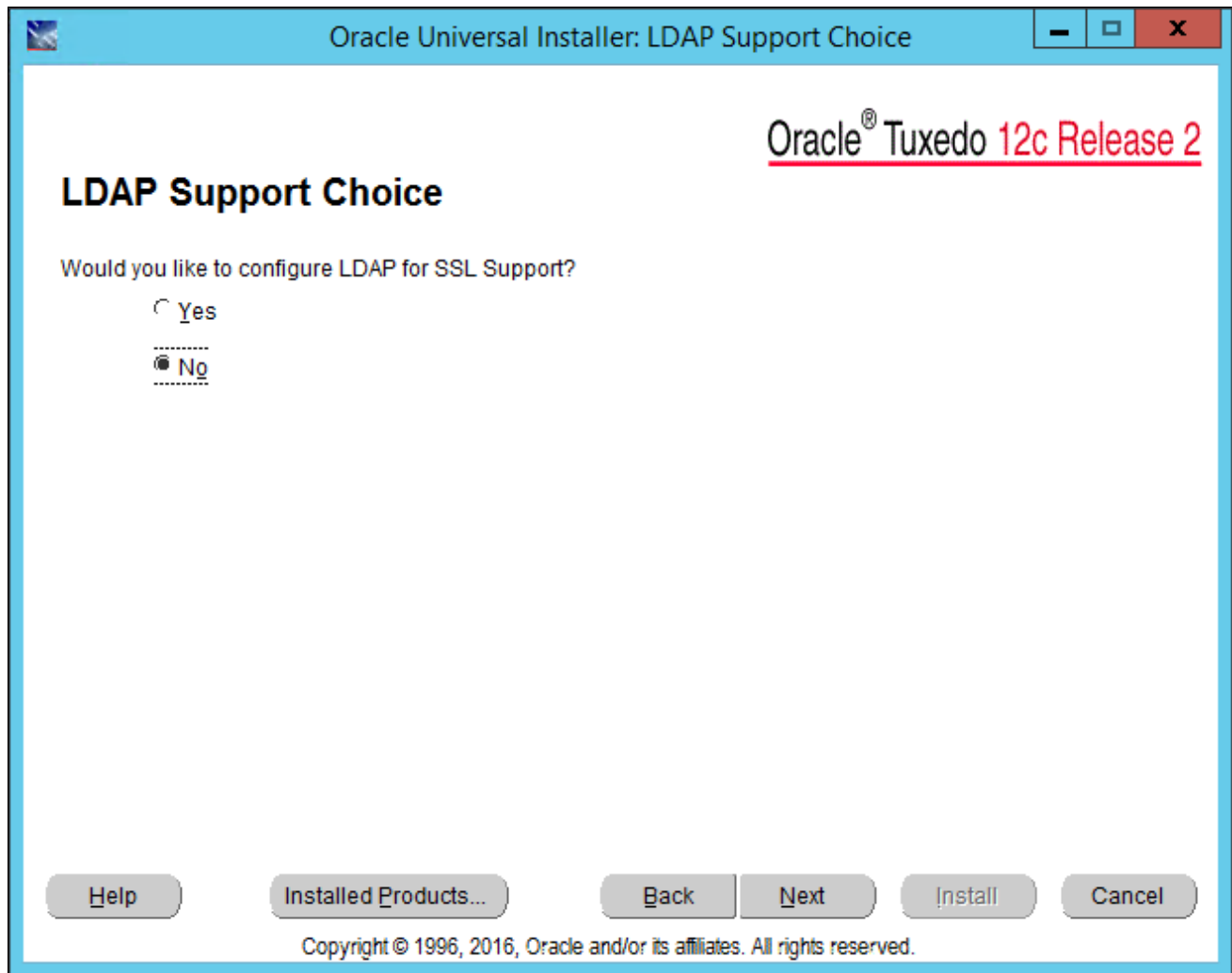
Oracle Universal Installer: Choose Max Encryption Bits window

14. Select Yes on the SSL Support Choice window, as shown in this example, and then click Next.



Oracle Universal Installer: SSL Support Choice window

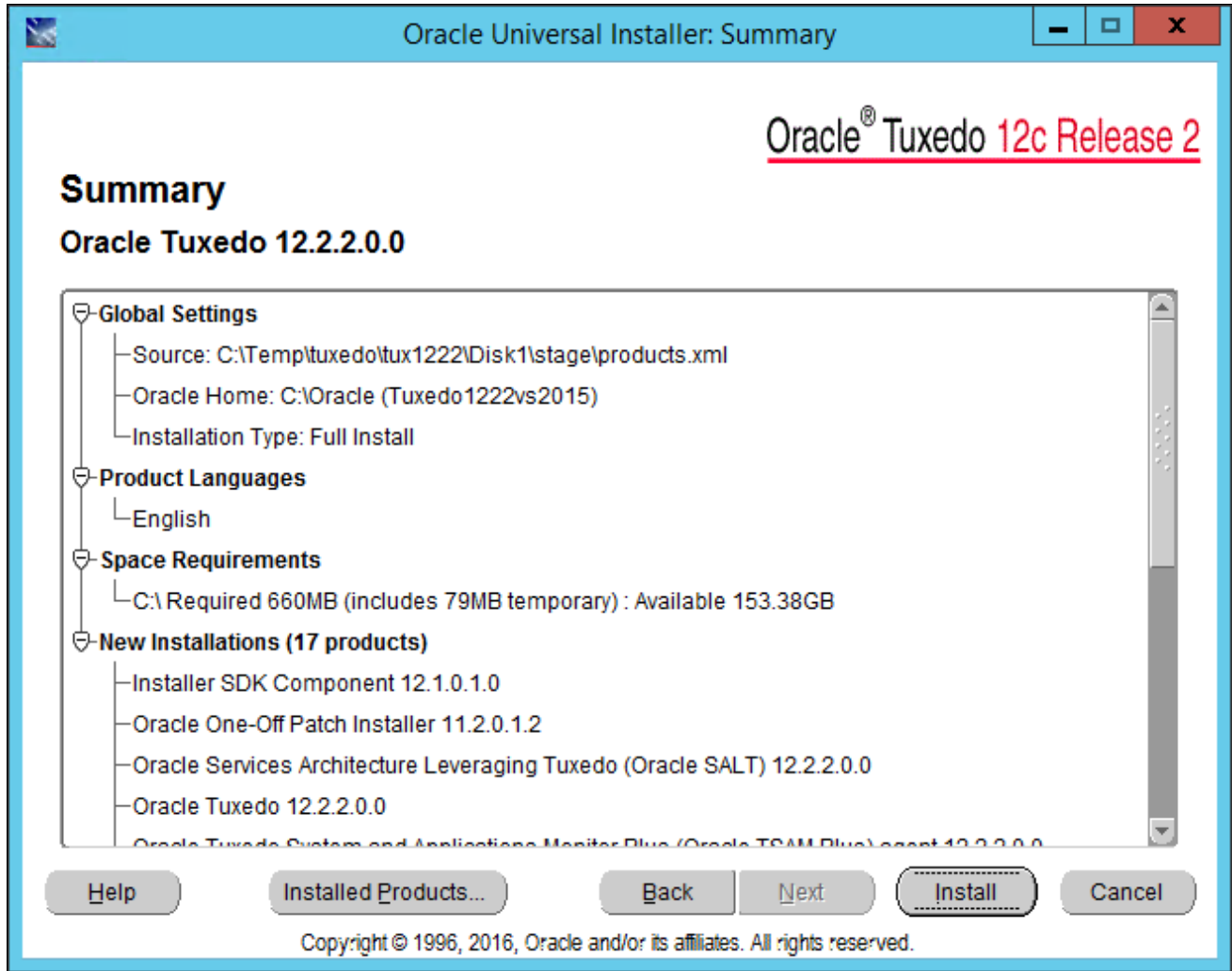
15. Select No for the option Would you like to configure LDAP for SSL Support? and then click Next.



Oracle Universal Installer: LDAP Support Choice window

16. Review the summary information, and click Install to continue.

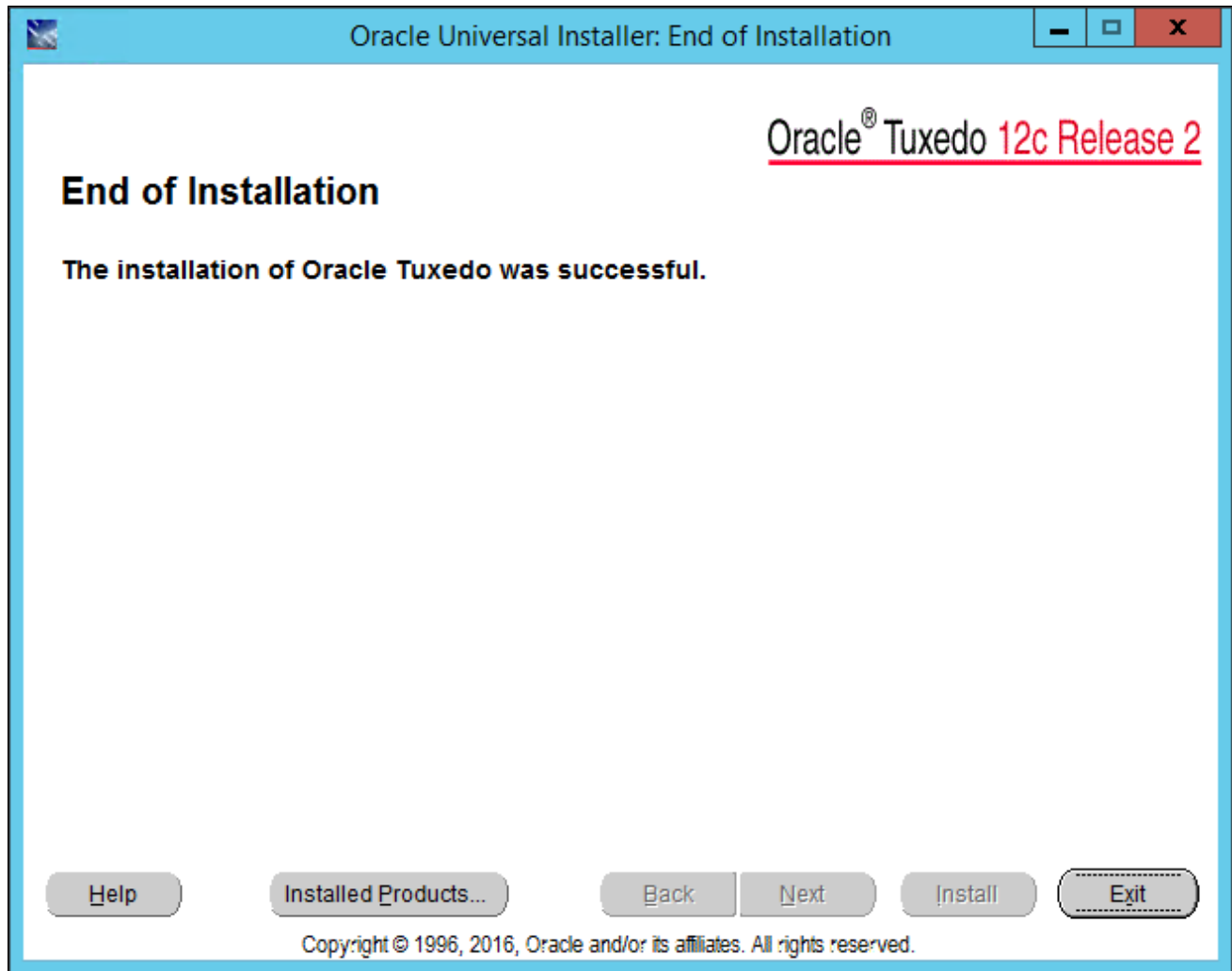
The summary information, shown in this example, includes the product name, install folder, installation type, and disk space information. If you want to change any of your choices, click Back.



Oracle Universal Installer: Summary window

A progress indicator appears during the installation.

17. Click Exit when you see the window indicating the installation completed successfully, as shown in this example.



Oracle Universal Installer: End of Installation window

### Task 3-1-6: Installing the Oracle Tuxedo Patch on Microsoft Windows

These instructions assume that you have installed the base Oracle Tuxedo 12cR2\_VS2015, and have downloaded the platform-specific version of the rolling patch to a directory referred to here as *TUX\_INSTALL*. Carry out these steps as a user with administrative privileges.

To install the patch:

1. Stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation.
2. Verify that the environment variable TUXDIR is set to the Oracle Tuxedo installation location, such as C:\oracle\tuxedo12.2.2.0.0\_VS2015.

---

**Note.** The TUXDIR directory should include subdirectories bin and udataobj.

---

3. Verify that the environment variable ORACLE\_HOME is set to the *ORACLE\_HOME* location you specified when you installed Oracle Tuxedo, such as C:\oracle.



---

**Note.** This is the parent directory for the Oracle Tuxedo installation. It should include subdirectories OPatch and oui.

---

4. Verify that the environment variable JAVA\_HOME is set to the 64-bit JDK 1.8 directory, as mentioned in the prerequisites section.

5. Run the following command to verify the opatch version:

```
%ORACLE_HOME%\OPatch\opatch.bat version
```

The version should be 12.1.0.1.1 or later. If the version is lower, you must first update opatch by installing patch 19166960.

6. Launch the Services window; for example, select Start, Administrative Tools, Services.

7. Select each of the following services, right-click, and select Stop:

- ORACLE ProcMGR V12.2.2.0.0\_VS2015
- TListen 12.2.2.0.0\_VS2015 (Port: 3050)

---

**Note.** The port number is variable.

---

8. Uninstall any existing patches.

9. Go to the directory where you downloaded the patch zip file from My Oracle Support, *TUX\_INSTALL*, and unzip the file.

This creates a directory that includes a zip file named 25391869.zip with the patch.

10. Set the environment variable for the platform ID; for example:

```
set OPATCH_PLATFORM_ID=233
```

You can find the value for OPATCH\_PLATFORM\_ID in the file *ORACLE\_HOME/inventory/ContentsXML/oraclehomeproperties.xml*.

11. Open a command prompt and go to the *TUX\_INSTALL/25391869* directory.

12. Run the following command:

```
%ORACLE_HOME%\OPatch\opatch.bat apply 25391869.zip
```

---

**Note.** The patch installer backs up all files being patched. The backup copy is located in the directory *ORACLE\_HOME\patch\_storage\*. Do not delete these backup files. They will be used if you need to remove the patch installation.

---

You see a message similar to the following:

```
Oracle Home       : C:\oracle
Central Inventory : C:\Program Files\Oracle\Inventory
  from           : n/a
OPatch version    : 12.2.0.1.0
OUI version       : 12.2.0.1.0
Log file location : C:\oracle\cfgtoollogs\opatch\opatch<datetime>.log
```

13. If OPatch cannot locate the Oracle inventory, you may see a messages such as the following:

```
Applying interim patch 25391869 to OH 'C:\Oracle'
Verifying environment and performing prerequisite checks.
OPatch system modification phase did not start
```

In this case, specify the full path to the Oracle inventory file oraInst.loc, with the `invPtrLoc` option:

```
%ORACLE_HOME%\OPatch\opatch.bat apply 25391869.zip -invPtrLoc <full_⇒
path_to_inventory_file>
```

## Task 3-1-7: Installing Oracle Tuxedo on Microsoft Windows in Silent Mode

This section discusses:

- Understanding Silent Installation on Microsoft Windows
- Running the Silent Mode Installation on Microsoft Windows

### Understanding Silent Installation on Microsoft Windows

You can carry out a silent installation of Oracle Tuxedo 12cR2\_VS20125 by providing all the required settings in a response file. With silent installation there is little or no user interaction.

See Oracle Tuxedo documentation.

Use a text editor to create the response file and specify the values according to your installation requirements.

Here is a sample response file:

```
#
# ..... Silent Installation Properties file .....
#

RESPONSEFILE_VERSION=2.2.1.0.0

ORACLE_HOME="C:\oracle"

ORACLE_HOME_NAME="tuxedo1222_VS2015"

INSTALL_TYPE="Full Install"

ENABLE_TSAM_AGENT=false

LDAP_SUPPORT_SSL=false

INSTALL_SAMPLES=false

ENCRYPT_CHOICE=0

CONFIG_TLISTEN=false
```

Most of the entries are similar to those seen in the GUI installation. Note the following definitions:

- **ORACLE\_HOME:** The high level installation directory, for example C:\oracle.  
The installer creates the Oracle Tuxedo installation directory, *TUXDIR*, as `ORACLE_HOME\tuxedo12.2.2.0.0_VS2015`.
- **ORACLE\_HOME\_NAME:** The name of the current Oracle installation, for example `tuxedo1222_VS2015`.  
This identifies the Oracle Tuxedo installation in the Oracle Universal Installer, when reviewing the Installed Products list.

## Running the Silent Mode Installation on Microsoft Windows

The following procedure assumes that you saved and extracted the installation file from Oracle Software Delivery Cloud in the directory *TUX\_INSTALL*.

See Obtaining the Oracle Tuxedo Installation Files from Oracle Software Delivery Cloud.

To run the installer:

1. Create a response file as described in the previous section and copy it to *TUX\_INSTALL*.
2. Open a command prompt and change directory to *TUX\_INSTALL*\Disk1\install.
3. Run the installer.

- If you specify an empty directory for *ORACLE\_HOME*, use this command:

```
setup.exe -silent -responseFile response_file
```

Specify the full path to the response file. For example, if the response file name is *response.rsp*, and *TUX\_INSTALL* is *D:\Temp*, use this command:

```
setup.exe -silent -responseFile D:\Temp\response.rsp
```

- If you specify an existing directory that is not empty for *ORACLE\_HOME*, you must include the *-force* option.

When you use the *-force* option with a non-empty *ORACLE\_HOME*, you may see a warning message recommending that you install to an empty directory or one that includes Operating System generated files. You may close the message to continue the installation.

```
setup.exe -silent -responseFile D:\Temp\response.rsp -force
```

---

**Note.** If you do not include the *-force* option with an *ORACLE\_HOME* directory that is not empty, the installer will abort.

---

4. After you enter the commands in the previous steps, the installer is launched in silent mode, and a progress indicator tracks the installation.

When the installation is complete, you should see a completion message such as "The installation of Oracle Tuxedo was successful."

## Task 3-1-8: Uninstalling the Oracle Tuxedo Patch on Microsoft Windows

To remove an Oracle Tuxedo installation, you must first remove the rolling patch, as follows:

1. Stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation.
2. Verify that the environment variable *TUXDIR* is set to the Oracle Tuxedo installation location, such as *C:\oracle\tuxedo12.2.2.0.0\_VS2015*.
3. Verify that the environment variable *ORACLE\_HOME* is set to the *ORACLE\_HOME* location you specified when you installed Oracle Tuxedo, such as *C:\oracle*.
4. Open a command prompt and run the following command:

```
%ORACLE_HOME%\OPatch\opatch.bat rollback -id 25391869
```

## Task 3-1-9: Uninstalling Oracle Tuxedo in GUI Mode

To remove the Oracle Tuxedo 12cR2\_VS2015 or 12cR2 installation, use Oracle Universal Installer (OUI).

1. Start Oracle Universal Installer (OUI).

The way that you access OUI may vary depending upon your environment. Use one of the following methods, for example:

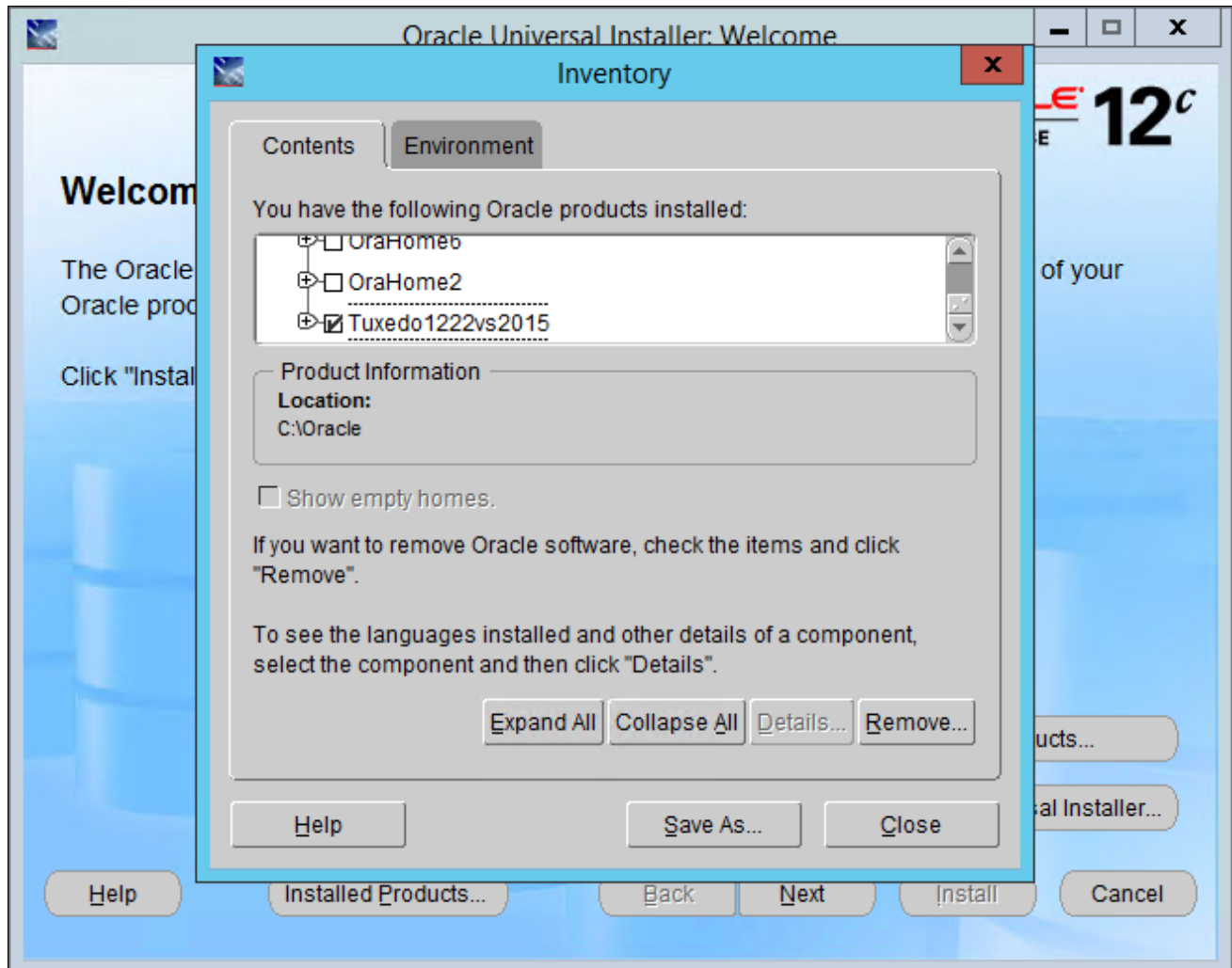
- On Microsoft Windows 2012 R2, access the Apps screen, and select Oracle 12c, Oracle Installation Products, Universal Installer.
- Double-click `TUX_INSTALL\Disk1\install\setup.exe`.

2. Click Deinstall Products, as shown in this example:



Oracle Universal Installer: Welcome window

- On the Contents page, select the name for the Oracle Tuxedo installation, which is tuxedo1222vs2015 in this example, and then click Remove.



Inventory window: Contents page

- Open the Microsoft Windows registry, for example by selecting Start, Run, regedit.

Verify that the following key has been removed from the registry:

HKEY\_LOCAL\_MACHINE\SOFTWARE\ORACLE\TUXEDO\12.2.2.0.0\_VS2015

### Task 3-1-10: Checking the Windows Service Account

Use the information in this section to ensure that the Microsoft Windows services are properly configured. Oracle recommends installing the application server binaries locally on your C drive, for best performance. The procedure to set up the ORACLE ProcMGR V12.2.2.0.0\_VS2015 service in the next section includes options for the account type. Use the following guidelines to choose between the Local System account option and the This Account option. (For the option This Account, you must specify a user ID and password.)

**Note.** For the sake of brevity and convenience, this documentation sometimes shortens "ORACLE ProcMGR V12.2.2.0.0\_VS2015" to "Oracle ProcMGR."

- If you plan to install the PeopleSoft application server binaries (as in, psappsrv.exe and so on) on a remote file

server, you must select the This Account option.

- If the PeopleSoft application server binaries are *local*, that is, they exist on your local hard drive, you can use either the Local System account or This Account option.
- If you intend to use this Microsoft Windows service to start Process Scheduler, you must *always* select the This Account option. Enter the name of your Domain/Windows user name—not the machine name—and your password.
- If you are running on Microsoft Windows and are configuring a search index that resides on a mapped network drive, you must ensure that the user ID of the Oracle ProcMGR service has access to network drives accessed by the search engine. The search engine stores the search indexes at *PS\_HOME/data/search*. However, this path can be changed in the application or the Process Scheduler's configuration. If this path is changed in these configurations and it points to a network drive, you must ensure that the user ID that starts the Oracle ProcMGR service has access to these network drives. The application server and the Process Scheduler are started by the Oracle ProcMGR service and therefore inherit the same permissions as the Oracle ProcMGR service.

## See Also

"Setting Up Process Scheduler on Windows," Setting Up Process Scheduler Security

## Task 3-1-11: Restricting Domain Process Privileges

This section discusses:

- Understanding Domain Process Privileges
- Setting TM\_CPAU Environment Variable

### Understanding Domain Process Privileges

For PeopleSoft systems, the Oracle ProcMGR service (*tuxipc.exe*) is responsible for starting Oracle Tuxedo domain processes on Microsoft Windows. By default, domain processes run as the same user ID that the service is running as. In a default installation, the service is configured to log on to Microsoft Windows as the Local System user. Microsoft does not support assigning network privileges to the Local System user for security reasons, but the Local System user otherwise has full administrative access to the local system.

In this configuration, PeopleSoft PeopleTools domain processes also run as the Local System user, which presents several potential issues, including:

- PeopleSoft PeopleTools domain processes are unable to access network resources.
- PeopleSoft PeopleTools domain processes run with more privileges than are necessary. A compromised PeopleSoft PeopleTools process will have full access to the local system and could potentially be used to gain unauthorized access to the local system.
- All PeopleSoft PeopleTools domain processes on the system run as the same user ID.

These problems are not present on UNIX systems where domain processes are always started as the user that runs *tadmin* (by way of *PSADMIN* for PeopleSoft installations) to boot the domain. UNIX systems therefore support multiple domains, each running under different user IDs, with only the desired local privileges, and with no undesirable restrictions to network resources.

For Microsoft Windows platforms, you can use the Oracle Tuxedo `TM_CPAU` environment variable to achieve behavior similar to UNIX systems. If `TM_CPAU` is set to *YES* before `tuxipc` is started, `tuxipc` creates an Oracle Tuxedo process that belongs to the user who initiated `tmboot`. If the Oracle ProcMGR service (`tuxipc.exe`) is started with the `TM_CPAU=YES` environment variable set, then domain processes will run as the user ID used to run `tmadmin` (PSADMIN) to boot the domain.

Using the `TM_CPAU` environment variable enables a variety of configuration options, including:

- The Oracle ProcMGR service can be run as the Local System user, but domain processes can be run using a minimally privileged user. This reduces the chance of a compromised PeopleSoft PeopleTools process being used to gain unauthorized access to the system. Note that the option "Allow services to interact with Desktop" should *not* be selected.
- The Oracle ProcMGR service can be configured to log on to Microsoft Windows using a minimally privileged user ID and PeopleSoft PeopleTools processes can run as a user with more privileges than the Oracle Tuxedo user ID. For example, the Oracle Tuxedo user ID could have read-only access to `PS_CFG_HOME`, but the PeopleSoft PeopleTools user could have read-write access. The Oracle Tuxedo user ID does not actually require read access to `PS_HOME`. When `CreateProcessAsUser` runs, access to the executable to start is evaluated using the user ID that the process will run as.
- A single Microsoft Windows system can be used to host multiple PeopleSoft PeopleTools installations that are each administered by a different user. A non-administrative user ID used to boot one domain will have no privileges to processes started with a different user ID.
- Domain processes can be identified and managed in Windows Task Manager by a non-administrative user.

See File Formats, Data Descriptions, MIBs, and System Processes Reference, Oracle Tuxedo Reference Topics, [http://docs.oracle.com/cd/E35855\\_01/tuxedo/docs12c/rf5/rf5.html](http://docs.oracle.com/cd/E35855_01/tuxedo/docs12c/rf5/rf5.html).

## Setting `TM_CPAU` Environment Variable

This is a recommended step. Perform this step only if Local System account is used in the task Setting Up the Windows Services for Oracle Tuxedo.

To set the `TM_CPAU` environment variable:

1. Access the Control Panel, and then select System and Security, System, on Microsoft Windows 8 or 2012 R2.
2. Select Advanced system settings.
3. Select the Advanced tab.
4. Click Environment Variables.
5. In the System variables area, click New to add a new environment variable.
6. Enter `TM_CPAU` as the variable name, `YES` as the value, and click OK three times to close the dialog boxes.
7. Restart your machine.

## Task 3-1-12: Setting Up the Windows Services for Oracle Tuxedo

To set up the Microsoft Windows services for Oracle Tuxedo:

1. Log on again as the Application Server Administrator, TUXADM, or a designated user ID.
2. Open the Control Panel and double-click Administrative Tools.
3. Select Computer Management and expand Services and Applications.
4. Select Services and locate the service labeled `ORACLE ProcMGR V12.2.2.0.0_VS2015`.  
Double-click `ORACLE ProcMGR V12.2.2.0.0_VS2015` to open the properties dialog box.

5. On the General tab, if the Stop button is enabled, click it to stop the current ORACLE ProcMGR V12.2.2.0.0\_VS2015 process.
6. Select Log On.
7. Choose either Local System account or This account.

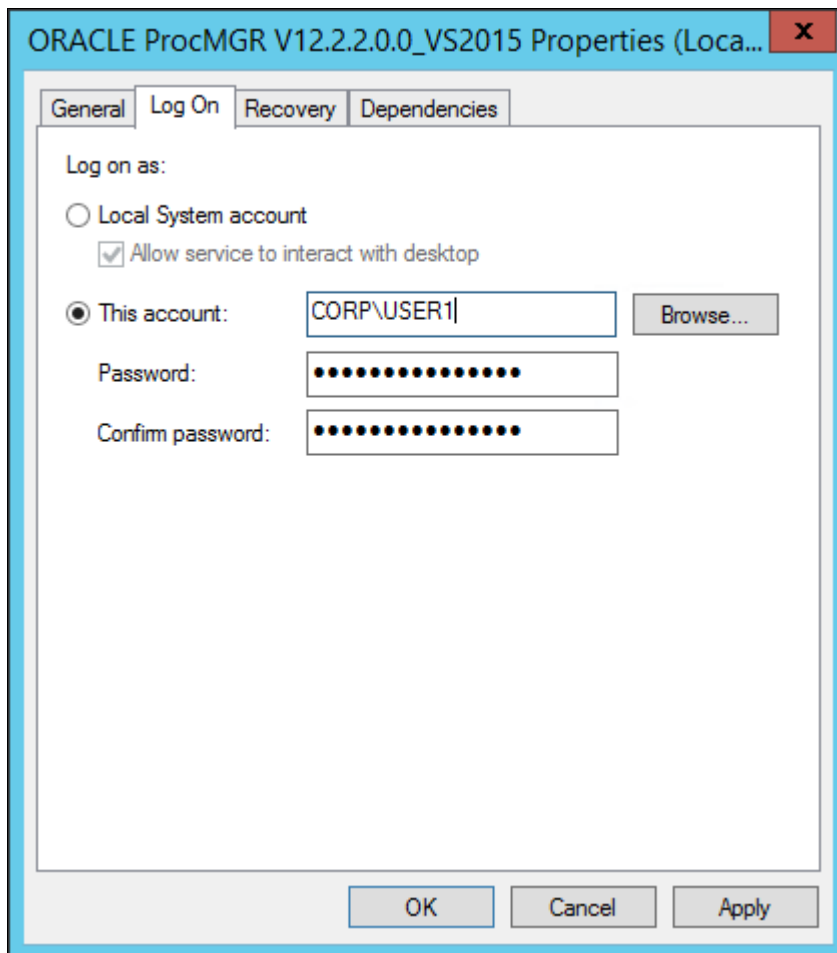
If you select This account, as shown in this example, be sure to specify a user with the appropriate permissions, and then enter and confirm the password.

---

**Note.** The option used—Local System account or This account—must be consistent with your ODBC catalog definition, due to registry operations. For example, if you use the Local System Account option, you must also catalog your ODBC data source using System DSN.

---

See Checking the Windows Service Account.

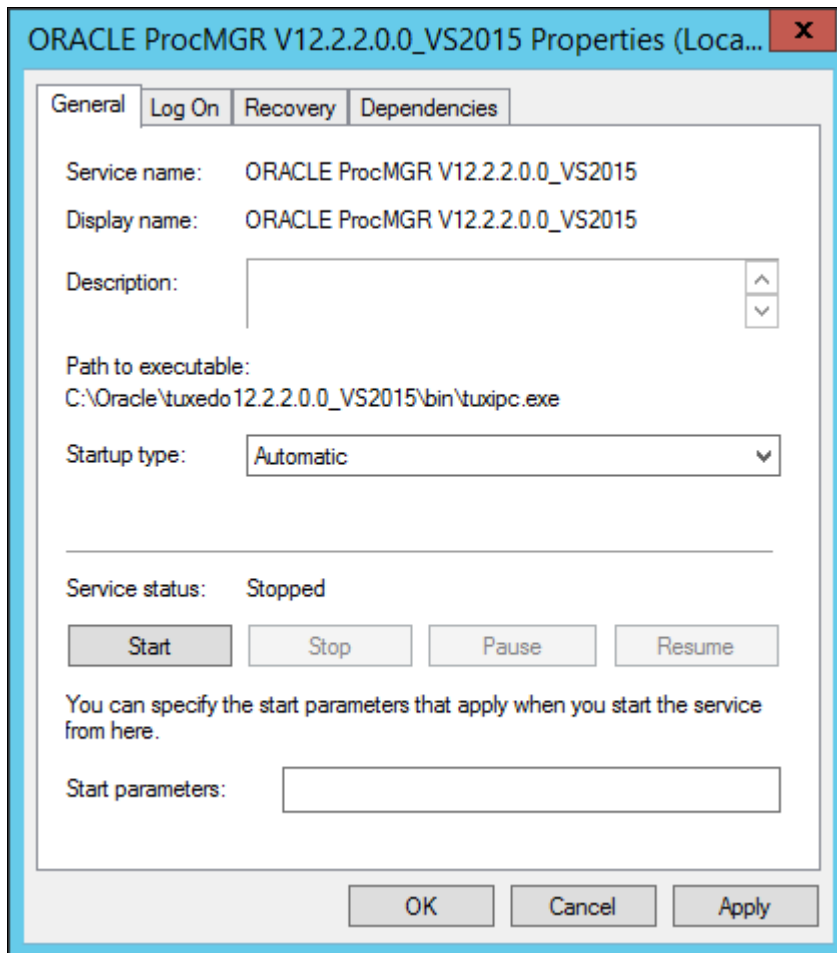


ORACLE ProcMGR V12.2.3.0.0\_VS2015 Properties dialog box: Log On tab



## 8. Select General.

Make sure that Startup Type is set to *Automatic*, as shown in this example.



ORACLE ProcMGR V12.2.3.0.0\_VS2015 Properties dialog box: General tab

## 9. Click Start.

The status Started appears both on the General tab of the Oracle ProcMGR V12.2.2.0.0\_VS2015 Properties dialog box and in the Services dialog box. Click OK to close the dialog box.

10. As mentioned, unless you intend to use the Tuxedo Web Monitor, you should disable the TListen 12.2.2.0.0\_VS2015 (Port: *PORT*) service, where *PORT* is the port number you entered during the installation. The default is 3050.

### Task 3-1-13: Verifying the Server Installation on Microsoft Windows

At this point, you should verify that the server installation was successful.

To verify the installation:

1. Open a command prompt.
2. Set the TUXDIR environment variable; for example:  

```
set TUXDIR=C:\oracle\tuxedo12.2.2.0.0_VS2015
```
3. Go to the directory where you installed Oracle Tuxedo, *TUXDIR*, and then to the bin sub-directory. For

example:

```
C:\oracle\tuxedo12.2.2.0.0_VS2015\bin
```

4. Issue this command:

```
tmadmin -v
```

The command will return the Oracle Tuxedo version that is installed. For example:

```
INFO: Oracle Tuxedo, Version 12.2.2.0.0_VS2015, 64-bit, Patch Level 016
```

If you do not see the desired output, review your steps and reinstall Oracle Tuxedo 12cR2\_VS2015.

5. Open the Microsoft Windows registry, for example by selecting Start, Run, regedit.

Verify that the following key is created in the Windows registry:

```
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\TUXEDO\12.2.2.0.0_VS2015
```

### Task 3-1-14: Removing Existing Oracle Tuxedo Installations from UNIX (Optional)

You may have older versions of Oracle Tuxedo installed on your system from an earlier version of PeopleSoft PeopleTools. If you are completely upgrading to PeopleSoft PeopleTools 8.56 from an earlier version of PeopleSoft PeopleTools and you do not require the older Oracle Tuxedo anymore, then, you may uninstall it.

---

**Note.** It is not mandatory to uninstall older Oracle Tuxedo versions from the machine where you are installing Oracle Tuxedo 12cR2, as older Oracle Tuxedo versions and Oracle Tuxedo 12cR2 can exist on the same machine.

---

You may have to remove your Oracle Tuxedo installation on UNIX for the following reasons:

- You are having problems starting Oracle Tuxedo and decide to reinstall.
- You no longer need Oracle Tuxedo on a machine.

To remove Oracle Tuxedo from UNIX:

1. Using PSADMIN, shut down any application server, Process Scheduler, and Search server domains that may be running on the machine.
2. Use the UNIX `rm` command to directly remove the Oracle Tuxedo installation.  
Be sure to remove the directory containing Oracle Tuxedo, referred to here as *TUXDIR*.
3. Remove the TUXDIR environment variable and any entries containing your platform-specific LIBRARY PATH and PATH environment variables.

### Task 3-1-15: Completing the Preinstallation Checklist on UNIX

We recommend that you complete the following preinstallation checklist before you begin the Oracle Tuxedo installation. The checklist includes various parameters with descriptions and example values. Specify your values in the Real Value column. Completing this information first should save you time during your installation.

Item	Description	Example Value	Real Value
ORACLE_HOME	The high level installation directory. You specify this value in the silent installation file.	/oracle	<enter value>

Item	Description	Example Value	Real Value
ORACLE_HOME_NAME	The name of the current Oracle installation. This identifies the Oracle Tuxedo installation in the Oracle Universal Installer, when reviewing the Installed Products list.	tuxedo1222	<enter value>
TUXDIR	The full path to the Oracle Tuxedo installation. The installer creates this as ORACLE_HOME/tuxedo12.2.2.0.0	/oracle/tuxedo12.2.2.0.0	<enter value>
Username	The UNIX user name of the Application Server Administrator (Oracle Tuxedo owner). See the next section for instructions.	tuxedo	<enter value>
UNIX_GROUP_NAME	The UNIX group name of the Oracle Tuxedo owner. See the next section for instructions.	tuxedo	<enter value>
FROM_LOCATION	The full path to the directory containing the products to be installed.	/home/temp/Disk1/stage/products.xml	

---

**Note.** You can select any user name and group name you want; however, you might want to use the "tuxedo" convention for simplicity.

---

## Task 3-1-16: Designating the Oracle Tuxedo Owner on UNIX

A new or existing user must be designated as the Oracle Tuxedo owner.

---

**Note.** For Oracle Tuxedo 11gR1 and later releases, the application server can be booted only by the Oracle Tuxedo owner or the group that the owner is in. The predefined UNIX "other" group does not have read or execute permission. If it is required that members of the "other" group be able to boot and shut down an application server domain, you must manually give read and execute permissions to all files and folders under the *TUXDIR/locale* and *TUXDIR/udataobj* directories.

---

To designate the Oracle Tuxedo owner:

1. Log in as root.
2. Create the UNIX group and the user name of the individual who will be the owner of Oracle Tuxedo.

Using the values from the preinstallation checklist, create the group and specify the group name. Then create the user who will be the Oracle Tuxedo owner, specifying the user name, group name, and home directory, denoted by TUXDIR from the checklist.

---

**Note.** The utility that you use to create the user and group varies, depending on your operating system. For example, HP-UX Itanium uses the "sam" utility, IBM AIX uses the "smit" utility, and so on. For the exact utility, refer to your operating system documentation.

---

## Task 3-1-17: Installing Oracle Tuxedo in Silent Mode on UNIX

This section discusses:

- Understanding the Silent Mode Installation on UNIX
- Running the Silent Mode Installation on UNIX

### Understanding the Silent Mode Installation on UNIX

You can carry out a silent installation of Oracle Tuxedo 12cR2 by providing all the required settings in a response file. With silent installation there is little or no user interaction.

---

**Note.** Console mode installation is not supported for Oracle Tuxedo 12cR2.

---

Use a text editor to modify the values in the response file according to your installation requirements. Here is a sample response file:

```
#
# ..... Silent Installation Properties file .....
#

RESPONSEFILE_VERSION=2.2.1.0.0
#Unix group to be set for the inventory directory. Valid only in Unix⇒
platforms.
UNIX_GROUP_NAME="dba"

#Complete path of the Oracle Home.
ORACLE_HOME="/home/psftuser/oracle"

#Oracle Home Name. Used in creating folders and services.
ORACLE_HOME_NAME="tuxedo1222"
DEINSTALL_LIST={"Tuxedo","12.2.2.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Full Install"
ENABLE_TSAM_AGENT=false
LDAP_SUPPORT_SSL=false
TLISTEN_PORT="3050"
MIN_CRYPT_BITS_CHOOSE=0
MAX_CRYPT_BITS_CHOOSE=256
INSTALL_SAMPLES=true
ENCRYPT_CHOICE=0
CONFIG_TLISTEN=true
TLISTEN_PASSWORD=password
```

## Running the Silent Mode Installation on UNIX

The following procedure assumes that:

- You saved and extracted the installation files from Oracle Software Delivery Cloud in the directory *TUX\_INSTALL*.
- You installed the supported version of Java 8.

The command requires the full path for the JRE file, such as `/home/java/jre1.8.0_65`.

To install Oracle Tuxedo on UNIX or Linux:

1. If it does not exist, use a text editor, such as "vi", to create the central inventory location file, named `oraInst.loc`, in a convenient directory.

If you have previously installed Oracle software on the system, the `oraInst.loc` file may already exist. The `oraInst.loc` file contains only the following two lines:

```
inventory_loc=/home/psftuser/oraInventory
inst_group=ccpt
```

The `oraInst.loc` file contains the following information:

- `inventory_loc` — Specify the full path to the directory where you want the installer to create the inventory directory. The location in the example is `/home/psftuser/oraInventory`.
  - `oui_install_group` — Specify the name of the group whose members have write permissions to this directory. The group name in the example is `ccpt`.
2. Create a response file as described in the previous section and copy it to *TUX\_INSTALL*.
  3. Open a command prompt and change directory to *TUX\_INSTALL/Disk1/install*.
  4. If this is the first time you are installing on your system (that is, there is no pre-existing Oracle inventory location, and you had to create the `oraInst.loc` file in the first step), use the following command to perform a silent installation:

```
./runInstaller -responseFile <complete_filename> -silent -invPtrLoc =>
<complete_inventory_filename> -jreLoc <JRE file location>
```

Specify the full path and name for the response file, the `oraInst.loc` file, and the JRE file. For example:

```
./runInstaller -responseFile /home/temp/response.rsp -silent -invPtrLoc=>
/home/psftuser/oraInventory/oraInst.loc -jreLoc /home/java/jre1.8.0_65
```

5. If you have previously installed an Oracle product on your system and do not need to specify an Oracle inventory location, use the following command to perform a silent installation:

```
./runInstaller -responseFile <complete_filename> -silent -jreLoc <JRE=>
file location>
```

Specify the full path and name for the response file and the JRE file. For example:

```
./runInstaller -responseFile /home/temp/response.rsp -silent -jreLoc =>
/home/java/jre1.8.0_102
```

6. After you enter the commands in the previous steps, the installer is launched in silent mode, and a progress indicator tracks the installation.

The progress indicator includes the name and location of the installation log file. When the installation is complete, you should see a successful completion message.

## Task 3-1-18: Installing the Oracle Tuxedo Patch on UNIX

These instructions assume that you have installed the base Oracle Tuxedo 12cR2, and have downloaded the platform-specific version of the rolling patch to a directory referred to here as *TUX\_INSTALL*.

To install the patch:

1. Stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation.

Shut down any tlisten processes.

2. Verify that the environment variable TUXDIR is set to the Oracle Tuxedo installation location, such as `/home/psftuser/oracle/tuxedo12.2.2.0.0`.

---

**Note.** The TUXDIR directory should include subdirectories bin and udataobj.

---

3. Verify that the environment variable ORACLE\_HOME is set to the *ORACLE\_HOME* location you specified when you installed Oracle Tuxedo, such as `/home/psftuser/oracle`.

---

**Note.** This is the parent directory for the Oracle Tuxedo installation. It should include subdirectories OPatch and oui.

---

4. Verify that the environment variable JAVA\_HOME is set to the 64-bit JDK 1.8 directory, as mentioned in the prerequisites section.

5. Go to the directory where you downloaded the patch zip file from My Oracle Support, *TUX\_INSTALL*, and extract the file.

This creates a directory 25391869, which includes a zip file with the patch.

6. Open a command prompt and go to the *TUX\_INSTALL/25391869* directory.

7. Run the following command:

```
$ORACLE_HOME/OPatch/opatch apply 25391869.zip
```

---

**Note.** The patch installer backs up all files being patched. The backup copy is located in the directory *ORACLE\_HOME\patch\_storage\*. Do not delete these backup files. They will be used if you need to remove the patch installation.

---

8. If OPatch cannot locate the Oracle inventory, you may see a messages such as the following:

```
Applying interim patch 25391869 to OH '/oracle'
Verifying environment and performing prerequisite checks.
OPatch system modification phase did not start
```

In this case, specify the full path to the Oracle inventory file oraInst.loc, with the *invPtrLoc* option:

```
%ORACLE_HOME%/OPatch/opatch.bat apply 25391869.zip -invPtrLoc <full_⇒
path_to_inventory_file>
```

## Task 3-1-19: Uninstalling the Oracle Tuxedo Patch from UNIX

To remove an Oracle Tuxedo installation, you must first remove the rolling patch, as follows:

1. Stop all PeopleSoft PeopleTools domains that are running and using your Oracle Tuxedo installation.
2. Verify that the environment variable TUXDIR is set to the Oracle Tuxedo installation location, such as `/home/psftuser/oracle/tuxedo12.2.2.0.0`.

3. Verify that the environment variable `ORACLE_HOME` is set to the *ORACLE\_HOME* location you specified when you installed Oracle Tuxedo, such as `/home/psftuser/oracle`.
4. Open a command prompt and run the following command:
 

```
$ORACLE_HOME/OPatch/opatch rollback -id 25391869
```

### Task 3-1-20: Uninstalling Oracle Tuxedo from UNIX Using Silent Mode

To remove the Oracle Tuxedo 12cR2 installation from UNIX:

1. Open a command prompt and change directory to *TUX\_INSTALL/Disk1/install*.
2. Run the following command, where `ORACLE_HOME` refers to the high-level installation director, and `REMOVE_HOMES` refers to the directory to be removed:

```
./runInstaller -deinstall -silent ORACLE_HOME=<LOCATION_OF_ORACLE_HOME>=>
"REMOVE_HOMES={<LOCATION_OF_ORACLE_HOME_TO_BE_REMOVED>}"
```

For example:

```
./runInstaller -deinstall -silent ORACLE_HOME="/home/psftuser/oracle"=>
"REMOVE_HOMES={/home/psftuser/oracle}"
```

See Oracle Tuxedo documentation.

### Task 3-1-21: Verifying the Server Installation on UNIX

To verify that the server installation was successful:

1. Open a shell.
2. Change directory to *TUXDIR/bin*. For example:
 

```
/home/psftuser/oracle/tuxedo1222/bin
```
3. Issue the following command:
 

```
tmadmin -v
```

The command will return the Oracle Tuxedo version that is installed. For example:

```
INFO: Oracle Tuxedo, Version 12.2.2.0.0, 64-bit, Patch Level 016
```

If you do not see the desired output, review your steps and reinstall Oracle Tuxedo 12cR2.

### Task 3-1-22: Ensuring that Oracle Tuxedo Coexists with Earlier Versions

This section discusses:

- Understanding the Use of Multiple Oracle Tuxedo Versions
- Checking Your Environment Variables
- Changing the TListen Port

## Understanding the Use of Multiple Oracle Tuxedo Versions

Earlier versions of PeopleSoft PeopleTools rely on earlier versions of Oracle Tuxedo—for example, PeopleSoft PeopleTools 8.49 uses Oracle Tuxedo 9.1, and releases 8.44 to 8.48 use Oracle Tuxedo 8.1. If you are installing only PeopleSoft PeopleTools 8.56, you can safely skip this section. If you need to run application servers on PeopleSoft PeopleTools 8.56 and earlier PeopleSoft PeopleTools versions on the same machine, read this section to learn about coexistence issues. Although Oracle Tuxedo 12cR2 coexists with earlier Oracle Tuxedo versions on the same machine, you may need to take a number of manual steps to ensure that these products share the same environment gracefully.

## Checking Your Environment Variables

Installing Oracle Tuxedo changes your `TUXDIR` and `PATH` environment variables. Although you do not need to change these environment variables to successfully run PeopleSoft PeopleTools 8.56 with Oracle Tuxedo 12cR2, earlier versions of PeopleSoft PeopleTools rely on these environment variables being set.

To change your environment variables manually:

1. Set your `TUXDIR` environment variable to reflect the installation directory of your earlier Oracle Tuxedo release.

For example, Oracle Tuxedo 8.1 may be installed to `C:\tux8.1`. This means that `TUXDIR=C:\tux8.1` is the correct setting.

2. Your `PATH` environment variable must contain `TUXDIR\bin` for the earlier Oracle Tuxedo version before any entries for `TUXDIR\bin` for Oracle Tuxedo 12cR2.

For example the setting `PATH=C:\winnt;C:\oracle\tuxedo12.1.3.0.0_VS2012\bin;C:\tux8.1\bin` will cause your pre-8.49 domains to no longer work. You would need to change this to `PATH=C:\winnt;C:\tux8.1\bin;C:\oracle\tuxedo12.1.3.0.0_VS2012\bin` to work with pre-PeopleSoft PeopleTools 8.49 domains.

---

**Note.** PeopleSoft PeopleTools 8.44 and later do not use environment variables to discover the installation location of Oracle Tuxedo 8.1 and later. The `PSADMIN` tool retrieves these values from the Microsoft Windows registry.

---

3. Your library path on UNIX (whichever of the environment variables `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH` is appropriate for your platform) must contain `TUXDIR/lib` for the earlier Oracle Tuxedo version before any entries for Oracle Tuxedo 12cR2.

For example the setting

`LD_LIBRARY_PATH=/lib:/usr/lib:/home/user/Oracle/tuxedo12cR2/lib:/prod/tuxedo/8.1/lib`, will cause your pre-8.49 domains to no longer work. You would need to change this to

`LD_LIBRARY_PATH=/lib:/usr/lib:/prod/tuxedo/8.1/lib:/home/user/Oracle/tuxedo12cR2/lib` for your pre-8.49 domains to work.

Alternatively, you can set the environment variables for a desired release using these steps:

1. Go to the `TUXDIR` directory for the release that you want to run and run the command `./tux.env`.

This command sets the environment variables needed to run Oracle Tuxedo.

2. Verify the correct Oracle Tuxedo version by running this command:

```
tmadmin -v
```

See [Verifying the Server Installation on UNIX](#).



## Changing the TListen Port

Installing Oracle Tuxedo 12cR2 and earlier creates a new service known as TListen. In most cases, you can disable this service as it is not required to run PeopleSoft PeopleTools application server domains. However, if you intend to use the Tuxedo Web Monitor you may wish to ensure that there is no port clash with earlier versions. This port is determined at installation and should be changed to a port other than the default 3050 if you intend on using the TListen service for Oracle Tuxedo 12cR2 and earlier Oracle Tuxedo versions concurrently.



## Chapter 4

# Using the PeopleSoft Installer

This chapter discusses:

- Understanding the PeopleSoft Installer
- Prerequisites
- Obtaining the PeopleSoft Installation Files from Oracle Software Delivery Cloud
- Running the PeopleSoft Installer
- Verifying Necessary Files for Installation on Windows
- Installing PeopleSoft Application Software
- Installing the PeopleTools Client Files
- Binding Windows "SQR for PeopleSoft" DB2 Connect Packages
- Mapping a Drive on the Install Workstation

## Understanding the PeopleSoft Installer

---

This section discusses:

- Defining the PeopleSoft Installer
- Defining Supported Server Combinations

### Defining the PeopleSoft Installer

The PeopleSoft Installer is a Java-based tool that delivers software to your servers and to the PeopleTools Client. You can install the whole range of PeopleSoft servers and client with the PeopleSoft installer. You can install the server and client software separately or together.

---

**Note.** You must install the necessary web server products and any additional component software as described in the previous chapters before you run the PeopleSoft Installer.

---

The PeopleSoft Installer enables you to transfer files needed for various PeopleSoft servers—including application servers, batch servers, web servers, and database servers, and for the PeopleTools Client.

You run the PeopleSoft installer to install the necessary products on the target machines. Which files are installed depends on the operating system on the target machine, the database platform, and the selected server option. The PeopleSoft Installer installs files directly to Microsoft Windows, UNIX, and Linux machines. PeopleSoft PeopleTools and PeopleSoft applications use the same PeopleSoft installation template. This chapter discusses the installation of PeopleSoft PeopleTools, followed by the installation of PeopleSoft application software and the application-specific Multilanguage files.

All components of the PeopleSoft Architecture must be installed on each server. If you are not able to download and extract the PeopleSoft installation files directly on a UNIX machine, for example, you can download to the Windows file server and then FTP the files to your UNIX system.

You can install multiple logical servers to the same machine. For example, you can have the application server and the batch server on the same machine. But, if you want to install different servers to different machines, you have to run the PeopleSoft Installer once for each server.

Before beginning the installation, be sure to review the information about the various PeopleSoft servers and clients in the chapter "Preparing for Installation."

## See Also

"Preparing for Installation," Planning Your Initial Configuration

## Defining Supported Server Combinations

The following table lists the supported operating systems for the various PeopleSoft servers for your database platform. For more detailed information, consult the PeopleSoft product certifications area of My Oracle Support.

Supported operating systems for database servers	Supported operating systems for application servers and batch servers	Supported operating systems for file servers	Supported operating systems for web servers
IBM z/OS on System z	<ul style="list-style-type: none"> <li>IBM AIX on POWER Systems (64-bit)</li> <li>IBM z/OS on System z (batch server only; no application server)</li> <li>Linux x86-64</li> <li>Microsoft Windows x64 (64-bit)</li> <li>Oracle Solaris on SPARC (64-bit)</li> </ul>	Microsoft Windows x64 (64-bit)  Linux or UNIX with network file system (NFS) or equivalent support	<ul style="list-style-type: none"> <li>HP-UX Itanium (64-bit)</li> <li>IBM AIX on POWER Systems (64-bit)</li> <li>Linux x86-64</li> <li>Microsoft Windows x64 (64-bit)</li> <li>Oracle Solaris on SPARC (64-bit)</li> </ul>

## See Also

My Oracle Support, Certifications

## Prerequisites

---

Verify that you fulfill the following requirements before beginning the installation:

- The PeopleSoft Installer requires Java Virtual Machine (JVM), which is bundled for all OS platforms. The PeopleSoft Installer directly uses the bundled JVM, and therefore does not need to search for the JVMs in the directories in which users would typically install JVM. PeopleSoft PeopleTools supports JRE/JDK 1.8 and higher patch level. See My Oracle Support for information on the correct JRE version for your system.

See My Oracle Support, Certifications.

- Before running the PeopleSoft installer, you must verify that you have the correct patches for your JVM level.

Check My Oracle Support and your vendor for required patches.

See Operating System, RDBMS, & Additional Component Patches Required for Installation PeopleTools, My Oracle Support, (search for the article title).

- Make sure you have at least 4.5 GB of free space to perform your installation.

See Running the PeopleSoft Installer.

- The installation process also requires at least 2.0 GB of free temporary disk space, which is needed only for the duration of the process. The process uses the directory defined by the TEMP environment variable on your installation computer or the directory specified by the -tempdir option when using setup.sh to install.

Oracle strongly recommends that you use the -tempdir option to install, using the following guidelines:

- Do not use /tmp as the temporary directory.
- Do not specify /tmp as the explicit temporary directory for the -tempdir option.
- Do not specify a directory that is on a shared drive.
- Do not specify a directory that is inside the location where PeopleSoft PeopleTools is being installed; for example, *PS\_HOME*/temp.
- The user who installs PeopleSoft PeopleTools must be root or the owner of *PS\_HOME*.  
*PS\_HOME* is used throughout this installation guide to refer to the high-level directory where your PeopleSoft PeopleTools software is installed. The documentation may also use the notation \$PS\_HOME or %PS\_HOME% to refer to the PS\_HOME environment variable in a code sample.
- You can install the PeopleSoft Application software to *PS\_HOME*, or to another directory outside *PS\_HOME*. This documentation refers to the directory where you install the PeopleSoft application software as *PS\_APP\_HOME*.  
See "Preparing for Installation," Defining Installation Locations.
- You must have admin privileges to install the PeopleSoft web server.
- You can install the PeopleSoft web server to *PS\_HOME*, or to another directory outside *PS\_HOME*. This documentation refers to the directory where you install the PeopleSoft web server as *PIA\_HOME*.  
See "Preparing for Installation," Defining Installation Locations.
- If your installation requires any PeopleSoft PeopleTools patches, you can apply the code (that is, the contents of the zip file you downloaded from My Oracle Support) after running the PeopleSoft Installer. Do not apply the database instructions at this time; the database objects will be applied later during the install. Be sure to read and follow the instructions provided with the PeopleSoft PeopleTools patches.

## See Also

My Oracle Support, Certifications

## Task 4-1: Obtaining the PeopleSoft Installation Files from Oracle Software Delivery Cloud

---

You obtain the PeopleSoft PeopleTools, PeopleSoft application, and multi-language software by downloading them as zip files from Oracle Software Delivery Cloud. At this point you may have already downloaded the necessary files. However, if you have not yet downloaded the files, this section includes information on finding and using the installation files.

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 installation files for PeopleSoft PeopleTools and PeopleSoft applications from Oracle Software Delivery Cloud:

1. After logging in to Oracle Software Delivery Cloud, enter the name of a specific PeopleSoft application product in the search box.

For example, for PeopleSoft Human Capital Management, enter and select PeopleSoft Enterprise Human Resources. For PeopleSoft Financials and Supply Chain Management, enter and select PeopleSoft Enterprise Financials.

---

**Note.** The installation files for PeopleSoft PeopleTools are included with the PeopleSoft application installation files. If you want to obtain the files for PeopleSoft PeopleTools only, enter PeopleSoft Enterprise PeopleTools in the Product field, and select PeopleSoft Enterprise PeopleTools - Enterprise Development from the drop-down list.

---

2. Click Select Platform, select the operating system you are running on, and then click Select.

Note that you must unzip the zip files on the operating system platform for which they are intended. For example, if you download the files for Oracle Solaris, you must unzip the files on an Oracle Solaris operating system. If you unzip the files on a Microsoft Windows machine into a staging directory, and then move the directory to an Oracle Solaris machine, the staging area files may be corrupted.

For installations on DB2 z/OS, download the Microsoft Windows version of the zip file. When you install, use the PeopleSoft Server Transfer to copy the files from the Microsoft Windows machine to your DB2 z/OS machine.

See "Setting Up the Batch Environment on z/OS," Using PeopleSoft Server Transfer.

3. Click Continue.
4. In the Download Queue section, click the arrow for your PeopleSoft application to expand the selection.
5. Select the check boxes for all the products you want to download, and then click Continue.
6. Read the license agreement, select the check box to acknowledge that you accept the agreement, and then click Continue.
7. On the File Download window, click one of the filenames to download an individual zip file, or click Download to obtain all of the files.
8. For the PeopleSoft PeopleTools installation, when you unzip the files, extract them into a temporary directory, referred to here as *PS\_INSTALL*. The extracted files are loaded into directories Disk1, Disk2, Disk3, and so on.

For the PeopleSoft application, and other files, extract the zip files into a convenient local directory, referred to as *PS\_INSTALL*.

*For UNIX only:*

After you download the installation files from Oracle Software Delivery Cloud, if it is necessary to transfer the files to a UNIX computer using FTP, you must change the permissions to make them executable, for example using the `chmod +x` command. Change the mode to executable for the following files:

- *PS\_INSTALL*\Disk1\setup.sh
- Files in *PS\_INSTALL*\Disk1\InstData:
  - setup.aix
  - setup.hp-ia64
  - setup.linux
  - setup.solaris

## See Also

Application-specific installation instructions, My Oracle Support, (search for the PeopleSoft application)

## Task 4-2: Running the PeopleSoft Installer

---

This section discusses:

- Understanding the PeopleSoft Installer
- Starting the PeopleSoft Installer
- Installing PeopleSoft PeopleTools in GUI Mode
- Installing PeopleSoft PeopleTools in Console Mode

## Understanding the PeopleSoft Installer

The PeopleSoft Installer guides you through the process of installing files to your various servers. You must run the PeopleSoft Installer on each machine that you use for one or more PeopleSoft server. The specific options that you see during the installation procedure depend upon the operating system platform, database platform and so on.

Use the PeopleSoft Installer for:

- PeopleSoft PeopleTools
- PeopleSoft applications
- Multilanguage files
- PeopleTools Client files

The directory where the files are installed is referred to in this section as *PS\_HOME*. As described earlier in this documentation, you can configure your environment with separate installation locations for PeopleSoft PeopleTools and PeopleSoft applications. It is a good idea to use a directory name that indicates the application you are installing and the version number, such as HCM920 for the 9.2 version of PeopleSoft Human Capital Management.

See "Preparing for Installation," Defining Installation Locations.

You can run the installer in GUI mode, on Microsoft Windows operating systems, or in console (text) mode, on UNIX or Linux.

---

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

---

The PeopleSoft Installer asks whether you want to install supporting features such as Environment Management Hub. Before you run the PeopleSoft Installer, you may want to consult supporting documentation to help you in choosing these options.

## See Also

*PeopleTools: Global Technology*

*PeopleTools: Change Assistant and Update Manager*

*PeopleTools: System and Server Administration*

My Oracle Support, Certifications

## Task 4-2-1: 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]
```

To run the PeopleSoft Installer for an installation on DB2 for z/OS, use `PS_INSTALL\disk1\setup.bat` to install on Microsoft Windows, and then use Server Transfer. This is the procedure that was used in PeopleSoft PeopleTools 8.1x releases.

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 8.56. 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. See the Prerequisites section for information on choosing the 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.

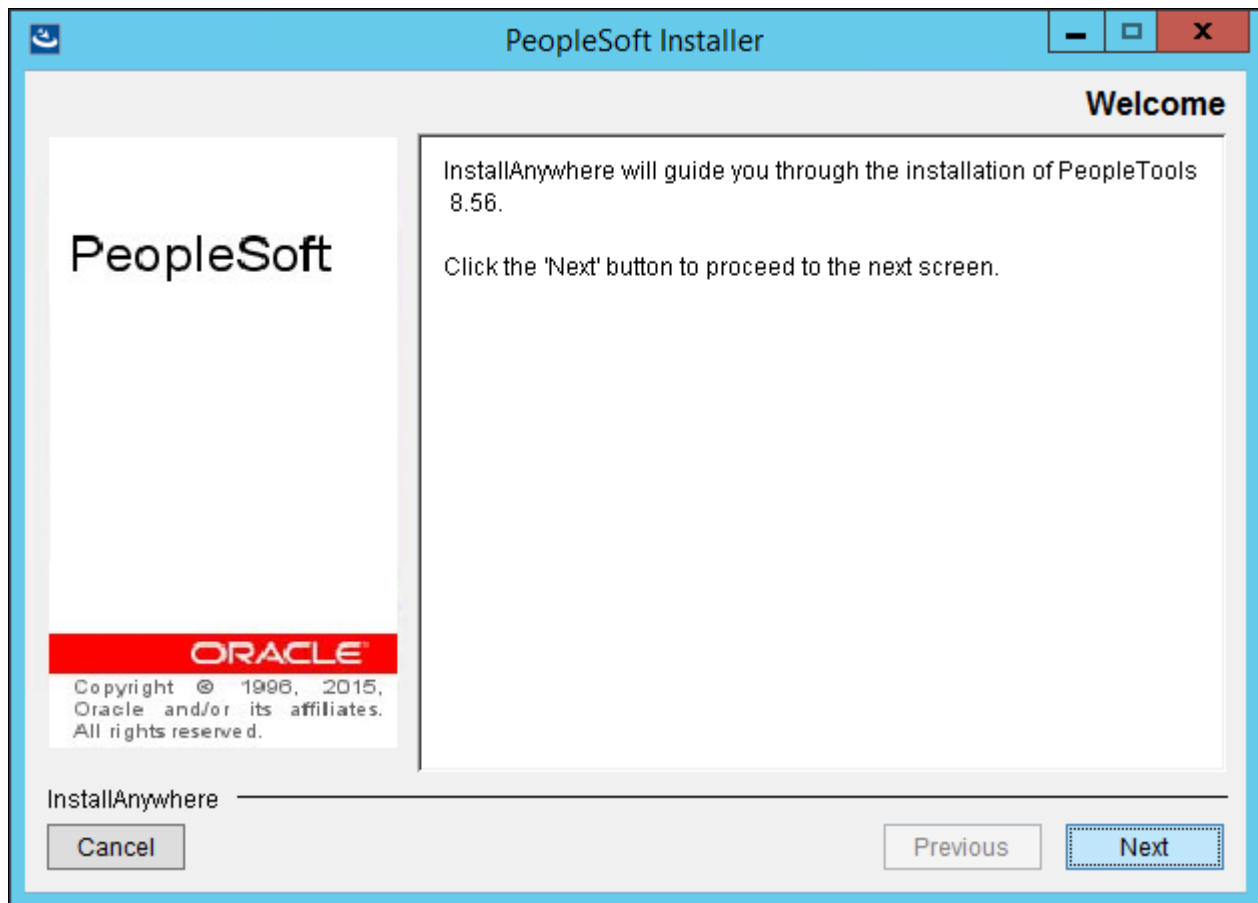
## Task 4-2-2: Installing PeopleSoft PeopleTools in GUI Mode

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

1. Launch the installer. For example:

```
PS_INSTALL\disk1\setup.bat
```

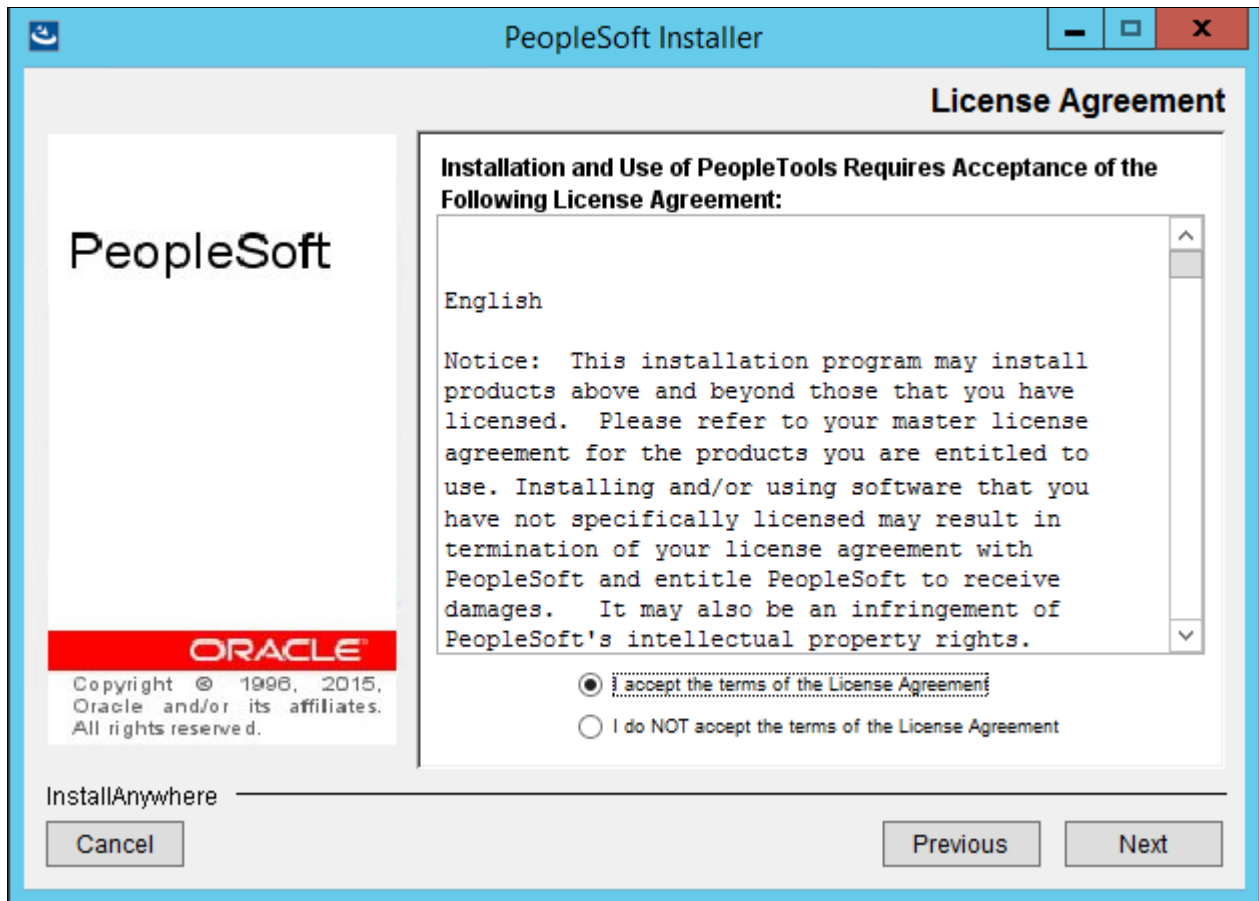
Click Next when you see the Welcome screen for PeopleTools 8.56.



PeopleSoft Installer Welcome window

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

The License Agreement window includes the terms in several languages.



PeopleSoft Installer License Agreement window

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

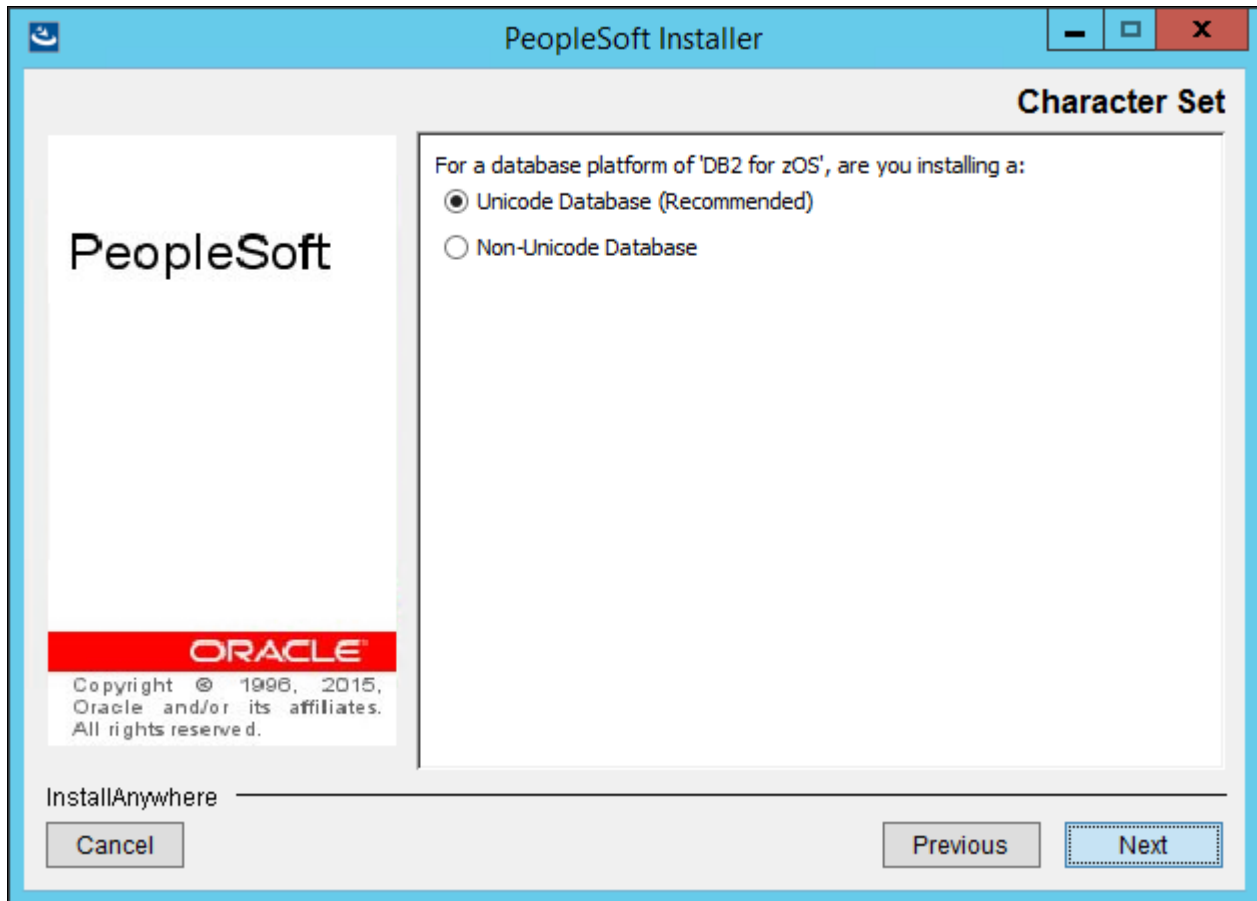
---

**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*.

This example shows the option Unicode Database (Recommended) selected.



PeopleSoft Installer Character Set window

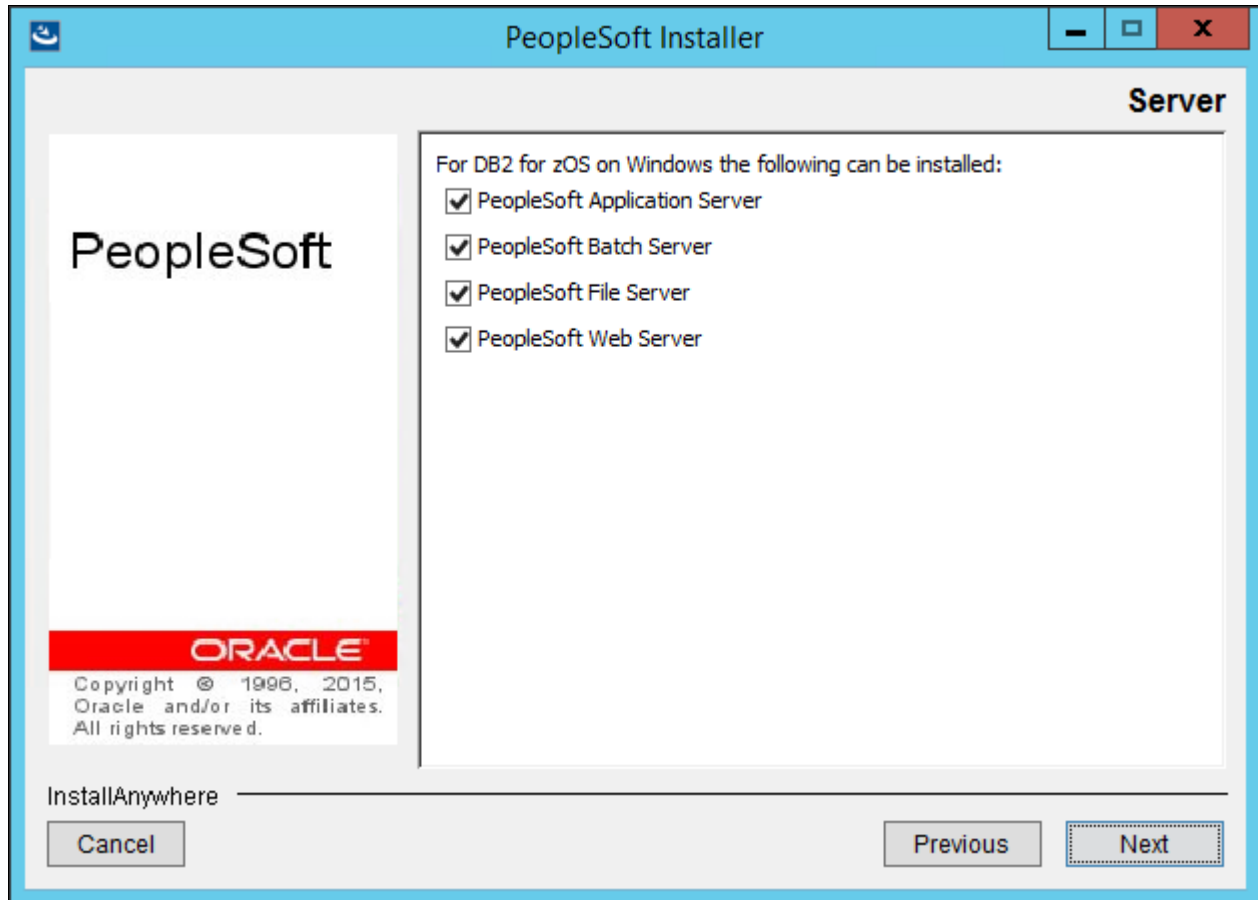
4. Select the servers you want to install and click *Next*.

---

**Warning!** If you are installing for DB2 for z/OS, you need to select *all* PeopleSoft Servers. This will ensure that all of the files needed by Server Transfer are installed to the PeopleSoft file server.

---

In this example the PeopleSoft Application Server, PeopleSoft Batch Server, PeopleSoft File Server, and PeopleSoft Web Server are selected.



PeopleSoft Installer Server window

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.

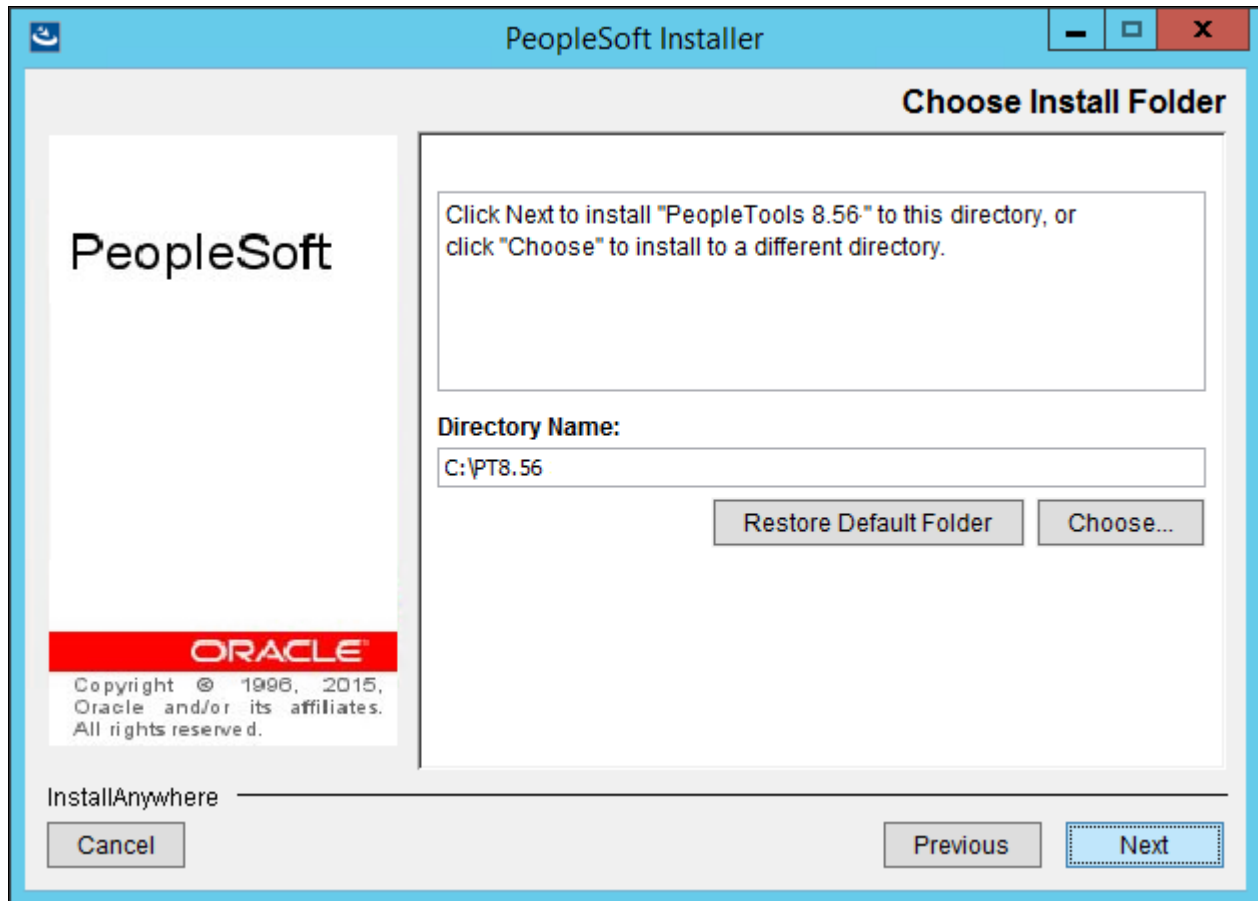
5. Specify the directory where you want to install PeopleSoft PeopleTools, referred to in this documentation as *PS\_HOME*, in the Directory Name field, and click *Next*.

In this example, *PS\_HOME* is C:\PT8.56.

---

**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.

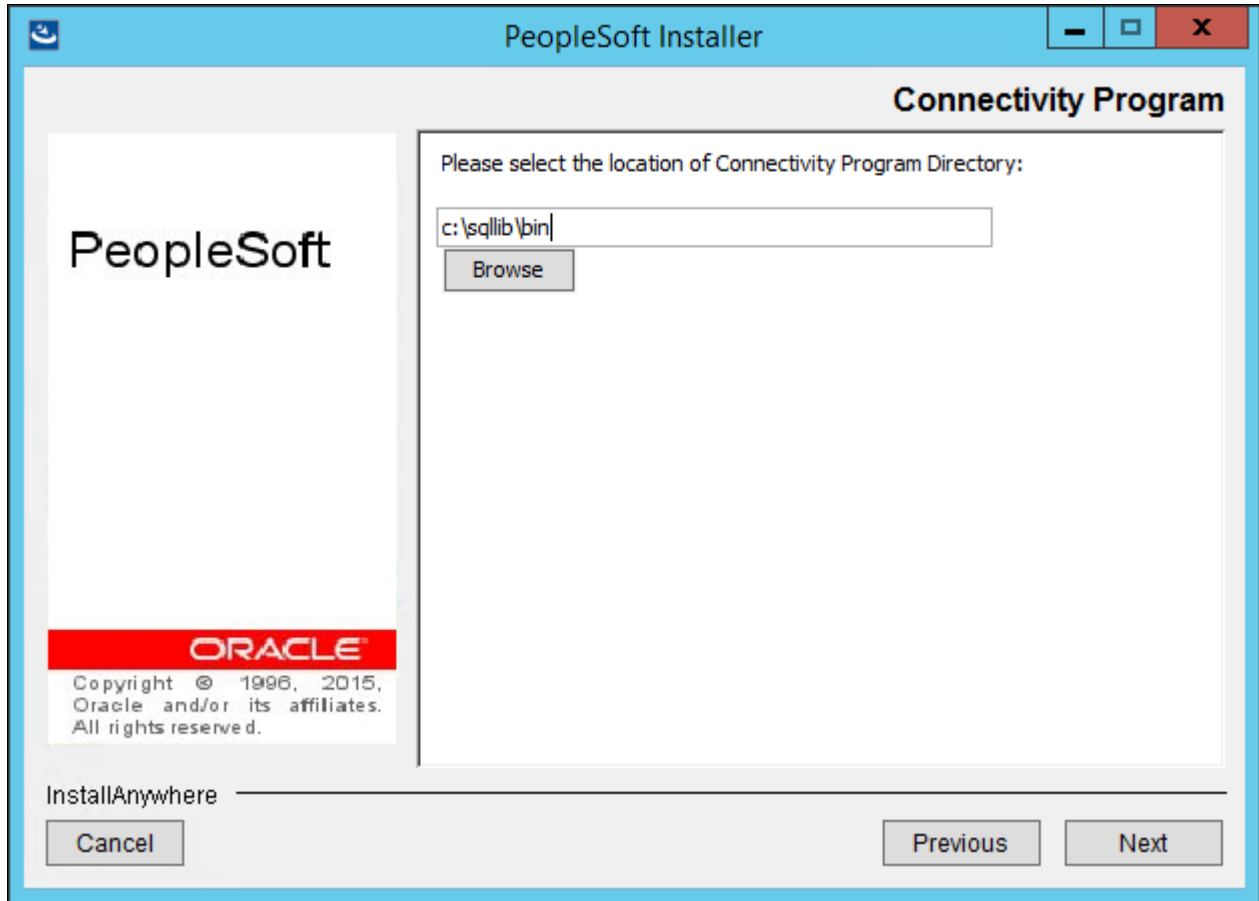
---



PeopleSoft Installer Choose Install Folder window

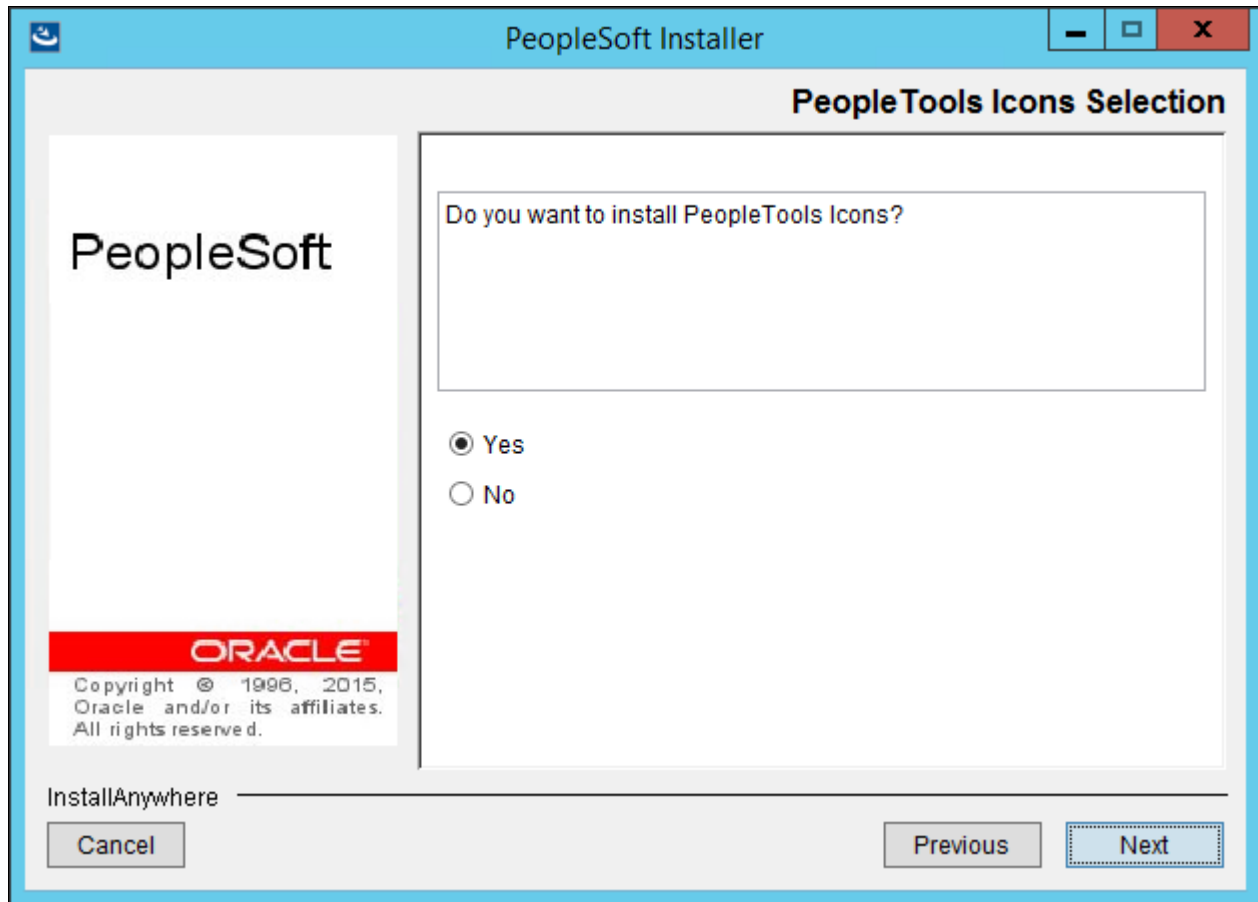
- 6. Specify the location of your Connectivity Program Directory and click *Next*.

The default location for the connectivity software for DB2 for z/OS (as set by the vendor) is: C:\sqlib\bin. If the database connectivity software was installed to a different directory, enter that path instead.



PeopleSoft Installer Connectivity Program window

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

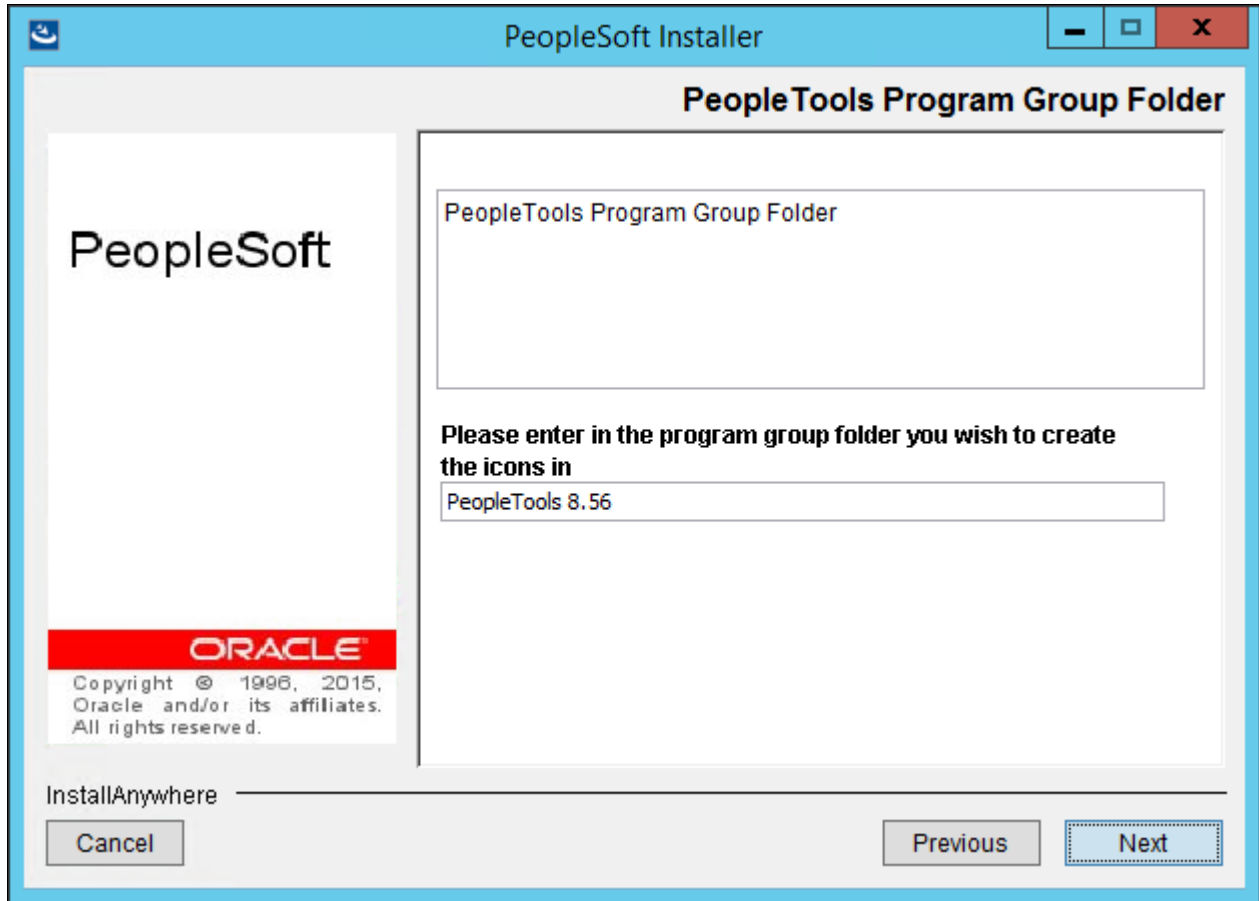


PeopleSoft Installer PeopleTools Icons Selection window



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

This example shows the default group folder, PeopleTools 8.56.

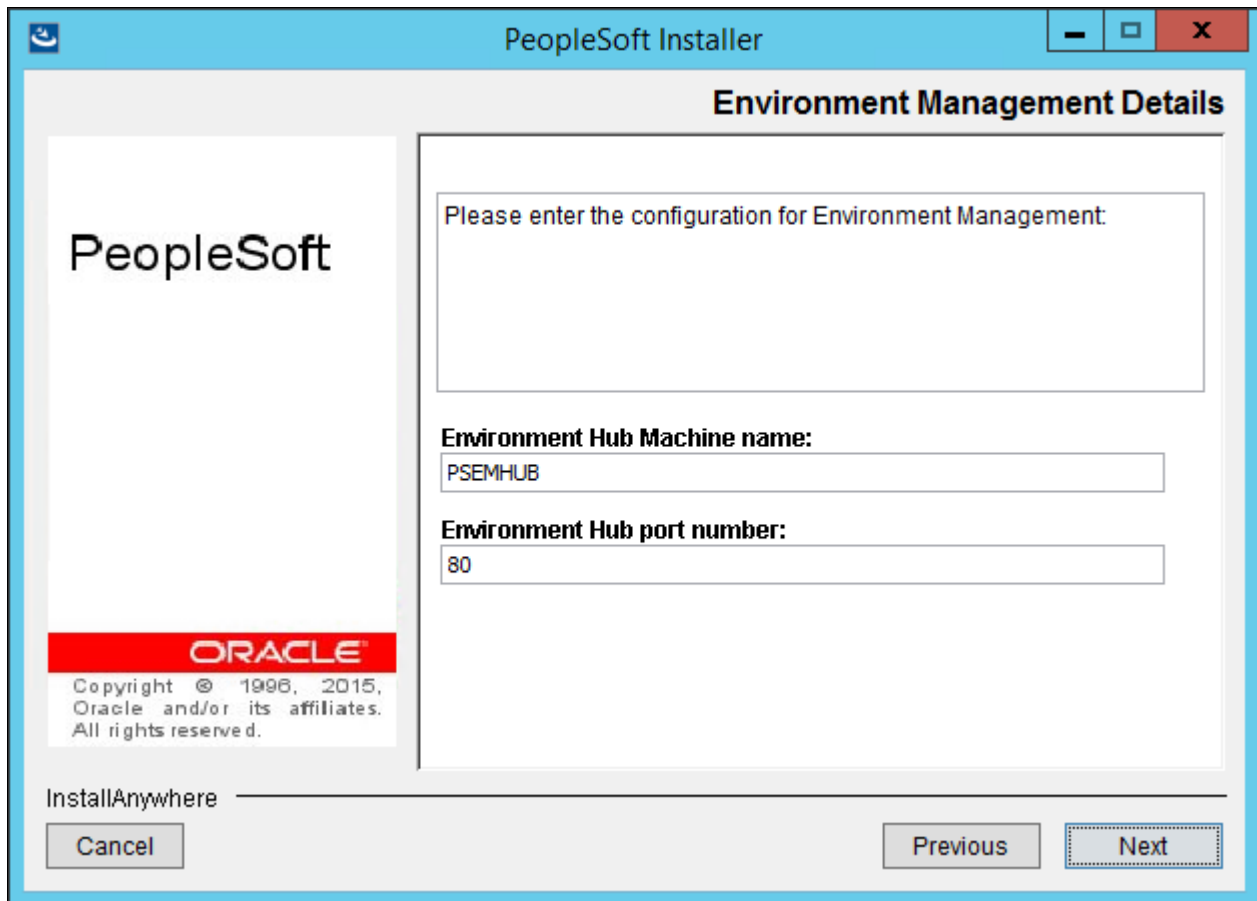


PeopleSoft Installer PeopleTools Program Group Folder window

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.

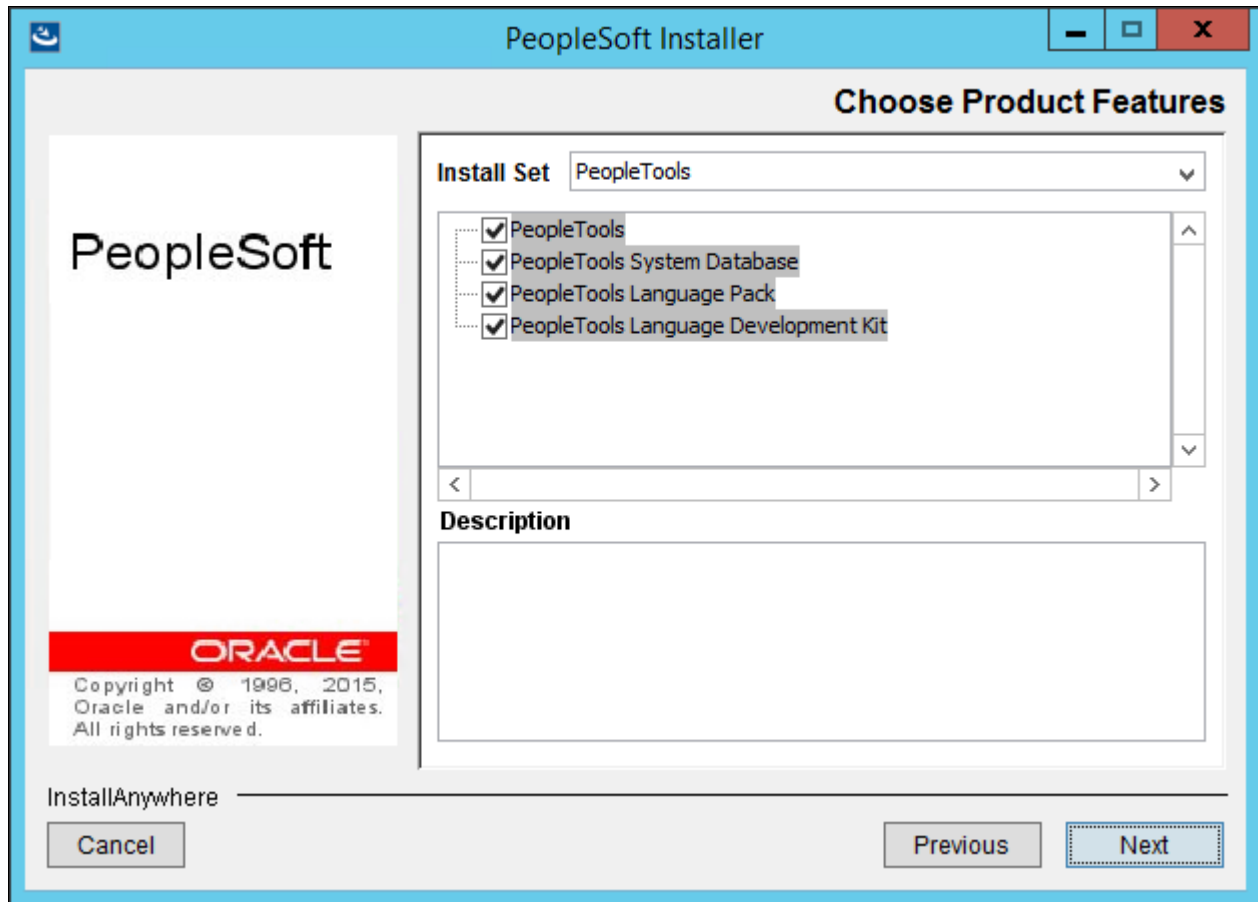
See the information on configuring and running Environment Management Components in the *PeopleTools: Change Assistant and Update Manager* product documentation.



The screenshot shows a Windows-style window titled "PeopleSoft Installer" with a subtitle "Environment Management Details". On the left side, there is a "PeopleSoft" logo and an "ORACLE" logo with the text "Copyright © 1996, 2015, Oracle and/or its affiliates. All rights reserved." Below this is the text "InstallAnywhere". The main area of the window contains a text box with the instruction "Please enter the configuration for Environment Management:". Below this are two input fields: "Environment Hub Machine name:" with the value "PSEMHUB" and "Environment Hub port number:" with the value "80". At the bottom of the window, there are three buttons: "Cancel", "Previous", and "Next".

PeopleSoft Installer Environment Management Details window

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



PeopleSoft Installer Choose Product Features window

- 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.
- 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.

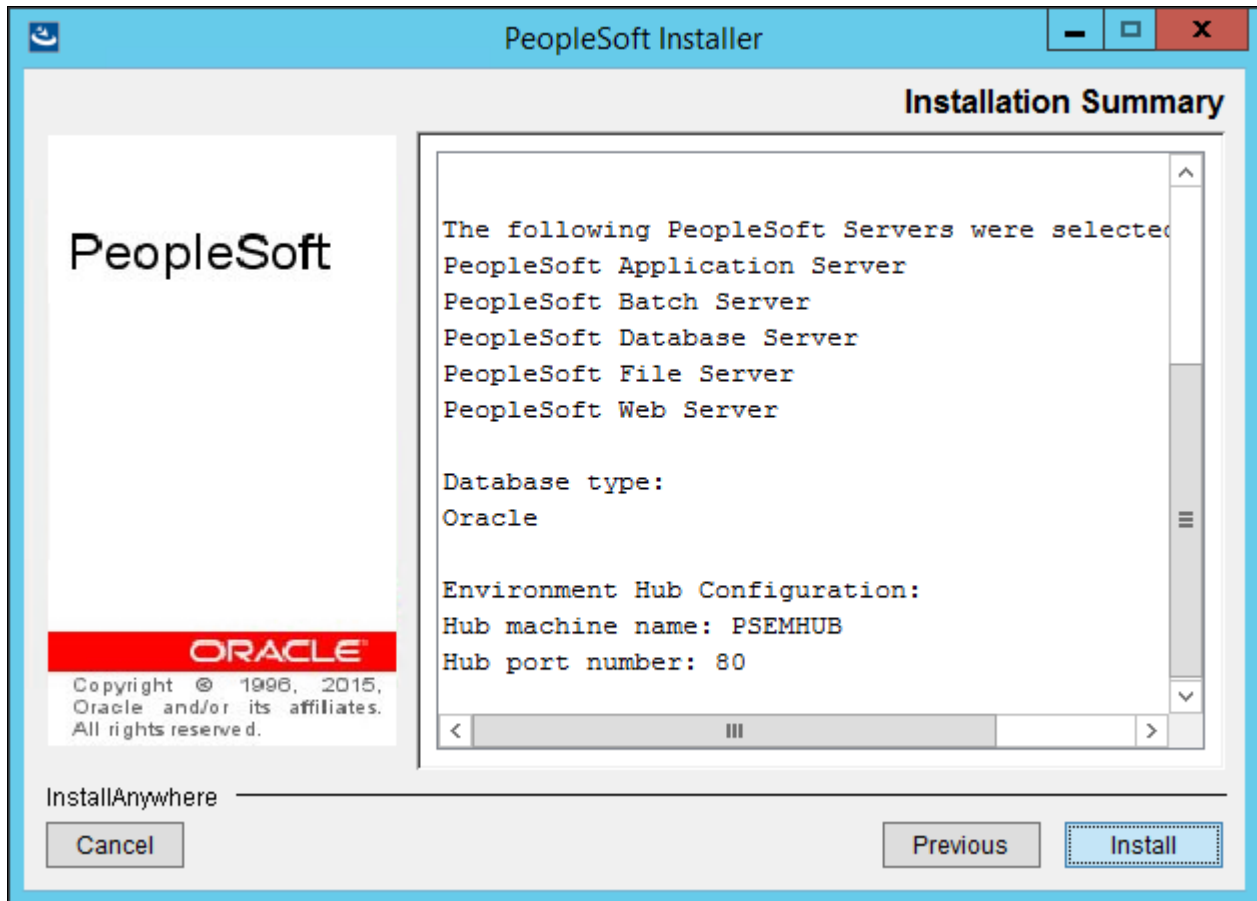
---

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.

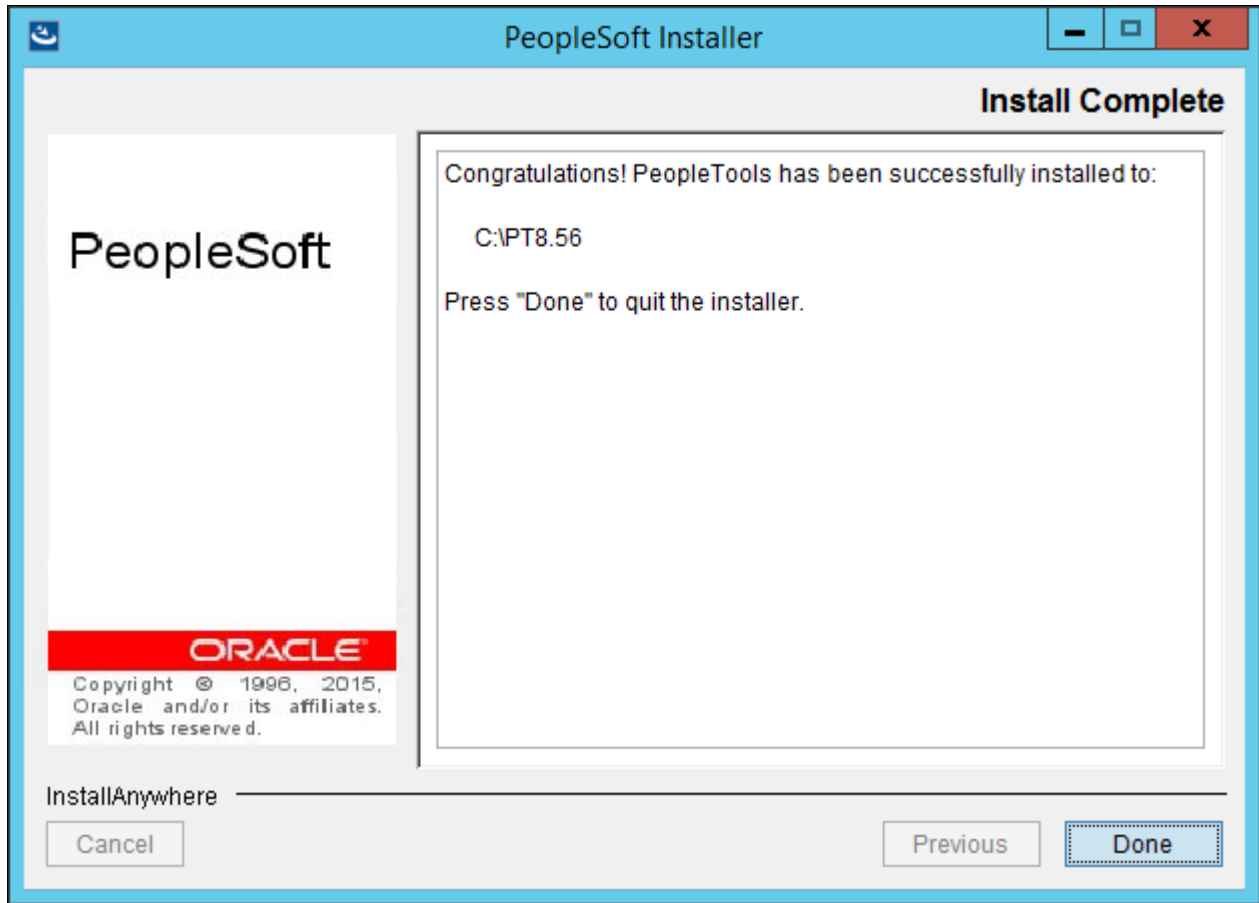
The summary information includes the installation directory, the features, and the PeopleSoft servers:



PeopleSoft Installer Installation Summary window

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

The window displays the installation directory, which is C:\PT8.56 in this example.



PeopleSoft Installer Install Complete window

### Task 4-2-3: Installing PeopleSoft PeopleTools 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 8.56.

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 DB2 for zOS 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.

---



---

**Note.** If you are installing on DB2 z/OS, you must select *all* servers when running the installer on Microsoft Windows. This is because there are additional steps using Server Transfer to upload the files. Also, to install a Unicode database, DB2 z/OS customers must select the Unicode Database (Recommended) option.

---

6. Enter the installation location, such as /home/pt856, 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:\PT8.56):

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

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

The default location for the connectivity software for DB2 for z/OS (as set by the vendor) is: C:\sqllib\bin.

If the database connectivity software was installed to a different directory, enter that path instead.

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 8.56.

Please enter in the program group folder you wish to create the icons⇒  
 in  
 [PeopleTools 8.56]:

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/PT856

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:

```
DB2 for zOS
```

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/PT856
```

```
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 4-3: 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 installed by all of the PeopleSoft installers, including:

- 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 the PeopleSoft installer did not run, 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\psvcrt.
2. Run `vcredist_x64.exe`.

---

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

---

## Task 4-4: Installing PeopleSoft Application Software

---

After installing PeopleSoft PeopleTools, install the PeopleSoft application software to the same *PS\_HOME* directory. The installation windows may look slightly different depending upon which application you install.

See "Preparing for Installation," Defining Installation Locations.

To install the PeopleSoft application, launch the PeopleSoft Installer from *PS\_INSTALL/disk1* and follow the procedure in Running the PeopleSoft Installer.

Use the following guidelines when installing:

- If you are installing more than one application, it is a good idea to create an application-specific *PS\_HOME* and carry out an installation of PeopleSoft PeopleTools for each application. This helps you to maintain your applications more efficiently, since you can easily match each application version to the correct version of PeopleSoft PeopleTools.
- The installation includes all products for your PeopleSoft application and both System Database and Demo Database files.

See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode," Completing Post-Installation Steps.

See "Setting Up the PeopleSoft Pure Internet Architecture in Console Mode," Completing Post-Installation Steps.

## Task 4-5: Installing the PeopleTools Client Files

---

This section discusses:

- Installing the PeopleTools Client Files Using the PeopleSoft Installer
- Installing the PeopleTools Client Files in Silent Mode

### Task 4-5-1: Installing the PeopleTools Client Files Using the PeopleSoft Installer

To install the files needed for the PeopleTools Client, you must first install PeopleSoft PeopleTools. After you install PeopleSoft PeopleTools, launch the PeopleSoft Installer from *PS\_HOME\setup\Client\Disk1* and follow the procedure in the section Running the PeopleSoft Installer. Note that the PeopleTools Client installation does not include the Environment Management Setup window.

---

**Note.** If you installed PeopleSoft PeopleTools on a UNIX or Linux computer, you can copy the directory *PS\_HOME\setup\Client\* to a Microsoft Windows machine to install the client.

---

### Task 4-5-2: Installing the PeopleTools Client Files in Silent Mode

This section discusses:

- Editing the Response File
- Running the Silent Mode Installation for the PeopleTools Client

## Editing the Response File

You can carry out a silent installation of the PeopleTools client files by providing all the required settings in a response file. With silent installation there is no user interaction after the installation begins.

You need a response file to start the installer in silent mode. After installing PeopleSoft PeopleTools you can find a response file template (resp\_file\_client.txt) in the directory *PS\_HOME*\setup\Client\Disk1. Modify the values in the response file according to your installation requirements. Use the information in the section Running the PeopleSoft installer for guidance in editing the file.

For example, to specify D:/PT8.56\_Client as the installation directory, edit the file to include this line:

```
USER_INSTALL_DIR=D:/PT8.56_Client
```

---

**Note.** Use a forward slash ("/") to specify the directory.

---

*Sample response file:*

```
# Response file for Client Installation

# Notes:
# 1. Use "/" forward slash in the path (unix style), (for ex, D:/PT8.53-→
803-R1-client)
# 2. Replace _DESTDIR_ below with the destination directory path.
# 3. Invoke silent install as "<cddir>\disk1\setup.bat -i silent -DRES_⇒
FILE_PATH=<path_to_response_file>".

# the install directory for (for ex, D:/PT8.53-803-R1-client)
USER_INSTALL_DIR=_DESTDIR_

# Possible values for database type are "ORA","DBX","MSS","DB2"
DB_TYPE=ORA

# "0" for non-unicode db and "1" for unicode db
# Applies to daatabase types "ORA","DBX","MSS","DB2"
UNICODE_DB=1

# install shortcuts for Client components in start > programs , allowed⇒
values- "0" not to create shortcut, "1" to create shortcut.
USER_INPUT_RESULT_0=0

# if you set USER_INPUT_RESULT_0 to 1 (above) then Name your shortcut like⇒
the way you want to see in Start>programs (default is PeopleTools Client⇒
8.55)
USER_INPUT_RESULT_14=PeopleTools Client 8.56
```

## Running the Silent Mode Installation for the PeopleTools Client

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 PeopleTools client files in silent mode:

1. In a command prompt, go to *PS\_HOME*\setup\Client\Disk1.
2. Run the following command:  

```
setup.bat -i silent -DRES_FILE_PATH=<path_to_response_file>
```

## Task 4-6: Binding Windows "SQR for PeopleSoft" DB2 Connect Packages

---

This task applies to Microsoft Windows file or report servers.

To bind Windows "SQR for PeopleSoft" DB2 Connect packages:

1. Using an ID with mainframe logon and BINDADD privileges, log on to DB2 Connect Command Line Processor:

```
db2 => CONNECT TO <database name> USER <mainframe User Id>
```

---

**Note.** Enter your current password for "mainframe User Id": <mainframe User Id password>.

---

Database Connection Information:

Database server = DB2 OS/390 9.5.0

SQL authorization ID = <mainframe User Id>

Local database alias = <database name>

2. The Windows SQR bind executable is located in the File or Report Server directory (for example, *PS\_HOME*\bin\sqr\db2\BINW\dbcalls.bnd).

For an EBCDIC installation, issue the following bind command:

```
db2 => bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd blocking all grant=>
public=>
sqlerror continue
```

For a Unicode installation, issue the following command to bind the Windows SQR executable with encoding Unicode:

```
db2 -> bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd encoding unicode=>
blocking=>
all grant public sqlerror continue
```

Collection id (COLLID) of SQR will be added to SYSPACKAGE catalog table and package execute authority to PUBLIC in SYSPACKAUTH catalog table.

---

**Note.** This bind needs to be executed for each new version of SQR for PeopleSoft on every DB2 subsystem or database.

---

## **Task 4-7: Mapping a Drive on the Install Workstation**

---

If you need to install to the file server or PeopleTools Client from a networked install workstation, map a drive letter to the top-level PeopleSoft directory (*PS\_HOME*) from the install workstation. The *PS\_HOME* directory must be shared, and you must have write permission from the install workstation to the file server or PeopleSoft Client.

From the install workstation, create a logical drive that points to the *PS\_HOME* directory.

On a Windows network, use Windows Explorer to map to the drive on the file server or PeopleTools Client to which you are installing; or use the NET USE command, for example:

```
NET USE N: \\SERVER1\PS_HOME
```

On a Novell network, use the MAP command:

```
MAP ROOT N:=SERVER1/SYS:PS_HOME
```

In this example, *SERVER1* is the name of the file server or PeopleTools Client.

### **See Also**

"Setting Up the Install Workstation"



## 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 Server Transfer, 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 DB2 UDB for OS/390.
- *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.

If you have decided to modify the PeopleSoft database directly and use a user ID other than a user ID delivered by PeopleSoft, type your user ID into this field.

- *Connect ID and Connect Password* — Type your connect ID and password into these fields. Connect ID is required for this PeopleSoft release. The connect ID and password must match the z/OS ID that you set up in the chapter "Preparing for Installation."

## See Also

"Preparing for Installation," Using Connect ID

## Task 5-3: Editing the Default Profile

---

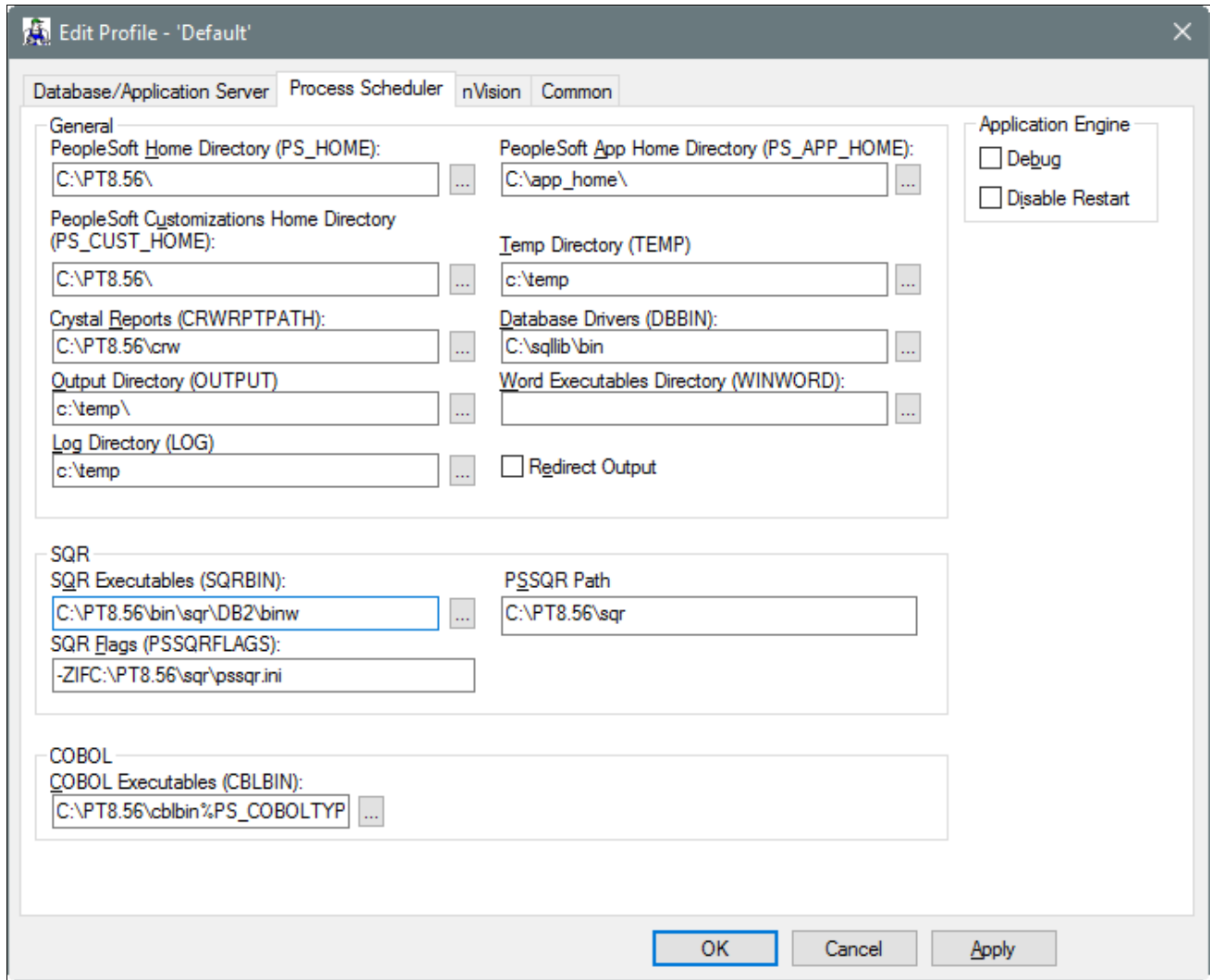
Begin by editing the default profile for the workstation. Among other things, this will verify that the paths to *PS\_HOME* and its subdirectories are correctly set, which is required for subsequent tasks.

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.

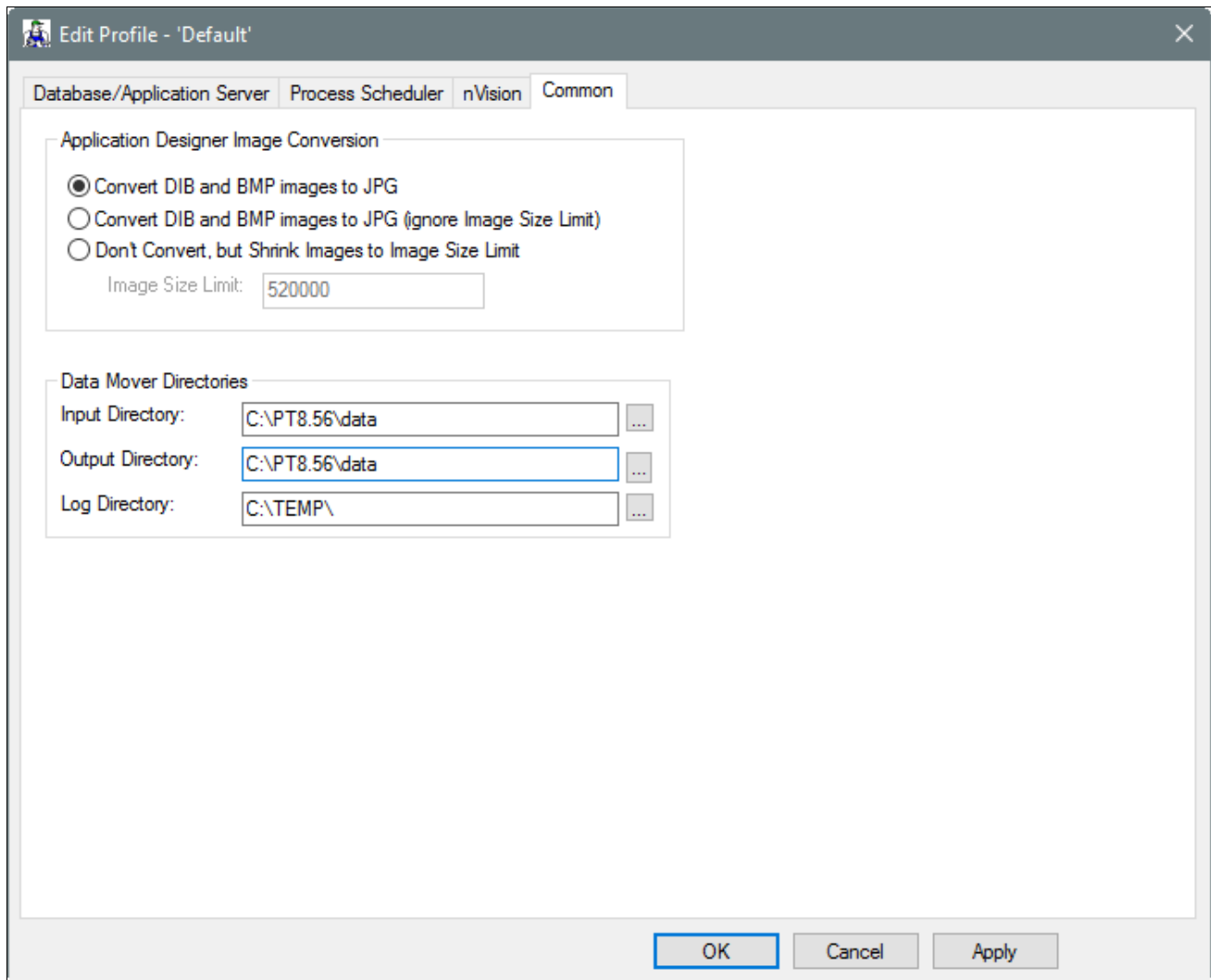
- In the Process Scheduler tab verify the options listed below the example. These should have been set correctly by the PeopleSoft installation program.



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.
- On Microsoft Windows operating systems, set the Database Drivers (DBBIN) field to the location of the database connectivity files on the workstation.  
The example shows the default for DB2 z/OS, *c:\sqllib\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 6

# Setting Up the Batch Environment on z/OS

This chapter discusses:

- Understanding COBOL and the Batch Environment
- Setting Up Your Batch Environment
- Completing the Preinstallation Worksheet
- Allocating z/OS Partitioned Datasets
- Using PeopleSoft Server Transfer
- Setting up the USS Environment Variables and Granting Access to USS Files
- Installing SQR for z/OS
- Binding the SQR DB2 Plan
- Assembling PeopleTools Programs
- Compiling and Link-Editing DB2 COBOL
- Compiling and Link-Editing COBOL
- Changing the IBM Enterprise COBOL Compiler Version

## Understanding COBOL and the Batch Environment

---

This chapter describes how to compile and link PeopleSoft ASSEMBLER and COBOL batch programs, if necessary. Note that COBOL is no longer needed for PeopleTools because the Process Scheduler is written in C++. In addition, COBOL is not required for applications that contain no COBOL programs.

**Note.** We require that you maintain a "central repository" of your COBOL source code on the file server. The multiplatform installer will place all the needed COBOL source code on your Microsoft Windows and UNIX servers during the initial install. However, if you download any COBOL patches or make any customizations, you should apply them to your file server. From there you can transfer the updated COBOL source code out to any relevant application or batch servers. This approach will help you keep your COBOL source code in sync, even if it resides on multiple machines. For Microsoft Windows operating systems, COBOL stored SQL statements are only installed on the file server as well.

Carry out the procedures in this chapter to set up COBOL if your batch (Process Scheduler) server is on a supported z/OS operating system. See the My Oracle Support, Certifications area for the supported COBOL compilers for PeopleSoft PeopleTools.

If you are using IBM Enterprise COBOL for z/OS V5.1, follow the instructions in the section Using IBM Enterprise COBOL for z/OS V5.1. If you are using IBM Enterprise COBOL for z/OS V4.2 follow the instructions in this chapter, but skip the section Using IBM Enterprise COBOL for z/OS V5.1. Otherwise, to compile COBOL on Microsoft Windows and UNIX operating systems, see the chapters "Installing and Compiling COBOL on Windows" and "Installing and Compiling COBOL on UNIX."

---

## See Also

*PeopleTools: Global Technology*

My Oracle Support, Certifications

---

## Setting Up Your Batch Environment

---

This chapter describes how to set up your batch environment on a z/OS database server. This process involves compiling and linking PeopleSoft COBOL batch programs that you will use for such PeopleSoft products as PeopleSoft Human Capital Management's Payroll or PeopleSoft Financial Management's General Ledger. The PeopleSoft Server Transfer program creates a script that your FTP program will use to transfer files from the file server to the database or batch server. It also creates scripts to configure the batch environment.

---

**Note.** Remember, COBOL is not required for applications that contain no COBOL programs.

---

The batch environment components reside in two locations: the z/OS server and UNIX System Services. COBOL, SQR and other installation-related components reside on the z/OS server; Process Scheduler and Application Engine components reside in UNIX System Services.

The Server Transfer process must be executed using an ID that has the authority to access both the z/OS Server and UNIX System Services (USS). PDS and PDSE members will be created on the z/OS server, and directories and files will be created in UNIX System Services. UNIX System Services security requires that any IDs or USER values deployed in subsequent batch processes must belong to the same GROUP as the User ID that initially created the libraries and files on USS. During batch execution, both permanent and temporary files are written to UNIX Systems Services, and the ID creating these files must have the proper authority to create directories and files. Oracle recommends that this be administered at the UNIX security GROUP level.

After you compile your COBOL components in the following steps you will only need to re-compile COBOL in the following situations:

- Any COBOL programs change
- The supported COBOL compiler changes
- You change the version of your RDBMS
- You change your version of your operating system
- You apply a patch or a fix

## See Also

My Oracle Support, Certifications

My Oracle Support, Patches & Updates

---

## Task 6-1: Completing the Preinstallation Worksheet

---

Use the preinstallation worksheet below to record site-specific information to expedite editing and transferring COBOL and SQR files to z/OS. Try to complete it before going on to the next step. Typically, z/OS and DB2 systems administrators should be able to supply the required information.

Parameter values will be blank the first time you run the PeopleSoft Server Transfer program. You must specify your own site-specific values. The sample values, where provided, are only suggestions. In subsequent executions of the Server Transfer program, the program will use the values stored in %TEMP%\PSXFR.CFG, built during the initial run. Note that %TEMP% is a system or environment variable.

Transfer Parameters	Site-Specific Value	Sample Value
<p><i>1. z/OS Dataset High Level Qualifier</i></p> <p>The high-level qualifier used for PeopleSoft COBOL and SQR datasets.</p> <p>Suggested usage: <i>hlq.ppvvv</i></p> <p>where <i>hlq</i> is the highest-level qualifier, and <i>ppvvv</i> is the PeopleSoft product and release (such as HR920).</p> <p><b>Note.</b> This documentation often uses HLQ.PPVVV as an example.</p>	<enter value>	PS.HR920
<p><i>2. PeopleSoft File Server High Level Directory</i></p> <p>Set to <i>PS_HOME</i>, the directory to which you installed the PeopleSoft software, such as N:\HR920.</p>	<enter value>	N:\HR920
<p><i>3. Target Directory for Generated Files</i></p> <p>The workstation directory that will contain a variety of files generated when you run the PeopleSoft Server Transfer program, including file transfers, COBOL compile JCL, and translated SQRs (for example [ and ] translated to \).</p> <p>Suggested usage: <i>PS_HOME\STAGE</i></p>	<enter value>	N:\HR920\STAGE
<p><i>4. File Transfer Method</i></p> <p>Indicates which file transfer protocol will be used.</p> <p>Suggested usage: Microsoft FTP</p>	<enter value>	Microsoft File Transfer Protocol (FTP)
<p><i>5. Database Server Host/Node Name</i></p> <p>FTP Only: Symbolic IP Name For z/OS System</p> <p>Suggested usage: IP Name of Server</p> <p>If you do not use FTP, specify any alphanumeric character in this field.</p>	<enter value>	Server IP name

Transfer Parameters	Site-Specific Value	Sample Value
<p><b>6. Database Server Login ID</b></p> <p>FTP Only: z/OS user ID used to connect to z/OS server and create files and directories on USS.</p> <p><i>Note:</i> This ID MUST be in the same UNIX GROUP as any IDs under which subsequent batch processing will be executed.</p> <p>Suggested usage: LOGONID</p> <p>If you do not use FTP, specify any alphanumeric character in this field.</p>	<enter value>	USER1
<p><b>7. Job Card Line 1</b></p> <p>This is the first line of a job card that will be inserted into JCL files by the PeopleSoft Server Transfer program.</p> <p>Enter // in first two positions followed by job card information such as job name, keyword JOB, account information, and so on. If the job card extends to two lines, end the first line with a comma and complete Job Card Line 2.</p> <p><i>Note:</i> Any USER= parm coded MUST be in the same UNIX GROUP as the Database Server Logon ID noted in Parameter 6 above.</p>	<enter value>	//PSHR920 JOB (PSOFT),'J',CLASS=A,MSGCLASS=A
<p><b>8. Job Card Line 2</b></p> <p>This is the second line of a job card that will be inserted into JCL files by the PeopleSoft Server Transfer program.</p> <p>Enter // in first two positions followed by at least one space before continuing to add job card information.</p> <p>Suggested usage: //*</p>	<enter value>	//REGION=OM,MSGLEVEL=(1,1),USER=BATCHID1,PASSWORD=BPSWD1
<p><b>9. Job Card Line 3</b></p> <p>This is the third line of a job card that will be inserted into JCL files by the PeopleSoft Server Transfer program.</p> <p>Enter // in first two positions followed by at least one space before continuing to add job card information.</p> <p>Suggested usage: //*</p>	<enter value>	// NOTIFY=&SYSUID



Transfer Parameters	Site-Specific Value	Sample Value
<p><i>10. OS390z/OS/DB2 Operator ID</i></p> <p>This parameter is for PeopleSoft internal use. Let it default to OPRID.</p>	<enter value>	OPRID
<p><i>11. OS390z/OS/DB2 Table Owner ID</i></p> <p>This is the PeopleSoft table owner ID—the high-level qualifier for DB2 tables. (also known as "CREATOR" in the IBM SYS Catalog tables). If you are using secondary authorization, this will be your secondary authorization ID, otherwise it will be your primary authorization ID.</p> <p>Suggested usage: PSOWNER</p>	<enter value>	PS001
<p><i>12. DB2 Subsystem Name</i></p> <p>This is the DB2 Subsystem used for the PeopleSoft application you are currently installing (DMO or SYS).</p> <p>Suggested usage: DDDD</p>	<enter value>	DSNT
<p><i>13. DB2 System Dataset Containing DSN Member</i></p> <p>This is the DB2 system dataset that contains member DSN.</p>	<enter value>	DSN $n$ 10.SDSNLOAD ( $n$ is an alphanumeric variable)
<p><i>14. DB2 System Dataset Containing DSN3@ATH Member</i></p> <p>This is the DB2 system dataset that contains member DSN3@ATH. DSN3@ATH is a sample authorization exit. By implementing the sample authorization exits you can provide group names as secondary authorization IDs.</p>	<enter value>	DSN $n$ 10.SDSNEXIT ( $n$ is an alphanumeric variable)
<p><i>15. DB2 System Dataset Containing DSNTEP2 Member</i></p> <p>This is the DB2 runtime system dataset containing member DSNTEP2.</p>	<enter value>	DSN $n$ 10.RUNLIB.LOAD ( $n$ is an alphanumeric variable)
<p><i>16. PeopleSoft Database Name</i></p> <p>Suggested usage: DB</p>	<enter value>	PSHR920

Transfer Parameters	Site-Specific Value	Sample Value
<p><i>17. Plan Name for PTPSQLRT via TSO Attach Facility</i></p> <p>This is DB2 Plan used by PTPSQLRT (the COBOL/DB2 API used by COBOL batch and process scheduler jobs).</p> <p>Suggested usage: PTPSQLRT</p>	<enter value>	PTPSQLRT
<p><i>18: Package Name for PTPSQLRT via TSO Attach Facility</i></p> <p>This is the DB2 Package used by PTPSQLRT (the COBOL/DB2 API used by COBOL batch and process scheduler jobs).</p> <p>Suggested usage: PAKSQLRT</p>	<enter value>	PAKSQLRT
<p><i>19. Plan Name for PTPSQLRT via Call Attach facility (for USS)</i></p> <p>Suggested usage: PTPSQLRA</p>	<enter value>	PTPSQLRA
<p><i>20: Package Name for PTPSQLRT via CALL Attach facility (for USS)</i></p> <p>Suggested usage: PAKSQLRA</p>	<enter value>	PAKSQLRA
<p><i>21. Language Environment runtime library (that is, CEE.SCEERUN)</i></p> <p>We recommend that you ensure the LE runtime libraries are present on the system:</p> <p>xxx.SCEERUNxxx.SCEERUN2</p>	<enter value>	<p>Check with System Administrator for installation LE library name.</p> <p>For example:</p> <p>SYS1.CEE.SCEERUN</p>
<p><i>22. Language Environment linkedit library (that is, CEE.SCEELKED)</i></p> <p>Note that SQR uses PM Binder CEE.SCEEBIND.</p>	<enter value>	CEE.SCEELKED

Transfer Parameters	Site-Specific Value	Sample Value
<p><i>23. CBL System Dataset Containing IGY* Members</i></p> <p>This is the COBOL load library containing modules used by COBOL compiler. Its members include IGYCASM1, IGYCINIT, and so on.</p> <p>Suggested usage:</p> <ul style="list-style-type: none"> <li>• For IBM Enterprise COBOL V4.2: <ul style="list-style-type: none"> <li>• IGY.V4R2M0.SIGYCOMP</li> <li>• IGY.V4R2M0.SIGYCOMP for ANSI Database (EBCDIC)</li> <li>• IGY.V4R2M0.SIGYCOMP for Unicode Database</li> </ul> </li> <li>• For IBM Enterprise COBOL V5.1 (Version 5 Release 1): IGY.V5R1M0.SIGYCOMP</li> </ul> <p>See Changing the IBM Enterprise COBOL Compiler Version</p>	<enter value>	<p>Check with the System Administrator for the installation of IBM Enterprise COBOL V4.2.</p> <p>For example: IGY.V4R2M0.SIGYCOMP</p>
<p><i>24. COBOL Compiler</i></p> <p>Select the COBOL compiler version from the drop-down list:</p> <ul style="list-style-type: none"> <li>• IGY51 IBM Enterprise COBOL V5.1 (Version 5 Release 1)</li> <li>• IGY42 IBM Enterprise COBOL V4.2 (Version 4 Release 2)</li> </ul> <p>See Changing the IBM Enterprise COBOL Compiler Version</p>	<enter value>	IGY51
<p><i>25. System Storage Name for Temporary Datasets</i></p> <p>This is the storage device name used for temporary datasets—used in sorting, passing temporary datasets, and so forth—that are deleted after the job completes.</p> <p>Suggested usage: SYSTEMP</p>	<enter value>	SYSTEMP

<b>Transfer Parameters</b>	<b>Site-Specific Value</b>	<b>Sample Value</b>
<p><i>26. System Storage Name for Permanent Datasets</i></p> <p>This is the storage device name used for permanent datasets used in dataset allocation, such as those used to store COBOL and SQR files.</p> <p>Suggested usage: SYSPERM</p>	<enter value>	SYSPERM
<p><i>27. Assembler System Dataset Containing STIMER</i></p>	<enter value>	SYS1.MACLIB
<p><i>28. Assembler Program Name</i></p>	<enter value>	ASMA90
<p><i>29. SQR High Level Qualifier</i></p> <p>This is the high-level qualifier used for SQR datasets.</p> <p>Suggested usage: PS.HR920.SQR</p>	<enter value>	PS.HR920.SQR
<p><i>30. SQR Program Name Found in SQR Load Library</i></p> <p>This is the name of the SQR program contained in the SQR Load Library.</p> <p>Suggested usage: SQR</p>	<enter value>	SQR
<p><i>31. SQR Plan Name</i></p> <p>This is the DB2 Plan name assigned for SQR.</p> <p>Suggested usage: DBCALLS</p>	<enter value>	SQR920
<p><i>32. SQR Package Name</i></p> <p>This is the DB2 Package name assigned for SQR.</p> <p>Suggested usage: PAKSQR</p>	<enter value>	PAKSQR
<p><i>33. Target Server Hardware Platform</i></p>	<enter value>	UNIX System Services (OS390z/OS)
<p><i>34. PeopleSoft Unix System Services Home Directory</i></p> <p>Suggested usage: /u/data001/dbname</p>	<enter value>	/u/data001/PSHR800
<p><i>35. Library for DB2 CLI Load Module (that is, DSNAOCLI)</i></p>	<enter value>	DSNn10.SDSNLOAD (n is an alphanumeric variable)

Transfer Parameters	Site-Specific Value	Sample Value
<p>36. Plan Name for CLI Packages (that is, DSNACLI)</p> <p>Suggested usage: DSNACLI</p>	<enter value>	DSNACLI
<p>37. Attachment Type for ODBC to Connect to DB2</p> <p>Suggested usage: RRSAF</p>	<enter value>	RRSAF (Resource Recovery Services Attachment Facility)
<p>38. HFS path to top level of JDK product</p> <p>This will provide the value for the JDK_HOME environment variable in the psconfig.sh file.</p> <p>Suggested usage: /usr/lpp/java/J1.7</p>	<enter value>	/usr/lpp/java/J1.7

## Task 6-2: Allocating z/OS Partitioned Datasets

Allocate a z/OS partitioned dataset as HLQ.PPVVV.CNTL, where HLQ is the highest-level dataset qualifier, and PPVVV is the current release of your PeopleSoft software (such as HR920).

File attributes are: FB, LRECL=80,BLKSIZE=6160, Dir Blks 5, SPACE (Primary 15 Tracks, Secondary 5 Tracks). This dataset will be used to transfer allocation JCL.

To complete allocating the datasets:

1. Transfer *PS\_HOME*\SRC\CBL\MVS\PSLIBCBL.JCL to HLQ.PPVVV.CNTL(PSLIBCBL).
2. Transfer *PS\_HOME*\SRC\CBL\MVS\PSLIBSQR.JCL to HLQ.PPVVV.CNTL(PSLIBSQR).
3. Log on to z/OS and edit PSLIBCBL and PSLIBSQR to reflect the appropriate values for your site as follows:
  - a. Add a job card.
  - b. Change all occurrences of *\$PSHLQ\$* to the z/OS Dataset High Level Qualifier determined in the preinstallation worksheet.
  - c. Change all occurrences of *\$SYSPERM\$* to the System Storage Name for Permanent Datasets value determined in the preinstallation worksheet.
  - d. Change all occurrences of *\$SQRHLQ\$* to the z/OS Dataset High Level Qualifier determined in the preinstallation worksheet.

See Completing the Preinstallation Worksheet.

4. Submit (PSLIBCBL) and (PSLIBSQR) to allocate files.

## Task 6-3: Using PeopleSoft Server Transfer

This section discusses:

- Understanding PeopleSoft Server Transfer
- Running the PeopleSoft Server Transfer Program

- Transferring Files to Host Manually
- Mapping PeopleSoft Installation Directories to z/OS

## Understanding PeopleSoft Server Transfer

The PeopleSoft Server Transfer program simplifies editing and transferring COBOL and SQR files to z/OS. Pre-compile, Compile, Linkedit, binds, and Process Scheduler-initiated COBOL and SQR jobs are ready to submit following the file transfer, assuming the worksheet values you enter are correct.

---

**Note.** Remember, before you can run the Server Transfer program to set up a batch server on z/OS, you need to have run the PeopleSoft Installer, as described in the chapter "Using the PeopleSoft Installer." Run it on a Microsoft Windows machine, making sure to select *all* of the PeopleSoft servers. This Microsoft Windows machine will then function as your file server, from which you can run Server Transfer.

---

The PeopleSoft Server Transfer program performs the following functions:

- Generates a file containing transfer commands to transfer files to z/OS and UNIX System Services (USS). This file is named PSFTXFR.TXT for transferring files to z/OS using FTP.
- Generates COBOL compile JCL — program preparation JCL.
- Edits various JCL and PRC files to site-specific standards using values from the transfer parameters specified in the PeopleSoft Server Transfer program.
- Translates [ and ] characters to a \ (backslash) to correct an ASCII-to-EBCDIC translation problem that occurs during the transfer of SQR files.

Later in this chapter you will learn how workstation file directories relate to z/OS partitioned datasets.

See Mapping PeopleSoft Installation Directories to z/OS.

Before running the PeopleSoft Server Transfer program, ensure that an environment variable (%TMP%) is set to a "temporary" directory to which you have write access. Oracle recommends using C:\temp for this use.

The transfer program writes the following two files to the %TMP% directory:

- PSXFR.LOG — a log file that summarizes the program's execution.
- PSXFR.CFG — a configuration file that stores the parameters you selected.

---

**Note.** The PeopleSoft Server Transfer program writes the above files to the %TMP% directory, or to the %TEMP% directory if the %TMP% environment variable is undefined.

---

See "Using the PeopleSoft Installer."

---

**Note.** In PeopleTools 8.4 and above, the Server Transfer program is used only to transfer files to your batch server. On UNIX or Windows, to install files to your application server, file server, web server, and so on, you should use the PeopleSoft Installer.

---

## Task 6-3-1: Running the PeopleSoft Server Transfer Program

To run the PeopleSoft Server Transfer program:

1. Start PeopleSoft Server Transfer.

Enter the following path into the Run dialog box:

```
PS_HOME\BIN\CLIENT\WINX86\pstrans.exe
```

Alternatively, select the Server Transfer shortcut, if you elected to create a Program Group during the PeopleSoft PeopleTools installation.

The PeopleSoft Server Transfer screen appears, as shown in this example, which contains all of the parameters whose values you should have determined while filling out the preinstallation worksheet.

The screenshot shows a dialog box titled "PeopleSoft Server Transfer - IBM DB2 For OS390 (Batch Server)". Inside, there is a section labeled "Transfer Parameters" containing a table with the following data:

	Parameter Description	Parameter Value
1	OS390 Dataset High Level Qualifier (HLQ.PPVVVV)	
2	PeopleSoft File Server High Level Directory	
3	Target Directory for Generated files	
4	File Transfer Method	
5	Database Server Host/Node Name	
6	Database Server Login ID	

Below the table, there is a field labeled "Host/Node Login ID Password" and buttons for "OK", "Reset", "Cancel", and "Help". A "Browse" button is located to the right of the table.

Entering transfer parameters in the PeopleSoft Server Transfer dialog box

2. Enter the appropriate value for each parameter.

Using the preinstallation worksheet you completed earlier, enter the parameter values describing how you want to install the PeopleSoft batch environment on your database server. Some of the parameter values may already exist either as default values or as values from a previous execution of the Server Transfer program. To select an individual row, just click it. To enter or change a particular parameter value, either select from predefined values in a drop-down list or enter the values manually if there is no drop-down list.

**Note.** You must specify a value for each edit field. If you are not sure what value to use, type in the default suggested by Oracle for PeopleSoft software (see the preinstallation worksheet for a list of suggested usage) and edit the parameter value following the file transfer on z/OS.

For parameters that require a directory path, you may enter it directly. If you don't know the exact location, click Browse to select the directory from the Select Directory dialog box. The Browse button is available when you click in a field that requires a directory path.

3. Enter the appropriate value for Host/Node Login ID Password. This value should be the password for the Host/Node Name specified as parameter number 5 in the Server Transfer panel.

This password is mandatory regardless of your database platform or site specifications. Microsoft's FTP

software requires a password.

4. Once you enter all the correct parameter values for your site, click OK. (If instead you want to clear all of your entries and start over, press Reset. To close this instance of the PeopleSoft Server Transfer, press Cancel.)

The PeopleSoft Server Transfer prepares the files for transfer, which can take from a few seconds to a few minutes, depending on the number of files and the type of processing required.

The PeopleSoft Server Transfer program will generate a number of files that will be located in the *Target Directory for Generated Files* that you specified previously.

5. In the PeopleSoft Server Transfer Output window, if you want to verify that the Transfer program created all the proper files, click the Display Log button.

The Display Log button calls the PSXFR.LOG in your %TMP% directory (or %TEMP% directory if %TMP% is undefined) and displays it in Microsoft Notepad. PSXFR.LOG provides summary information about the transfer program's execution that can be helpful for identifying potential errors and inconsistencies. It contains the following sections:

- *SELECTED PARAMETERS*: Shows the parameters you selected from the PeopleSoft Server Transfer main window.
- *SUMMARY OF SELECTED FILES*: Shows which files—and how many of them—will be transferred. It also shows which directory they were copied from and their new location.
- *FILE TRANSFER NOTES*: Shows important details regarding your transfer process, such as the command line option and where log files are located.

---

**Note.** Only click Close if you want to dismiss the PeopleSoft Server Transfer Output window and transfer the files manually from the command line.

---

6. Click the Transfer Now button to begin the transfer process. This button will launch the file transfer method that you selected on the server transfer main screen.

---

**Note.** The Transfer Now button assumes that the destination partitioned datasets exist. See "Allocating z/OS Partitioned Datasets."

---

7. When the transfer has completed, the FTPOUT.LOG will display in Notepad. You should review this file for any errors that may have occurred during the transfer. The file is located in the Target Directory for Generated Files that you specified previously.
8. Close Notepad and press the CLOSE button on the PeopleSoft Server Transfer Output Panel.

---

**Note.** If your transfer is unsuccessful or you would rather transfer the files manually, read the following section.

---

The following table summarizes the files generated during the use of the PeopleSoft Server Transfer utility, in the order in which they are generated, along with their locations and a description.

File Name	Location	Contents
PSXFR.CFG	%TMP%	Configuration file generated by the PeopleSoft Server Transfer Utility. It contains the parameters entered in a somewhat cryptic format.



File Name	Location	Contents
PSXFR.LOG	%TMP%	Summary file generated by the PeopleSoft Server Transfer Utility. It contains a summary of the parameters entered, the files that will be transferred, and instructions on how to manually transfer the files, if you choose to do so later.
PSFTXFR.TXT	The Target Directory for Generated Files that you specified previously.	A Microsoft FTP command file that contains the FTP statements to be executed to transfer the files. This file is only generated if you selected the Microsoft FTP file transfer protocol option.
FTPEXEC.BAT	The Target Directory for Generated Files that you specified previously.	The .bat file that calls either the Microsoft FTP command file, from which the FTP process is initiated. The PeopleSoft Server Transfer Utility will initiate this batch file if you select the Transfer Now option.
FTPOUT.LOG	The Target Directory for Generated Files that you specified previously.	This is the FTP log file generated by the FTP utility that details the transfer results for each file processed.

### Task 6-3-2: Transferring Files to Host Manually

From a command line utility (DOS shell) in Microsoft Windows, transfer application files to z/OS using the transfer/send file generated by the PeopleSoft Server Transfer program. For the Microsoft FTP file transfer protocol, the file containing transfer commands is in *PS\_HOME\STAGE* and is called PSFTXFR.TXT.

You can initiate either Server Transfer by executing the FTPEXEC.BAT file in *PS\_HOME\STAGE*. Allow at least 45 minutes to complete the file transfer. If the transfer fails:

- Make sure the z/OS datasets to which the files are transferred have been allocated.
- Check whether a z/OS dataset is underallocated or allocated on a volume with insufficient space.
- Verify that the Database Server Login ID specified in Parameter 6 has write access to z/OS and UNIX System Services.

### Task 6-3-3: Mapping PeopleSoft Installation Directories to z/OS

The following tables shows the mapping between workstation files and the suggested z/OS target datasets. The root directory is assumed to be PPVVV, which denotes the high-level PeopleSoft directory, such as \HR920. Each table lists the files, datasets, and descriptions for a subdirectory of PPVVV.

Mapping in subdirectory \SRC\CBL\BASE:

Files	z/OS Dataset	Description
??P*.CBL	HLQ.PPVVV.SRCLIB	COBOL programs
??C*.CBL	HLQ.PPVVV.COPYLIB	COBOL copy members

Mapping in subdirectory \SRC\CBL\MVS:

Files	z/OS Dataset	Description
??P*.CBL	HLQ.PPVVV.SRCLIB	z/OS specific programs
??C*.CBL	HLQ.PPVVV.COPYLIB	z/OS COBOL copy members
*.ASM	HLQ.PPVVV.SRCLIB	Assembler programs
*.JCL	HLQ.PPVVV.JCLLIB	Compile, bind, Process Scheduler jobs
*.PRC	HLQ.PPVVV.PROCLIB	Procs for compile, bind, assemble
*.JCT	/u/datax/ppvvv/appserv/prcs/shelljcl	JCL Shells for COBOL and SQR Processes

Mapping in \SQR subdirectory:

Files	z/OS Dataset	Description
*.SQR	HLQ.PPVVV.SQRSRC	Application SQRs
*.SQC	HLQ.PPVVV.SQRINC	Application SQR include members
SQRPARMS.PAR	HLQ.PPVVV.PARMLIB	SQR parameter file
SQRSAMP.JCL	HLQ.PPVVV.JCLLIB	Sample SQR JCL
SQRPROC.PRC	HLQ.PPVVV.PROCLIB	SQR cataloged procedures

Mapping in \SCRIPTS subdirectory:

Files	z/OS Dataset	Description
??DDL.SQL	HLQ.PPVVV.DDLLIB	DDL script files used to build PeopleSoft database in the chapter Creating a Database
??DDLU.SQL	HLQ.PPVVV.DDLLIB	Script files for Unicode databases

Mapping in \APPSERV\PRCS subdirectory:

Files	z/OS Dataset	Description
*.IN	/u/datax/ppvvv/appserv	PSADMIN program utility files
psprcsunix.val	/u/datax/ppvvv/appserv/prcs	Process Scheduler value Validation file

Mapping in \BIN\SERVER subdirectory:

Files	z/OS Dataset	Description
*.*	/u/datax/ppvvv/bin	Process Scheduler executables for USS

**Note.** The \SRC\CBL\MVS directory contains files specifically for the DB2 for z/OS platform. Certain files will appear in both the \SRC\CBL\BASE and \SRC\CBL\MVS directories. The \*.CBL files in the \SRC\CBL\BASE directory will be transferred first, followed by the \*.CBL files in the \SRC\CBL\MVS directory. As a result, the z/OS-specific files will overwrite the generic files. In other words, the order in which files are FTPed to the server does matter. The PeopleSoft Server Transfer program FTPs the files to the server in the correct order.

## Task 6-4: Setting up the USS Environment Variables and Granting Access to USS Files

Before installing SQR for z/OS, you need to set up USS environment variables by executing the psconfig.sh shell script, and grant access to specific libraries in UNIX System Services by executing the psmv.sh shell script.

To execute the psconfig.sh and psmv.sh shell scripts:

1. Locate the files psconfig.sh and psmv.sh in USS Home directory /u/datax/ppvvv.

This is the same directory specified in the preinstallation worksheet, parameter 30. Make this directory your current working directory.

2. Grant execute authority to the file by entering the following at the prompt:

```
chmod 755 psmv.sh
```

3. Execute the scripts by entering psconfig.sh and psmv.sh at the prompt.

## Task 6-5: Installing SQR for z/OS

To install SQR in the designated partitioned dataset, you need to run the INSTALLSQR.SH shell script. The shell script performs the following tasks:

- Copies all SQR installation binary files from the HFS directory *PS\_HOME/bin/sqr* into the designated SQR sequential data sets.
- Submits HLQ.PPVVV.JCLLIB (RECVSQR) that will use IBM's RECV utility to migrate all the binaries from the sequential data set to the designated SQR partitioned dataset.

To execute the installsqr.sh shell script:

1. Change directory to the USS Home directory /u/datax/ppvvv. This is the same directory specified in the

preinstallation worksheet (item 30).

2. Enter `installsqr.sh` at the prompt.

When the shell script submits the JCL to unpack all the SQR binaries from the installation sequential data set, review the status of the JCL from TSO to verify that all steps using the RECV utility have successfully completed with return code of 0.

## Task 6-6: Binding the SQR DB2 Plan

---

Once SQR is installed, you have to run the DSN subcommand BIND to build an application plan for SQR. All DB2 programs require an application plan to allocate resources and to support SQL requests made during execution. The keywords and parameters you should use when exercising the DSN BIND commands follow. Refer to the IBM DB2 Command and Utility Reference Manual for further information on BIND.

To create the DB2 Plan for SQR, submit the following JCL job:

```
HLQ.PPVVV.JCLLIB (PSBNDSQL)
```

---

**Note.** To execute an XPLINK program, the SCEERUN2 as well as the SCEERUN data set must be in the z/OS program search order (see the `{_PLIB_PREFIX}` environment variable). The following data sets are also used: The data sets `{_PLIB_PREFIX}.SCEERUN` and `{_PLIB_PREFIX}.SCEERUN2` contain the runtime library programs. These data sets are listed here for information only, to assist in identifying the correct data sets to be added to the z/OS program search order. The default value is "CEE".

---

## Task 6-7: Assembling PeopleTools Programs

---

You need to assemble the PeopleSoft program PTPSQLTM. PTPSQLTM, called by PTPSQLRT, collects time-interval data to produce the statistics report.

In z/OS, submit the following job:

```
HLQ.PPVVV.JCLLIB (PSASM)
```

On job output, the expected return code is 0 or 4.

---

**Note.** In the catalogued procedure PSASM, the ASM step EXEC statement contains the assembler program specified during the PeopleSoft Server Transfer program. `$ASMLIB$` is replaced by the "Assembler Program Name" transfer parameter. The expected assembler program name is ASMA90. However, IEV90 may also be used, but the SYSLIN DD statement in the ASM step must be commented first to be assembled successfully.

---

## Task 6-8: Compiling and Link-Editing DB2 COBOL

---

Precompile, compile, and link-edit PTPSQLRT (PeopleSoft's COBOL/DB2 API) as follows:

- Submit `HLQ.PPVVV.JCLLIB(PSCOB*)`. Acceptable return codes are 0 and 4 for pre-compiles and compiles, and 0 for the link-edit step.
- PSCOBDA: for DB2 precompile, compile and linkedit of program PTPSQLRT for Native CAF for USS.
- PSCOBDE: for DB2 precompile, compile and linkedit of program PTPSQLRT for TSO CAF.
- PSCOBNET: for compile and linkedit COBOL program PTPNETRT for Native CAF for USS.

Common compile errors include:

- Users inadvertently introducing tab characters into source code while viewing it using workstation editors before file transfer. Check to see if you have X'05' (or other odd hex values) in the z/OS source.
- Failure to transfer all the BASE and z/OS copy members from the file server, or perhaps overwriting the z/OS versions with the BASE versions. Check PSFTXFR.TXT to see the order in which the files were transferred.
- Failure in LINKEDIT of PSCOBNET with error message "Attempt to get file status for an HFS file failed..." usually results when the User ID under which the PSCOBNET job is running does not have read access to the necessary USS file.

---

**Note.** Oracle delivers procedure library members PSCOBD, PSCOBDA, and PSCOBDE, which set the DB2 precompiler options DATE(ISO) and TIME(ISO). Do not change these settings, because PeopleSoft applications rely on the ISO format for date and time processing.

---

## **Task 6-9: Compiling and Link-Editing COBOL**

Submit HLQ.PPVVVV.JCLLIB(PSCOB\*) to compile COBOL programs.

---

**Note.** Previous versions of PSCOB had to be manually divided into multiple jobs if they contained more than 125 COBOL programs to compile. This step is now done by the Server Transfer process, which will create the PSCOB\* members.

---

Next, serialize compile jobs to avoid problems associated with concurrent PDS updating, and submit the PSCOB job(s). Acceptable return codes are 0 or 4 for pre-compiles and compiles, and 0 for the link-edit step.

Common compile errors include:

- Users inadvertently introducing tab characters to source code while viewing them using workstation editors before file transfer. Check to see if you have X'05' (or other odd hex values) in the z/OS source.
- Failure to transfer all the BASE and z/OS copy members from the file server, or perhaps overlaying the z/OS versions with the BASE versions. Check PSFTXFR.TXT to see the order in which the files were transferred.

## **Task 6-10: Changing the IBM Enterprise COBOL Compiler Version**

After you have run the PeopleSoft Server Transfer program, pstrans.exe, use this procedure if you want to change the version of the IBM Enterprise COBOL compiler manually.

1. Locate the following procs in the COBOL PROCLIB (that is, HLQ.PPVVVV.PROCLIB):
  - For IBM Enterprise COBOL for z/OS V5.1, PSSTCCN5 and PSOPTCN5
  - For IBM Enterprise COBOL for z/OS V4.2, PSSTCCN4 and PSOPTCN4.
2. Make backup copies of PSSTCCOB and PSOPTCOB.
3. To use IBM Enterprise COBOL for z/OS V5.1, perform these steps on TSO:
  - a. Copy PSSTCCN5 to PSSTCCOB, overwriting the proc PSSTCCOB with PSSTCCN5.
  - b. Copy PSOPTCN5 to PSOPTCOB, overwriting the proc PSOPTCOB with PSOPTCN5.
4. To use IBM Enterprise COBOL for z/OS V4.2, perform these steps on TSO:
  - a. Copy PSSTCCN4 to PSSTCCOB, overwriting the proc PSSTCCOB with PSSTCCN4.
  - b. Copy PSOPTCN4 to PSOPTCOB, overwriting the proc PSOPTCOB with PSOPTCN4.

5. Compile COBOL programs as done previously; that is, run PSCOBDA.JCL, PSCOBDE.JCL, and PSCOBNET.JCL.
6. To confirm the COBOL compiler version, review the JCL output.  
The COBOL compiler version 4.2 or 5.1 is included in the JOB output.

## Chapter 7

# Creating a Database

This chapter discusses:

- Understanding Database Creation
- Planning Your Installation
- Transferring DDL Scripts to z/OS
- Creating PS.PSDBOWNER Table
- Granting Privileges on PS.PSDBOWNER
- Granting Privileges to Owner ID
- Creating DB2 Databases, Storage Groups, and Tablespaces
- Creating Tables
- Configuring the DB2 Connect Gateway
- Creating Data Mover Import Scripts
- Running Data Mover Import Scripts
- Checking the Log Files and Troubleshooting
- Creating Indexes
- Reviewing Patch Application
- Updating Database to Latest PeopleTools Release
- Running the DB2 RUNSTATS Utility
- Creating PeopleSoft Views
- Building Temporary Tables
- Creating PeopleSoft Triggers
- Running Additional Data Mover Scripts
- Cleaning Up Orphaned Language Data
- Running SQR Reports
- Updating PeopleSoft System Tables
- Binding DB2 Plans
- Running VERSION Application Engine Program
- Changing the Base Language
- Checking the Database
- Running Alter Audit
- Disabling %UpdateStats

## 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.

---

**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.

---

### See Also

"Preparing for Installation," Planning Database Creation

"Setting Up the Install Workstation"

## Planning Your Installation

---

This section discusses:

- Using %UpdateStats
- Using Temporary Tables

---

**Note.** Two features that impact how you install your PeopleSoft database are the %UpdateStats MetaSQL function, and the Application Designer Object Type of "Temporary Table."

---

### Using %UpdateStats

%UpdateStats is an optional feature that lets you invoke the DB2 Utility RUNSTATS from within an Application Engine or COBOL process. Consider the following if you plan to use %UpdateStats:

- You can initiate RUNSTATS dynamically via the IBM stored procedure DSNUTILS. Before you can use %UpdateStats, the stored procedure DSNUTILS must be configured in the DB2 subsystem in which you run the PeopleSoft applications. If %UpdateStats is enabled but DSNUTILS is not in place, a processing error will result. Please refer to your IBM Systems documentation for instructions on enabling and configuring the DSNUTILS stored procedure.



- Using %UpdateStats with COBOL requires modifications to some delivered PeopleSoft code. These modifications are described in the *PeopleTools: Data Management* product documentation.
- %UpdateStats can be enabled or disabled based on the DBFLAGS Process Scheduler configuration parameter. Disabling %UpdateStats will cause the functionality to be bypassed, without causing any processing errors. Note that the default setting for DBFLAGS for UNIX and Windows Process Schedulers is ON (DBFLAGS=0). The default setting for USS is DBFLAGS=0 (Enable Second DB Connection).
- The %UpdateStats MetaSql targets a table, whereas the DB2 z/OS RUNSTATS utility processes at the tablespace level. This can present a performance issue with the default PeopleSoft database installation strategy, which combines multiple tables into a single tablespace. To alleviate this issue and assist you in installing your database to optimally utilize the %UpdateStats feature, consider using the PeopleSoft Tablespace DDL Automation Tool (PSTAAT). PSTAAT can be used to better optimize the mapping of tables among tablespaces and databases.

See Appendix: "Using The PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

The scripts that are required for PeopleSoft products are listed in the section "Transferring DDL Scripts to z/OS".

## Using Temporary Tables

Temporary tables are an object type defined in Application Designer to support Application Engine concurrent processing. For PeopleSoft installations, we refer to these objects as temporary tables, but to the DB2 z/OS database they will be defined as "permanent" SQL tables. Each temporary table defines a base table from which additional instances or copies of the base table are scripted and physically created on your DB2 z/OS PeopleSoft database. Only the definition of the base table is stored in Application Designer. The actual number of instances is governed by a global value for Online concurrent processes, and a value defined either at a Global level (for EPM) or at the Application Engine Process Level for batch processes.

See *PeopleTools: Application Engine*.

In an attempt to limit the number of potentially unused objects created on your database, we have reduced the number of temporary table instances to a minimum setting. Depending on the actual products you are installing, your processing characteristics and workloads, you may need to modify the number of temporary table instances to improve performance. This will become evident if you have a number of processes queuing to use a limited number of temporary table instances. The actual scripting and creation of the temporary tables are performed as a separate step in the installation process, so you may intervene during this process to increase the number of temporary table instances if you feel you have substantial batch processing workloads and/or a large volume of online transaction processing. Temporary tables can be regenerated at any time in the life of your database, so you don't need to determine the exact number of instances that will be right for your environment at installation time.

When the number of instances of the temporary tables within the PeopleSoft application is changed, all temporary tables should be regenerated. The same values in the PeopleTools tables that are used to determine how many temporary tables instances should be created, are also used to determine how many should be available to an Application Engine process. The expectation is that the number of instances defined within the PeopleTools tables actually exists on the database. A later task in this chapter describes how to create the temporary tables.

Lastly, since each instance of a base temporary table is not defined within the PeopleTools tables, database and tablespace information is not stored for these instances. When the DDL is generated to create the base temporary table and its instances, each instance is put in the same database and tablespace as the base temporary table. To avoid concurrency issues and obtain optimal performance, each temporary table instance should also be assigned to its own unique tablespace, particularly when the temporary table is also the object of the %UpdateStats functionality, described earlier. Use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to put the base temporary table and each of its instances in separate tablespaces. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

## Task 7-1: Transferring DDL Scripts to z/OS

---

If you have set up your batch environment on the z/OS mainframe following the instructions in the chapter "Setting Up the Batch Environment on z/OS," these files have already been transferred and you can skip this step.

All DDL script files to create the DB2 objects for the PeopleSoft database reside in the *PS\_HOME*\SCRIPTS directory of your file server (where *PS\_HOME* is the root directory where PeopleSoft software has been installed in your file server). This task requires that you manually transfer these files to z/OS. Each of these files must be customized with site-specific values and standards before you submit them either through SPUFI or DSNTEP2.

To transfer DDL scripts:

1. Allocate a partitioned dataset named HLQ.PPVVV.DDLLIB on z/OS, where HLQ is the highest-level dataset qualifier, and PPVVV is the current release of your PeopleSoft software (such as HR920).

File attributes are: FB, LRECL=80, Dir Blks 10, SPACE (Primary 800 Tracks, Secondary 300 Tracks). For example, DCB=(RECFM=FB,LRECL=80,BLKSIZE=6160) SPACE=(TRK,(800,300,10)).

2. Transfer the following files from the *PS\_HOME\SCRIPTS* directory, as a member of the *HLQ.PPVVV.DDLLIB* PDS library using Microsoft File Transfer Protocol (FTP).

This table lists and gives a brief description for each script, and defines the naming convention.

Files in the <b>SCRIPTS</b> subdirectory	Description
XXDDL.SQL †	This script contains all the DDL statements to create database, storage groups, and table spaces
XXDDL.U.SQL †	This script contains all the DDL statements to create database, storage groups, and table spaces for a UNICODE database.
PSDDL.SQL	This script contains the DDL statements to create the PS.PSDBOWNER table.
TBDDL.SQL	This script contains all the CREATE TABLE statements for the product line.
TBDDL.U.SQL	This script contains all the CREATE TABLE statements for the product line for a UNICODE database.
IXDDL.SQL	This script contains all the CREATE INDEX statements for the product line.

† Substitute these product line values for XX:

- Use *CS* for PeopleSoft Campus Solutions.
- Use *CR* for PeopleSoft Customer Relationship Management.
- Use *LM* for PeopleSoft Enterprise Learning Management.
- Use *PF* for PeopleSoft Enterprise Performance Management.
- Use *EP* for PeopleSoft Financials/Supply Chain Management.
- Use *EA* for PeopleSoft Financials/Supply Chain Management Argentina.
- Use *EB* for PeopleSoft Financials/Supply Chain Management Brazil.
- Use *HC* for PeopleSoft Human Capital Management.
- Use *PA* for PeopleSoft Portal Solutions.

## Task 7-2: Creating PS.PSDBOWNER Table

You can skip this step if a PS.PSDBOWNER table already exists in the same DB2 subsystem as your new database. This would be the case if you already have an existing PeopleSoft database in the target DB2 subsystem. You will have one PS.PSDBOWNER table per subsystem.

Edit and execute *HLQ.PPVVV.DDLLIB(PSDDL)* using *SPUFI* or *DSNTEP2*. The PS.PSDBOWNER must exist in each DB2 subsystem where PeopleSoft databases will be installed and it is the only table that Oracle provides for PeopleSoft software where an OWNERID cannot be customized. PeopleSoft PeopleTools applications select from this table to obtain the Owner ID and Database Name information during the PeopleSoft Sign-on process.

---

**Note.** For UNICODE databases, it is not necessary to use the CCSID=UNICODE option of the Create Database statement when creating the PSOWNRDB (this contains the PS.PSDBOWNER table). IBM supports the use of Unicode, EBCDIC, and ASCII tables in the same subsystem, and the ability to join data using any of these encoding schemes in DB2 for z/OS New Function Mode.

---

## **Task 7-3: Granting Privileges on PS.PSDBOWNER**

---

Grant the ALL authority to the table owner ID used for the PeopleSoft database:

```
GRANT ALL ON TABLE PS.PSDBOWNER TO <Owner_ID> WITH GRANT OPTION;
```

## **Task 7-4: Granting Privileges to Owner ID**

---

Before creating your DB2 databases, make sure the owner ID has authorization to use the following DB2 resources:

Grant use of bufferpool to the Owner ID:

```
GRANT USE OF BUFFERPOOL BP1 TO <Owner_ID>;
GRANT USE OF BUFFERPOOL BP2 TO <Owner_ID>;
GRANT USE OF BUFFERPOOL BP3 TO <Owner_ID>;
GRANT USE OF BUFFERPOOL BP32K TO <Owner_ID>;
```

## **Task 7-5: Creating DB2 Databases, Storage Groups, and Tablespaces**

---

This section discusses:

- Understanding DB2 Databases, Storage Groups, and Tablespaces
- Customizing the Database Name
- Working with Tablespaces

### **Understanding DB2 Databases, Storage Groups, and Tablespaces**

Oracle delivers a generic script to create the DB2 for z/OS storage groups, database shells and tablespaces. Unless you are installing the System (SYS) or Demo (DMO) database using the generic defaults in the script, you need to edit various parameters to comply with the standard at the customer site. These parameters include:

- Storage group names and volumes (if you have already created stogroups, you may comment out the statements in the script to create them)
- Database names
- Tablespace names
- Bufferpool names
- Owner\_ID

---

**Note.** There is a SET CURRENT SQLID = 'OWNER#ID' statement in the script. It is recommended that the Current SQLID be set to the ID that will be used to "own" all the database tables (even though no tables are being created in this step). This will either be the Secondary Authorization ID, if using Secondary Authorization ID processing, or the Primary Authorization ID, if not. (In the scripts to create the tables found in the next step, this value is referred to as OBJ#OWNER). The "CREATOR" field in the SYSIBM.SYSTABLESPACE catalog table will be the same value as the "CREATOR" field in the SYSIBM.SYSTABLES catalog table. Having these two fields being the same value will facilitate running the optional SQR SETDBNAM and creating the temporary tables, mentioned later in the chapter.

---

The following instructions detail where to make these edits as necessary.

- Using SPUFI, DSNTEP2, or an equivalent product, create your DB2 objects (that is, databases, storage groups, and tablespaces) using the HLQ.PPVVV.DDLLIB(XXDDL/XXDDL) file.
- Use the XXDDL version for the non-Unicode installation, and the XXDDL) version for Unicode installation.
- Use the product line values listed in the task Transferring DDL Scripts in HLQ.PPVVV.DDLLIB(XXDDL/XXDDL):

## Task 7-5-1: Customizing the Database Name

This section discusses:

- Understanding Database Name Customization
- Editing the XXDDL.SQL or XXDDL)SQL Script

### Understanding Database Name Customization

You can customize the database name found in the CREATE DATABASE statements to your organization standards. However, make note of the database names you change because you will have to make corresponding changes to the DDL scripts for creating the tables.

Because of the large number of objects delivered in the database, and to facilitate performance, multiple physical databases are deployed to contain the single, logical PeopleSoft database. The objects in the physical databases are unified into one logical database by sharing the same Owner ID (the CREATOR field in SYSIBM.SYSTABLES). For consistency, and to facilitate editing, the physical database names all share a common root value of seven characters. A unique eighth character is appended to the root name, resulting in a distinct database name.

As an example, the Human Capital Management product is delivered with a "root" value of PSHRDMO for the database name. The actual physical database names include PSHRDMO, PSHRDMOB, PSHRDMOH, PSHRDMOP, PSHRDMOT, PSHRDMO1 and PSHRDMO2.

The PeopleSoft applications contain a substantial number of DB2 objects, and we do not recommend putting all these objects into a single database. Doing so will require an inordinately large EDM pool size, and will produce undesirable results in your DB2 system. Note also that the PTPRC tablespace is assigned to its own database PSxxDMOT. This tablespace contains all the tables used by Process Scheduler. Combining these tables in one of the other databases could potentially cause the lockout of other processes, such as DB2 utilities running concurrently with Process Scheduler.

Beginning with PeopleSoft PeopleTools 8.53, the tablespace PSIMAGE2 is delivered and is assigned to its own database PSXXDMOX, where XX refers to application-specific product identifiers. This tablespace contains tables with PeopleSoft Long data types.

See PeopleTools 8.53 Release Notes, My Oracle Support.

See the information on creating field definitions in the *PeopleTools: Application Designer Developer's Guide* product documentation.

Finally, note that several tablespaces specify LOCKSIZE ROW. If any tables we deliver within these tablespaces are moved, they should only be moved to a tablespace that was defined with row-level locking.

---

**Note.** Use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to customize the physical database names that constitute your logical PeopleSoft database. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

---

## Editing the XXDDL.SQL or XXDDL.U.SQL Script

To edit the XXDDL.SQL (or XXDDL.U.SQL for Unicode) script, edit the CREATE STOGROUP statements to site-specific values. Storage group name defaults are PSSGTSxx and PSSGIXxx for tablespaces and index spaces, respectively, but you can change them to comply with your organization's standards. You may also comment out the CREATE STOGROUP statements if you have already established Stogroups on your DB2 subsystem, but you will still need to edit the CREATE TABLESPACE statements with your site-specific Stogroup value.

Verify that your XXDDL.SQL or XXDDL.U.SQL script includes the following statements:

---

**Note.** You can also copy these statements from the PTDDL.SQL (EBCDIC) or PTDDL.U.SQL (Unicode) scripts.

---

- To create the PSXXDMOX database for EBCDIC databases:

```
CREATE DATABASE PSXXDMOX STOGROUP PSSGTSPT ;
COMMIT;
```

To create the PSXXDMOX database for Unicode databases:

```
CREATE DATABASE PSXXDMOX STOGROUP PSSGTSPT CCSID UNICODE;
COMMIT;
```

- To grant permissions to the PSXXDMOX database, for EBCDIC or Unicode databases:

```
GRANT DBADM ON DATABASE PSXXDMOX TO OBJOWNER;
COMMIT;
```

```
SET CURRENT SQLID='OBJOWNER';
COMMIT;
```

- To create the PSIMAGE2 tablespace, for EBCDIC or Unicode databases:

```
CREATE TABLESPACE PSIMAGE2 IN PSXXDMOX
  USING STOGROUP PSSGTSPT PRIQTY 172800 SECQTY 8640
  FREEPAGE 0 PCTFREE 10
  SEGSIZE 32 BUFFERPOOL BP32K LOCKSIZE ANY CLOSE NO ;

COMMIT;
```

We highly recommend that you use standard PeopleSoft tablespace names when installing the demonstration database to simplify the installation process.

The script contains the GRANT DBADM commands for each DB2 database you plan to create for your PeopleSoft database. This is the easiest way to grant the required privileges to the owner ID. This enables the owner ID to perform other tasks, such as starting and stopping the PeopleSoft database, and running DB2 utilities such as RUNSTATS.

---

**Note.** References to *owner ID* in this document, and in the accompanying scripts, refer to the DB2 Secondary Authorization ID if using Secondary Authorization ID processing, or to the DB2 Primary Authorization ID, if not.

---

The options are to grant DBADM to the Owner ID or to issue individual grants for the following:

- Grant bind capability to the Owner ID:  
`GRANT BINDADD TO <Owner_ID>;`
  - Grant create tablespace capabilities to the Owner ID:  
`GRANT CREATETS ON DATABASE <database_name> TO <Owner_ID>;`
  - Grant create table capability to the Owner ID:  
`GRANT CREATETAB ON DATABASE <database_name> TO <Owner_ID>;`
- 

**Note.** You may use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to customize tablespace DDL. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

---

## Task 7-5-2: Working with Tablespaces

This section discusses:

- Using Tablespaces
- Following the Standard Tablespace Name Formats
- Naming Tablespace Defaults
- Parsing Tablespaces

### Using Tablespaces

For tablespaces in your PeopleSoft installation, Oracle provides a strategy for Demo and System databases aimed at identifying high growth and frequently updated tables. This limits the number of tables the DBA must monitor and analyze, and simplifies capacity planning and database tuning activities. In addition, with PeopleSoft Release 8 and higher, a new type of table was introduced referred to as a temporary table. A temporary table is permanently created in the database, but its usage, by Application Engine programs, is temporary. The tables are delivered empty, but because of the potential for a volatile increase and decrease in the number of rows populating the table during the execution of a process, the temporary tables are also segregated into their own tablespaces, buffer pool, and databases. This segregation seeks to facilitate administration of these tables and tablespaces separate from the tablespaces in which the core application tables reside.

For customers that elect to use the %UpdateStats functionality, use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to place each table that is the target of the %UpdateStats function in its own tablespace. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

---

**Note.** For multilingual installs, the PTTBL, PTTLRG and PSIMAGE tablespaces may need to be increased in size.

---

### Following the Standard Tablespace Name Formats

The standard tablespace names that Oracle delivers categorize tables as follows:

- High growth and frequently updated tables for Applications are grouped together into tablespaces named **XXLARGE**, where **XX** is a PeopleSoft application identifier. Similarly, the PeopleTools tables identified as large tables or frequently updated tables are grouped in the **PTTLRG** tablespace. Depending on customer-specific requirements and environment, it may be advisable to move those tables containing the largest amount of data from this shared tablespace into their own segmented or partitioned tablespaces. This should be done for performance and concurrency reasons.
- Tables with static or relatively minimal growth are grouped into tablespaces named **XXAPP**, where **XX** is a PeopleSoft application identifier. These tablespaces are defined with a moderate free space specification.
- Tables that are classified by record type as Temporary tables are grouped into tablespaces named **XXWORK**, where **XX** is a PeopleSoft application identifier.
- Tables with rows exceeding 4K in length are placed in the **PSIMAGE** tablespace, which is created using a 32K buffer pool.
- Tables that benefit from row-level locking exist in the following tablespaces:
  - **PTPRC** — Tables used by the Process Scheduler
  - **PTPRJWK** — Tools Project Work Table
  - **PTAUDIT** — Table used by PeopleTools Audit functionality
  - **PTAMSG** — Tables used by Application Messaging
  - **PTLOCK** — **PSLOCK** and **PSVERSION** tables are stored in this tablespace. These tables consist of multiple rows and are used for concurrency and version control respectively.
  - **PTRPTS** — Tables used by Report Repository processes
  - **PSIMGR** — Tables that benefit from row level locking that also require use of a 32K bufferpool.
- Other tablespaces exist to group tables in PeopleSoft PeopleTools by functionality (that is, **PTTREE** for tree tables, and **PTAPPE** for Application Engine tables).

Simple or partitioned tablespaces (one table per tablespace) are not supported for the initial installation, but may be implemented for demonstration and production databases using the PeopleTools Application Designer.

### Naming Tablespace Defaults

The following tables lists and describes common tablespaces:

Tablespaces	Comments
PTAPP, PTTBL	Contain moderate sized PeopleTools tables with little expected growth.
PTTLRG	Contains larger PeopleTools tables that have the potential to grow large.
PTAUDIT	Contains table PSAUDIT used by PeopleTools audit functionality. Row level locking is specified for this tablespace.
PSIMAGE	Contains PeopleSoft Application and PeopleSoft PeopleTools tables that contain LONG field types which require a 32KB page size.



Tablespaces	Comments
PSIMAGE2	Contains PeopleSoft Application and PeopleSoft PeopleTools tables that contain LONG field types which require a 32KB page size.
PSIMGR	Contains tables requiring a 32K bufferpool size that also benefit from row level locking. Row level locking is specified for this tablespace.
PTAMSG	Tables used by Application Messaging. Row level locking is used for this tablespace.
PTAPPE	Tables used for Application Engine. Please note that other AE tables exist in PSIMAGE because they require 32K bufferpool.
PTLOCK	Contains PSLOCK and PSVERSION. Row level locking is used for this tablespace.
PTTREE	Contains tables specific to PeopleTools trees.
PTPRC	All tables used by Process Scheduler. Row level locking is used for this tablespace.
PTPRJWK	Contains table PSPROJECTWRK. Row level locking is used for this tablespace.
PTRPTS	Contains tables associated with Report Repository functionality. Row level locking is used for this tablespace.
XXWORK	Contain PeopleSoft PeopleTools and PeopleSoft Application "temporary" tables.
XXLRG	Application tablespaces containing tables identified as high growth and high update, where the xx corresponds to the two-character application identifier (FS, PC, AF, and so on).
XXAPP	Application tablespaces identified as static or with the potential for relatively minimal growth, where the xx corresponds to the two-character application identifier (FS, PC, AF, and so on).
XXIMAGE	Contain Application tables requiring 32K buffer pool size.

## Parsing Tablespaces

In this multiple database strategy, the tablespaces are distributed to different databases based on the key application group within the product line. This parsing strategy serves as a good starting point to build a PeopleSoft database in your development environment. We recommend that you install the Demonstration database with the delivered strategy to expedite the database creation. You may consider tailoring the delivered DDL script files to implement your own strategy to build your System PeopleSoft database.

Below are some guidelines that were used in determining a parsing strategy:

- PeopleSoft PeopleTools tablespaces are created in a "root" database, with one exception ("root" being the seven-character database name without addition of the eighth character).
- Tablespace PTPRC (also a PeopleSoft PeopleTools tablespace) is placed in its own database, with an added eighth character of T, to avoid contention between Process Scheduler and any other processes that may be running.
- Tablespace PSIMAGE2 (shared between PeopleSoft Application and PeopleSoft PeopleTools tablespaces) is assigned to its own database PSXXDMOX.

Refer to the summary found in the specific *XXDDL*.SQL script, for the exact database or tablespace parsing strategy for the Product Line.

---

**Note.** You can further improve performance by remapping tables to additional tablespaces, and tablespaces to additional databases with the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT). Consult the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" to help you plan a strategy for implementing production PeopleSoft databases.

---

See *PeopleTools: Data Management*.

## Task 7-6: Creating Tables

---

The CREATE TABLE statements to build the tables for the application group are in Partitioned Data Set HLQ.PPVVV.DDLLIB. To create the tables, use TBDDL for non-Unicode databases, and TBDDLU for Unicode databases. If any changes were made to the names of the databases or tablespaces in the HLQ.PPVVV.DDLLIB(*XXDDL*) or HLQ.PPVVV.DDLLIB(*XXDDL*U) script, you must make the same parameter changes to the file you will use to create the tables. The key values you need to modify are:

- *Owner#ID* — This value equates to the "CREATOR" field in the SYSIBM.SYSTABLES catalog table and is offered to facilitate Secondary Authorization ID processing.
- *OBJ#OWNER* — This value should equate to the CREATOR field in the SYSIBM.SYSTABLES catalog table.
- *Database names*
- *Tablespace names* — Only if you changed the default names specified in the HLQ.PPVVV.DDLLIB(*XXDDL*) or HLQ.PPVVV.DDLLIB(*XXDDL*U) script.

After reviewing all your changes, submit this file, preferably through DSNTEP2, since this task will take between one and two hours.

---

**Warning!** By default DSNTEP2 allows 10 errors, failing on the 11th error. Allowing 10 errors before the script stops could leave your database in an inconsistent state. It is important that your script stop at the first error so you can assess the problem, fix it and resubmit the job. You may want to change the default for DSNTEP2 to fail on the first error or use SPUFI to submit the TBDDL.

---

---

**Note.** You may use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to optimize the default installation DDL scripts (*XXDDL*, *XXDDL**U*, *TBDDL*) for a production environment. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

---

## **Task 7-7: Configuring the DB2 Connect Gateway**

---

Because subsequent installation tasks require connectivity to the remote database, you now need to configure the DB2 Connect Gateway, cataloging an alias for the PeopleSoft database. You also need to perform any additional tasks required for connectivity that you didn't already complete during preparation. For instructions on performing these tasks, see the appendix "Installing and Configuring DB2 Connect." For details on DB2 Connect configuration, refer to your IBM DB2 Connect documentation.

## **Task 7-8: 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.

You must perform this procedure for each type of database that you create (System and Demo databases). Also, if your database supports Unicode, you must decide whether to use an Unicode or EBCDIC database before carrying out this procedure.

See *PeopleTools: Global Technology*.

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 7-8-1: 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.

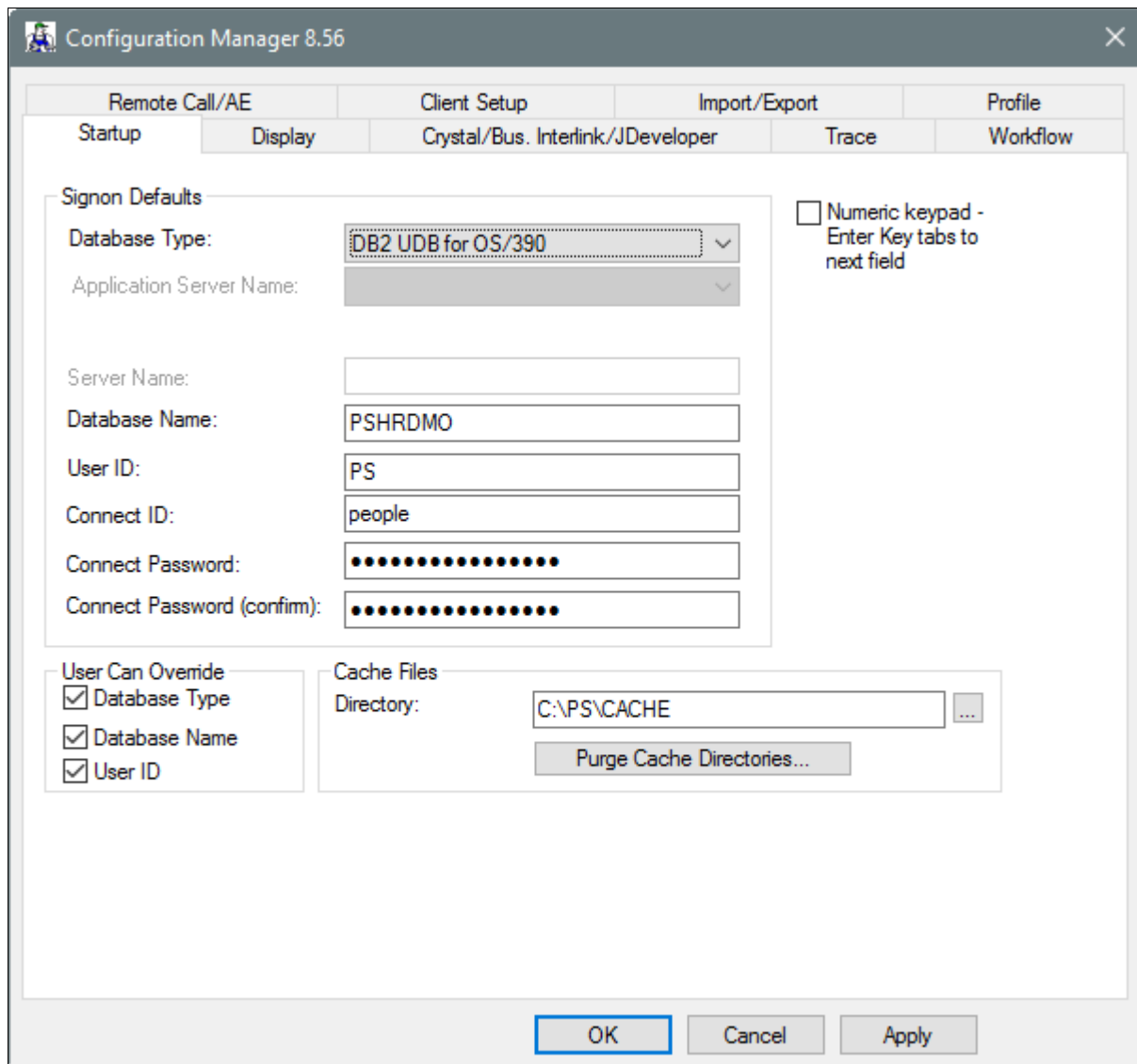
## Task 7-8-2: Running Database Setup to Create Data Mover Import Scripts

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`.

- Verify in the Signon Defaults on the Startup page that the Database Type of DB2 UDB for OS/390 is selected, as shown in the example.



Startup tab on the Configuration Manager dialog box

- Verify that the connect ID is correct.  
If you accepted all defaults, the connect ID is people. Enter and confirm a value for the connect ID password.
- 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`.
- Log on using the Access ID and password you defined in your mainframe security software application; this will start Data Mover in bootstrap mode.

See Checking the Log Files and Troubleshooting, Running Data Mover.

---

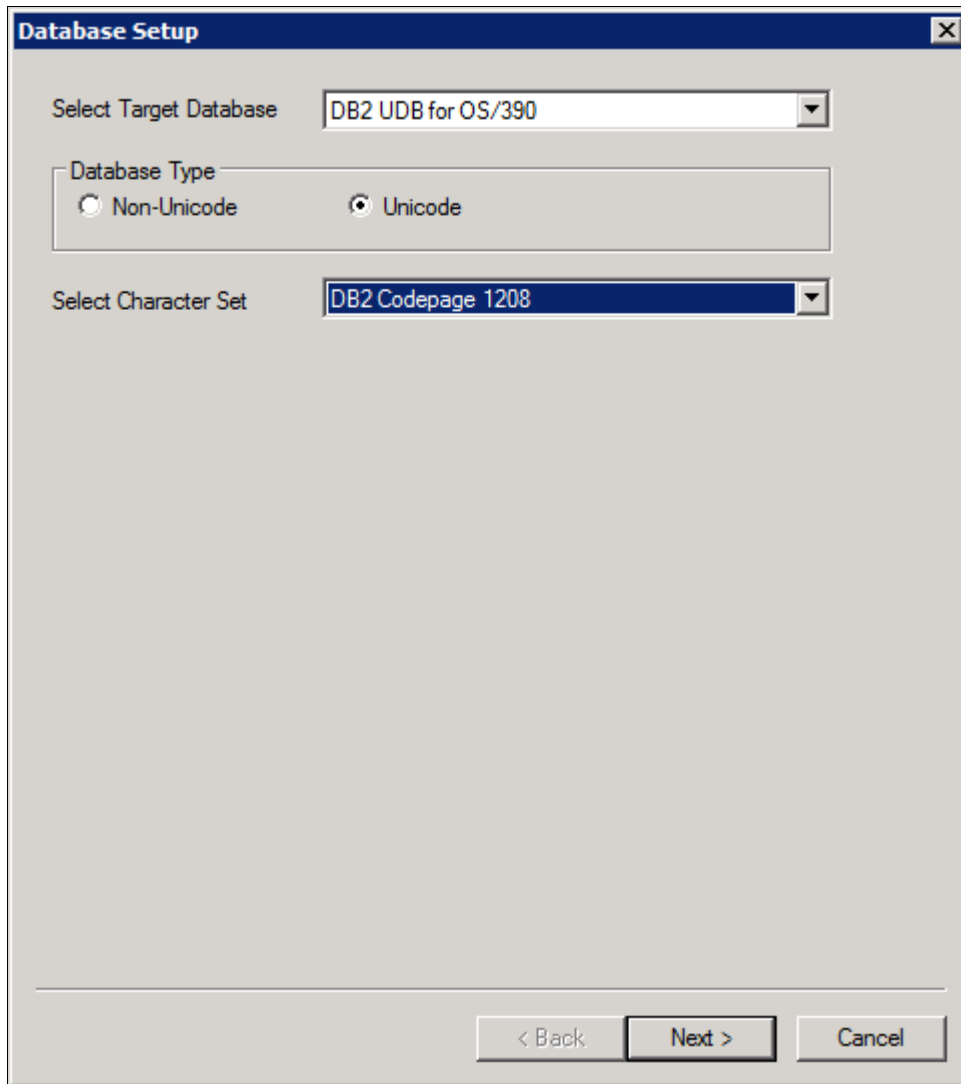
**Note.** You must limit the Access ID to eight characters or less. You must limit the Access password to 30 characters or less.

---

See "Preparing for Installation," Planning Database Creation.

6. 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

7. Select your database platform from the Select Target Database drop-down list.
8. Select your database type, Unicode or non-Unicode, and character set.

---

**Note.** The database setup does not actually modify the encoding scheme of your database. That is accomplished during creation. The database setup process only creates customized scripts based on your selection.

---

9. Select the Demo or System radio button, depending on which type of PeopleSoft database you are installing.
10. 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.

11. Set the database parameters described below and then click Finish.

The screenshot shows a dialog box titled "Database Setup - Database Parameters". It contains the following fields and options:

- Database Name: PSHRDMO
- Symbolic ID: SYSADM1
- Access ID: SYSADM
- Access Password: (empty)
- Connect ID: PEOPLE
- Application Server ID: (empty)
- Application Server Password: (empty)
- Web Server ID: PTWEBSERVER
- Web Server Password: (empty)
- Enable All Profiles
- Set Global Password
- Global Password: (empty)
- Table Owner: TABLEOWNER
- Index Storage Group: PSSGIDX
- Tablespace Storage Group: PSSGSPC

At the bottom of the dialog box, there are three buttons: "< Back", "Finish", and "Cancel".

Specifying Database Parameters on the Database Setup dialog box

- *Database Name:* Specify the logical DB2 database name determined in the chapter "Preparing for Installation" in the task Planning Database Creation.

The database name must also be defined as an alias in DB2 Connect to establish a successful connection to your PeopleSoft database, as described in the chapter "Installing and Configuring DB2 Connect."

- *Symbolic ID:* Specify 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 PeopleSoft Access ID defined in the chapter "Preparing for Installation" in the task Planning Database Creation. This is also the User ID value with which you should be currently logged on to Data Mover. This value is case sensitive.
- *Access Password:* Specify the PeopleSoft Access Password defined in the chapter "Preparing for Installation" in the task Planning Database Creation. This is also the User password value with which you should be currently logged on to Data Mover.



- *Connect ID:* For DB2 for z/OS, specify the Connect ID that can be used for the initial connection to DB2 for z/OS. This ID is used for connecting to the database.

---

**Note.** The Connect ID must be defined as a valid logon ID in the database security management software. The Connect ID only needs to be granted SELECT access on PS.PSDBOWNER, PSACCESSPROFILE, PSOPERDEFN, and PSSTATUS. This ID should be granted no other database authorities.

---

- *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 check box 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.

---

- *Table Owner:* The name of the table owner ID determined in the chapter "Preparing for Installation" in the task Planning Database Creation.

This value will populate the CREATOR field in the system catalog table SYSIBM.SYSTABLES. It is this value that identifies all the tables as belonging to the logical PeopleSoft database.

- *Index Storage Group:* Specify the storage group where the index spaces will be created.

Later you have to edit the delivered script IXDDL.SQL with this value.

- *Tablespace Storage Group:* Specify the storage group for tablespaces.

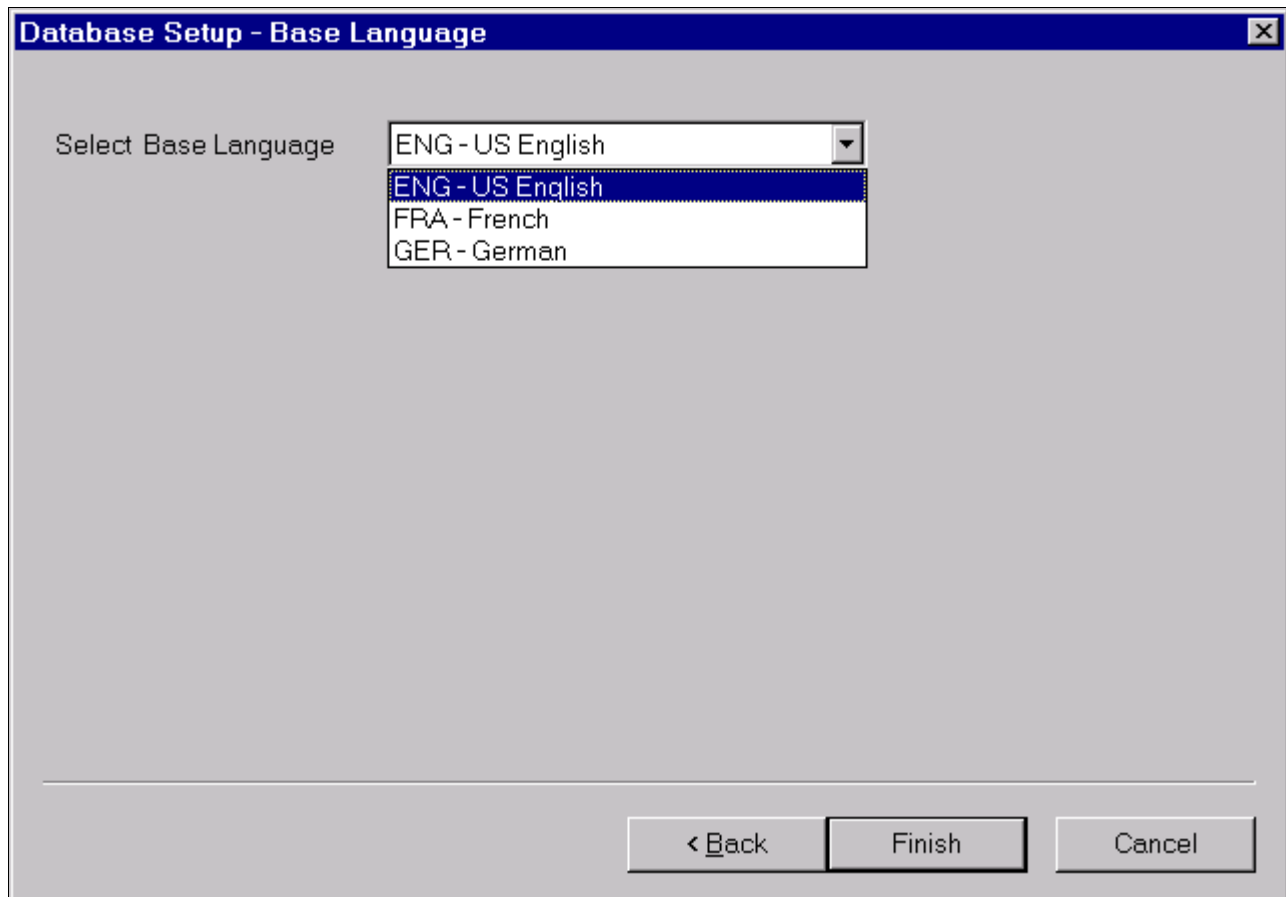
This value must be the same as that used in the XXDDL.SQL/XXDDL.U.SQL script described earlier when the Tablespaces were created.

## 12. 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.

13. 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.

---

A script <dbname>dbo.dms is created in the *PS\_HOME*\scripts directory, and the script is displayed in the Data Mover input window. The log files will be written to the location you have specified for the Data Mover Log Directory in the Configuration Manager profile.

---

**Note.** If you selected a Database Type of *System* in the Database Setup dialog box (above), you must use the Data Mover DBSPACE command to properly override the default database names in the generated Data Mover script (script <dbname>dbo.dms). The appendix "Extracting DDL for PTSYS Database" discusses a sample script that you can use to customize the database names for your location. Refer to this appendix for information on creating a PTSYS database.

---

## See Also

*PeopleTools: Data Management*

*PeopleTools: Security Administration*, "PeopleSoft Authorization IDs"

"Extracting DDL for PTSYS Database"

## Task 7-9: 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.

---

**Note.** You should already be signed on in bootstrap mode from having completed the previous task.

---

Verify that the same Connect ID was used in the Database Setup, and Configuration Manager panel. If you accepted all defaults, the Connect ID is people.

See *PeopleTools: Data Management*.

---

**Warning!** The Data Mover utility uses the INSERT SQL command to populate all the tables in PeopleSoft database. Notify your systems programmer and operations staff that this activity will generate more DB2 z/OS logging activity than usual.

---

## See Also

Checking the Log Files and Troubleshooting, Running Data Mover

## Task 7-9-1: 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. If you have logged out of Data Mover after creating the DMS script, log back on again in Bootstrap mode; otherwise skip the next instruction.
3. Choose File, Open to open the DMS script you created earlier.  
Browse the directory where the script was created: *PS\_HOME*\scripts. Open the DMS script with the name *<dbname>DBO.dms*, where *<dbname>* is the name of the database you provided when creating the script.
4. One of the statements in the script grants select authority on PS.PSDBOWNER to the Connect ID.  

```
GRANT SELECT ON PS.PSDBOWNER TO <Connect ID>;
```
5. If you have not granted the Access ID (the ID that you used to log on to Data Mover to execute the script) a level of authority that would permit it to execute this statement, the Data Mover script will fail and stop at the statement.

You can exercise three options to prevent this failure:

- Grant SELECT access on PS.PSDBOWNER to PUBLIC, and remove this GRANT statement from the script.
  - Remove this GRANT statement from the script and perform it later with an ID that is authorized to issue grants on PS.PSDBOWNER.
  - Grant authority to the Access ID to grant access on PS.PSDBOWNER to other user IDs.
6. Select File, Run to execute the script.

When you run the script, Data Mover typically performs the following actions:

- IMPORT \*  
Load data into PeopleTools and application tables.
- ENCRYPT\_PASSWORD \*  
Encrypt security information for the database.

## Task 7-10: Checking the Log Files and Troubleshooting

This section discusses:

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

- Improving Execution

## Task 7-10-1: 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.

This is the same directory you specified for the Data Mover Log Directory in the Configuration Manager profile, unless you edited this location in the DMS script.

See "Setting Up the Install Workstation," Editing the Default Profile.

## Task 7-10-2: 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.

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.

## See Also

*PeopleTools: Data Management*

## Task 7-10-3: 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, or in the "Creating Indexes" section later in this chapter, 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>dbo.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.

<RECORD NAME> is the PeopleSoft record name as defined in PSRECDEFN, not necessarily the same as the DB2 table name. With the exception of the PeopleSoft PeopleTools tables, most PeopleSoft record names are appended with PS\_ to create the DB2 table 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
```

First delete the rows from the partially inserted table (for example, record) by using the DELETE FROM <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>;
DELETE FROM <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 NO RECORD;
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 NO RECORD;
SET NO VIEW;
SET NO SPACE;
SET NO TRACE;
SET UNICODE ON;
SET START PSPNLFIELD;
DELETE FROM PSPNLFIELD;
IMPORT *;

```

For the DELETE statement, for records with a rename without a leading PS, add PS\_ to the beginning of the rename; otherwise the table will not be found. For example, PS\_<RECNAME>.

- Restart the script (File, Run Script).

## Task 7-10-4: Improving Performance

The following tips can help you save time when running the Data Mover scripts:

- 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.

## Task 7-10-5: Improving Execution

Data Mover, by default, commits at the end of each table. If you prefer, when running Data Mover, you can include a SET COMMIT command (such as SET COMMIT 5000) to force a commit after the specified number of rows have been inserted into the table. However, if you use this option, and Data Mover ends abnormally again, you must mass delete the rows contained in the current table.

If the script stops and the table is partially inserted with the message below:

```

Importing PSPNLFIELD
Rows inserted into PSPNLFIELD
5000, 10000, 15000

```

Bypass the record using the SET START AFTER command and complete the import. In a second pass, import the partially inserted table using this command:

```

Replace_data <record_name>;

```

## Task 7-11: Creating Indexes

---

All DDL statements to create the indexes for your application are located in the HLQ.PPVVV.DDLLIB(IXDDL) file. Edit the IXDDL file to make changes to the delivered DDL to customize the OWNER#ID, OBJ#OWNER, DEFINE YES, DEFINE NO, and STOGROUP values to the specific values used at your site:

---

**Note.** You may then use the IXDDL script with the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to further optimize index DDL. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

---

- **OWNER#ID:** The statement SET CURRENT SQLID may be used, but is not required. All objects in the CREATE INDEX statements are fully qualified.
- **OBJ#OWNER:** This value should equate to the CREATOR field in the SYSIBM.SYSINDEXES catalog table.
- **DEFINE YES or DEFINE NO:** The default for the delivered index DDL is DEFINE NO.

If you do not want to defer creation of the underlying VSAM index datasets until rows are inserted into tables (DEFINE NO), edit the IXDDL file in ISPF as follows:

```
change all 'DEFINE NO' to 'DEFINE YES'
```

or

```
change all 'DEFINE NO' to ' '
```

If you want to permanently change the delivered default for index DDL to *DEFINE YES*, edit the Data Mover script *PS\_HOME/scripts/DDLDB2.DMS* by removing *DEFINE NO* from the end of the index model statement. Terminate the statement with a semi-colon and save the script. For example:

*Original:*

```
CREATE [UNIQUE] INDEX **OWNER**.[IDXNAME] ON **OWNER2**.[TBNAME] (=>
[IDXCOLLIST]) USING STOGROUP **STOGROUP** PRIQTY **PRIQTY** SECQTY=>
**SECQTY** [CLUSTER] BUFFERPOOL **BUFFERPL** CLOSE NO DEFINE NO;
```

*New:*

```
CREATE [UNIQUE] INDEX **OWNER**.[IDXNAME] ON **OWNER2**.[TBNAME] (=>
[IDXCOLLIST]) USING STOGROUP **STOGROUP** PRIQTY **PRIQTY** SECQTY=>
**SECQTY** [CLUSTER] BUFFERPOOL **BUFFERPL** CLOSE NO;
```

After you edit the script, you must run the STOREDDL.DMS script to update the index model ddl definition. See Updating PeopleTools System Tables.

- **STOGROUP**

Save your changes and submit the DDL statements either through SPUFI or DSNTEP2. It is preferable to submit this in batch mode using DSNTEP2. This task can take several hours to complete, depending on the product line you are installing.

If you decide to submit this through SPUFI, verify that the designated output data set is allocated with sufficient tracks or cylinders to hold the result of processing all the CREATE INDEX statements. You should consider creating a SPUFI output dataset with file attributes: VB,Record Length =4092,Blk size=4096, SPACE (Primary 20 cylinders, Secondary 5 cylinders).



---

**Important!** Do not change the name of any index. All indexes in this script are cataloged in the PeopleSoft system tables. If you change an index name, the physical index will not match the index definition stored in PeopleTools. These index discrepancies will be reported as exceptions in the DDDAUDIT report.

---

## **Task 7-12: Reviewing Patch Application**

---

The section Reviewing Patches and Updates Required at Installation in the first chapter of this documentation instructed you to search the My Oracle Support Patches & Updates area for Required for Install patches for PeopleSoft PeopleTools and your PeopleSoft application.

See "Preparing for Installation," Reviewing Patches and Updates Required at Installation.

The patch user documentation, which is included with the files that you download from My Oracle Support, specifies whether the patch includes database changes. The type of patch you are applying may affect how you proceed with the tasks in this chapter.

- If you meet *both* of the following listed requirements, skip the task Updating Database to Latest PeopleTools Release, and continue with the task Running the DB2 RUNSTATS Utility:
  - You are installing a database delivered on PeopleSoft PeopleTools 8.56.
  - You are applying a Required for Install PeopleSoft PeopleTools patch.

Follow the directions in the patch user documentation to apply the database changes.

- Complete the task Updating Database to Latest PeopleTools Release, and proceed to review and carry out the tasks following it if:

You are installing a PeopleSoft Application system (SYS) or demo (DMO) database that is *not* delivered on PeopleSoft PeopleTools 8.56. The task includes a step to apply the patch database changes.

See Understanding Database Updates for information on determining the delivered version of PeopleSoft PeopleTools.

## **Task 7-13: 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 the DB2 RUNSTATS Utility. 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 the DB2 RUNSTATS Utility.

### Task 7-13-1: 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 7-13-2: 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 7-13-3: 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 7-13-4: Creating New PeopleTools Tablespaces

Review the `XXDDL.SQL` (non-Unicode) or `XXDDL.U.SQL` (Unicode) 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` (non-Unicode) or `ptddlupgu.sql` (Unicode) script.

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

### See Also

"Creating a Database," Creating DB2 Databases, Storage Groups, and Tablespaces

### Task 7-13-5: 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 SPUFI, DB2 Command Center, 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:

<b>Application Database Version</b>	<b>Required Scripts for Non-Unicode Databases</b>
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
8.48	rel849, rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.49	rel850, rel851, rel852, rel853, rel854, rel855, and rel856
8.50	rel851, rel852, rel853, rel854, rel855, and rel856
8.51	rel852, rel853, rel854, and rel855, and rel856
8.52	rel853, rel854, rel855, and rel856
8.53	rel854, rel855, and rel856
8.54	rel855 and rel856
8.55	rel856
8.56	None

Use the scripts in the following table for Unicode databases:

<b>Application Database Version</b>	<b>Required Scripts for Unicode Databases</b>
-------------------------------------	-----------------------------------------------

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
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
8.48	rel849u, rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.49	rel850u, rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.50	rel851u, rel852u, rel853u, rel854u, rel855u, and rel856u
8.51	rel852u, rel853u, rel854u, rel855u, and rel856u
8.52	rel853u, rel854u, rel855u, and rel856u
8.53	rel854u, rel855u, and rel856u
8.54	rel855u and rel856u
8.55	rel856u
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. If the application database you are installing is 8.53, run the following SQL commands:

```
DROP TABLE PS_PTIACPTMPLTDEFN;  
DROP TABLE PS_PTIACPTMPLTSTEP;
```

5. Edit and run the `grant.sql` script in the `PS_HOME\scripts` directory. This will grant permissions to the Connect ID.
6. 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.
7. 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.
8. If you are applying a required for install PeopleSoft PeopleTools patch, invoke Data Mover in user mode and run `PS_HOME\scripts\PTPATCH.DMS`.
9. 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 7-13-6: Updating Select PeopleTools Database Objects

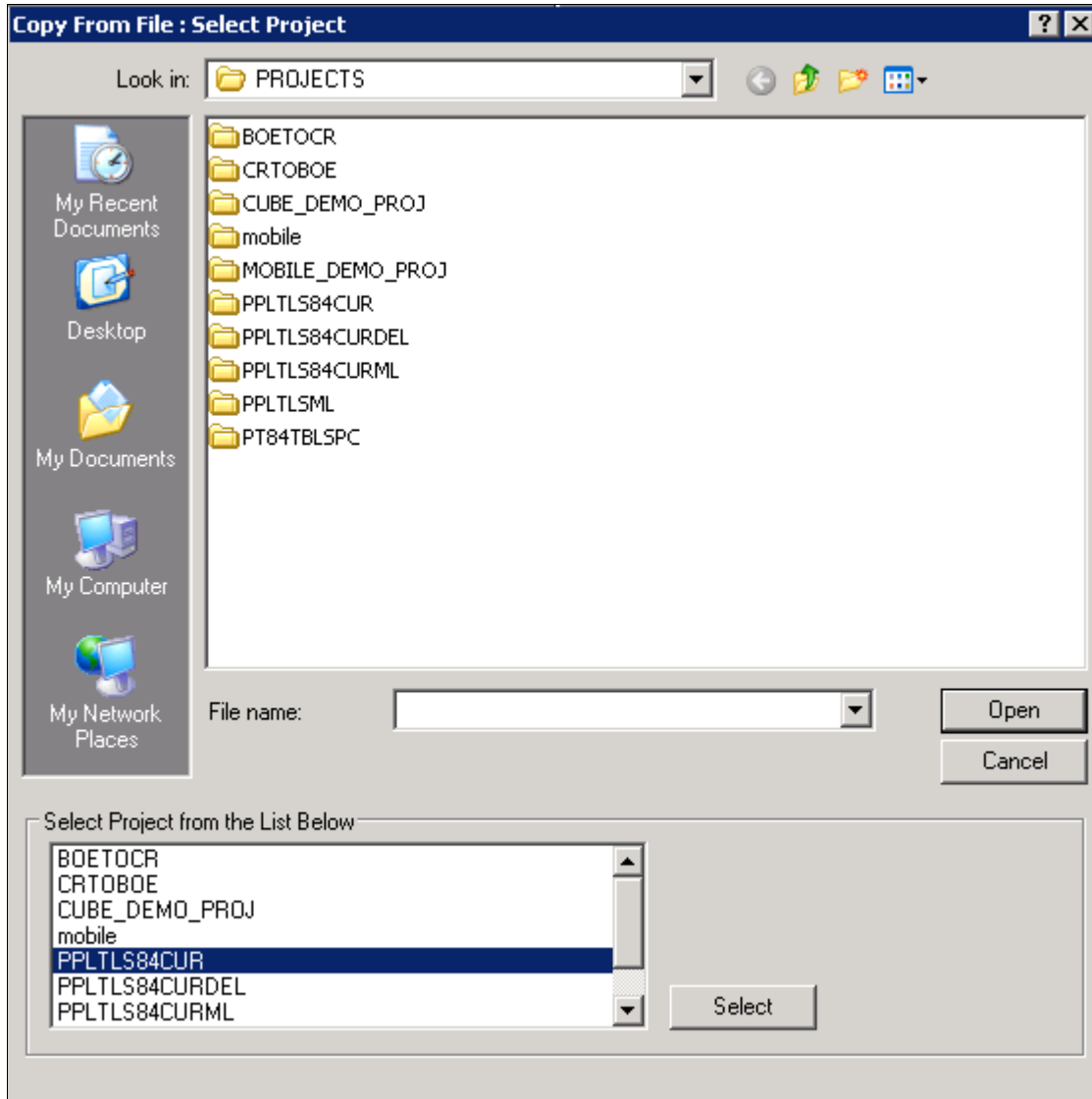
To update PeopleSoft PeopleTools database objects to the current release you must be in Application Designer. The Copy from File functionality lets you update your PeopleSoft PeopleTools database objects from a file. You must perform this step to bring the database objects in sync with the PeopleSoft 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.

- 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

- The Copy From File dialog box appears.

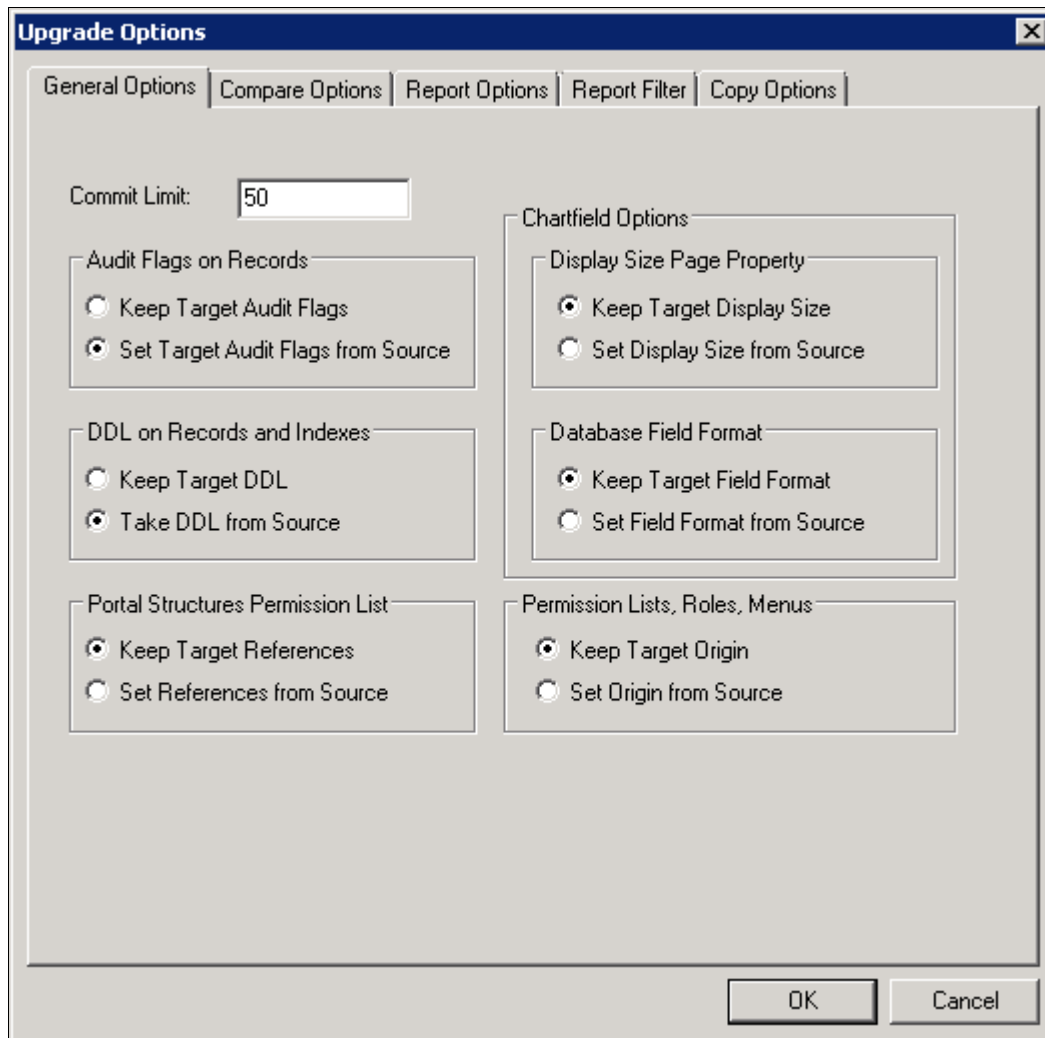
Select *only* the first three object types (Records, Fields, and Indexes) in the Definition Type(s) field and then click Options.

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 7-13-7: 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.

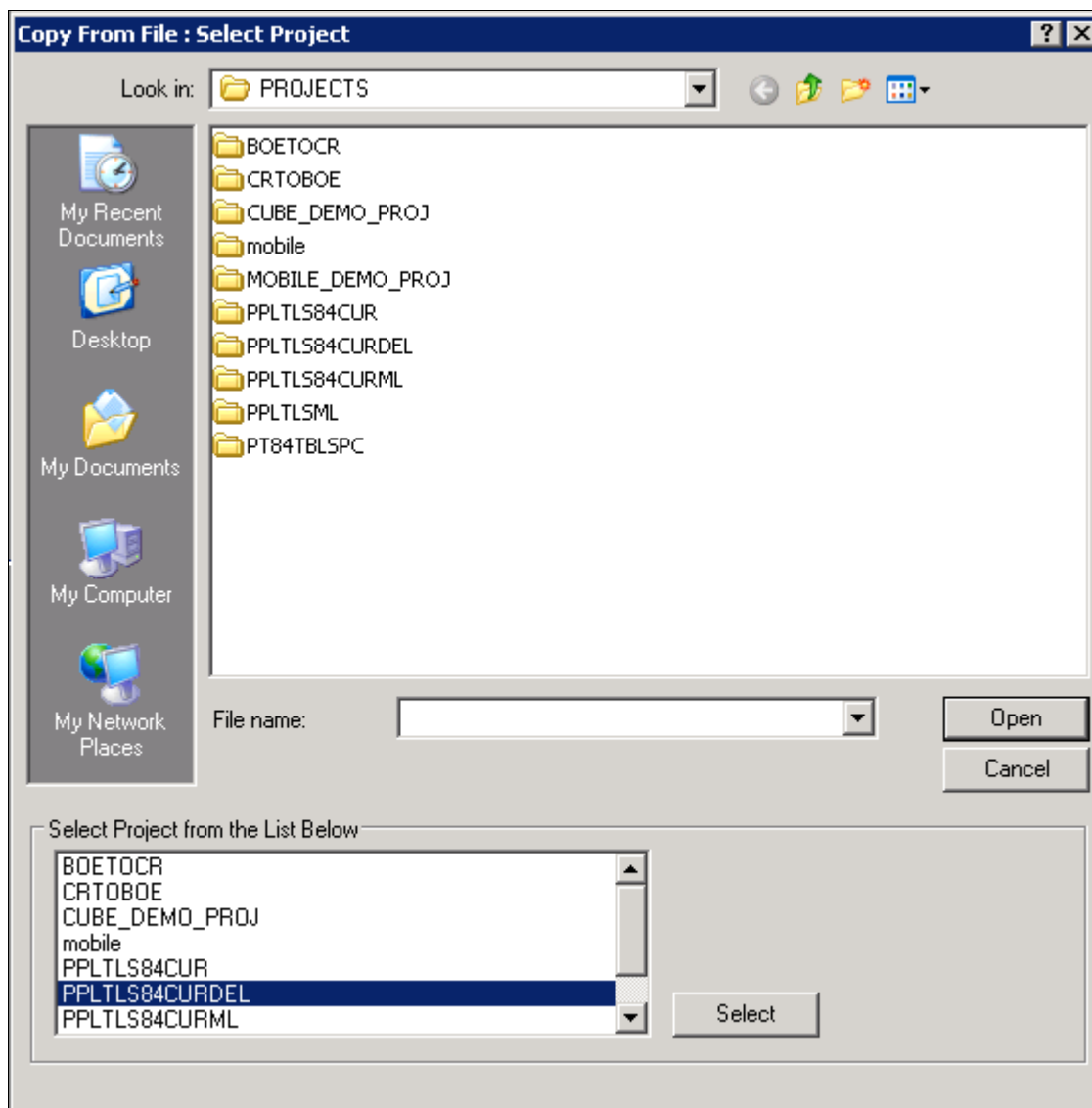
To delete obsolete PeopleSoft PeopleTools database objects:

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 7-13-8: 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 7-13-9: 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 7-13-10: 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.

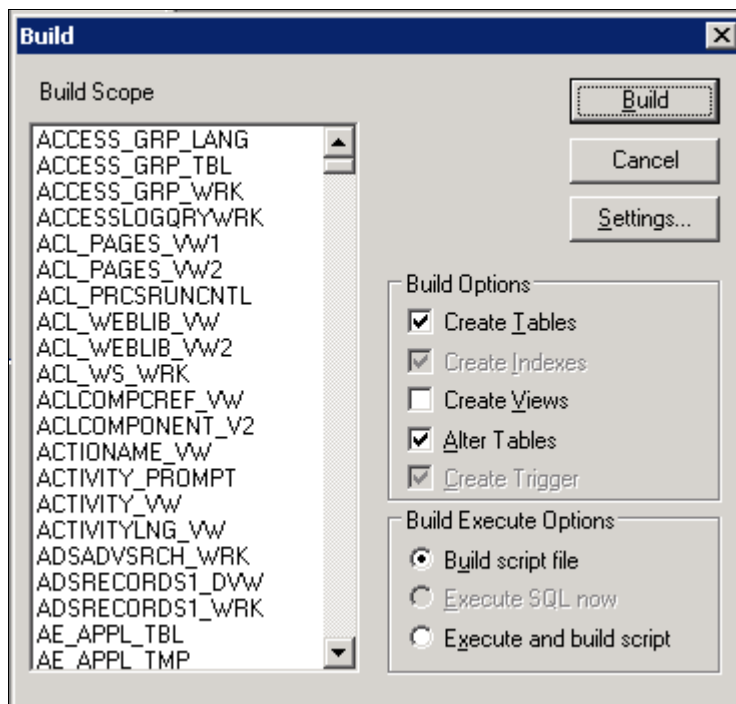
To alter PeopleSoft PeopleTools tables:

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:

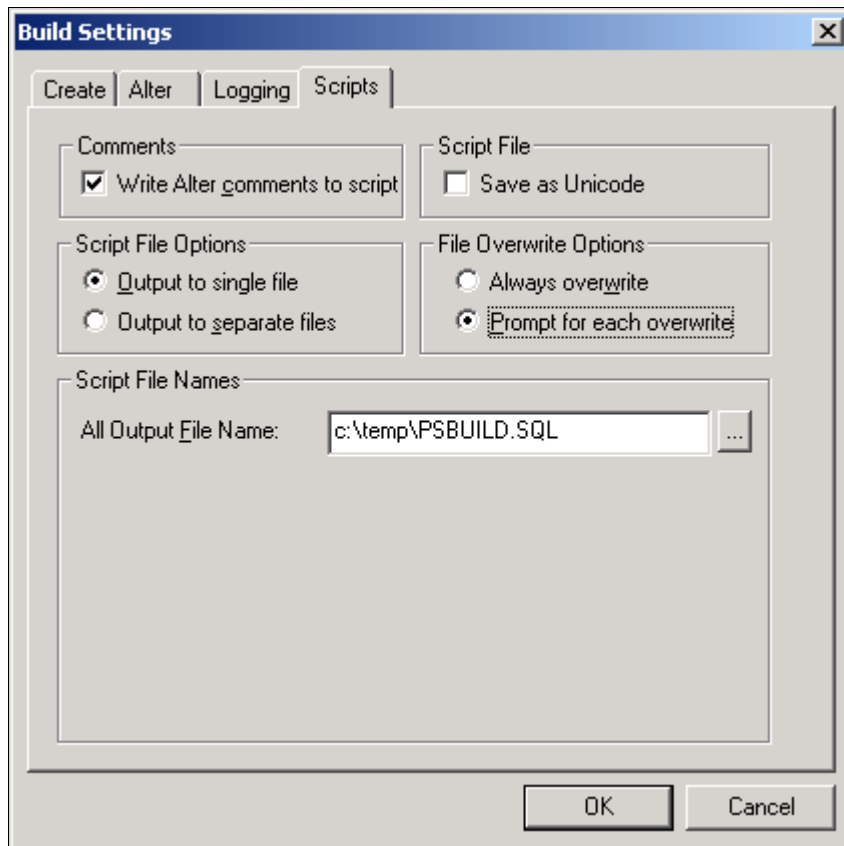


The Build dialog box with selections for altering tables

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:



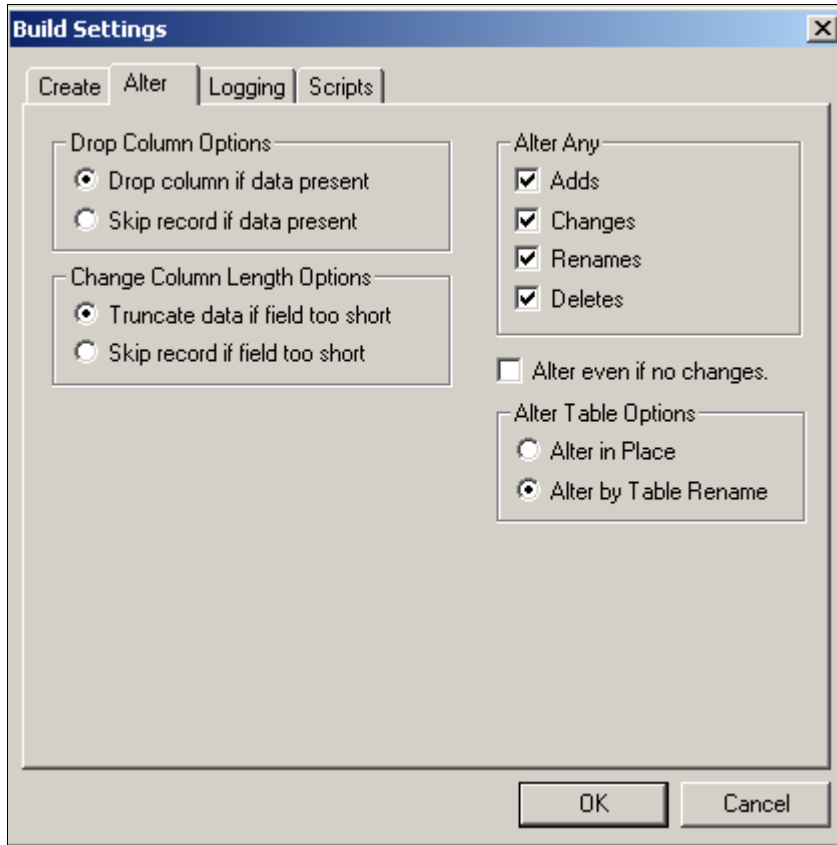
Build Settings dialog box: Scripts tab

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.

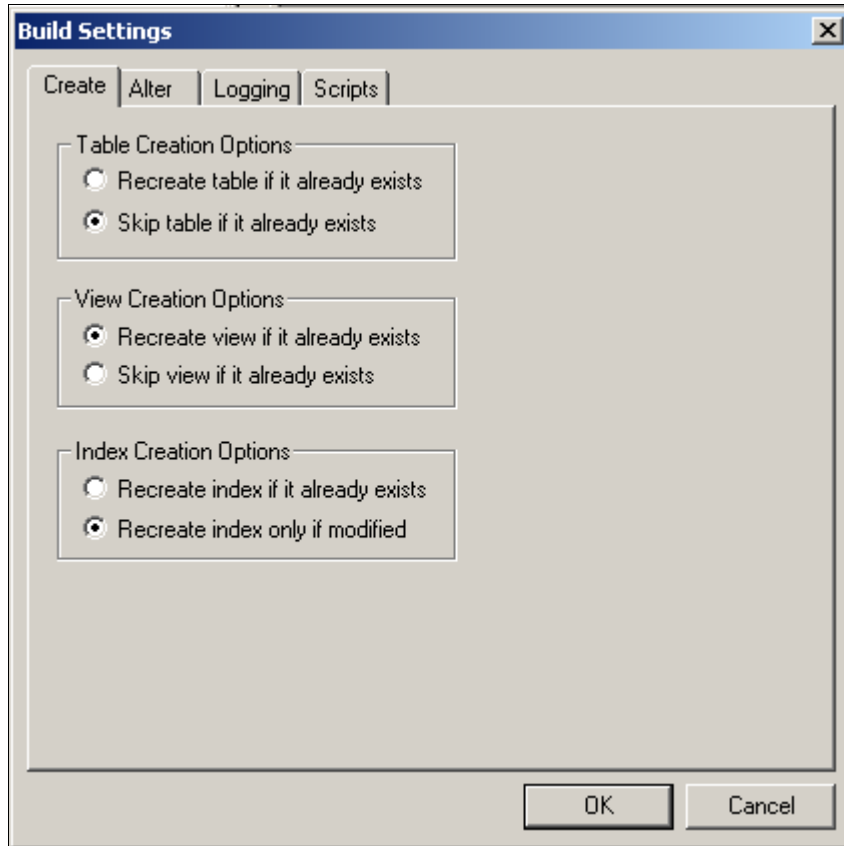
The check box Drop column if data present should be selected in the Drop Column Options region, and the option Truncate data if field too short should be selected in the Change Column Length Options region.

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 database name.
16. Edit the generated SQL script for the correct tablespace names and sizing parameters if you are not using delivered PeopleSoft Tablespace names.
17. Run the generated SQL script in your platform-specific query tool to bring your database structure in sync with the PeopleSoft PeopleTools tables.

## Task 7-13-11: 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:

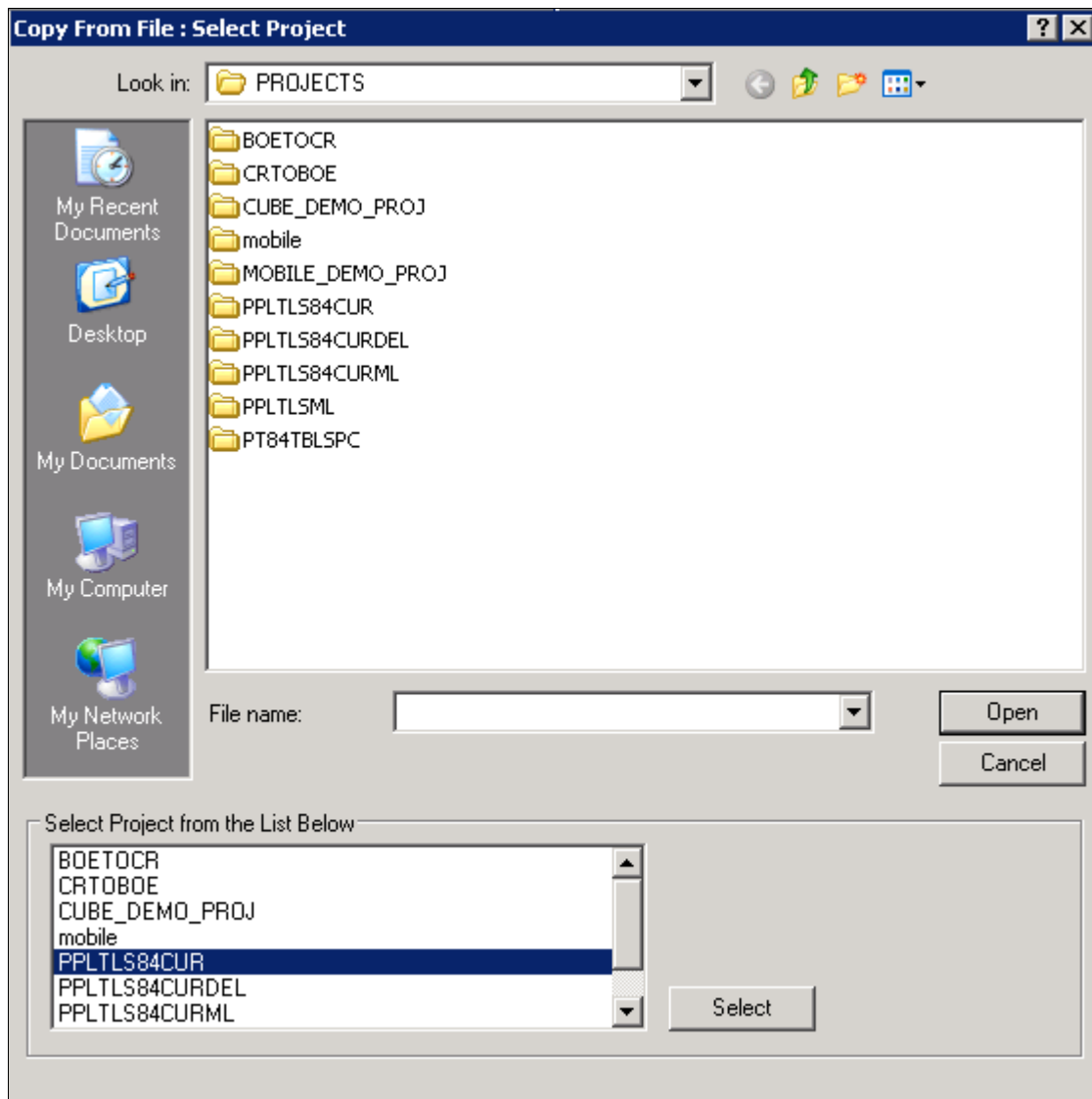
1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.

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.

---



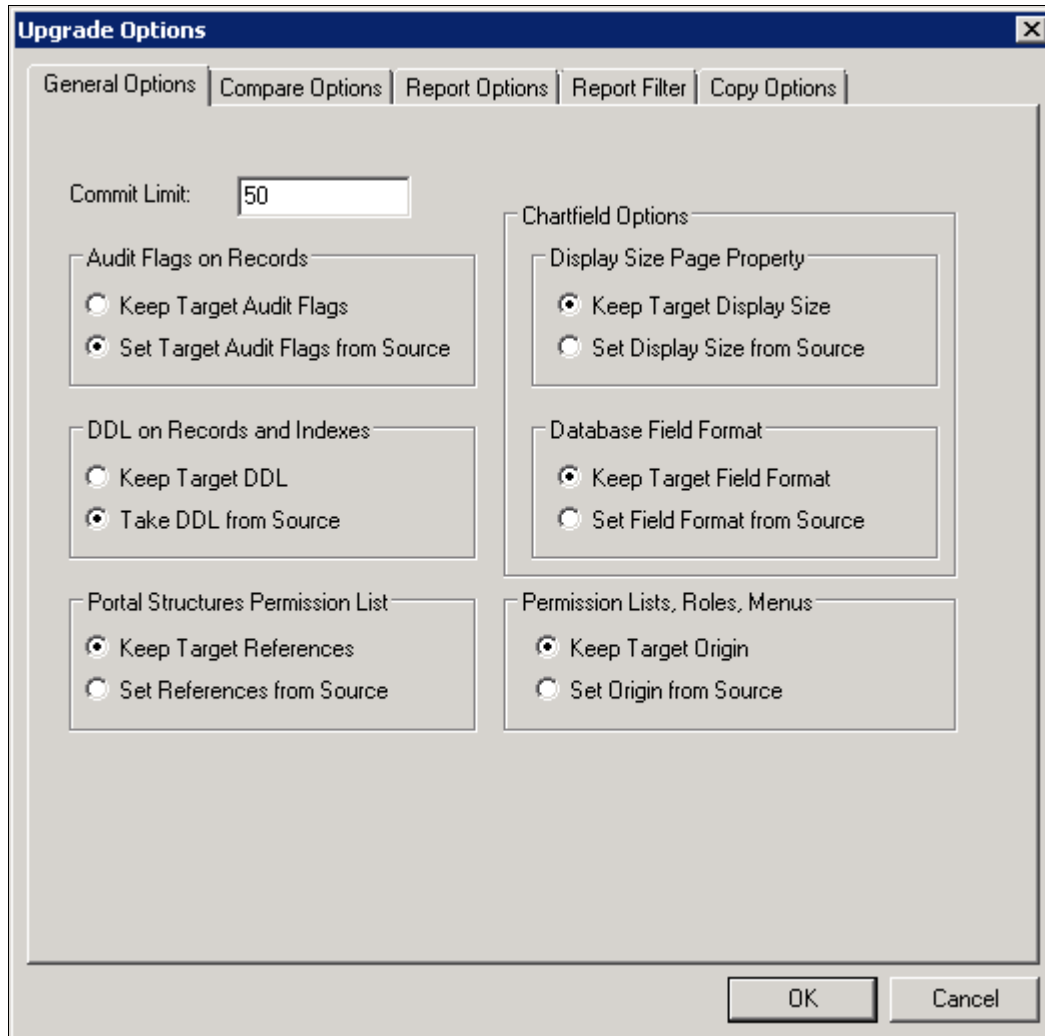
Selecting Project PPLTLS84CUR in the Copy From File dialog box

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.



- 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

- 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 7-13-12: 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.

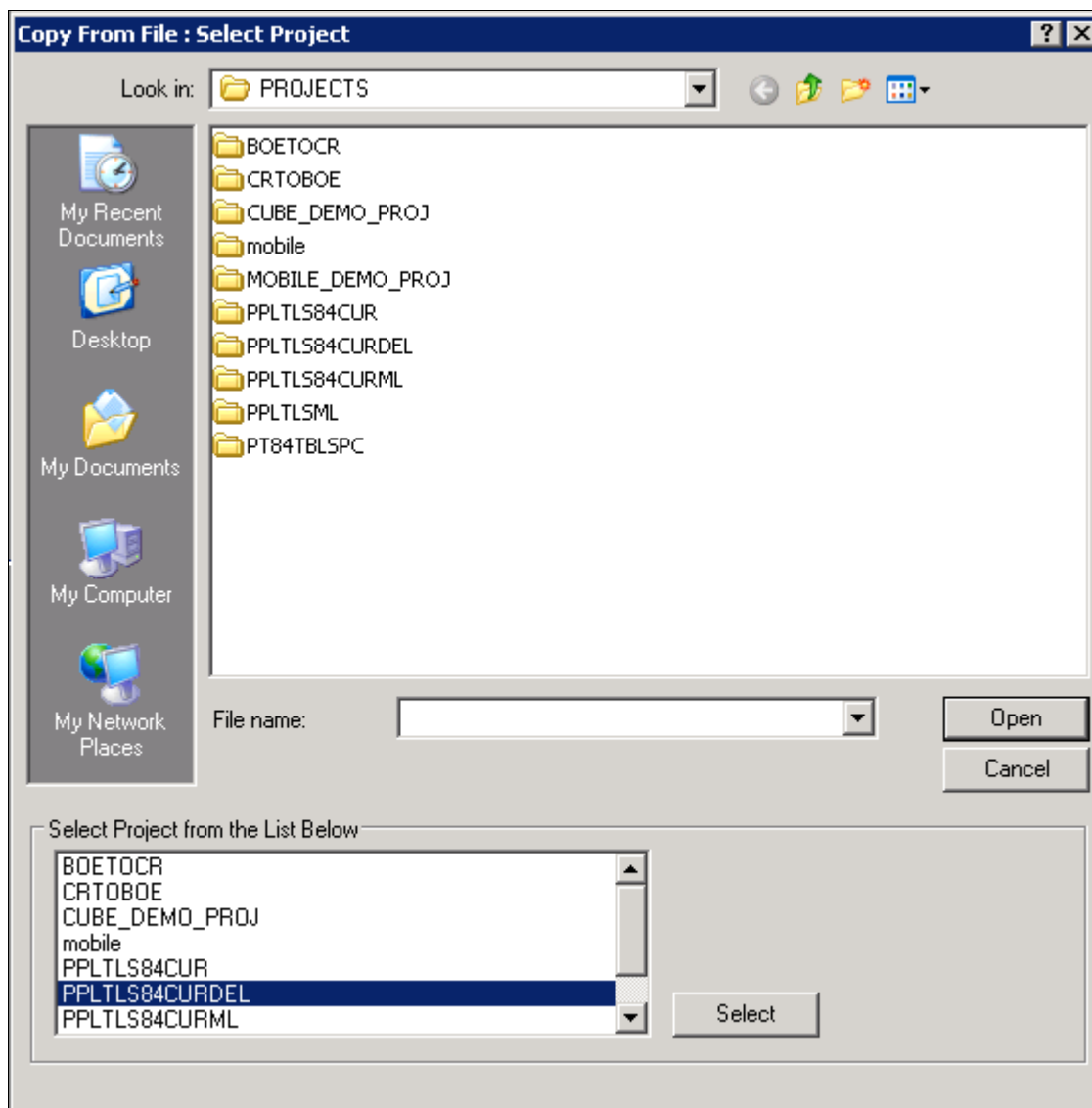
To delete obsolete PeopleSoft PeopleTools database objects:

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 7-13-13: 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 7-13-14: Migrating Records to New Tablespaces

This section discusses:

- Copying the Tablespace Record Project
- Running Alter Tools Tables

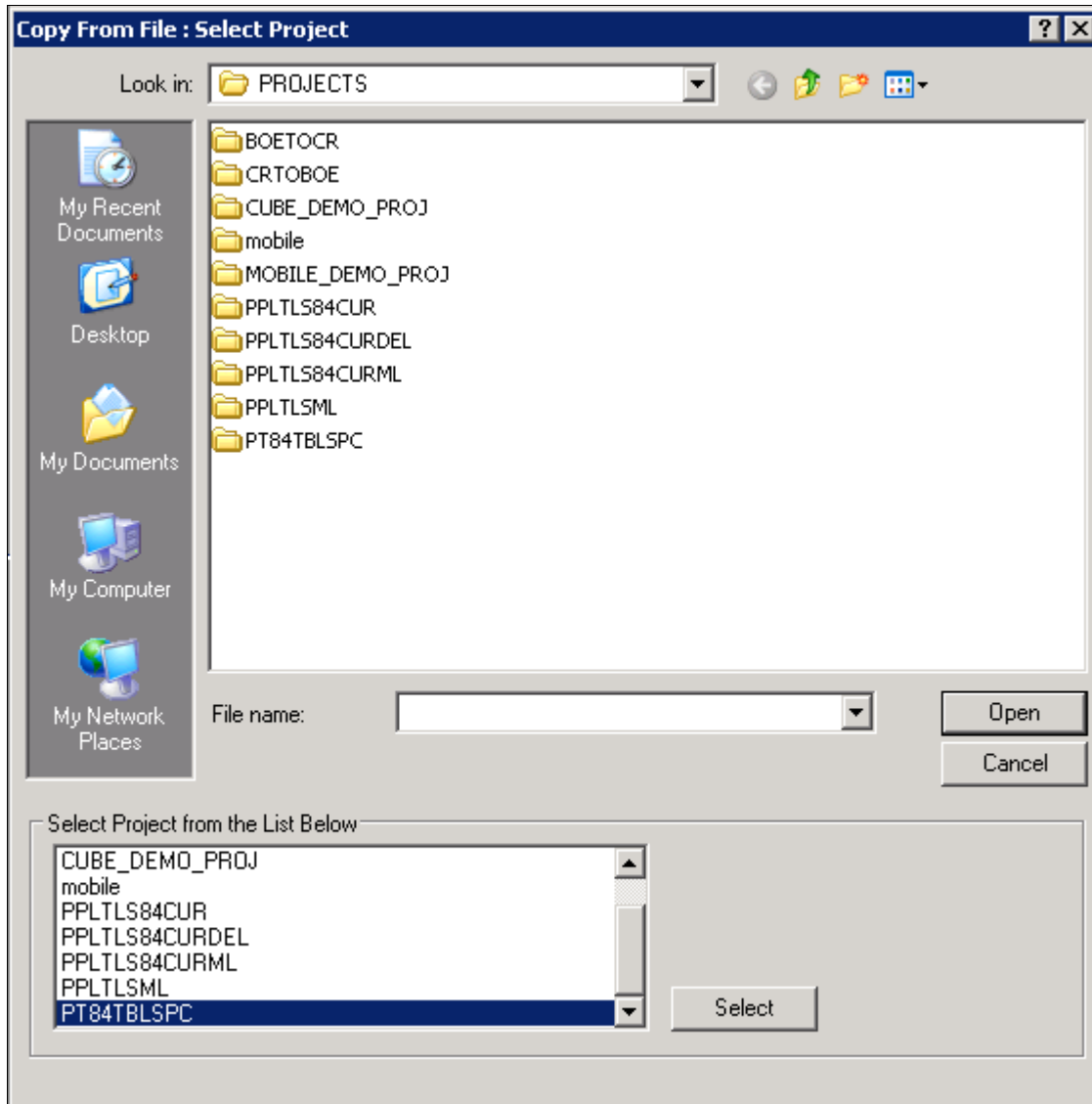
#### Copying the Tablespace Record Project

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:

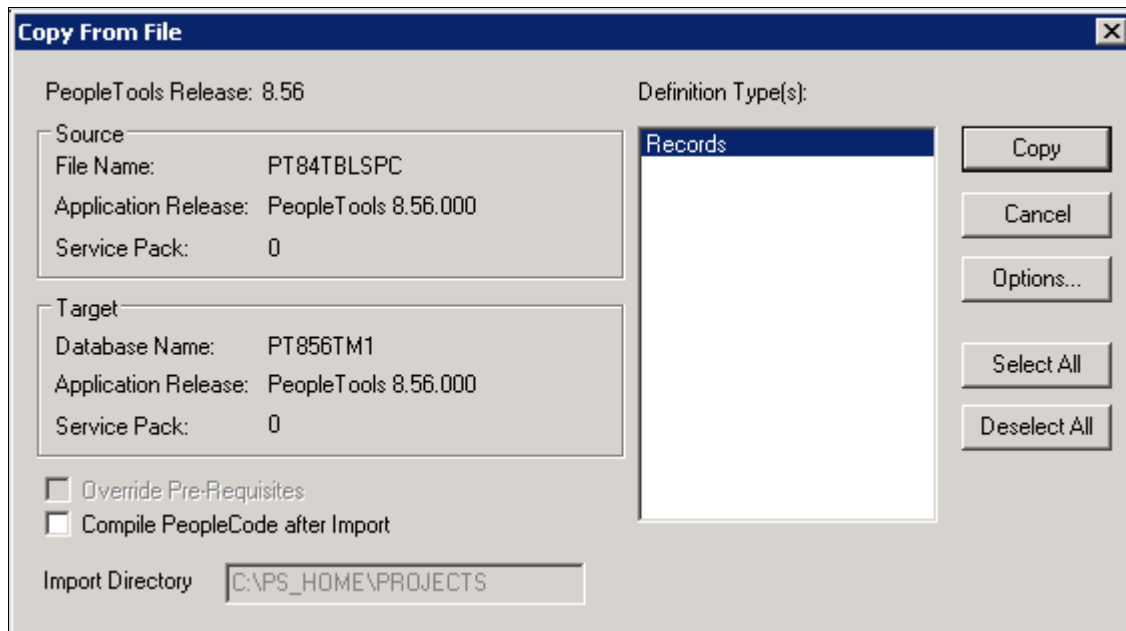
1. Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
2. Select Tools, Copy Project, From File.
3. In the resulting dialog box, change the import directory to *PS\_HOME*\projects, select PT84TBLSPC from the list of projects, and click Select.

**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

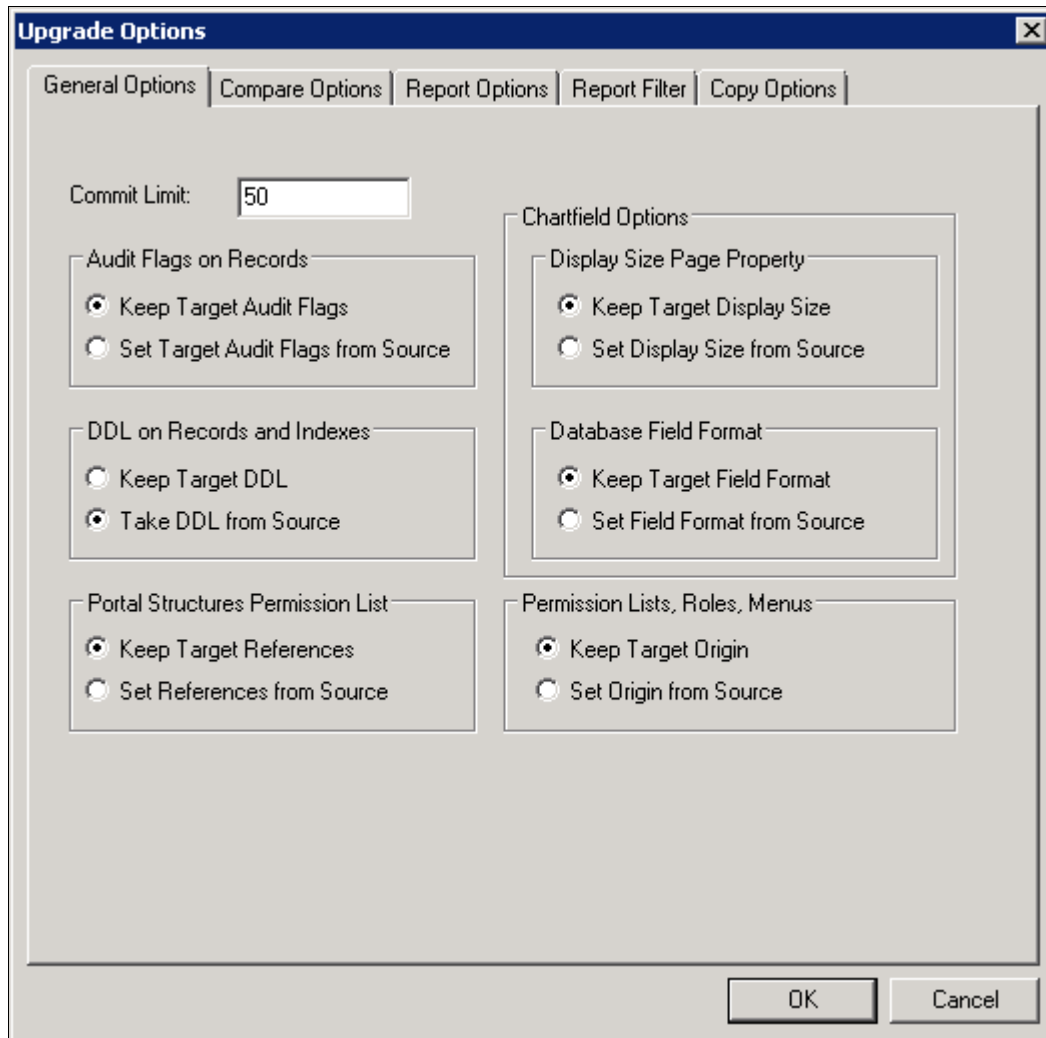
4. The Copy From File dialog box appears.  
Select all object types and click the Options button.



The Copy From File dialog box showing that PT84TBLSPC will be copied

- 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

- On the Copy From File dialog box, click the Copy button.  
When the progress dialog box disappears, the project has been copied.

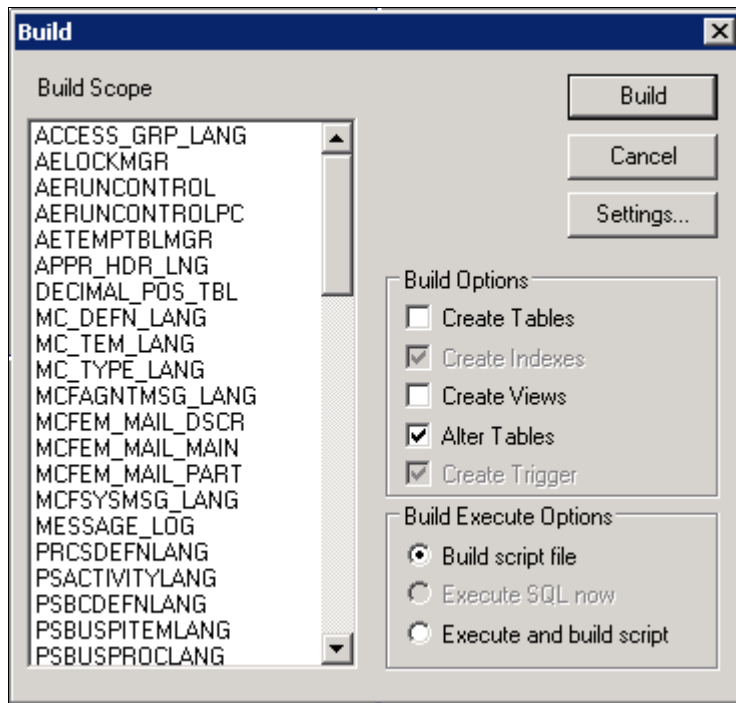
## Running Alter Tools Tables

To run Alter Tools tables:

- Launch Application Designer and sign on to your database with a valid PeopleSoft user ID.
- From the Application Designer, select File, Open.
- 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:

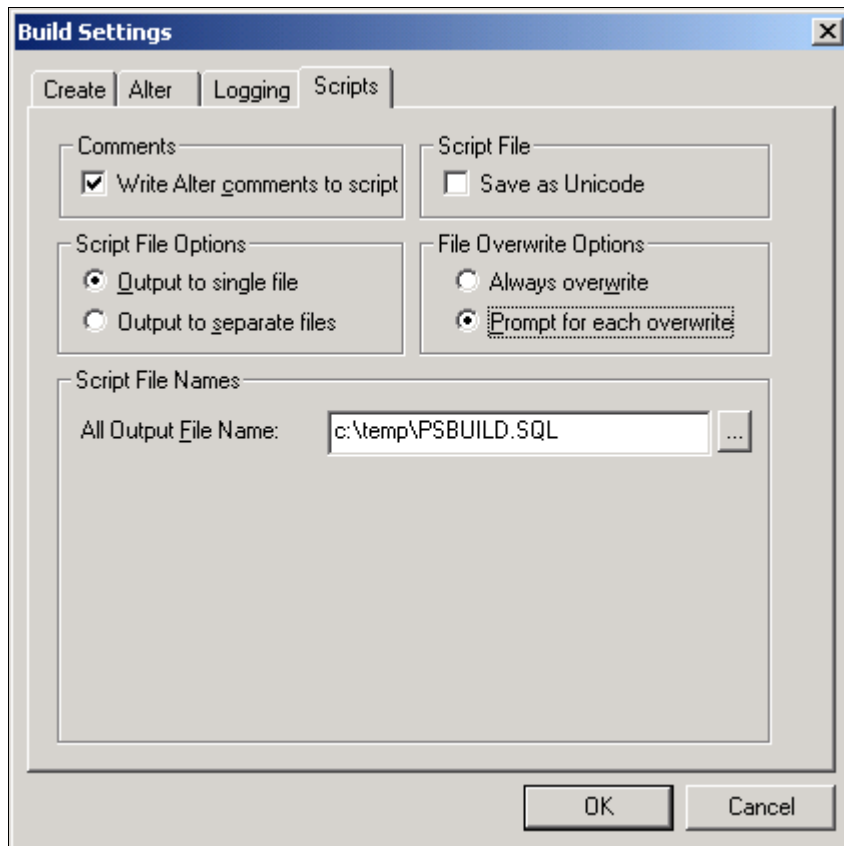


The Build dialog box

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:



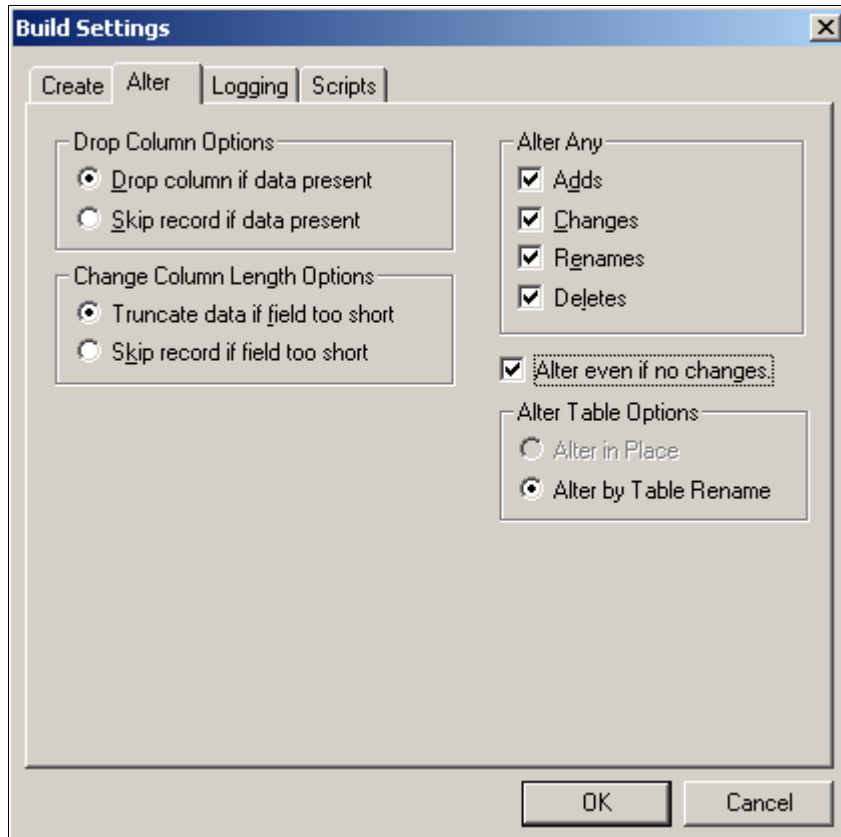
Build Settings dialog box: Scripts tab

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 database name.

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 move the tables to the correct tablespaces.

## Task 7-13-15: 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:

---

**Note.** DB2 for z/OS scripts need the "set current sqld" statement so that the tables are created with the correct owner ID. Open each script listed below, and then uncomment and modify all of the statements specific for DB2 for z/OS to reflect your environment.

---

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 have non-English languages, run the `ptxxx.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 `ptxxx.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 `ptxxx.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 DB2ODBC -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 7-13-16: 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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -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 DB2ODBC -CO <oprid> -CP=>
<pswd> -R INSTALL -AI UPGPT851DBC
```

## Task 7-13-17: 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 DB2ODBC -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 7-13-18: 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 DB2ODBC -CO <oprid> -CP=>  
<pswd> -R INSTALL -AI UPGPTSERVOPR
```

## Task 7-14: Running the DB2 RUNSTATS Utility

---

It is recommended that you run the DB2 RUNSTATS utility against the xxWORK tablespaces at this point. The tables in these tablespaces are designated as temporary tables or tables against which %UpdateStats is being performed.

**Note.** The PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) isolates temporary tables to individual tablespaces named as follows: TMP00001, TMP00002 and so on. Do not run RUNSTATS against any of the TMPnnnnn tablespaces at this time because this could prove detrimental to performance. The TMPnnnnn tablespaces should also be excluded from routine RUNSTATS and other database maintenance jobs. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool" for more details.

---

## Task 7-15: Creating PeopleSoft Views

---

This section discusses:

- Understanding PeopleSoft Views
- Creating Views in Data Mover
- Creating Views in Application Designer

### Understanding PeopleSoft Views

If you had to carry out the task "Updating Database to Latest PeopleTools Release" you have already created your views, in which case you can skip this task.

When creating the PeopleSoft Views, you can use Data Mover or Application Designer to create the objects directly, or you may use Application Designer to generate a DDL script of SQL statements, which can then be run using another utility such as SPUFI or DSNTPEP2 and/or a User ID other than the Access ID.

## Task 7-15-1: Creating Views in Data Mover

To create views in Data Mover:

1. Start Data Mover in User mode using a valid PeopleSoft operator ID, for example, PS or VP1.  
See Running Data Mover.
2. Select File, Open from the Data Mover menu and navigate to *PS\_HOME*\scripts.
3. Select the script CREATEVW.dms.
4. Select File, Run to execute the script.
5. Exit Data Mover.

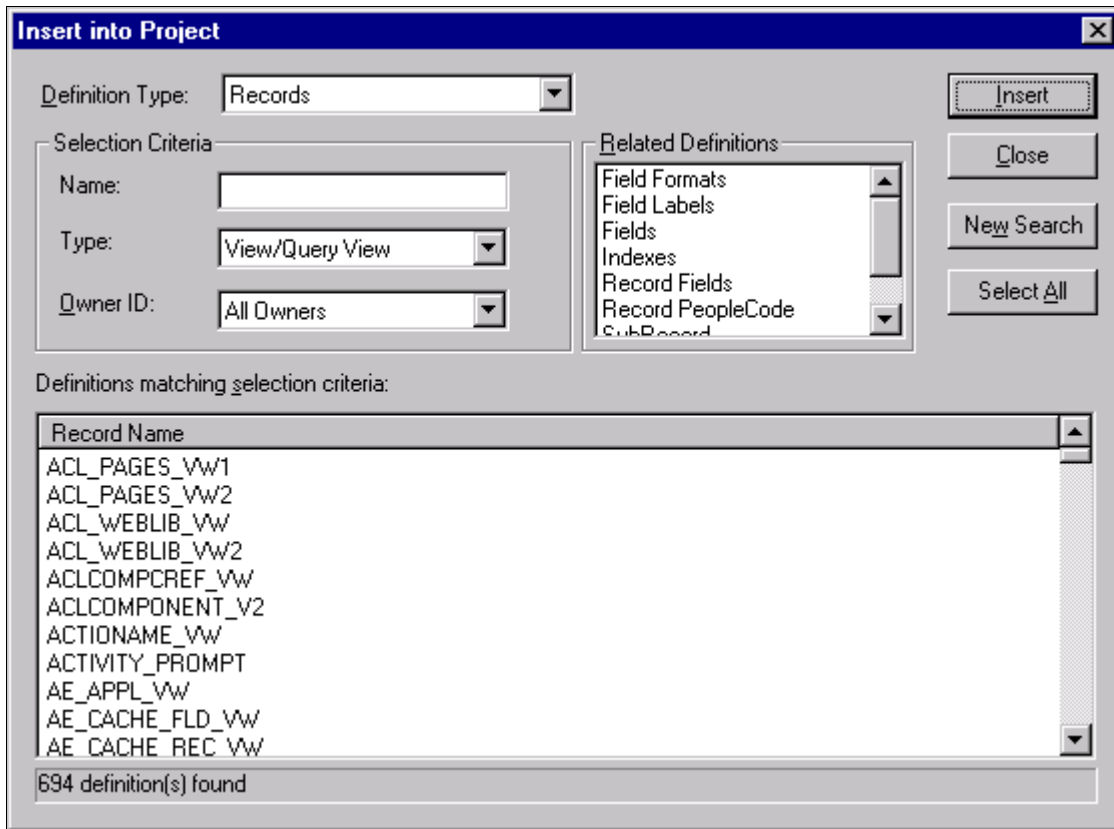
## Task 7-15-2: Creating Views in Application Designer

To create views in Application Designer:

1. Start Application Designer; for example:
  - On Microsoft Windows 7, select Start, Programs, PeopleTools 8.56, Application Designer.
  - On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, Application Designer.
  - Run *PS\_HOME*\bin\client\winx86\pside.exe.
2. Create a new project. Choose File, New, and then select Project from the New dialog.
3. Insert all PeopleTools view records into the project:
  - a. Choose Insert, Definitions into Project. The Insert into Project dialog box appears.
  - b. Select a Definition Type of *Records*.

- c. In the Selection Criteria control group, choose a Type of *View/Query View*; and then press ENTER to select the records.

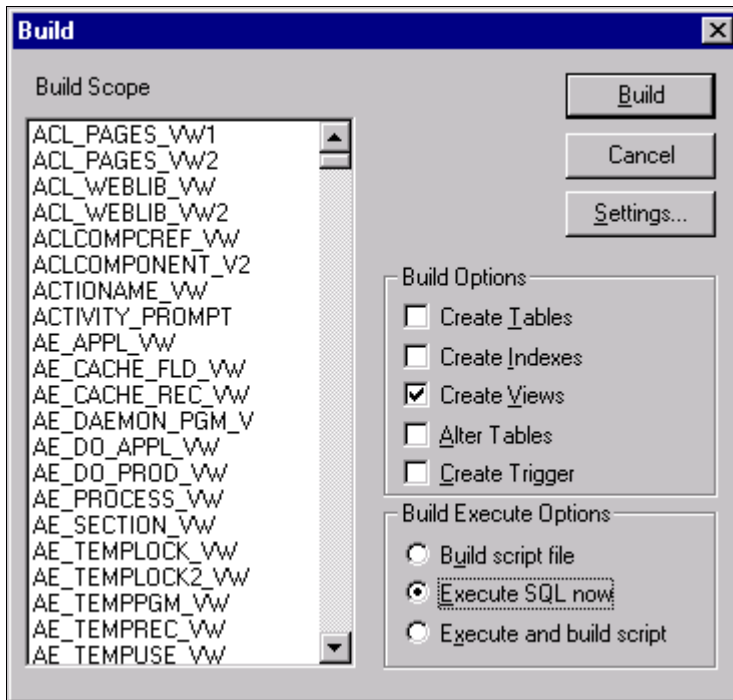
This example shows the Insert into Project dialog box with a list of results in the Record Name area.



Insert into Project dialog box

- d. Click Select All, and then click Insert to insert the View/Query View records into the project.
  - e. Click Close to close the Insert into Project dialog box.
4. Build the project.
- a. Choose Build, Project. The Build dialog box appears.

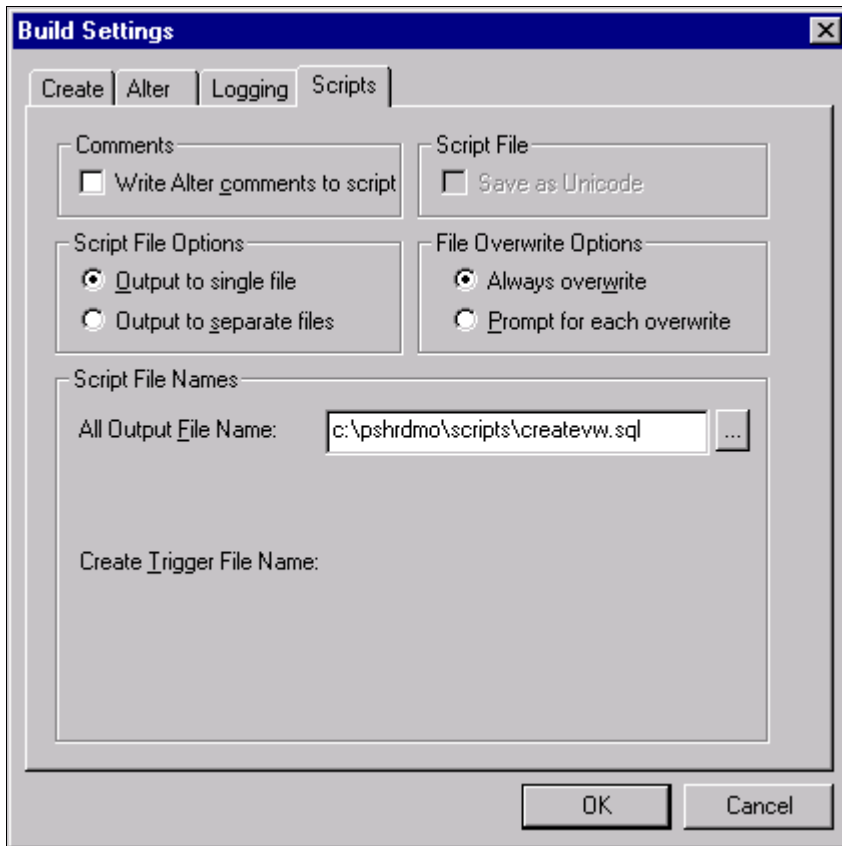
- b. In the Build Options group, select the Create Views check box. In the Build Execute Options group, select the Execute SQL now radio button to create the views directly, or the Build script file radio button to generate a DDL script of CREATE VIEW statements.



Selecting Create Views and Execute SQL now in the Build dialog box

- c. If you select Build script file, click Settings, go to the Scripts tab, and enter the output directory and filename where you want the DDL statement script written in the area All Output File Name.

In this example, the directory and filename are c:\pshrdmo\scripts\createvw.sql.



Build Settings dialog box: Scripts tab

- d. Click OK to return to the Build dialog box.  
e. Click Build to build the views in the project.

Depending on the Build Execute Option you selected, Application Designer will either directly build the views on the database or generate a script file of CREATE VIEW DDL statements. If you have opted to generate the script file, execute the DDL statements either through SPUFI or DSNTEP2. Because of the time it may take the script to complete, we recommend submitting this script in batch mode using DSNTEP2. You may also need to prefix the script with the SQL command `SET CURRENT SQLID = <ownerid>`.

---

**Note.** On DB2 z/OS, when an object is dropped, all the dependent objects are automatically dropped. As a result some of the drop view statements could fail—and generate errors—if they were dependent on the view earlier dropped in the script. Please ignore these errors and restart the remaining part of the script.

---

## Task 7-16: Building Temporary Tables

This section discusses:

- Understanding Temporary Tables



- Running SQR SETSPACE.SQR
- Correcting Invalid Database/Tablespace Combinations
- Setting the Number of Temporary Tables
- Using the Volatile Table Attribute
- Building the Temporary Tables and Their Indexes

## Understanding Temporary Tables

In this task you use Application Designer to create temporary tables. PeopleSoft software has a temporary table structure where the number of instances for each base temporary table is controlled internally to PeopleSoft PeopleTools. The definition of each base temporary table is stored in the PeopleSoft PeopleTools table PSRECDEFN. The temporary table instances themselves are not defined. The table PSRECTBLSPC contains the database and tablespace values for each record defined in PSRECDEFN. The DDL generated by Application Designer to create the temporary tables uses the database and tablespace information from the base temporary table definition in PSRECTBLSPC. The delivered database and tablespace values are in synch with the *XXDDL* or *XXDDL*U script that you ran earlier to create the databases and tablespaces. If you changed the database or tablespace name values in this script for tablespaces originally named xxWORK, you need to either update the PSRECTBLSPC table or revise the DDL script to be generated to create the temporary tables.

Oracle recommends that you run SQR SETSPACE.SQR against your database and use the output from the SQR as a guide in making the necessary updates or revisions. How and where to make the adjustments is discussed in the later section "Correcting Invalid Database/Tablespace Combinations."

---

**Note.** If you used the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to optimize the installation DDL, run the SETSPACE.SQR to update table PSRECTBLSPC with the database and tablespace values created by PSTAAT.

---

### Task 7-16-1: Running SQR SETSPACE.SQR

In this procedure, you run SQR SETSPACE.SQR to update table PSRECTBLSPC with the database and tablespace values from the DB2 system catalog. Application Designer uses the database and tablespace values stored in PSRECTBLSPC to generate DDL statements to create the tables.

SETSPACE.SQR serves multiple purposes:

- It updates PSRECTBLSPC with the database/tablespace values from the DB2 system catalog table SYSIBM.SYSTABLES for the tables defined in the DB2 System Catalog.
- It reports tables in PSRECTBLSPC that are updated with a new database or tablespace name.
- It reports tables that are defined in PSRECTBLSPC, but not defined in the DB2 system catalogs, and whether the database/tablespace combination defined for the record is valid or invalid (not defined in the DB2 system catalog table SYSIBM.SYSTABLESPACE).
- It syncs up the database/tablespace combinations used in PSRECTBLSPC with the PeopleTools "master" tablespace table PSTBLSPCCAT by inserting the valid combinations in PSTBLSPCCAT if they have not already been defined.
- It reports those database/tablespace values added to the PSTBLSPCCAT table.
- It summarizes and reports database/tablespace combinations defined in PSTBLSPCCAT that are not valid. The reports are a valuable tool in determining how and where to make revisions so the temporary tables are created in the correct location, and without error.

To run SQR SETSPACE.SQR:

Submit the Job PSHLQ.PPVVV.JCLLIB(SETSPACE) to execute the SQR on the mainframe.

The SDSF logs will display the results of running the SQR and information related to the success of executing this SQR.

An output file will be written to PSHLQ.PPVVV.SQRLIST(SETSPACE) detailing the records processed and actions taken.

---

**Note.** The SQR can be run multiple times without any negative impact, but the output file will be overwritten with each execution. You may want to rename the member PSHLQ.PPVVV.SQRLIST(SETSPACE) to another name before each resubmission of the SQR.

---

## Task 7-16-2: Correcting Invalid Database/Tablespace Combinations

Review the output in PSHLQ.PPVVV.SQRLIST(SETSPACE). Note any messages with "Table Undefined — DB/TS Invalid," but most importantly, note any Warning messages in the second Phase of the output report. These warning messages summarize the database/tablespace name combinations defined in PSRECTBLSPC that have not been defined in the DB2 system catalog tables.

There are five options for making the necessary revisions. Of these options, Option 1 is the recommended one, for several reasons. Editing can be done globally; no table data will be impacted as it would in other options; you are guaranteed that the temporary table will be built in the database and tablespace that you intend; and you may have already found it necessary to edit the script file of DDL statements to create the Temporary table for other reasons.

- *Option 1 (Recommended):* Proceed through the installation process and build a script file of the DDL statements to create the temporary tables. After the script has been generated, but before executing it, globally edit the database/tablespace name combinations using the second Phase of the output report as a guide to the "before" values, changing them to your preferred site specific values.
- *Option 2:* Update the PSRECTBLSPC table directly via the database interface of choice before building the script file of DDL statements to create the temporary tables. Use the second Phase of the output report as a guide. The SQL to correct each invalid database/tablespace combination would be scripted as follows:

```
UPDATE PSRECTBLSPC SET DBNAME = '<new dbname>',
                  DDLSPACENAME = '<new tablespacename>'
WHERE DBNAME = '<old dbname>'
AND DDLSPACENAME = '<old tablespacename>'
AND DBTYPE = (SELECT MAX(A.DBTYPE) FROM PSRECTBLSPC A
              WHERE RECNAME = A.RECNAME
              AND A.DBTYPE IN (' ', '1'))
```

- *Option 3:* Run SQR SETDBNAM to update the database value in PSRECTBLSPC with a "best guess" value based on the tablespace value defined in PSRECTBLSPC. The accuracy of this SQR is based on the following caveats:
  - The ID or Current SqlID that was used to create the tablespaces must be the same value as the owner ID of the tables comprising the logical PeopleSoft database. In other words, the CREATOR field value in SYSIBM.SYSTABLESPACE must be the same value as the CREATOR field in SYSIBM.SYSTABLES.
  - The given tablespace name and CREATOR value in SYSIBM.SYSTABLESPACE must represent a unique relationship. For a given CREATOR, if you have defined a given tablespace name in more than one database, the SQR will use the database value associated with the tablespace that contains the fewest number of tables.

If either of these requirements is not met, either a database value will not be found and PSRECTBLSPC will not be updated, or PSRECTBLSPC could be updated with a database value different from that intended.

To run the SQR SETDBNAM, follow the same procedure as running SQR SETSPACE, using the JCL Job PSHLQ.PPVVV.JCLLIB(SETDBNAM) instead.

- *Option 4:* Log into the database via Application Designer, and update the record definitions with valid database/tablespace combinations, before building the script of DDL statements to create the temporary tables. Use the first Phase of the output report as a guide. (This could be a tedious and time-consuming process and is not recommended over the previously described options.)
- *Option 5:* Create the database/tablespace combinations in DB2 so they are no longer invalid, before executing the script file of DDL statements to create the Temporary tables. Use the second Phase of the output report as a guide to the databases and tablespaces that need to be created. (This is not recommended simply because it is likely to contradict the naming standards established for your DB2 installation.)

### Task 7-16-3: Setting the Number of Temporary Tables

Normally, you will leave the number of temporary tables set to the default defined in the database. You may want to change this setting for optimal performance, depending on various aspects of your implementation, including account transaction volumes, benchmark numbers for the current hardware and database platform, and your service-level requirements.

Oracle delivers a minimum of three temporary table instances in most cases. You cannot adjust the number of temporary tables unless you have installed the PeopleSoft Pure Internet Architecture. (See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode" or "Setting Up the PeopleSoft Pure Internet Architecture in Console Mode.") You may skip this step entirely, and come back to it after PeopleSoft Pure Internet Architecture has been installed and you have a better idea of how many instances of the temporary tables might best fit your processing requirements. Another option is to update the PeopleTools table that controls the number of temporary table instances directly. Using the Database SQL interface of choice, issue the following SQL:

```
UPDATE PSOPTIONS SET TEMPTBLINSTANCES = <#>, TEMPINSTANCEONLINE = <#>=>
WHERE TEMPINSTANCEBATCH = 0
```

The number of instances (#) for either field should not be less than 3 or greater than 9.

For non-EPM applications, it is strongly recommended that the TEMPTBLINSTANCES and TEMPINSTANCEONLINE values be the same. For EPM applications we strongly recommend that you take the delivered defaults.

---

**Note.** Again, this step can be performed at installation and/or at any time during the life of your database. The only caveat is that when any of the parameters are changed that would impact the number of temporary table instances, all temporary tables should be regenerated.

---

### Task 7-16-4: Using the Volatile Table Attribute

Beginning with PeopleSoft PeopleTools 8.48 and later, all temporary tables are created using the volatile keyword.

Sample DB2 for z/OS volatile temporary DDL follows:

```
CREATE TABLE Q848902.PS_AEEXT_TAO (PROCESS_INSTANCE DECIMAL(10) NOT
NULL,
  AE_INT_1 SMALLINT NOT NULL,
  AE_APPLID CHAR(12) NOT NULL,
  AE_SECTION CHAR(8) NOT NULL,
  AE_STEP CHAR(8) NOT NULL) VOLATILE IN Q848902.PTAPPE;
```

The volatile attribute specifies that the DB2 optimizer should favor index access on this table whenever possible for SQL operations regardless of the presence of statistics.

For more details on the volatile table attribute, refer to the DB2 for z/OS SQL Reference and the DB2 for z/OS Administration Guide.

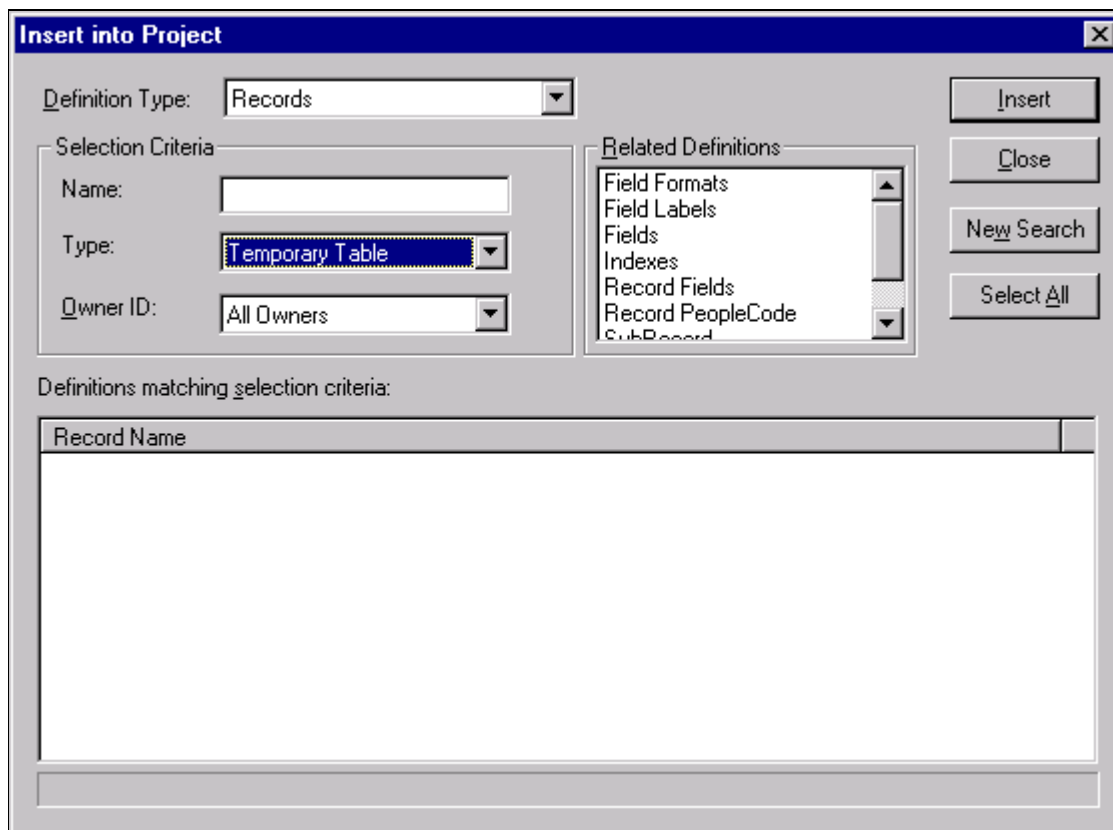
## Task 7-16-5: Building the Temporary Tables and Their Indexes

Use the following procedure to build temporary tables in the database.

**Note.** You may use the temporary table DDL script created at the end of this task as input to the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to isolate each of the temporary tables to its own tablespace.

To build temporary tables:

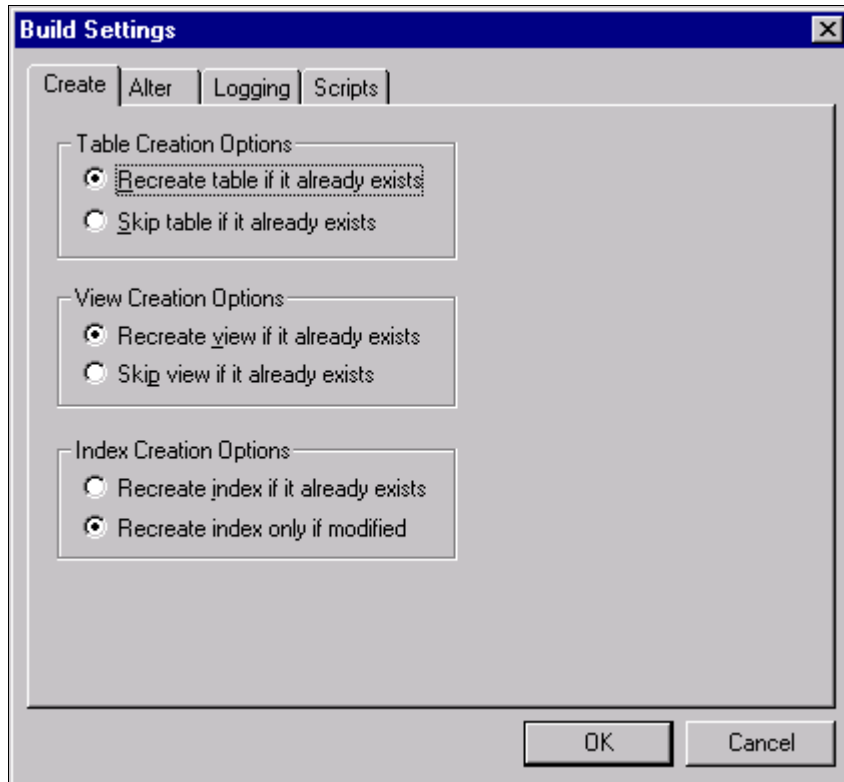
1. Open Application Designer.
2. Choose File, New. In the New dialog, select Project, and then click OK.
3. Choose Insert, Definitions into Project.
4. Set Definition Type to *Records* and Type to *Temporary Table*.



Insert into Project dialog box

5. Press ENTER, or click Insert and then click the Select All button. This selects all of the PeopleTools Records for temporary tables.
6. Click Insert to insert all of the temporary tables into the new project.
7. Click Close to close the Insert into Project dialog.

8. Before building the project, you should save it. Choose File, Save Project As and enter a project name such as *TEMPTBL*.
9. Choose Build, Project. The Build dialog appears.
10. In the Build Options group, select the Create Tables check box. The Create Index check box should be selected by default.
11. Select Build script file to direct the DDL to a file.
12. Click the Settings button. The Build Settings dialog appears.
13. On the Create tab, select Recreate table if it already exists (if it is not already selected) under Table Creation Options.

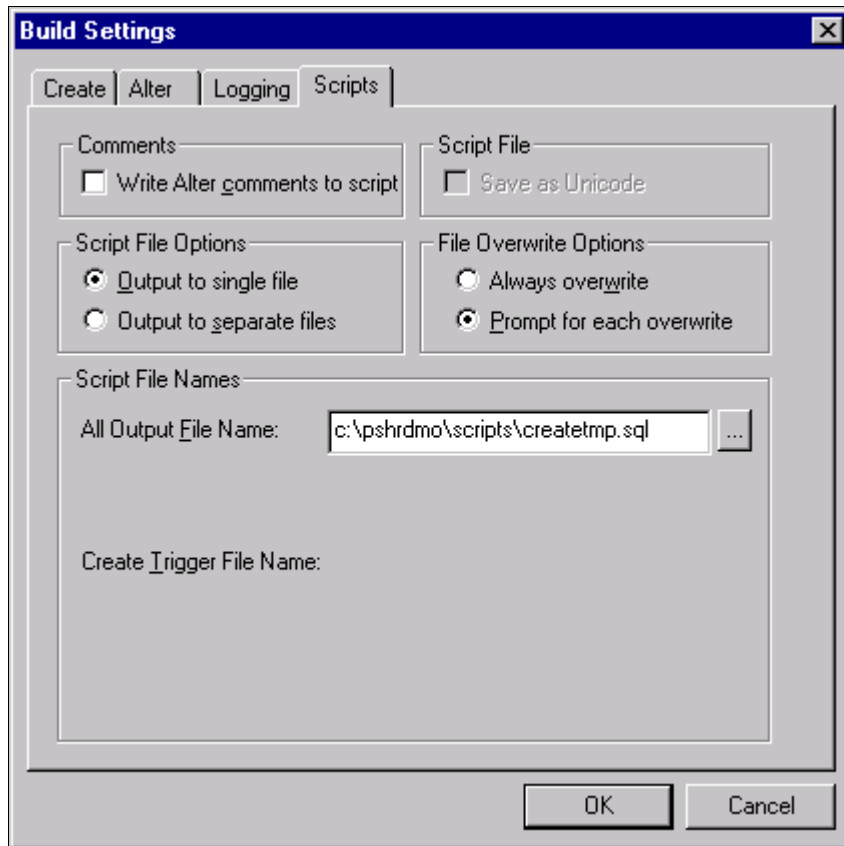


Selecting the Recreate table if it already exists in the Build Settings dialog box

14. Select the Scripts tab, and select Output to Single File under Script File Options.

15. Under Script File Names, specify the path and filename for the output file to contain the DDL to create the Temporary tables and their indexes (for example, *PS\_HOME*\scripts\TEMPDDL.SQL).

The path and filename in this example is *c:\pshrdmo\scripts\createtmp.sql*.



Specifying the path and filename in the All Output File Name section

16. Click OK to accept the build settings.
17. Click Build to build temp tables. You may receive a warning message, which you can disregard because the temp tables do not contain any existing data.
18. After the script generation process has finished, click Close in the Build Progress dialog box to return to Application Designer.
19. Transfer the file of DDL statements just created to the mainframe server PDS HLQ.PPVVV.DDLLIB (*filename*).
20. If you have corrected the invalid database/tablespace combinations following Option 1 described earlier, and not updated the PSRECTBLSPC table with the database and tablespace names used in your installation, you need to edit the file, changing both the database and tablespace names from the values as would be noted in the second Phase of the output report from SQR SETSPACE, to your site-specific values.

---

**Note.** If you intend to use the %UpdateStats functionality, you should use the PeopleSoft Tablespace DDL Automation Assistance Tool (PSTAAT) to isolate each of the temporary tables to its own tablespace to avoid contention in any concurrently running processes. See the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool."

---

21. When the file has been edited with the appropriate database and tablespace name values, save your changes and submit the DDL statements either through SPUFI or DSNTEP2. It is preferable to submit this in batch mode using DSNTEP2, because the task could take over an hour to complete.

## Task 7-17: Creating PeopleSoft Triggers

---

This section discusses:

- Understanding PeopleSoft Triggers
- Creating Triggers in Data Mover
- Creating Triggers in Application Designer

### Understanding PeopleSoft Triggers

When creating the PeopleSoft Triggers, you can use Data Mover or Application Designer to create the objects directly, or you can use Application Designer to generate a DDL script of SQL statements, which can then be run using another utility such as SPUFI or DSNTEP2, and with a UserID with a greater level of database authority.

### Task 7-17-1: Creating Triggers in Data Mover

To create triggers in Data Mover:

1. Start Data Mover in User mode, using a valid PeopleSoft operator ID, for example, PS or VP1.  
See Running Data Mover.
2. Choose File, Open from the Data Mover menu and navigate to *PS\_HOME*\scripts.
3. Select the script CREATETRGR.dms.
4. Choose File, Run to execute the script.
5. Exit Data Mover.

### Task 7-17-2: Creating Triggers in Application Designer

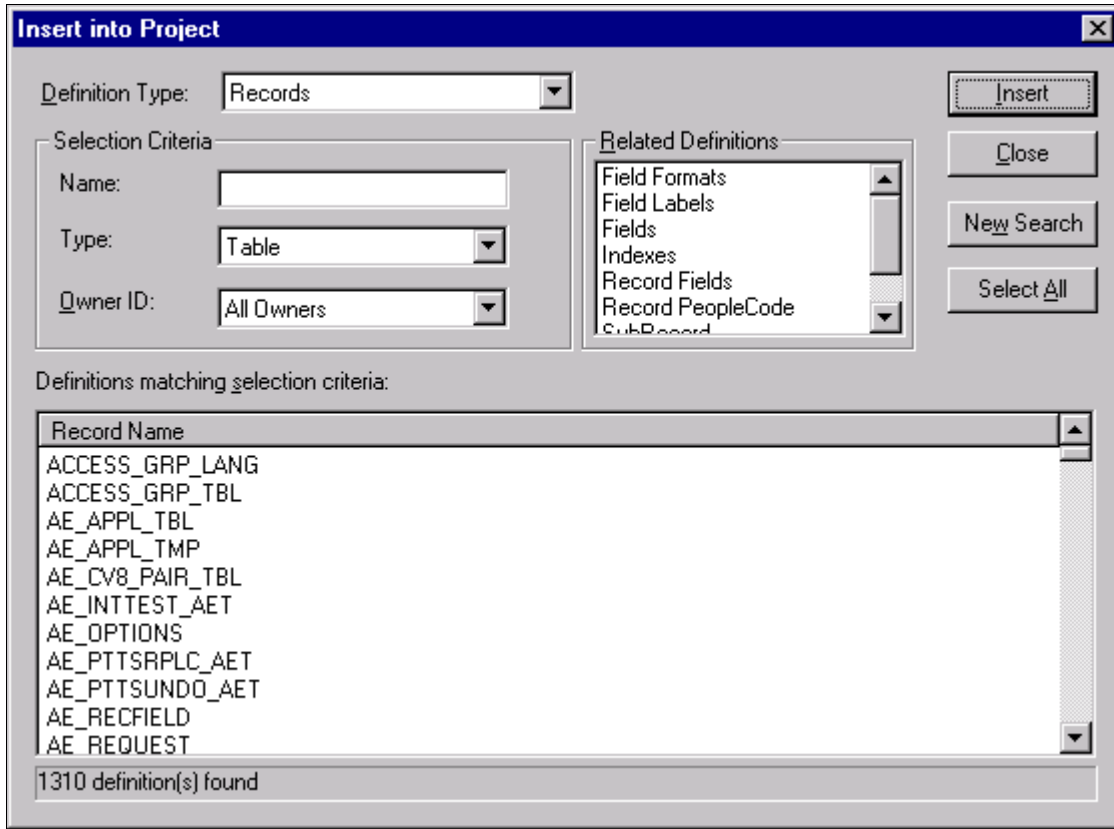
To create triggers in Application Designer:

1. Start Application Designer, for example:
  - On Microsoft Windows 7, select Start, Programs, PeopleTools 8.56, Application Designer.
  - On Microsoft Windows 8 or 2012 R2, access the Apps screen, and navigate to PeopleTools 8.56, Application Designer.
  - Run *PS\_HOME*\bin\client\winx86\pside.exe.
2. Create a new project. Choose File, New, and then select Project from the New dialog.
3. Insert all PeopleTools Table records into the project.

To insert the Table records:

- a. Choose Insert, Definitions into Project. The Insert into Project dialog appears.
- b. Select a Definition Type of *Records*.

- c. In the Selection Criteria control group, choose a Type of *Table*; and then press ENTER to select the records.

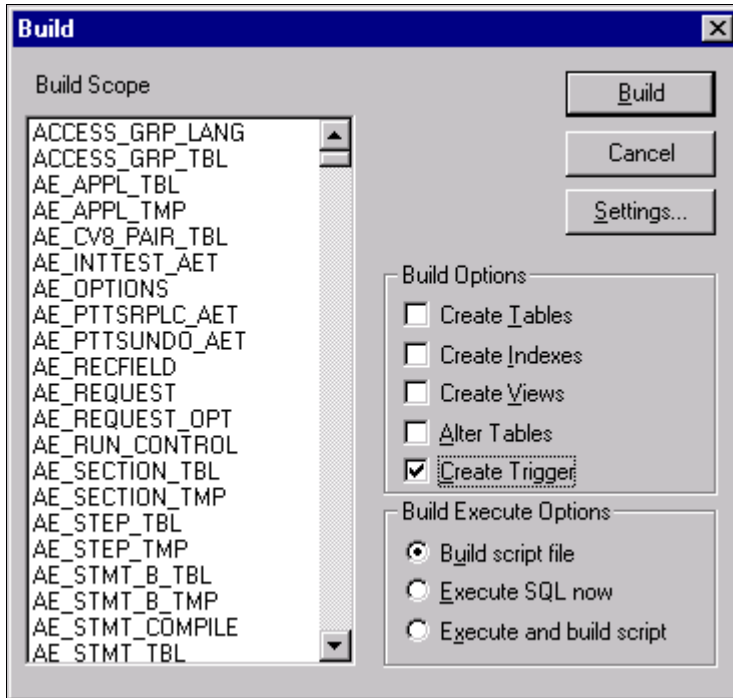


Insert into Project dialog box

- d. Click Select All, and then click Insert to insert the Table records into the project.
  - e. Click Close to close the Insert into Project dialog.
4. Build the project.
- a. Choose Build, Project. The Build dialog displays.

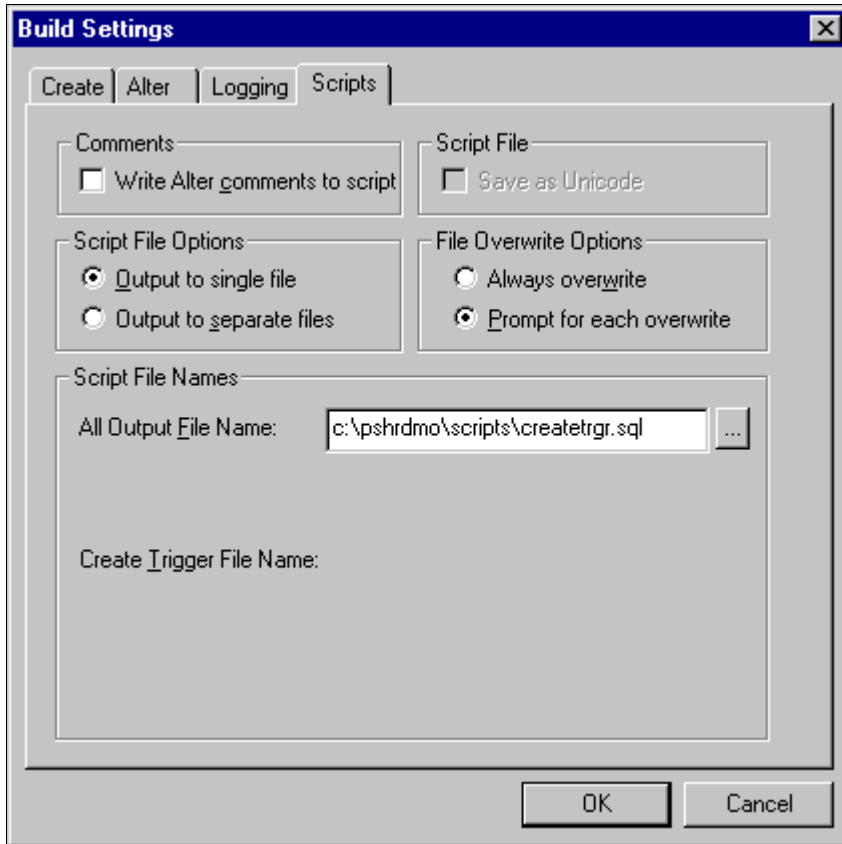


- b. In the Build Options group, select the Create Trigger check box. In the Build Execute Options group, select either the Execute SQL now radio button to create the triggers directly, or the Build script file radio button to generate a DDL script of CREATE TRIGGER statements.



Build dialog box

- c. If you have selected the Build script file radio button, click the Settings button, go to the Scripts tab, and enter the output directory and filename where you want the DDL statement script written.



Build Settings dialog box

- d. Click OK to return to the Build dialog.
5. Click Build to build the triggers associated with the tables in the project.

Depending on the Build Execute Option selected, Application Designer will either directly build the triggers on the database or generate a script file of CREATE TRIGGER DDL statements. If you have opted to generate the script file, execute the DDL statements either through SPUI or DSNTEP2. Because of the time it may take the script to complete, we recommend submitting this script in batch mode using DSNTEP2. You may also need to prefix the script with the SQL command `SET CURRENT SQLID = <ownerid>`.

## Task 7-18: 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 7-19: 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\.

```
set current sqlid = '<db owner name>';
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 DB2ODBC -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 7-20: Running SQR Reports

---

This section discusses:

- Understanding Running SQR Reports
- Binding the dbcalls.bnd
- 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 7-20-1: Binding the dbcalls.bnd

You need to bind the dbcalls.bnd before running SQR reports.

To bind dbcalls.bnd:

1. Using an ID with mainframe logon and BINDADD privileges, log on to DB2 Connect Command Line Processor:

```
db2 => CONNECT TO <database name> USER <mainframe User Id>
```

---

**Note.** Enter your current password for "mainframe User Id": <mainframe User Id password>.

---

2. The Windows SQR bind executable is located in the File or Report Server directory (for example, *PS\_HOME*\bin\sqr\db2\BINW\dbcalls.bnd).

- Issue the following bind command for an EBCDIC installation:

```
db2 => bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd blocking all grant=>
public=>
sqlerror continue
```

- For a Unicode installation, you must bind the windows SQR executable with encoding unicode as follows:

```
db2 -> bind <ps_home>\bin\sqr\db2\BINW\dbcalls.bnd encoding unicode=>
blocking=>
all grant public sqlerror continue
```

---

**Note.** The executable program PSSQR.EXE is a wrapper program used by PeopleSoft Process Scheduler to run SQR reports. It is not designed to run manually outside of Process Scheduler. That is, the PeopleSoft system does not support running PSSQR from the command line.

---

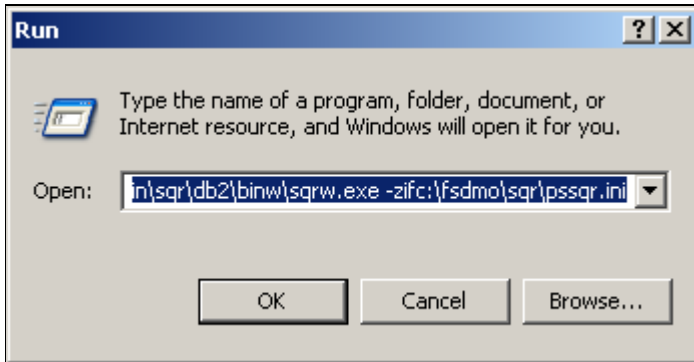
## Task 7-20-2: Running SQRs on the Client Workstation

To run an SQR on the client workstation:

1. Select Start, Run, click Browse, and navigate to *PS\_HOME*\bin\sqr\DB2\binw. Select sqrw.exe and click Open.

2. Add any needed flags at the end of the command line.

Refer to the table that follows. For those flags that require attributes, append the attributes to the flags with no intervening spaces (for example, `-fE:\fsdmo\bin\sqr\pssqr.ini`).



Microsoft Windows Run dialog box launching SQRW

The following table summarizes the SQR report arguments used by PeopleSoft software. (For a full listing of report arguments, press the Help button to view the SQR help topic for this dialog box.)

Flag	Description
-I	Specifies the directories that SQR will search for the #INCLUDE files. (A trailing slash is required.)
-f	Specifies the directory where the report output will be sent.  If you use the <code>-keep</code> flag, you must specify the directory with a trailing slash.  If you use the <code>-printer</code> flag, specify a full pathname with a filename for the HTML file.
-ZIF	Sets the full path and name of the SQR initialization file. The <code>-ZIF</code> flag should point to your <code>PS_HOME\sqr\pssqr.ini</code> file.
-keep	Keeps the .SPF file after the program runs. This enables you to view the report with the SQR viewer.
-printer:ht	Generates the output file in HTML format. Specify the filename, with path location, with the <code>-f</code> flag.

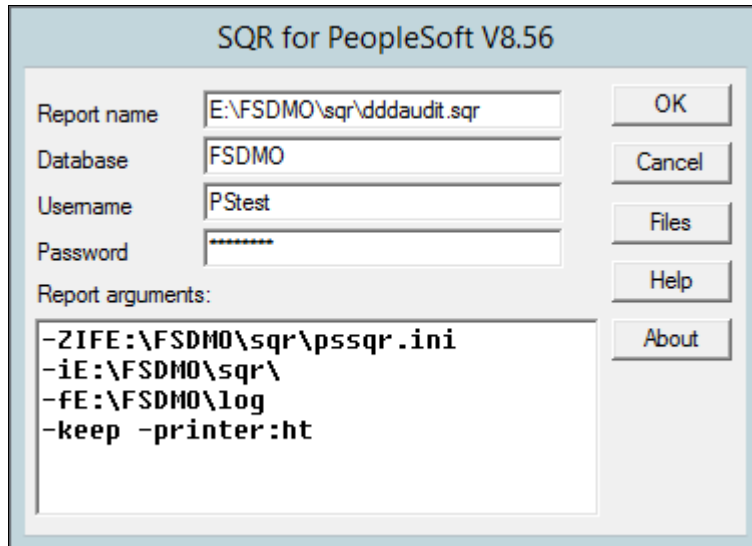
## 3. Click OK.

The SQR for PeopleSoft V8.56 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.

### Task 7-20-3: 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\DB2\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 7-21: Updating PeopleSoft System Tables

---

This section discusses:

- Understanding PeopleSoft System Tables
- Updating PeopleSoft System Tables

### Understanding PeopleSoft System Tables

In this task, you run SQR scripts that update PeopleTools tables with information from the DB2 system catalog tables.

- *SETSPACE.SQR* was run in an earlier task, but should be re-run at this point. It updates PSRECTBLSPC with the database and tablespace information captured from the DB2 system catalog table SYSIBM.SYSTABLES, inserts valid database and tablespace combinations defined in PSRECTBLSPC that have not yet been defined in PSTBLSPCCAT, and provides an audit report of actions taken and invalid database and tablespace combinations defined in PSRECTBLSPC but not defined in the DB2 system catalog table SYSIBM.SYSTABLESPACE. You can run this SQR multiple times without negative impact.
- *SETTMPIN.SQR* inserts rows into PSRECTBLSPC to store the database and tablespace location for each temporary table instance defined in the DB2 system catalog table SYSIBM.SYSTABLES. You need to run this SQR after each time you create or refresh the temporary tables on your database. You can run this SQR multiple times without negative impact.

---

**Note.** This SQR will *not* facilitate regeneration of the temporary tables by ensuring that each instance is rebuilt in the database/tablespace location to which it was originally assigned. The purpose of the SQR is to capture the location of each temporary table instance after it has been created in the database, and sync PSRECTBLSPC with the DB2 system catalog.

---

### Task 7-21-1: Updating PeopleSoft System Tables

To update PeopleSoft system tables initiate SQRW.exe as you did in the task Running SQR Reports and run the SETSPACE.SQR and SETTMPIN.SQR (if applicable) programs.

---

**Note.** Oracle also provides SETINDEX.SQR and SETBUFF.SQR, which will help the PeopleSoft DBA keep the PeopleSoft system tables in sync with the DB2 catalogs.

---

## Task 7-22: Binding DB2 Plans

---

If you are not planning to run COBOL on the mainframe, this step is not necessary.

You need to bind the following DB2 Plans used by PTPSQLRT—the first one is for the Native Attach Facility for UNIX System Services, and the second one is for the Call Attach Facility. On the z/OS server, submit the following two JCL jobs:

```
HLQ.PPVVV.JCLLIB(BINDAADD)
HLQ.PPVVV.JCLLIB(BINDEADD)
```

The only acceptable message reads:

```
BIND SUCCESSFUL
```

If you receive any other message, it means you have encountered an error. Common bind errors include:

- Program PTPSQLRT failed to precompile (jobs PSCOBDA and/or PSCOBDE) and the DBRM was not generated. If this is the case, run PSCOBDA or PSCOBDE again, and carefully examine the return codes.
- If you get a "Plan Already Exists" error, do a bind/replace using BINDAREP and BINDEREP.

## **Task 7-23: Running VERSION Application Engine Program**

---

Run the VERSION Application Engine program on your database. From the command line utility, the syntax is:

```
<PS_HOME>\bin\client\winx86\psae -CD <dbname> -CT DB2ODBC -CO <userid> ->
CP=>
<userpswd> -R RESETVERSIONS -AI VERSION
```

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>.

**Note.** Do not change the parameter `-R RESETVERSIONS`. This value is required for the run control ID for this task.

See "Setting Up the Install Workstation."

## **Task 7-24: Changing the Base Language**

---

The information in the earlier task Planning Multilingual Strategy will help you determine whether you should change your base language, and lists the currently supported languages.

See "Preparing for Installation," Planning Multilingual Strategy.

See PeopleTools Certifications — Supported Languages, My Oracle Support (search for article name).

This task applies only if your users will be operating PeopleSoft applications *primarily* in one particular language other than English. It gives a performance boost to the language you designate as the base language, but requires more administrative overhead than leaving English as the base language. The details are spelled out in the *PeopleTools: Global Technology* product documentation.

## **Task 7-25: Checking the Database**

---

Run and examine the SQR reports to verify that your database is complete.



See Running SQR Reports.

See Updating PeopleTools System Tables.

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."

---

**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 7-26: Running Alter Audit

---

Use the ALTER AUDIT process to check whether the PeopleSoft PeopleTools tables are synchronized with the underlying SQL data tables in your database. This process compares 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 of time in the install, we do not expect to see differences between the database structure and the PeopleSoft PeopleTools tables.

---

**Note.** If your application database was delivered on the PeopleSoft PeopleTools release you are installing, this task is optional.

---

**Note.** Triggers are always dropped and re-created during the alter process and will always show up in the generated Alter Audit script. You can ignore the generated script for triggers.

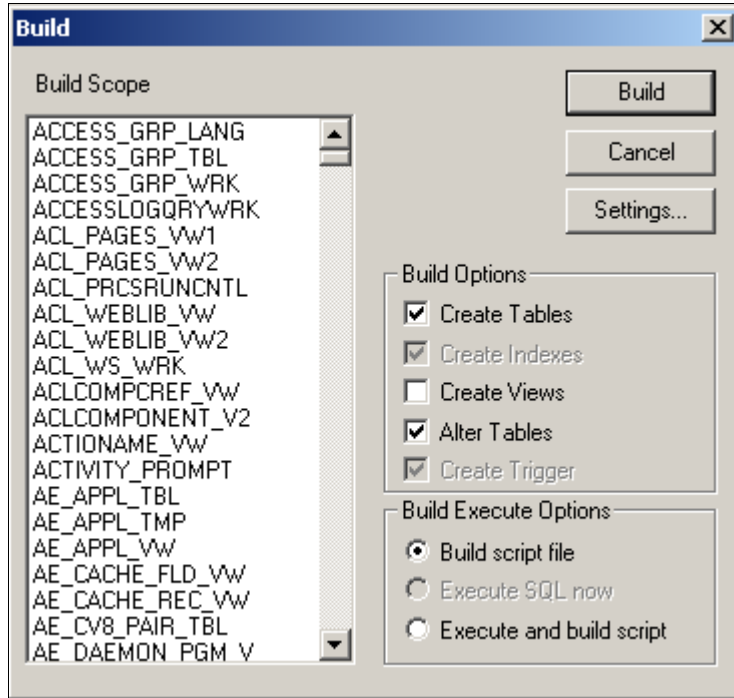
---

To alter PeopleSoft PeopleTools tables:

1. Launch Application Designer and sign on to the installed database with a valid PeopleSoft user ID.
2. Select File, New.
3. Select Project and click OK.
4. Select Insert, Definitions into Project.
5. Select *Records* from the Definition Type drop-down list box.
6. Select *Table* from the Type drop-down list box.

7. Click Insert, and then click Select All.
8. Click Insert, and then click Close.
9. Select Build, Project.

The Build dialog box appears:

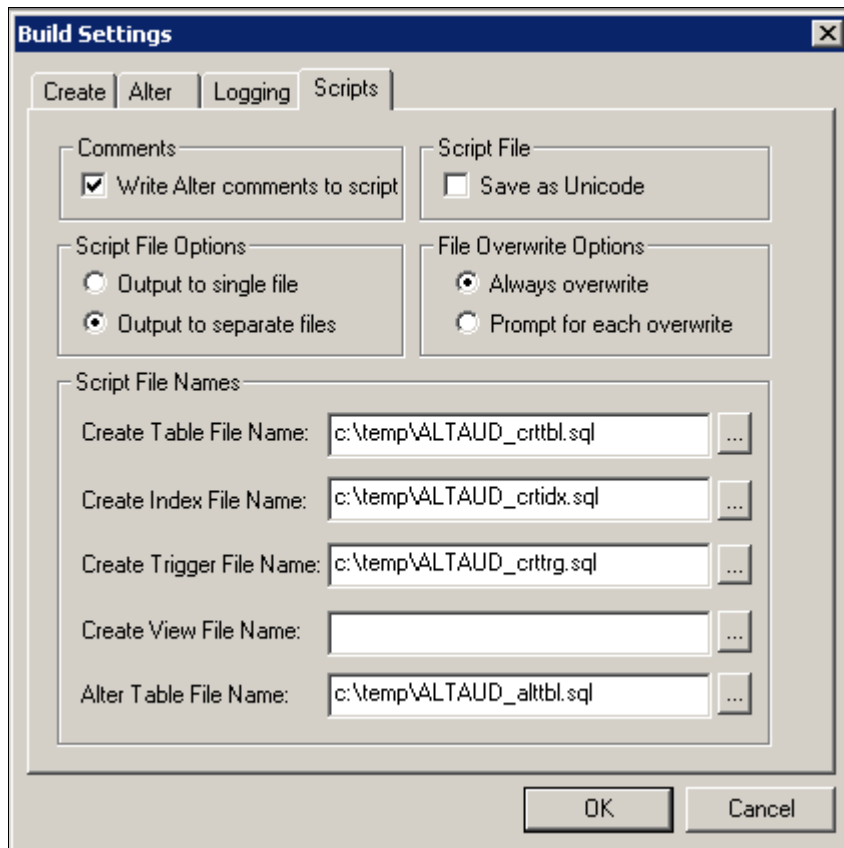


The Build dialog box

10. Select Create Tables and Alter Tables in the Build Options region (Create Indexes and Create Trigger will automatically be selected).
11. Select Build script file in the Build Execute Options region.

## 12. Click Settings.

The Build Settings dialog box appears:



Build Settings dialog box: Scripts tab

## 13. Select the Scripts tab.

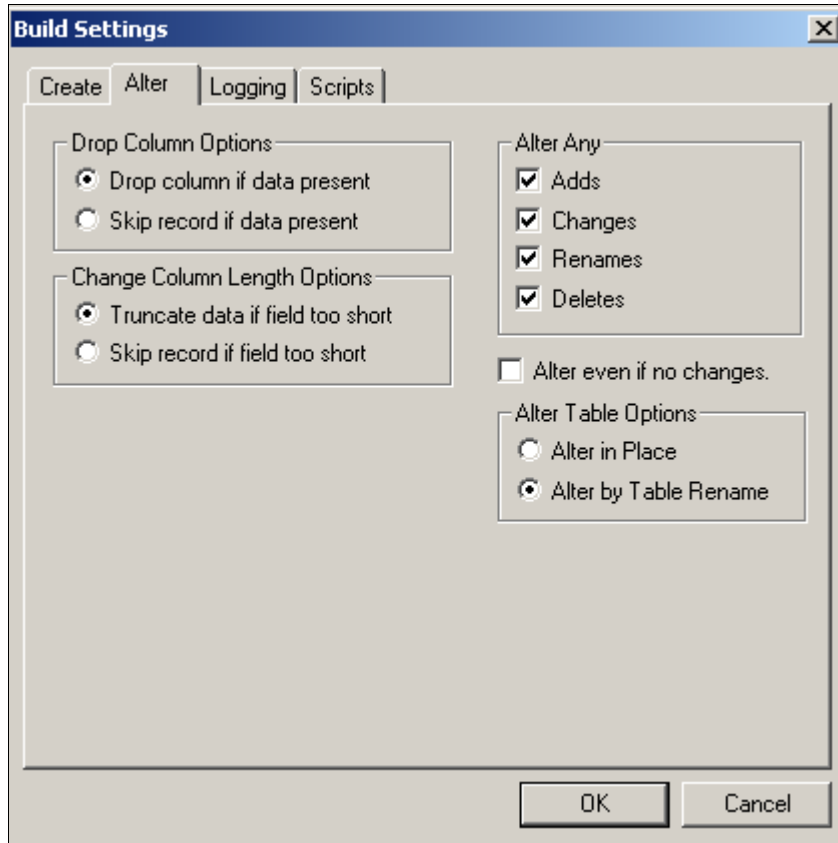
## 14. Select Write Alter comments to script.

## 15. Enter a unique output file name for each type.

16. Select the Alter tab and ensure that the Adds,Changes,Renames, and Deletes check boxes are selected in the Alter Any region.

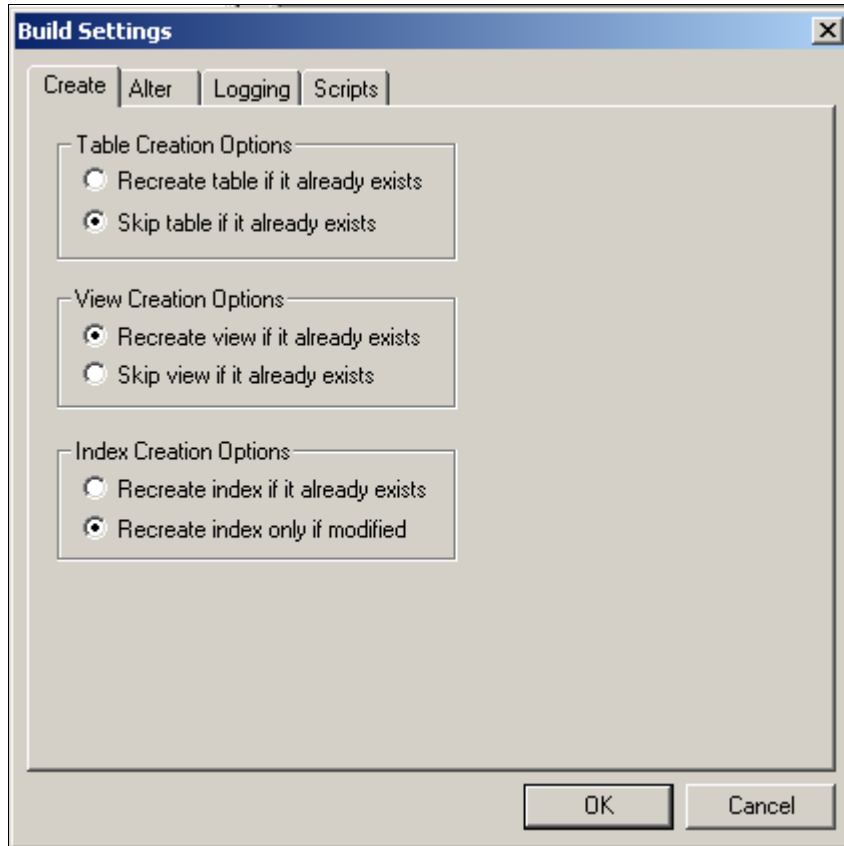
Drop column if data present should be selected in the Drop Column Options region, and Truncate data if field too short should be selected in the Change Column Length Options region.

Make sure that Alter by Table Rename is selected in the Alter Table Options region.



Build Settings dialog box: Alter tab

17. 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 are selected.



Build Setting dialog box: Create tab

18. Click OK.  
The Build dialog box reappears.
19. Click Build.
20. Click Close when the process is completed.
21. Edit the generated SQL script for the correct database name.
22. Edit the generated SQL script for the correct tablespace names and sizing parameters if you are not using delivered PeopleSoft tablespace names.
23. Run the generated SQL scripts in your platform-specific query tool to bring your database structure in sync with the PeopleTools tables.

## Task 7-27: Disabling %UpdateStats

---

The %UpdateStats meta-SQL function allows an Application Engine program to update DB2 catalog statistics after it has populated temporary tables with transient data used for intermediate query result sets. This allows the DB2 optimizer to choose a better access path when these tables are joined to other tables. To optimally use %UpdateStats for DB2 z/OS, it is highly recommended that tables subject to this feature be placed in their own tablespace. %UpdateStats invokes the DB2 RUNSTATS utility through the IBM DSNUTILS stored procedure. Because RUNSTATS executes at the tablespace level, having multiple tables in a given tablespace can degrade the performance of an Application Engine program that invokes this utility through %UpdateStats. Consider using PSTAAT (see the appendix "Using the PeopleSoft Tablespace DDL Automation Assistance Tool") to optimize the table to tablespace mapping for Application Engine temporary tables. If you have not installed and authorized the DSNUTILS stored procedure for use in your environment, or, if you have not isolated Application Engine temporary tables to individual tablespaces, you may wish to consider disabling the %UpdateStats function by setting DBFLAGS to 1 in your Process Scheduler configuration file. See the previous section, Using %UpdateStats, or search the PeopleSoft documentation for more details on using DBFLAGS to disable %UpdateStats.

If you have not implemented the DSNUTILS stored procedure and/or followed the traditional installation path, you might consider disabling recognition of the %UpdateStats function by setting DBFLAGS to 1 in your Process Scheduler configuration file. See the previous section, "Using %UpdateStats," or search the PeopleSoft documentation for more details on using DBFLAGS to disable %UpdateStats.

See *PeopleTools: Data Management*.

## Chapter 8A

# Configuring the Application Server on Windows

This chapter discusses:

- Understanding the Application Server
- Prerequisites
- Creating a Wallet for the SSL/TLS Setup
- Preparing the Application Server File System for a PeopleTools-Only Upgrade
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain

## Understanding the Application Server

---

The information in this chapter is provided to help you configure your PeopleSoft application server.

**Note.** COBOL is not needed for PeopleSoft PeopleTools or for PeopleSoft Applications that contain no COBOL programs. Check the information on My Oracle Support, and your application-specific documentation, for the details on whether your application requires COBOL.

---

Oracle supports a Microsoft Windows application server to use with any of our supported databases for the PeopleSoft installation. For detailed information, consult the certification information on My Oracle Support. The application server support can be found on the certification pages for PeopleSoft systems.

Application servers are not supported on z/OS because Oracle Tuxedo cannot run on the mainframe. For this reason, you can only install an application server in a "physical" three-tier configuration—with the application server on a machine separate from the database server machine. You cannot run a "logical" three-tier configuration—with the application server on the same machine as the database server.

The configuration and log files for application server domains reside in *PS\_CFG\_HOME*. If you do not set a *PS\_CFG\_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
%USERPROFILE%\psft\pt\peopletools_version
```

See "Preparing for Installation," Defining Installation Locations.

---

**Note.** You can start application servers as a Windows service, which means that administrators no longer need to manually start each application server that runs on a Windows machine.

---

## See Also

"Preparing for Installation," Understanding PeopleSoft Servers and Clients

"Setting Up Process Scheduler on Windows," Starting Process Scheduler as a Windows Service

*PeopleTools: System and Server Administration*, "Using PSADMIN Menus"

*PeopleTools: Data Management*

My Oracle Support, Certifications

"Setting Up the Install Workstation"

"Installing and Compiling COBOL on Windows"

## Prerequisites

---

Before beginning this procedure, you should have completed the following tasks:

- Installed your application server.  
See "Using the PeopleSoft Installer," Planning Your Initial Configuration.
- Installed the supported version of Oracle Tuxedo  
See "Installing Additional Components."
- Set up SSL/TLS protocol for the workstation connection.  
The Secure Socket Layers/Transport Layer Security (SSL/TLS) protocol is supported for Workstation Listener and Jolt Listener ports for the current PeopleSoft PeopleTools release. The application server domain configuration requires a wallet. You can use the delivered wallet or create your own.  
See *PeopleTools: Integration Broker*, "Installing Web Server-Based Digital Certificates."
- Granted authorization to a PeopleSoft user ID to start the application server.  
The database configuration procedure includes a step for setting up the user ID with authorization to start the application server. See the application-specific installation instructions for information on the user IDs for your PeopleSoft application. See the *PeopleTools: Security Administration* product documentation for information on PeopleSoft PeopleTools delivered user profiles.  
See "Creating a Database," Creating Data Mover Import Scripts.
- Run the following SQL statements on your database server to review and if needed, update the PSCLASSDEFN table:
 

```
SELECT CLASSID, STARTAPPSERVER FROM PSCLASSDEFN
WHERE CLASSID IN (SELECT OPRCLASS FROM PSOPRCLS WHERE OPRID='<OPRID>')
UPDATE PSCLASSDEFN SET STARTAPPSERVER=1 WHERE CLASSID='<CLASSID>'
```

---

**Note.** Installers typically use VP1 or PS to test the application server. If these users are deleted or their passwords are changed, the application server will no longer be available. To avoid this problem, you can set up a new operator (called PSADMIN or PSASID, for instance) with privileges to start the application server. If you do this, you can use the new operator for your application servers and you won't need to change the password each time VP1 or PS is changed.

---



## Task 8A-1: Creating a Wallet for the SSL/TLS Setup

---

This section discusses:

- Using the Delivered Wallet
- Creating a Wallet with OpenSSL

### Task 8A-1-1: Using the Delivered Wallet

Before you configure the application server to use the SSL/TLS protocol, you need a wallet. Use these instructions to create wallets for the application server and workstation client.

---

**Note.** The term "Oracle Wallet" is sometimes used in the software and documentation, for example in PSADMIN custom configuration, to refer to wallets on all RDBMS. In this context it does not refer to an entity specific to an Oracle RDBMS.

---

You also have the option to use the wallets that are included with the PeopleSoft PeopleTools installation. The default wallet for the application server is named psft and is located in `$PS_SERVDIR/security`. When you configure the application server, define the default wallet as follows:

- `SEC_PRINCIPAL_LOCATION=%PS_SERVDIR%\security`
- `SEC_PRINCIPAL_NAME=psft`

To specify the default wallet for the workstation client:

- `SEC_PRINCIPAL_LOCATION=PS_HOME\bin\client\winx86\security`
- `SEC_PRINCIPAL_NAME=wscpsft`

The default Java Keystore file used for the SSL/TLS configuration for JSL ports is located in `<PIA_HOME>\webserv\<DOMAIN_NAME>\piaconfig\keystore\pskey`. If you change the Keystore password in this file, you must also provide the password in the PIA configuration.properties file at `<PIA_HOME>\webserv\<DOMAIN_NAME>\application\peoplesoft\PORTAL.war\WEB_INF\psftdoc\ps`.

### Task 8A-1-2: Creating a Wallet with OpenSSL

This section discusses:

- Defining OpenSSL Options
- Creating a Server Wallet for the Application Server Domain with OpenSSL
- Creating a Client Wallet for the Workstation Client with OpenSSL
- Adding the Server's Certificate to the Client's Trust Store with OpenSSL

#### Defining OpenSSL Options

An example of an OpenSSL command that can be used to create a wallet is as follows.

For more information, see the OpenSSL documentation.

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in server.crt ->
chain -CAfile caCert.crt -passout pass:<password>
```



```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj =>
<subject>
```

For example:

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj=>
'/C=US/OU=Class 2 Public Primary Certification Authority/O=My=>
Organization'
```

7. Enter the following command:

```
openssl x509 -req -days 730 -in server.csr -CA caCert.crt -CAkey ca=>
Cert.key -set_serial 01 -out server.crt
```

8. Enter the following command to create the wallet ewallet.p12 and specify the server password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in=>
server.crt -chain -CAfile caCert.crt -passout pass:<server_password>
```

## Creating a Client Wallet for the Workstation Client with OpenSSL

This section gives an example of creating a client wallet with the open-source tool OpenSSL.

1. Create a directory, for example wallet.client, and change to that directory.

```
mkdir wallet.client
cd wallet.client
```

2. Copy the server's trust store to the client wallet.

```
cp wallet.server\caCert.crt wallet.client
cp wallet.server\caCert.key wallet.client
```

3. Enter these commands:

```
openssl genrsa -out client.key 4096
```

4. Run this command:

```
openssl req -new -key client.key -out client.csr -subj <subject>
```

For example:

```
openssl req -new -key client.key -out client.csr -subj '/C=country/CN=>
commonName'
```

5. Run this command:

```
openssl x509 -req -days 730 -in client.csr -CA caCert.crt -CAkey ca=>
Cert.key -set_serial 01 -out client.crt
```

6. Enter the following command to create the wallet ewallet.p12 and specify the client password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey client.key -in=>
client.crt -chain -CAfile caCert.crt -passout pass:<client_password>
```

7. Remove the client wallet password:

- a. Make a backup copy of the wallet, ewallet.p12:

On Microsoft Windows:

```
xcopy ewallet.p12 oldwallet.p12
```

- b. Run this command:

```
openssl pkcs12 -clcerts -nokeys -in oldwallet.p12 -out⇒
certificate.crt -password pass:<client_password> -passin pass:⇒
<client_password>
```

- c. Run this command:

```
openssl pkcs12 -cacerts -nokeys -in oldwallet.p12 -out ca-cert.ca -⇒
password pass:C<client_password> -passin pass:<client_password>
```

- d. Run this command:

```
openssl pkcs12 -nocerts -in oldwallet.p12 -out private.key -password⇒
pass:<client_password> -passin pass:<client_password> -passout pass:⇒
temp
```

- e. Run this command:

```
openssl rsa -in private.key -out NewKeyFile.key -passin pass:temp
```

- f. Run the command to create the PEM.pem file.

This file is created to copy the public key and root certificates.

On Microsoft Windows:

```
type certificate.crt ca-cert.ca >PEM.pem
```

- g. Run this command:

```
openssl pkcs12 -export -nodes -in PEM.pem -inkey NewKeyFile.key -out⇒
ewallet.p12 -passout pass:TrustedCertsOnlyNoPWNeeded
```

## Adding the Server's Certificate to the Client's Trust Store with OpenSSL

To complete the setup, add the application server's certificate to the workstation client's trust store:

1. Change directory.

```
cd %ORACLE_HOME%\jdk\bin
```

2. Add the certificate to the trust store found in the web server directory for the application server domain.

```
keytool -import -file <server_wallet>/<certificate> -alias srvcert -⇒
keystore <PIA_HOME>\webserv\<DOMAIN_NAME>\piaconfig\keystore\pskey -⇒
storepass password -noprompt
```

For example, on Microsoft Windows:

```
keytool -import -file wallet.server/caCert.crt -alias srvcert -keystore⇒
C:\user\psft\pt\8.56\webserv\ps\piaconfig\keystore\pskey -storepass⇒
password -noprompt
```

## Task 8A-2: Preparing the Application Server File System for a PeopleTools-Only Upgrade

---

When performing the installation of the separate upgrade *PS\_HOME* (which is different than your old release *PS\_HOME*), you may configure your Application Server at this point in time of the installation. Do not boot your Application Server until directed to do so within the upgrade. If you are installing into an old *PS\_HOME* or *PS\_CFG\_HOME* after completing a PeopleTools-only upgrade, review your old *PS\_HOME* or *PS\_CFG\_HOME* for configuration files that you may want to reuse for the new PeopleSoft PeopleTools release.

### See Also

"Preparing for Installation," Preparing for the PeopleTools-Only Upgrade

## Task 8A-3: Setting Up COBOL for Remote Call

---

Remote Call is a PeopleCode feature that launches a COBOL program from an application server, PeopleCode program or a batch Application Engine PeopleCode program and waits for it to complete execution before continuing. The execution of a COBOL program via Remote Call is completely independent of the Process Scheduler. You need to set up a COBOL runtime environment and COBOL executables on the application server to support Remote Call.

See "Installing and Compiling COBOL on Windows."

---

**Note.** If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

---

## Task 8A-4: Verifying Database Connectivity

---

Before continuing, it is critical to verify connectivity to the database that the application server domain will use. To verify connectivity, connect to the database server from the application server using the native SQL tool on the application server.

If you are running DB2 for z/OS, you can issue this command from the UNIX prompt:

```
db2 connect to <database name> user <z/OS ID> using <password>
```

If you are running DB2 for z/OS and are setting up your application server on a Microsoft Windows machine, enter the preceding command at a DB2 Connect command window, or use DB2 Connect's Command Center or Client Configuration Assistant.

See "Installing and Configuring DB2 Connect."

## Task 8A-5: Creating, Configuring, and Starting an Initial Application Server Domain

---

This section discusses:

- Creating, Configuring, and Starting the Application Server Domain

- Testing the Three-Tier Connection
- Importing an Existing Application Server Domain Configuration
- Setting Up a Custom Application Server Domain Configuration
- Troubleshooting Common Errors

## Task 8A-5-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```

-----
PeopleSoft Server Administration
-----

PS_CFG_HOME:  C:\Users\JSMITH\psft\pt\8.56
PS_HOME:      C:\PT8.56
PS_APP_HOME:  C:\HR92

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Service Setup
7) Replicate Config Home
8) Refresh Config Home
q) Quit
    
```

Command to execute (1-8, q): **1**

---

**Note.** Make sure you change the directory from the *PS\_CFG\_HOME* on the file server to the *PS\_HOME*, or high-level directory, on the application server.

---

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS\_CFG\_HOME/peopletools.properties* file with the current *PS\_HOME* location:

```

*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
    
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.

- You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.

- Specify *1* for Application Server and press ENTER.
- Specify *2* to Create a domain and press ENTER.

```
-----
PeopleSoft Application Server Administration
-----
```

- ```

1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit
```

Command to execute (1-4, q): **2**

- Specify the domain name.

In this example the domain name is HRDMO:

Please enter name of domain to create : **HRDMO**

Domain names are case sensitive and must be eight US-ASCII characters or less. The domain name is used to create a directory name under the *PS\_CFG\_HOME/appserv* directory.

See the information on *PS\_CFG\_HOME* and server domain configuration in the *PeopleTools: System and Server Administration* product documentation.

- Specify *4* for small if this is your initial domain installation, press ENTER.

See *PeopleTools: System and Server Administration*.

- After the system creates the domain, the PeopleSoft Application Server Administration menu appears with a Quick-configure menu similar to this:

```
-----
Quick-configure menu -- domain: HRDMO
-----
```

| Features<br>=====      |       | Settings<br>=====         |
|------------------------|-------|---------------------------|
| 1) Pub/Sub Servers     | : No  | 17) DBNAME : [HRDMO]      |
| 2) Quick Server        | : No  | 18) DBTYPE : [DB2ODBC]    |
| 3) Query Servers       | : No  | 19) UserId : [QEDMO]      |
| 4) Jolt                | : Yes | 20) UserPswd : []         |
| 5) Jolt Relay          | : No  | 21) DomainID : [TESTSERV] |
| 6) WSL                 | : No  | 22) AddToPATH : [ ]       |
| 7) PC Debugger         | : No  | 23) ConnectID : [people]  |
| 8) Event Notification  | : Yes | 24) ConnectPswd : []      |
| 9) MCF Servers         | : No  | 25) DomainConnectPswd: [] |
| 10) Perf Collator      | : No  | 26) WSL Port : [7000]     |
| 11) Analytic Servers   | : Yes | 27) WSL SSL Port : [7010] |
| 12) Domains Gateway    | : No  | 28) JSL Port : [9000]     |
| 13) Push Notifications | : No  | 29) JSL SSL Port : [9010] |
|                        |       | 30) JRAD Port : [9100]    |

```

Actions
=====
```

- 14) Load config as shown
- 15) Custom configuration
- 16) Edit environment settings
  - h) Help for this menu
  - q) Return to previous menu

HINT: Enter 17 to edit DBNAME, then 14 to load

Enter selection (1-28, h, or q):

---

**Note.** If your installation includes more than one application server domain on a given machine, read the troubleshooting section for more information.

---

See Troubleshooting Common Errors.

8. If you need to modify any of the values for these settings, enter the number next to the parameter name, press ENTER, then type the new value, and press ENTER again.

If you need to change any of the features, type the number next to the feature name and press ENTER.

9. Configure the WSL to boot by changing option 6 to Yes.

Enter 6, and press ENTER.

10. If you intend to use the PeopleSoft Report Distribution system, you must select *Yes* for feature 8, Event Notification.

This enables the REN server, which is used by the "run to window" functionality of the Report Distribution system. *The Report Distribution system, MultiChannel Framework, and Optimization Framework use REN servers.* You must also remember to enter an Authentication Token Domain when installing the PeopleSoft Pure Internet Architecture (PIA).

11. If you are configuring an application server domain to support applications based on the PeopleSoft MultiChannel Framework (such as PeopleSoft CRM ERMS), select feature 9, MCF Servers.

See the information on configuring REN Servers in the product documentation.

See *PeopleTools: MultiChannel Framework*.

12. Enter the values for the 20) UserPswd and 24) ConnectPswd that you specified during the database configuration.

Reenter each password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.

13. If you want to set a Domain Connection password, enter 25 and specify a password of 8 characters or less.

Reenter the password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.

The Domain Connection password is optional. You can specify a value or leave it blank. However, if you do specify a value, you must supply the same value when installing the PeopleSoft Pure Internet Architecture, to ensure the connection to the Application Server.

14. To set up the Workstation Listener for SSL/TLS protocol, enter 27 for WSL SSL Port, and specify an available port number.

The default port number is 7010.

15. To set up the Jolt listener for SSL/TLS protocol, enter 29 for JSL SSL Port, and specify an available port number.

The default port number is 9010.

16. Use the custom configuration menu to specify the settings for SSL/TLS encryption and the wallet location.



See *PeopleTools: Integration Broker*, "Installing Web Server-Based Digital Certificates."

- a. To specify the minimum and maximum encryption for SSL/TLS, select *15* for Custom Configuration.
- b. Reply *y*, and press ENTER, at this prompt:

```
Do you want to change any config values (y/n) [n]?
```

- c. Reply *n*, and press ENTER, at this prompt:

```
Do you want to change any values (y/n) [n]?
```

Continue to enter *n*, for No, for all sections until you see the Workstation Listener section, and then answer *y*. (Be aware that there are several sections.)

- d. If necessary, change the values for WSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

```
Values for config section - Workstation Listener
Address=%PS_MACH%
Port=7000
SSL Port=7010
WSL Min Encryption=0
WSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=60
Init Timeout=5
Tuxedo Compression Threshold=5000
```

- e. Accept the defaults for the next series of questions until asked if you want Oracle Wallet configured. In this case, answer *y*.

- f. Specify the values for the Oracle Wallet location, name, and password, or accept the defaults.

You can use an existing wallet that you created, or use the default wallet found in the security directory.

```
Values for config section - Oracle Wallet
SEC_PRINCIPAL_LOCATION=%PS_SERVDIR%\security
SEC_PRINCIPAL_NAME=psft
SEC_PRINCIPAL_PASSWORD=
```

- g. Accept the defaults for the next series of questions until asked if you want the JOLT Listener configured. In this case, answer *y*

- h. If necessary, change the values for JSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

```
Values for config section - JOLT Listener
Address=%PS_MACH%
Port=9000
SSL Port=9010
JSL Min Encryption=0
JSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
```

```
Client Cleanup Timeout=10
Init Timeout=5
Client Connection Mode=ANY
Jolt Compression Threshold=1000000
```

- i. Accept the default for the remaining questions; the configuration will load automatically.

17. If you are installing a REN server:

- a. Enter *15* for Custom configuration.
- b. Reply *y*, and press ENTER, at this prompt:

```
Do you want to change any config values (y/n) [n]?
```

- c. Reply *n*, and press ENTER, at this prompt:

```
Do you want to change any values (y/n) [n]?
```

Continue to enter *n*, for No, for all sections until you see the PSRENSRV section, and then answer *y*. (Be aware that there are several sections.)

- d. Leave the defaults for all settings except for `default_auth_token`, which you should set to the domain name for your web server.

---

**Note.** The `default_auth_token` setting should be identical to the Authentication Token Domain that you set during PIA installation.

---

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

- e. Accept the defaults for the next series of questions until asked if you want Event Notification configured. In this case, answer *y*.
- f. Accept the default for the remaining questions; the configuration will load automatically.

18. If you are not installing a REN server, after you update the settings you can load the configuration by entering *14*, for Load config as shown, from the Quick-configure menu.

19. To start the application server (whether you installed a REN server or not), select *1*, Boot this domain, from the PeopleSoft Domain administration menu.

20. Select *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot Menu.

---

**Note.** The messages you see and the number of processes started will depend on the options you chose during configuration.

---

21. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.

22. If you want to shut down your PeopleSoft application server domain later, follow these simple steps:

- a. From the PeopleSoft Domain Administration menu, enter *2* for Domain shutdown menu.
- b. From the PeopleTools Domain Shutdown Menu, enter *1* for Normal shutdown.

You see messages about the application server processes being shut down. The number of processes stopped will vary depending on the number of processes that started when you booted the domain.

- c. Enter *q* to quit the PeopleSoft Domain Administration Menu.

## Task 8A-5-2: Testing the Three-Tier Connection

If you get an error message when you try to sign in to the Application Server in Application Designer (that is, three-tier mode), it may be due to an incorrect server name or port number, because the database server is not running, or because the application server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Start Configuration Manager with one of these methods:
  - On Microsoft Windows 7, select Start, Programs, PeopleTools 8.56, Configuration Manager.
  - On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, Configuration Manager.
  - Run `PS_HOME\bin\client\winx86\pscfg.exe`.
2. Select the Profile Tab. Highlight Default and select Edit.
3. On the Edit Profile dialog box, select *Application Server* as the Connection Type.
4. Enter values for these parameters:

- Application Server Name
- Machine Name or IP Address
- Port Number (WSL)

Enter the WSL port that you specified when creating the application server domain. If you want to use the SSL/TLS protocol for connection, enter the WSL SSL port number (the default is 7010). If you want to use the LLE protocol, enter the non-SSL WSL port (the default is 7000).

- Domain Connection Password and Domain Connection Password (confirm)

Specify a value for the password, and repeat your entry for confirmation. The password must be 8 characters or less.

This password is optional. If you did not set the Domain Connection Password in Configuration Manager or in the Application Server configuration, leave it blank. If you specify a password, you must supply the same password during the PeopleSoft Pure Internet Architecture installation for a successful connection between the Application Server and PeopleSoft Pure Internet Architecture.

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

- Wallet Location

Enter the location that you specified for the client wallet. The default location is `%PS_HOME%\bin\client\winx86\security`.

- Wallet Name

Enter the name for the client wallet that you specified. The default name is `wscpsft`.

5. Select Set to add the definition to the list and select OK to close the dialog box.
6. On the Configuration Manager dialog box, select the Startup tab.
7. Select *Application Server* from the Database Type list. Your application server name should be displayed.
8. Enter the values for User ID, Connect ID, and password.
9. Click OK.

---

**Note.** Confirm that the application server is running by booting it from PSADMIN. Select *1*, Boot this domain, from the PeopleSoft Domain administration menu. Select option *1*, Boot (Serial Boot) or *2*, Parallel Boot, from the PeopleSoft Domain Boot menu.

---

10. Start Application Designer with one of these methods:

- On Microsoft Windows 7, select Start, Programs, PeopleTools 8.56, Application Designer.
- On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, Application Designer.
- Run `PS_HOME\bin\client\winx86\pside.exe`.

11. In the PeopleSoft Signon dialog box:

- Select *Application Server* as the Connection Type.
- Confirm that the Application Server Name is correct.
- Enter values for User ID and password.

12. Select OK to open Application Designer.

If you see the following error message when you try to sign in to the Application Server in Application Designer:

```
Network API: "Could not connect to application server 'Application Server=>
Name' Make sure the PeopleTools authentication server (PSAUTH) is booted."
```

This may indicate a problem with the Domain Connection Password. For example, if the password set in the Application Server configuration file does not match the value in Configuration Manager, you may get this error message when you sign in to Application Designer in three-tier mode. Check the Application Server logs for more information.

### Task 8A-5-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous PeopleSoft PeopleTools release, you can import it to create a new domain. You can import an existing domain configuration by specifying a file or by specifying the path to an existing domain. To import from a file, you must use the `psappsrv.cfg` file found inside an existing application server domain folder (you must specify the full path to `psappsrv.cfg`). This file can be located anywhere in the file system, but must be named `psappsrv.cfg`. To import from an existing domain configuration that you created in the current PeopleSoft PeopleTools release, you must specify `PS_CFG_HOME` and the name of an existing application server domain. (If you are importing a domain from a release before PeopleSoft PeopleTools 8.50, note that the domains were created in `PS_HOME`, and that is the path that you should provide.)

To import an existing application server domain configuration:

1. Go to the `PS_HOME\appserv` directory and run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----

PS_CFG_HOME:  C:\Users\JSMITH\psft\pt\8.56
PS_HOME:      C:\PT8.56
PS_APP_HOME:  C:\HR92
```

- 1) Application Server
- 2) Process Scheduler
- 3) Search Server
- 4) Web (PIA) Server
- 5) Switch Config Home
- 6) Service Setup
- 7) Replicate Config Home
- 8) Refresh Config Home
- q) Quit

Command to execute (1-8, q): **1**

The `PS_CONFIG_HOME` location, also referred to as Config Home, corresponds to the current working directory. For information on how Config Home is set, see the *PeopleTools: System and Server Administration* product documentation.

---

**Note.** Make sure you change the directory from the `PS_HOME` on the file server to the `PS_HOME` on the application server.

---

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The `PS_CFG_HOME` that you are working with was used previously from a different `PS_HOME`. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this `PS_CFG_HOME`.
- You configured your environment such that `PS_CFG_HOME` is the same as `PS_HOME`. The first time you use PSADMIN to create a domain, it updates the `PS_CFG_HOME/peopletools.properties` file. Continue with the next step.

3. Specify *1* for Application Server.
4. Specify *4* for Import domain configuration.

```
-----
PeopleSoft Application Server Administration
-----
```

- 1) Administer a domain
- 2) Create a domain
- 3) Delete a domain
- 4) Import domain configuration
- q) Quit

Command to execute (1-4, q): **4**

5. Specify *1* for Import regular domain.

```
-----
PeopleSoft Import Application Server Configuration
-----
```

- 1) Import regular domain
- 2) Import IB Master Configuration
- q) Quit

Command to execute (1-2, q) : **1**

6. Specify whether to import the domain configuration from a file (option 1) or from an existing application domain configuration (option 2).

```
-----
PeopleSoft Import Application Server Configuration
-----
```

- 1) Import from file
- 2) Import from application domain
- q) Quit

Command to execute (1-2, q) :

7. If you selected 1, provide the full path to the file `psappsrv.cfg`, and then specify the name of the domain you want to create. If you selected 2, go to the next step.

```
Enter full path to configuration file
:C:\temp\oldconfig\psappsrv.cfg
```

```
Enter domain name to create
:HRDMO
```

8. If you selected 2, to Import from application domain, provide the full path to the `PS_CFG_HOME` of the existing domain.

If importing from PeopleTools 8.49 or earlier, provide `PS_HOME` for `PS_⇒CFG_HOME`.

```
Enter PS_CFG_HOME of domain you wish to import: C:\Users\JSMITH\psft\pt⇒
\8.56
```

If applicable, choose among the existing application server domains in the specified `PS_CFG_HOME`:

```
Tuxedo domain list:
```

- 1) HRDBA
- 2) HRDBB

```
Select domain number to import: 1
```

```
Enter a name for new domain: HRDMO
```

After you create the domain, continue to the next task to verify that the imported configuration parameters are appropriate for the newly created domain. You may need to change the following values:

- DBName  
DBName can be the same or different, depending on which database the application server needs to point to.
- DBType

DBType depends on the database type of DBName.

- UserId and UserPswd

UserId and UserPswd are the user's choice.

- Workstation Listener Port

Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine.

- Jolt Listener Port

Jolt Listener Port will also need a different number if the old domain will be up and running in the same machine.

- Jolt Relay Adapter Listener Port

Jolt Relay Adapter Listener Port will need a different number if the old domain will be up and running in the same machine, and will be using Jolt Relay Adapter.

## Task 8A-5-4: Setting Up a Custom Application Server Domain Configuration

The Quick-configure menu is initially displayed when you choose to configure your domain. This menu is intended for the commonly adjusted parameters—those most likely to change from domain to domain. However, there are additional configuration parameters that are not available through the Quick-configure menu. For such configuration parameters, you must use the Custom Configuration option, which you can access from the Quick-configure menu. Feel free to skip this procedure if you have already created and configured your Application Server using the Quick-configure menu and want to move forward.

The following steps assume you will be using PSADMIN to specify parameter settings.

To reconfigure an application server domain:

1. Go to the *PS\_HOME*\appserv directory and run the `psadmin` command.

---

**Note.** Make sure you change the directory from the *PS\_HOME* on the file server to the *PS\_HOME* on the application server.

---

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS\_CFG\_HOME*/peopletools.properties file with the current *PS\_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME*/peopletools.properties file. Continue with the next step.
3. Specify *1* for Application Server and press ENTER.

4. Specify *1* for Administer a domain and press ENTER.
5. Select the domain to administer and press ENTER.
6. Specify *4* for Configure this domain and press ENTER.

The option Configure this domain performs the following tasks:

- Shuts down the application server, if it is running. (Shutdown is required since the binary file PSTUXCFG must be deleted and re-created to enable new configuration values. If there are no processes running when shutdown is attempted, an error will be displayed but the script continues on. This is normal.)
- Initiates an interactive dialog, prompting for configuration parameters.
- Updates psappsrv.cfg, generates psappsrv.ubb, and internally invokes Tuxedo's tmloadcf executable to create binary file PSTUXCFG used during the domain boot process.

7. Specify *15* for Custom Configuration and press ENTER.
8. Respond to this prompt:

```
Do you want to change any config values (y/n):
```

- Specify *y* to start an interactive dialog to change or examine parameter values, as described in the next step.

Oracle recommends this option for more experienced users.

- Specify *n* if you have already edited psappsrv.cfg, skip the next step, and continue with the step to select server process options.

9. Complete the interactive dialog to specify configuration parameters.

Configuration parameters are grouped into sections. For each section, you are asked whether you want to change any parameters in that section, as in the following example:

```
Values for config section - Startup
```

```
DBName=
DBType=
UserId=
UserPswd=
ConnectId=
ConnectPswd=
ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=
```

```
Do you want to change any values (y/n)? [n]: y
```

- Specify *y* to change any parameter values for the current configuration section displayed.

You are prompted for each parameter value. Either specify a new value, or press ENTER to accept the default if applicable. After pressing ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.

- Enter the user ID and user password that has security to start the application server. All application databases are delivered with one or more application server security users, usually PS or VP1.

The password you enter is hidden by masking characters.

- The parameters StandbyDBName, StandbyDBType, StandbyUserId, and StandbyUserPswd, are used for a



standby database in an Oracle environment.

See *PeopleTools: Data Management*, "Implementing Oracle Active Data Guard."

- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- The WSL, JSL, and JRAD port numbers, which are found in other sections of the configuration parameters, have default values of 7000, 9000, and 9100, respectively. These values must be unique for each application server domain. You may alter the port values if necessary to ensure that they are unique.
- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

---

**Note.** When setting up your application server, make a note of the values you use for Database Name, Application Server Name (the machine name), and JSL Port. You will need to use these same values when installing the PeopleSoft Pure Internet Architecture.

---

See *PeopleTools: System and Server Administration*.

#### 10. Select server process options.

At this point, you will be prompted to select server process options. If this is your initial installation, we suggest you accept the defaults. A message similar to this appears:

```
Setting Log Directory to the default... [PS_SERVDIR\LOGS]
Configuration file successfully created.
Loading new configuration...
```

The message "Loading new configuration" indicates that PSADMIN is generating a binary file named PSTUXCFG, which is used to boot the application server. At this point, your application server should be properly configured.

## Task 8A-5-5: Troubleshooting Common Errors

For troubleshooting help, you can access a log file through the PSADMIN PeopleSoft Domain Administration menu. The following list includes possible errors and troubleshooting tips.

- Use PSADMIN menu option 6 for Edit configuration/log files menu to check for errors in `<PS_CFG_HOME>\appserv\ and <PS_CFG_HOME>\appserv\.`
- If a PeopleSoft server such as PSAPPSRV fails, examine your configuration parameters. The failure of the PSAPPSRV process is often signalled by the message "Assume failed"—which means the process has failed to start. Check the SIGNON section for misspelled or invalid database name, an invalid or unauthorized OprId, or ConnectId or ServerName is missing or invalid. Finally, make sure the database connectivity is set correctly.
- If a WSL (or JSL) fails to start, try specifying another port number (it may be in use already by another application server domain process).
- If you are unable to start the BBL, check that your Tuxedo is installed fully and that the directory really exists.
- If the installation includes more than one application server domain on a single machine, before booting the second domain, adjust the REN server configuration to avoid conflict in one of these ways:
  - Use PSADMIN to disable Event Notification (option 8 on the Quick-configure menu) for the second and subsequent app server domains.
  - Change default\_http\_port to a value other than 7180.

## **See Also**

*PeopleTools: System and Server Administration*

*PeopleTools: MultiChannel Framework*

## Chapter 8B

# Configuring the Application Server on UNIX

This chapter discusses:

- Understanding the Application Server
- Understanding the Application Server Domain Processes
- Prerequisites
- Creating a Wallet for the SSL/TLS Setup
- Preparing the Application Server File System for a PeopleTools-Only Upgrade
- Setting Environment Variables
- Setting Up COBOL for Remote Call
- Verifying Database Connectivity
- Creating, Configuring, and Starting an Initial Application Server Domain

## Understanding the Application Server

---

The information in this chapter is provided to help you configure your PeopleSoft application server.

---

**Note.** We do not support application servers on z/OS.

---

**Note.** COBOL is not needed for PeopleSoft PeopleTools or for PeopleSoft Applications that contain no COBOL programs. Check the information on My Oracle Support, and your application-specific documentation, for the details on whether your application requires COBOL.

---

Oracle supports application servers for the PeopleSoft installation on several UNIX and Linux operating system platforms. For detailed information, consult the certification information on My Oracle Support. The application server support can be found on the certification pages for PeopleSoft systems.

Application servers are not supported on z/OS because Oracle Tuxedo cannot run on the mainframe. For this reason, you can only install an application server in a "physical" three-tier configuration—with the application server on a machine separate from the database server machine. You cannot run a "logical" three-tier configuration—with the application server on the same machine as the database server.

The configuration and log files for application server domains reside in *PS\_CFG\_HOME*. If you do not set a *PS\_CFG\_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
$HOME/psft/pt/<peopletools_version>
```

See "Preparing for Installation," Defining Installation Locations.

## See Also

"Preparing for Installation," Understanding PeopleSoft Servers and Clients

*PeopleTools: System and Server Administration*, "Using PSADMIN Menus"

*PeopleTools: Data Management*

My Oracle Support, Certifications

"Setting Up the Install Workstation"

"Installing and Compiling COBOL on UNIX"

## Understanding the Application Server Domain Processes

On most platforms (IBM AIX, Oracle Solaris, Linux, and HP-UX Itanium) no changes are required from the system defaults, in order to allow the "small" and "development" domains that are shipped with PeopleSoft PeopleTools to boot successfully.

Refer to the performance documentation for guidance in configuring your system to run larger domains. That document describes the suggested minimum kernel settings for running PeopleSoft PeopleTools in a real-world environment.

See PeopleTools Performance Guidelines Red Paper on My Oracle Support (search for the article title).

Permanently changing system-wide parameters generally requires root privileges, and any changes to the kernel configuration of your operating system should be done with care.

## Prerequisites

Before beginning this procedure, you should have completed the following tasks:

- Installed your application server.  
See "Using the PeopleSoft Installer," Planning Your Initial Configuration.
- Installed the supported version of Oracle Tuxedo  
See "Installing Additional Components."
- Set up SSL/TLS protocol for the workstation connection.  
The Secure Socket Layers/Transport Layer Security (SSL/TLS) protocol is supported for Workstation Listener and Jolt Listener ports for the current PeopleSoft PeopleTools release. The application server domain configuration requires a wallet. You can use the delivered wallet or create your own.  
See *PeopleTools: Integration Broker*, "Installing Web Server-Based Digital Certificates."
- Granted authorization to a PeopleSoft user ID to start the application server.  
The database configuration procedure includes a step for setting up the user ID with authorization to start the application server. See the application-specific installation instructions for information on the user IDs for your PeopleSoft application. See the *PeopleTools: Security Administration* product documentation for information on PeopleSoft PeopleTools delivered user profiles.  
See "Creating a Database," Creating Data Mover Import Scripts.
- Run the following SQL statements on your database server to review and if needed, update the PSCLASSDEFN table:

```
SELECT CLASSID, STARTAPPSERVER FROM PSCLASSDEFN
WHERE CLASSID IN (SELECT OPRCLASS FROM PSOPRCLS WHERE OPRID='<OPRID>')
UPDATE PSCLASSDEFN SET STARTAPPSERVER=1 WHERE CLASSID='<CLASSID>'
```

---

**Note.** Installers typically use VP1 or PS to test the application server. If these users are deleted or their passwords are changed, the application server will no longer be available. To avoid this problem, you can set up a new operator (called PSADMIN or PSASID, for instance) with privileges to start the application server. If you do this, you can use the new operator for your application servers and you won't need to change the password each time VP1 or PS is changed.

---

## Task 8B-1: Creating a Wallet for the SSL/TLS Setup

---

This section discusses:

- Using the Delivered Wallet
- Creating a Wallet with OpenSSL

### Task 8B-1-1: Using the Delivered Wallet

Before you configure the application server to use the SSL/TLS protocol, you need a wallet. Use these instructions to create wallets for the application server and workstation client.

---

**Note.** The term "Oracle Wallet" is sometimes used in the software and documentation, for example in PSADMIN custom configuration, to refer to wallets on all RDBMS. In this context it does not refer to an entity specific to an Oracle RDBMS.

---

You also have the option to use the wallets that are included with the PeopleSoft PeopleTools installation. The default wallet for the application server is named psft and is located in *\$PS\_SERVDIR/security*. When you configure the application server, define the default wallet as follows:

- SEC\_PRINCIPAL\_LOCATION=%PS\_SERVDIR%\security
- SEC\_PRINCIPAL\_NAME=psft

To specify the default wallet for the workstation client:

- SEC\_PRINCIPAL\_LOCATION=PS\_HOME\bin\client\winx86\security
- SEC\_PRINCIPAL\_NAME=wscpsft

The default Java Keystore file used for the SSL/TLS configuration for JSL ports is located in *<PIA\_HOME>\webserv\<DOMAIN\_NAME>\piaconfig\keystore\pskey*. If you change the Keystore password in this file, you must also provide the password in the PIA configuration.properties file at *<PIA\_HOME>\webserv\<DOMAIN\_NAME>\application\peoplesoft\PORTAL.war\WEB\_INF\psftdoc\ps*.

### Task 8B-1-2: Creating a Wallet with OpenSSL

This section discusses:

- Defining OpenSSL Options
- Creating a Server Wallet for the Application Server Domain with OpenSSL
- Creating a Client Wallet for the Workstation Client with OpenSSL

- Adding the Server's Certificate to the Client's Trust Store with OpenSSL

## Defining OpenSSL Options

An example of an OpenSSL command that can be used to create a wallet is as follows.

For more information, see the OpenSSL documentation.

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in server.crt ->
chain -CAfile caCert.crt -passout pass:<password>
```

- `-export`: indicates that a PKCS 12 file is being created
- `-chain`: specifies that an attempt is made to include the entire certificate chain of the user certificate
- `-inkey`: specifies the private key file
- `-in`: specifies the file that contains the user certificate and any other certificates in the certificate chain
- `-CAfile`: specifies a file containing trusted certificates
- `-out`: specifies the output file name, which must be `ewallet.p12` for an Oracle Wallet for PeopleSoft installations.
- `-passin`: specifies the password for the private key file
- `-passout`: specifies the password for the newly created wallet

## Creating a Server Wallet for the Application Server Domain with OpenSSL

This section gives an example of creating a wallet for the application server with the open-source tool OpenSSL.

1. Create a directory, for example `wallet.server`.

For example on Linux or UNIX:

```
mkdir /home/wallet.server
```

2. Change directory to `wallet.server`.

```
cd wallet.server
```

3. Enter the following command:

```
openssl genrsa -out server.key 4096
```

4. Enter the following command.

```
openssl req -new -key server.key -out server.csr -subj <subject>
```

For example:

```
openssl req -new -key server.key -out server.csr -subj '/C=country/CN=>
commonName'
```

The `<subject>` values in this step and step 7 are used to replace the specified data in an input request, and output a modified request. The format for `<subject>` is `'/type0=value0/type1=value1/type2=...'`. Characters must be escaped with a backslash (`\`), and no spaces are skipped. Use the following fields:

- `/C` — Country
- `/CN` — Common name

- /L — Location
  - /O — Organization
  - /OU — Organizational Unit
  - /ST — State
5. Enter the following command:
 

```
openssl genrsa -out caCert.key 4096
```
  6. Enter the following command,
 

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj =>
      <subject>
```

For example:

```
openssl req -new -x509 -days 1826 -key caCert.key -out caCert.crt -subj=>
      '/C=US/OU=Class 2 Public Primary Certification Authority/O=My=>
      Organization'
```
  7. Enter the following command:
 

```
openssl x509 -req -days 730 -in server.csr -CA caCert.crt -CAkey ca=>
      Cert.key -set_serial 01 -out server.crt
```
  8. Enter the following command to create the wallet ewallet.p12 and specify the server password:
 

```
openssl pkcs12 -export -out ewallet.p12 -inkey server.key -in=>
      server.crt -chain -CAfile caCert.crt -passout pass:<server_password>
```

## Creating a Client Wallet for the Workstation Client with OpenSSL

This section gives an example of creating a client wallet with the open-source tool OpenSSL.

1. Create a directory, for example wallet.client, and change to that directory.
 

```
mkdir wallet.client
      cd wallet.client
```
2. Copy the server's trust store to the client wallet.
 

```
cp wallet.server\caCert.crt wallet.client
      cp wallet.server\caCert.key wallet.client
```
3. Enter these commands:
 

```
openssl genrsa -out client.key 4096
```
4. Run this command:
 

```
openssl req -new -key client.key -out client.csr -subj <subject>
```

For example:

```
openssl req -new -key client.key -out client.csr -subj '/C=country/CN=>
      commonName'
```
5. Run this command:

```
openssl x509 -req -days 730 -in client.csr -CA caCert.crt -CAkey ca⇒
Cert.key -set_serial 01 -out client.crt
```

6. Enter the following command to create the wallet ewallet.p12 and specify the client password:

```
openssl pkcs12 -export -out ewallet.p12 -inkey client.key -in⇒
client.crt -chain -CAfile caCert.crt -passout pass:<client_password>
```

7. Remove the client wallet password:

- a. Make a backup copy of the wallet, ewallet.p12:

On Linux or UNIX:

```
cp ewallet.p12 oldwallet.p12
```

- b. Run this command:

```
openssl pkcs12 -clcerts -nokeys -in oldwallet.p12 -out⇒
certificate.crt -password pass:<client_password> -passin pass:⇒
<client_password>
```

- c. Run this command:

```
openssl pkcs12 -cacerts -nokeys -in oldwallet.p12 -out ca-cert.ca -⇒
password pass:C<client_password> -passin pass:<client_password>
```

- d. Run this command:

```
openssl pkcs12 -nocerts -in oldwallet.p12 -out private.key -password⇒
pass:<client_password> -passin pass:<client_password> -passout pass:⇒
temp
```

- e. Run this command:

```
openssl rsa -in private.key -out NewKeyFile.key -passin pass:temp
```

- f. Run the command to create the PEM.pem file.

This file is created to copy the public key and root certificates.

On Linux or UNIX:

```
cat certificate.crt ca-cert.ca >PEM.pem
```

- g. Run this command:

```
openssl pkcs12 -export -nodes -in PEM.pem -inkey NewKeyFile.key -out⇒
ewallet.p12 -passout pass:TrustedCertsOnlyNoPWNeeded
```

## Adding the Server's Certificate to the Client's Trust Store with OpenSSL

To complete the setup, add the application server's certificate to the workstation client's trust store:

1. Change directory.

```
cd %ORACLE_HOME%\jdk\bin
```

2. Add the certificate to the trust store found in the web server directory for the application server domain.

```
keytool -import -file <server_wallet>/<certificate> -alias srvcert -⇒
```



```
keystore <PIA_HOME>\webserv\<<DOMAIN_NAME>\piaconfig\keystore\pskey ->
storepass password -noprompt
```

For example, on Linux or UNIX:

```
keytool -import -file wallet.server/caCert.crt -alias srvcert -keystore=>
/home/psft_user/psft/pt/8.56/webserv/ps/piaconfig/keystore/pskey ->
storepass password -noprompt
```

## Task 8B-2: Preparing the Application Server File System for a PeopleTools-Only Upgrade

---

When performing the installation of the separate upgrade *PS\_HOME* (which is different than your old release *PS\_HOME*), you may configure your Application Server at this point in time of the installation. Do not boot your Application Server until directed to do so within the upgrade. If you are installing into an old *PS\_HOME* or *PS\_CFG\_HOME* after completing a PeopleTools-only upgrade, review your old *PS\_HOME* or *PS\_CFG\_HOME* for configuration files that you may want to reuse for the new PeopleSoft PeopleTools release.

### See Also

"Preparing for Installation," Preparing for the PeopleTools-Only Upgrade

## Task 8B-3: Setting Environment Variables

---

Telnet to your UNIX system. Log in and ensure the following environment variables are set appropriately.

**Note.** The environment variables for Tuxedo must be set explicitly; they are not set by running `psconfig.sh`. These can be also set using the `.profile` file in the user's home directory.

- `$TUXDIR` must be set to the correct Oracle Tuxedo installation directory. For example:  

```
TUXDIR=/home/user/Oracle/tuxedo12cR1; export TUXDIR
```
- `$TUXDIR/lib` must be prepended to `LD_LIBRARY_PATH`, `LIBPATH`, or `SHLIB_PATH`, whichever is appropriate for your platform. For example:  

```
LD_LIBRARY_PATH=$TUXDIR/lib:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH
```
- `$TUXDIR/bin` must be prepended to `PATH`. For example:  

```
PATH=$TUXDIR/bin:$PATH; export PATH
```

One method to ensure that the following PeopleSoft environment variables are set is to source `psconfig.sh`. Go to the *PS\_HOME* directory, and enter the following command:

```
. ./psconfig.sh
```

**Note.** After running `psconfig.sh`, you can invoke the `psadmin` utility from any location.

---

## Task 8B-4: Setting Up COBOL for Remote Call

---

Remote Call is a PeopleCode feature that launches a COBOL program from an application server, PeopleCode program or a batch Application Engine PeopleCode program and waits for it to complete execution before continuing. The execution of a COBOL program via Remote Call is completely independent of the Process Scheduler. You need to set up a COBOL runtime environment and COBOL executables on the application server to support Remote Call.

See "Installing and Compiling COBOL on UNIX."

**Note.** If your application does not contain COBOL programs, you do not need to purchase or compile COBOL.

---

## Task 8B-5: Verifying Database Connectivity

---

Before continuing, it is critical to verify connectivity to the database that the application server domain will use. To verify connectivity, connect to the database server from the application server using the native SQL tool on the application server.

If you are running DB2 for z/OS, you can issue this command from the UNIX prompt:

```
db2 connect to <database name> user <z/OS ID> using <password>
```

If you are running DB2 for z/OS and are setting up your application server on a Microsoft Windows machine, enter the preceding command at a DB2 Connect command window, or use DB2 Connect's Command Center or Client Configuration Assistant.

See "Installing and Configuring DB2 Connect."

## Task 8B-6: Creating, Configuring, and Starting an Initial Application Server Domain

---

This section discusses:

- Creating, Configuring, and Starting the Application Server Domain
- Testing the Three-Tier Connection
- Importing an Existing Application Server Domain Configuration
- Setting Up a Custom Application Server Domain Configuration
- Troubleshooting Common Errors

### Task 8B-6-1: Creating, Configuring, and Starting the Application Server Domain

To create, configure, and start the application server domain:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
```

```

PeopleSoft Server Administration
-----
PS_CFG_HOME:  /home/JSMITH/peopletools/8.56
PS_HOME:      /home/PT856
PS_APP_HOME:  /home/HR92

```

- 1) Application Server
- 2) Process Scheduler
- 3) Search Server
- 4) Web (PIA) Server
- 5) Switch Config Home
- 6) Replicate Config Home
- 7) Refresh Config Home
- q) Quit

Command to execute (1-7, q): **1**

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS\_CFG\_HOME/peopletools.properties* file with the current *PS\_HOME* location:

```

*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****

```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
- You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.

3. Specify *1* for Application Server and press ENTER.
4. Specify *2* to Create a domain and press ENTER.

```

-----
PeopleSoft Application Server Administration
-----
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit

```

Command to execute (1-4, q): **2**

5. Specify the domain name.

In this example the domain name is HRDMO:

Please enter name of domain to create : **HRDMO**

Domain names are case sensitive and must be eight characters or less. The domain name is used to create a directory name under the `PS_CFG_HOME/appserv` directory.

See the information on `PS_CFG_HOME` and server domain configuration in the *PeopleTools: System and Server Administration* product documentation.

- Specify 4 for small if this is your initial domain installation, press ENTER.

See *PeopleTools: System and Server Administration*.

- After the system creates the domain, the PeopleSoft Application Server Administration menu appears with a Quick-configure menu similar to this:

```
-----
Quick-configure menu -- domain: HRDMO
-----
          Features                               Settings
          =====                               =====
1) Pub/Sub Servers      : No                17) DBNAME           : [HRDMO]
2) Quick Server         : No                18) DBTYPE           : [DB2ODBC]
3) Query Servers        : No                19) UserId           : [VP1]
4) Jolt                 : Yes              20) UserPswd         : []
5) Jolt Relay           : No                21) DomainID         : [TESTSERV]
6) WSL                  : No                22) AddToPATH        : [ ]
7) PC Debugger          : No                23) ConnectID        : [people]
8) Event Notification   : Yes              24) ConnectPswd      : []
9) MCF Servers          : No                25) DomainConnectPswd : []
10) Perf Collator       : No                26) WSL Port         : [7000]
11) Analytic Servers    : Yes              27) WSL SSL Port     : [7010]
12) Domains Gateway     : No                28) JSL Port         : [9000]
13) Push Notifications  : No                29) JSL SSL Port     : [9010]
                               30) JRAD Port        : [9100]

          Actions
          =====
14) Load config as shown
15) Custom configuration
16) Edit environment settings
   h) Help for this menu
   q) Return to previous menu

HINT: Enter 17 to edit DBNAME, then 14 to load

Enter selection (1-28, h, or q):
```

---

**Note.** If your installation includes more than one application server domain on a given machine, read the troubleshooting section for more information.

---

See Troubleshooting Common Errors.

- If you need to modify any of the values for these settings, enter the number next to the parameter name, press ENTER, then type the new value, and press ENTER again.

If you need to change any of the features, type the number next to the feature name and press ENTER.

- Configure the WSL to boot by changing option 6 to Yes.

Enter 6, and press ENTER.

10. If you intend to use the PeopleSoft Report Distribution system, you must select *Yes* for feature 8, Event Notification.

This enables the REN server, which is used by the "run to window" functionality of the Report Distribution system. *The Report Distribution system, MultiChannel Framework, and Optimization Framework use REN servers.* You must also remember to enter an Authentication Token Domain when installing the PeopleSoft Pure Internet Architecture (PIA).

11. If you are configuring an application server domain to support applications based on the PeopleSoft MultiChannel Framework (such as PeopleSoft CRM ERMS), select feature 9, MCF Servers.

See the information on configuring REN Servers in the product documentation.

See *PeopleTools: MultiChannel Framework*.

12. Enter the values for the 20) UserPswd and 24) ConnectPswd that you specified during the database configuration.

Reenter each password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.

13. If you want to set a Domain Connection password, enter 25 and specify a password of 8 characters or less.

Reenter the password to verify the value. The password is hidden by masking characters as you type and in the Quick-configure menu.

The Domain Connection password is optional. You can specify a value or leave it blank. However, if you do specify a value, you must supply the same value when installing the PeopleSoft Pure Internet Architecture, to ensure the connection to the Application Server.

14. To set up the Workstation Listener for SSL/TLS protocol, enter 27 for WSL SSL Port, and specify an available port number.

The default port number is 7010.

15. To set up the Jolt listener for SSL/TLS protocol, enter 29 for JSL SSL Port, and specify an available port number.

The default port number is 9010.

16. Use the custom configuration menu to specify the settings for SSL/TLS encryption and the wallet location.

See *PeopleTools: Integration Broker, "Installing Web Server-Based Digital Certificates."*

- a. To specify the minimum and maximum encryption for SSL/TLS, select *15* for Custom Configuration.

- b. Reply *y*, and press ENTER, at this prompt:

```
Do you want to change any config values (y/n) [n]?
```

- c. Reply *n*, and press ENTER, at this prompt:

```
Do you want to change any values (y/n) [n]?
```

Continue to enter *n*, for No, for all sections until you see the Workstation Listener section, and then answer *y*. (Be aware that there are several sections.)

- d. If necessary, change the values for WSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

```
Values for config section - Workstation Listener
Address=%PS_MACH%
Port=7000
SSL Port=7010
WSL Min Encryption=0
```

```

WSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=60
Init Timeout=5
Tuxedo Compression Threshold=5000

```

- e. Accept the defaults for the next series of questions until asked if you want Oracle Wallet configured. In this case, answer *y*.

- f. Specify the values for the Oracle Wallet location, name, and password, or accept the defaults.

You can use an existing wallet that you created, or use the default wallet found in the security directory.

```

Values for config section - Oracle Wallet
SEC_PRINCIPAL_LOCATION=%PS_SERVDIR%\security
SEC_PRINCIPAL_NAME=psft
SEC_PRINCIPAL_PASSWORD=

```

- g. Accept the defaults for the next series of questions until asked if you want the JOLT Listener configured. In this case, answer *y*

- h. If necessary, change the values for JSL minimum and maximum encryption to correspond to your installed SSL/TLS cipher. The default minimum is 0 and the default maximum is 256. The maximum is the number of bits that indicates the highest level of encryption possible for the installed SSL/TLS version.

```

Values for config section - JOLT Listener
Address=%PS_MACH%
Port=9000
SSL Port=9010
JSL Min Encryption=0
JSL Max Encrytion=256
Min Handlers=1
Max Handlers=2
Max Clients per Handler=40
Client Cleanup Timeout=10
Init Timeout=5
Client Connection Mode=ANY
Jolt Compression Threshold=1000000

```

- i. Accept the default for the remaining questions; the configuration will load automatically.

17. If you are installing a REN server:

- a. Enter *15* for Custom configuration.

- b. Reply *y*, and press ENTER, at this prompt:

```
Do you want to change any config values (y/n) [n]?
```

- c. Reply *n*, and press ENTER, at this prompt:

```
Do you want to change any values (y/n) [n]?
```

Continue to enter *n*, for No, for all sections until you see the PSRENSRV section, and then answer *y*. (Be aware that there are several sections.)

- d. Leave the defaults for all settings except for `default_auth_token`, which you should set to the domain name for your web server.

---

**Note.** The default `_auth_token` setting should be identical to the Authentication Token Domain that you set during PIA installation.

---

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

- e. Accept the defaults for the next series of questions until asked if you want Event Notification configured. In this case, answer `y`.
  - f. Accept the default for the remaining questions; the configuration will load automatically.
18. If you are not installing a REN server, after you update the settings you can load the configuration by entering `I4`, for Load config as shown, from the Quick-configure menu.
  19. To start the application server (whether you installed a REN server or not), select `I`, Boot this domain, from the PeopleSoft Domain administration menu.
  20. Select `I`, Boot (Serial Boot) or `2`, Parallel Boot, from the PeopleSoft Domain Boot Menu.
- 

**Note.** The messages you see and the number of processes started will depend on the options you chose during configuration.

---

21. If you plan to continue with PIA installation and testing, do not shut down the application server at this time.
22. If you want to shut down your PeopleSoft application server domain later, follow these simple steps:
  - a. From the PeopleSoft Domain Administration menu, enter `2` for Domain shutdown menu.
  - b. From the PeopleTools Domain Shutdown Menu, enter `1` for Normal shutdown.  
You see messages about the application server processes being shut down. The number of processes stopped will vary depending on the number of processes that started when you booted the domain.
  - c. Enter `q` to quit the PeopleSoft Domain Administration Menu.

## Task 8B-6-2: Testing the Three-Tier Connection

If you get an error message when you try to sign in to the Application Server in Application Designer (that is, three-tier mode), it may be due to an incorrect server name or port number, because the database server is not running, or because the application server was not booted. To test a three-tier connection from the PeopleTools Development Environment (the Windows-based client):

1. Start Configuration Manager with one of these methods:
  - On Microsoft Windows 7, select Start, Programs, PeopleTools 8.56, Configuration Manager.
  - On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, Configuration Manager.
  - Run `PS_HOME\bin\client\winx86\pscfg.exe`.
2. Select the Profile Tab. Highlight Default and select Edit.
3. On the Edit Profile dialog box, select *Application Server* as the Connection Type.
4. Enter values for these parameters:
  - Application Server Name
  - Machine Name or IP Address
  - Port Number (WSL)

Enter the WSL port that you specified when creating the application server domain. If you want to use the SSL/TLS protocol for connection, enter the WSL SSL port number (the default is 7010). If you want to use the LLE protocol, enter the non-SSL WSL port (the default is 7000).

- Domain Connection Password and Domain Connection Password (confirm)

Specify a value for the password, and repeat your entry for confirmation. The password must be 8 characters or less.

This password is optional. If you did not set the Domain Connection Password in Configuration Manager or in the Application Server configuration, leave it blank. If you specify a password, you must supply the same password during the PeopleSoft Pure Internet Architecture installation for a successful connection between the Application Server and PeopleSoft Pure Internet Architecture.

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

- Wallet Location

Enter the location that you specified for the client wallet. The default location is %PS\_HOME%/bin/client/winx86/security.

- Wallet Name

Enter the name for the client wallet that you specified. The default name is wscpsft.

5. Select Set to add the definition to the list and select OK to close the dialog box.
6. On the Configuration Manager dialog box, select the Startup tab.
7. Select *Application Server* from the Database Type list. Your application server name should be displayed.
8. Enter the values for User ID, Connect ID, and password.
9. Click OK.

---

**Note.** Confirm that the application server is running by booting it from PSADMIN. Select 1, Boot this domain, from the PeopleSoft Domain administration menu. Select option 1, Boot (Serial Boot) or 2, Parallel Boot, from the PeopleSoft Domain Boot menu.

---

10. Start Application Designer with one of these methods:

- On Microsoft Windows 7, select Start, Programs, PeopleTools 8.56, Application Designer.
- On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleTools 8.56, Application Designer.
- Run `PS_HOME\bin\client\winx86\pside.exe`.

11. In the PeopleSoft Signon dialog box:

- Select *Application Server* as the Connection Type.
- Confirm that the Application Server Name is correct.
- Enter values for User ID and password.

12. Select OK to open Application Designer.

If you see the following error message when you try to sign in to the Application Server in Application Designer:

```
Network API: "Could not connect to application server 'Application Server⇒
Name' Make sure the PeopleTools authentication server (PSAUTH) is booted."
```

This may indicate a problem with the Domain Connection Password. For example, if the password set in the Application Server configuration file does not match the value in Configuration Manager, you may get this error message when you sign in to Application Designer in three-tier mode. Check the Application Server logs for more information.



## Task 8B-6-3: Importing an Existing Application Server Domain Configuration

If you have an existing application server configuration for a previous PeopleSoft PeopleTools release, you can import it to create a new domain. You can import an existing domain configuration by specifying a file or by specifying the path to an existing domain. To import from a file, you must use the `psappsrv.cfg` file found inside an existing application server domain folder (you must specify the full path to `psappsrv.cfg`). This file can be located anywhere in the file system, but must be named `psappsrv.cfg`. To import from an existing domain configuration that you created in the current PeopleSoft PeopleTools release, you must specify `PS_CFG_HOME` and the name of an existing application server domain. (If you are importing a domain from a release before PeopleSoft PeopleTools 8.50, note that the domains were created in `PS_HOME`, and that is the path that you should provide.)

To import an existing application server domain configuration:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----
PS_CFG_HOME:  /home/JSMITH/peopletools/8.56
PS_HOME:      /home/PT856
PS_APP_HOME:  /home/HR92
```

```
1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
7) Refresh Config Home
q) Quit
```

Command to execute (1-7, q): **1**

The `PS_CONFIG_HOME` location, also referred to as Config Home, corresponds to the current working directory. For information on how Config Home is set, see the *PeopleTools: System and Server Administration* product documentation.

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
- You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.

3. Specify *1* for Application Server.
4. Specify *4* for Import domain configuration.

```
-----
PeopleSoft Application Server Administration
-----
```

- ```
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit
```

Command to execute (1-4, q): **4**

5. Specify *1* for Import regular domain.

```
-----
PeopleSoft Import Application Server Configuration
-----
```

- ```
1) Import regular domain
2) Import IB Master Configuration
q) Quit
```

Command to execute (1-2, q) : **1**

6. Specify whether to import the domain configuration from a file (option 1) or from an existing application domain configuration (option 2).

```
-----
PeopleSoft Import Application Server Configuration
-----
```

- ```
1) Import from file
2) Import from application domain
q) Quit
```

Command to execute (1-2, q) :

7. If you selected *1*, provide the full path to the file *psappsrv.cfg*, and then specify the name of the domain you want to create. If you selected *2*, go to the next step.

```
Enter full path to configuration file
:/home/oldconfig/psappsrv.cfg
```

```
Enter domain name to create
:HRDMO
```

8. If you selected *2*, to Import from application domain, provide the full path to the *PS\_CFG\_HOME* of the existing domain.

If importing from PeopleTools 8.49 or earlier, provide `PS_HOME` for `PS_⇒CFG_HOME`.

```
Enter PS_CFG_HOME of domain you wish to import: /home/JSMITH⇒
/peopletools/8.56
```

If applicable, choose among the existing application server domains in the specified `PS_CFG_HOME`:

Tuxedo domain list:

- 1) HRDBA
- 2) HRDBB

Select domain number to import: **1**

Enter a name for new domain: **HRDMO**

After you create the domain, continue to the next task to verify that the imported configuration parameters are appropriate for the newly created domain. You may need to change the following values:

- **DBName**  
DBName can be the same or different, depending on which database the application server needs to point to.
- **DBType**  
DBType depends on the database type of DBName.
- **UserId and UserPswd**  
UserId and UserPswd are the user's choice.
- **Workstation Listener Port**  
Workstation Listener Port will need to be modified if the old domain will be up and running in the same machine.
- **Jolt Listener Port**  
Jolt Listener Port will also need a different number if the old domain will be up and running in the same machine.
- **Jolt Relay Adapter Listener Port**  
Jolt Relay Adapter Listener Port will need a different number if the old domain will be up and running in the same machine, and will be using Jolt Relay Adapter.

## Task 8B-6-4: Setting Up a Custom Application Server Domain Configuration

The Quick-configure menu is initially displayed when you choose to configure your domain. This menu is intended for the commonly adjusted parameters—those most likely to change from domain to domain. However, there are additional configuration parameters that are not available through the Quick-configure menu. For such configuration parameters, you must use the Custom Configuration option, which you can access from the Quick-configure menu. Feel free to skip this procedure if you have already created and configured your Application Server using the Quick-configure menu and want to move forward.

The following steps assume you will be using `PSADMIN` to specify parameter settings.

To reconfigure an application server domain:

1. Run the `psadmin` command.
2. Depending on your environment, you may see a message after the initial menu, which indicates that `PSADMIN` has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME`

location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.
3. Specify *1* for Application Server and press ENTER.
  4. Specify *1* for Administer a domain and press ENTER.
  5. Select the domain to administer and press ENTER.
  6. Specify *4* for Configure this domain and press ENTER.

The option Configure this domain performs the following tasks:

- Shuts down the application server, if it is running. (Shutdown is required since the binary file PSTUXCFG must be deleted and re-created to enable new configuration values. If there are no processes running when shutdown is attempted, an error will be displayed but the script continues on. This is normal.)
  - Initiates an interactive dialog, prompting for configuration parameters.
  - Updates psappsrv.cfg, generates psappsrv.ubb, and internally invokes Tuxedo's tmlodcf executable to create binary file PSTUXCFG used during the domain boot process.
7. Specify *15* for Custom Configuration and press ENTER.
  8. Respond to this prompt:

```
Do you want to change any config values (y/n):
```

- Specify *y* to start an interactive dialog to change or examine parameter values, as described in the next step.  
Oracle recommends this option for more experienced users.
  - Specify *n* if you have already edited psappsrv.cfg, skip the next step, and continue with the step to select server process options.
9. Complete the interactive dialog to specify configuration parameters.

Configuration parameters are grouped into sections. For each section, you are asked whether you want to change any parameters in that section, as in the following example:

```
Values for config section - Startup
      DBName=
      DBType=
      UserId=
      UserPswd=
      ConnectId=
      ConnectPswd=
```

```

ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=
Do you want to change any values (y/n)? [n]: y

```

- Specify *y* to change any parameter values for the current configuration section displayed. You are prompted for each parameter value. Either specify a new value, or press ENTER to accept the default if applicable. After pressing ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- Enter the user ID and user password that has security to start the application server. All application databases are delivered with one or more application server security users, usually PS or VP1. The password you enter is hidden by masking characters.
- The parameters StandbyDBName, StandbyDBType, StandbyUserId, and StandbyUserPswd, are used for a standby database in an Oracle environment. See *PeopleTools: Data Management*, "Implementing Oracle Active Data Guard."
- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- The WSL, JSL, and JRAD port numbers, which are found in other sections of the configuration parameters, have default values of 7000, 9000, and 9100, respectively. These values must be unique for each application server domain. You may alter the port values if necessary to ensure that they are unique.
- If you do not wish to change any values, specify *n* and you will be prompted for the next configuration section.

---

**Note.** When setting up your application server, make a note of the values you use for Database Name, Application Server Name (the machine name), and JSL Port. You will need to use these same values when installing the PeopleSoft Pure Internet Architecture.

---

See *PeopleTools: System and Server Administration*.

#### 10. Select server process options.

At this point, you will be prompted to select server process options. If this is your initial installation, we suggest you accept the defaults. A message similar to this appears:

```

Setting Log Directory to the default... [PS_SERVDIR/LOGS]
Configuration file successfully created.
Loading new configuration...

```

The message "Loading new configuration" indicates that PSADMIN is generating a binary file named PSTUXCFG, which is used to boot the application server. At this point, your application server should be properly configured.

## Task 8B-6-5: Troubleshooting Common Errors

For troubleshooting help, you can access a log file through the PSADMIN PeopleSoft Domain Administration menu. The following list includes possible errors and troubleshooting tips.

- Use the PSADMIN PeopleSoft Domain Administration menu option 6 for Edit configuration/log files menu to

check for errors in `<PS_CFG_HOME>/appserv/<domain>/LOGS/APPSRV_mmdd.LOG` and `<PS_CFG_HOME>/appserv/<domain>/LOGS/TUXLOG.mmddyy`.

- If a PeopleSoft server such as PSAPPSRV fails, examine your configuration parameters. The failure of the PSAPPSRV process is often signalled by the message "Assume failed"—which means the process has failed to start. Check the SIGNON section for misspelled or invalid database name, an invalid or unauthorized OprId, or ConnectId or ServerName is missing or invalid. Finally, make sure the database connectivity is set correctly.
- If a WSL (or JSL) fails to start, try specifying another port number (it may be in use already by another application server domain process).
- If you are unable to start the BBL, check that your Tuxedo is installed fully and that the directory really exists.
- If the installation includes more than one application server domain on a single machine, before booting the second domain, adjust the REN server configuration to avoid conflict in one of these ways:
  - Use PSADMIN to disable Event Notification (option 8 on the Quick-configure menu) for the second and subsequent app server domains.
  - Change default\_http\_port to a value other than 7180.
- Check that you do not have older Tuxedo releases prepended in your PATH or runtime library (LIBPATH, SHLIB\_PATH or LD\_LIBRARY\_PATH, depending on the UNIX operating system).

## See Also

*PeopleTools: System and Server Administration*

*PeopleTools: MultiChannel Framework*

## Chapter 9A

# Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode

This chapter discusses:

- Understanding PeopleSoft Pure Internet Architecture
- Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation
- Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade
- Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in GUI Mode
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in GUI Mode
- 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 (PIA) in GUI mode. It includes instructions for installing the PeopleSoft files on Oracle WebLogic and IBM WebSphere. Only complete the instructions for the web server product that you installed.

---

**Note.** See the chapter "Setting Up the PeopleSoft Pure Internet Architecture in Console Mode" for instructions on installing in silent mode on Microsoft Windows.

---

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.
- When installing on Microsoft Windows, change the font size to the default value.

If you use the installer with a non-default font size, some of the fields on the installer windows may appear with an incorrect length. To change the font size:

1. Right-click the desktop and select Personalize.
2. Click Adjust font size (DPI).
3. Select the default, 96 DPI.

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

## 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 host must have a fully qualified domain name (FQDN). The requirement that you must have a domain name does not imply that you must have a DNS, but you do need some type of naming service such as DNS or some managed `..\etc\hosts` file that contains a list of the servers with their domain name.
- 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 9A-1: Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade**

---

When performing the installation of the PeopleSoft Pure Internet Architecture system using the separate upgrade *PS\_HOME* (which is different than your old release *PS\_HOME*), you may install and configure your PeopleSoft Pure Internet Architecture system at this point in time of the installation, but do not start your PeopleSoft Pure Internet Architecture system until directed to do so within the upgrade.

If you are installing into an existing *PS\_HOME* or *PIA\_HOME* after completing a PeopleTools-only upgrade, perform the following instructions to remove any obsolete files.

See "Preparing for Installation," Preparing for the PeopleTools-Only Upgrade.

Stop the web server before performing the PeopleSoft Pure Internet Architecture installation or uninstallation.

Depending on your web server platform, complete the following steps to clean up previous PeopleSoft Pure Internet Architecture sites:

- Oracle WebLogic

Shut down Oracle WebLogic and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform.

Alternatively, delete the contents of one of the following directories:

- For PeopleSoft PeopleTools 8.43.x or earlier: `<weblogic_home>\wlserver6.1\config\<domain_name>|*`
- For PeopleSoft PeopleTools 8.44.x to 8.49.x: `<PS_HOME>\webserv\<domain_name>|*`
- For PeopleSoft PeopleTools 8.50.x or later: `<PIA_HOME>\webserv\<domain_name>|*`

- IBM WebSphere

Shut down IBM WebSphere and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform.

## **Task 9A-2: Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in GUI Mode**

---

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on a New Oracle WebLogic Domain
- Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain
- Uninstalling the PeopleSoft Pure Internet Architecture on Oracle WebLogic

## Prerequisites

This section describes how to install the PeopleSoft Pure Internet Architecture on Oracle WebLogic. Before installing the PeopleSoft Pure Internet Architecture (PIA) on Oracle WebLogic, you must have installed the Oracle WebLogic software. PeopleSoft PeopleTools 8.56 supports Java 8 enabled 64-bit Oracle WebLogic 12.2.1.

See "Installing Web Server Products," Installing Oracle WebLogic.

See the *PeopleTools: System and Server Administration* product documentation for more information on working with Oracle WebLogic.

## Task 9A-2-1: Installing the PeopleSoft Pure Internet Architecture on a New Oracle WebLogic Domain

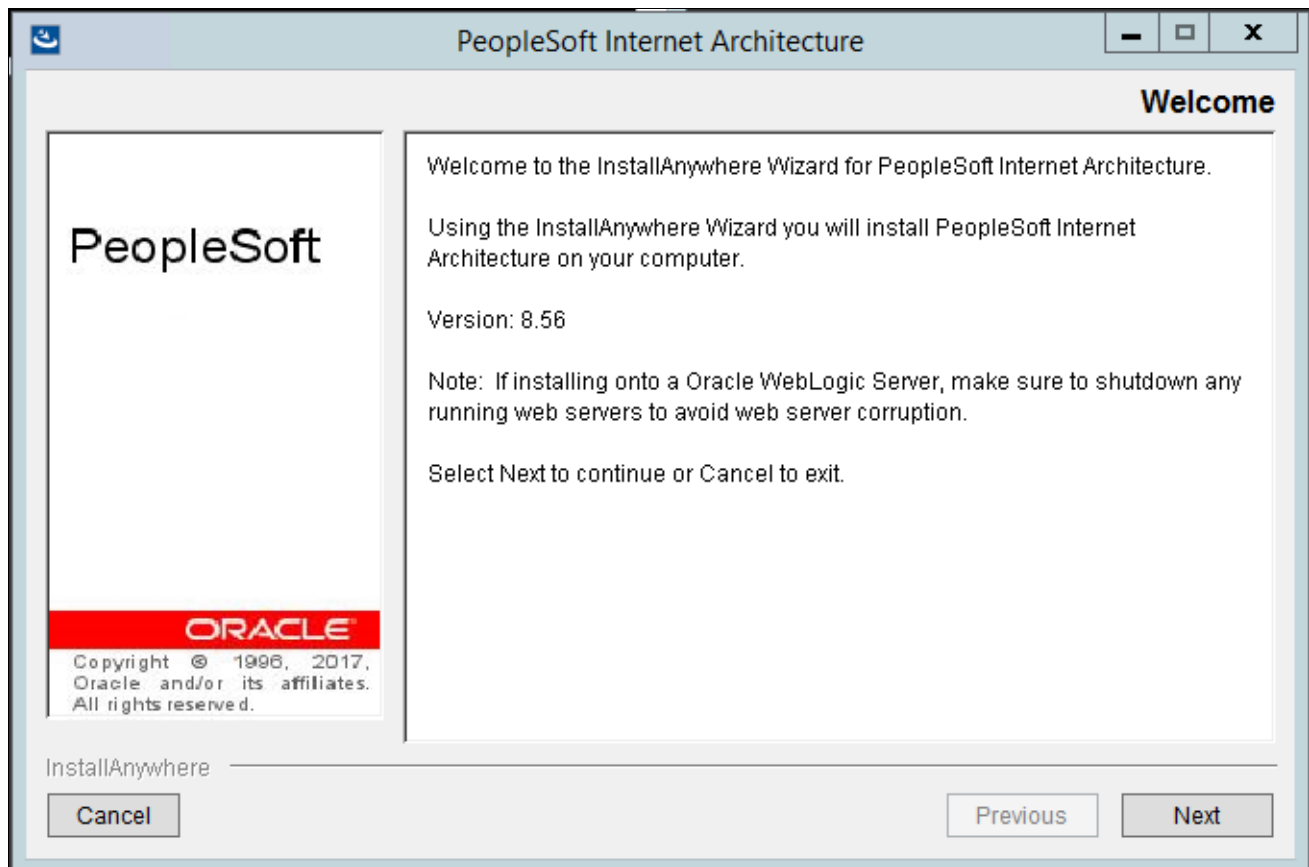
Use these instructions to install the PeopleSoft Pure Internet Architecture on a new Oracle WebLogic domain. See the next section to install on an existing Oracle WebLogic domain.

1. Go to `PS_HOME\setup\PsmPPIAInstall` and run `setup.bat`.

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

2. Click Next on the Welcome to the InstallAnywhere Wizard for PeopleSoft Internet Architecture window.

The window displays the PeopleSoft PeopleTools version, 8.56 in this example, and includes this note: "If installing onto a Oracle WebLogic Server, make sure to shutdown any running web servers to avoid web server corruption."

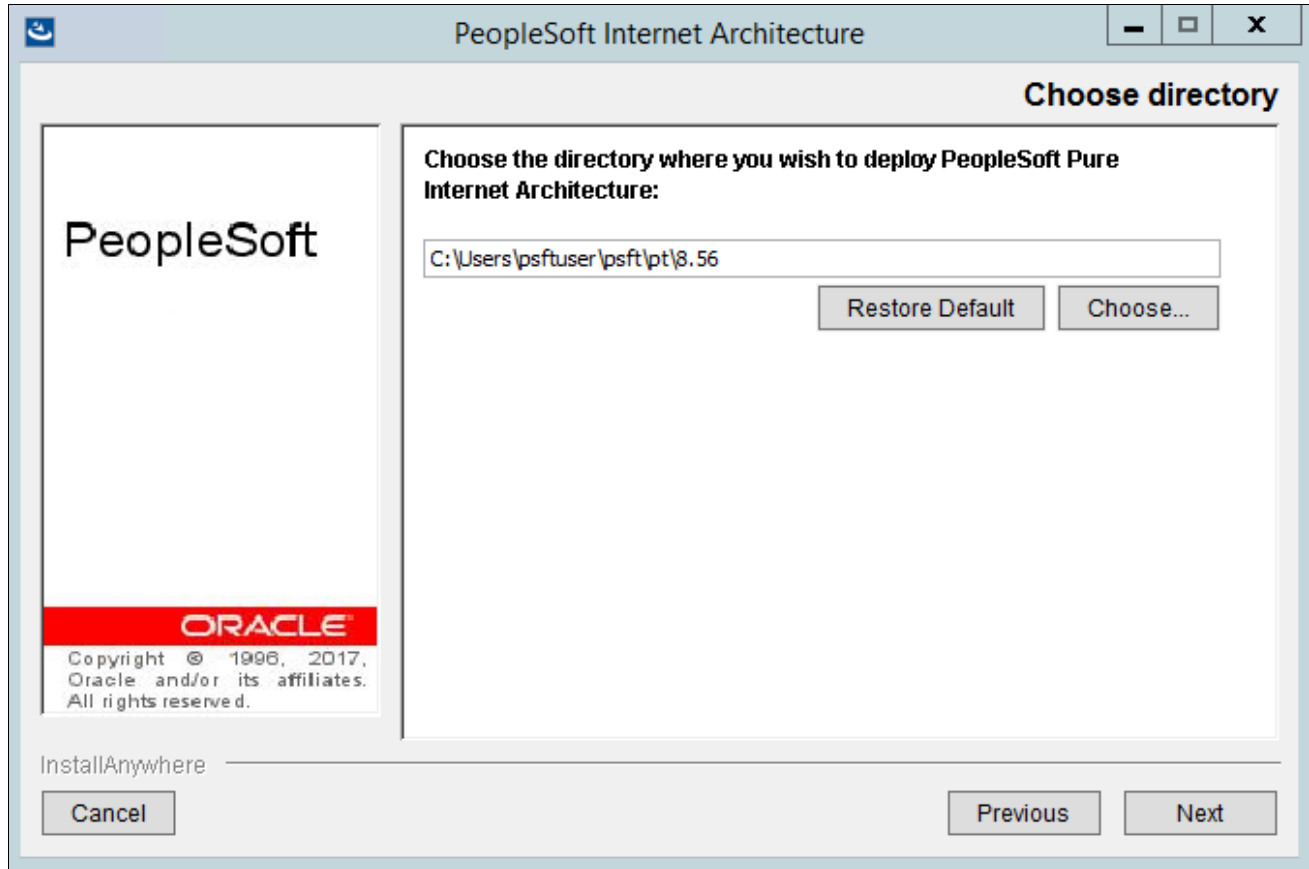


PeopleSoft Internet Architecture Welcome window

3. Enter the location where you want to install the PeopleSoft Pure Internet Architecture, referred to in this documentation as *PIA\_HOME*.

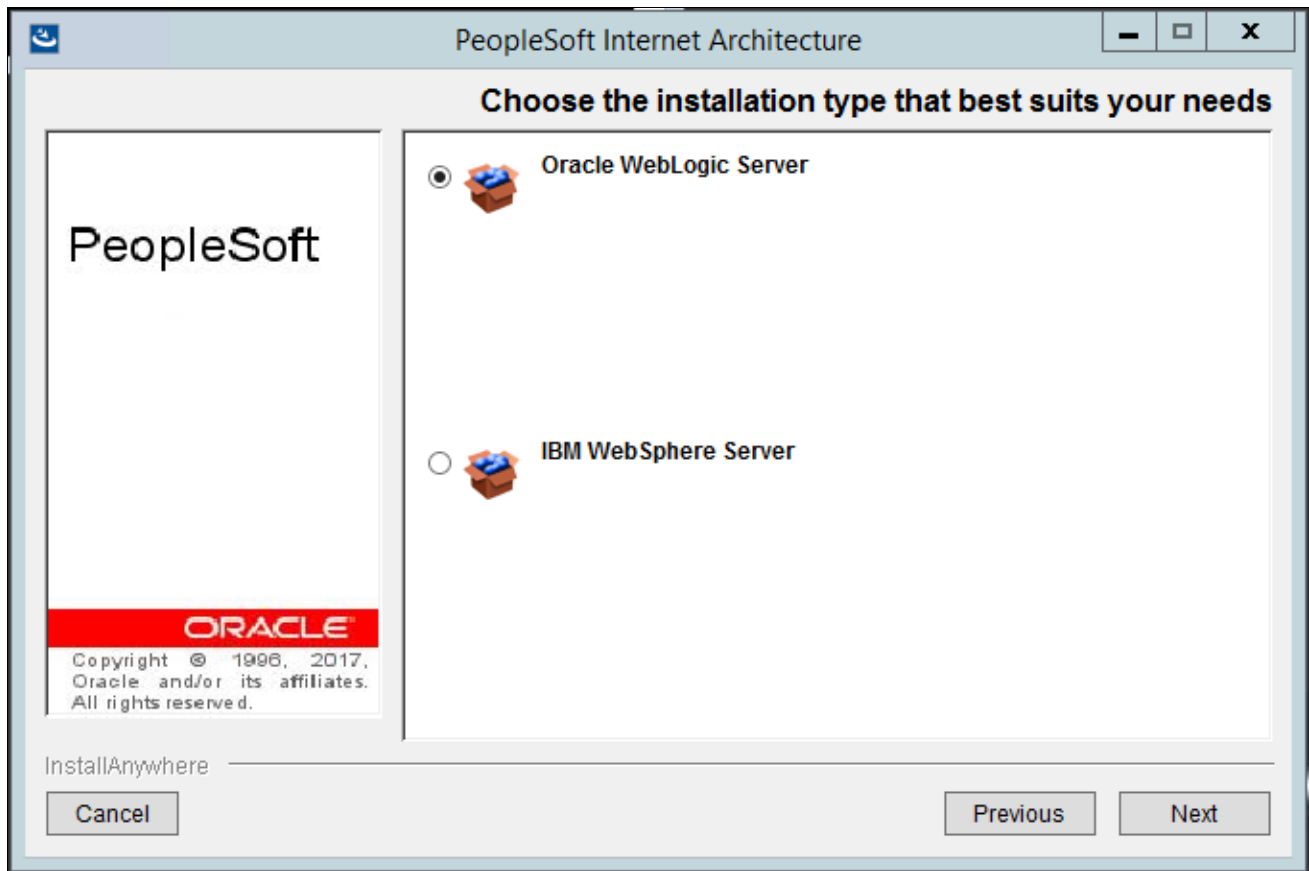
In this example, the directory is C:\Users\psftuser\psft\pt\8.56. The default location for *PIA\_HOME* is the same as *PS\_CFG\_HOME*.

See "Preparing for Installation," Planning Your Initial Configuration.



PeopleSoft Internet Architecture Choose directory window

- 4. Select Oracle WebLogic Server as in this example, and then click Next.

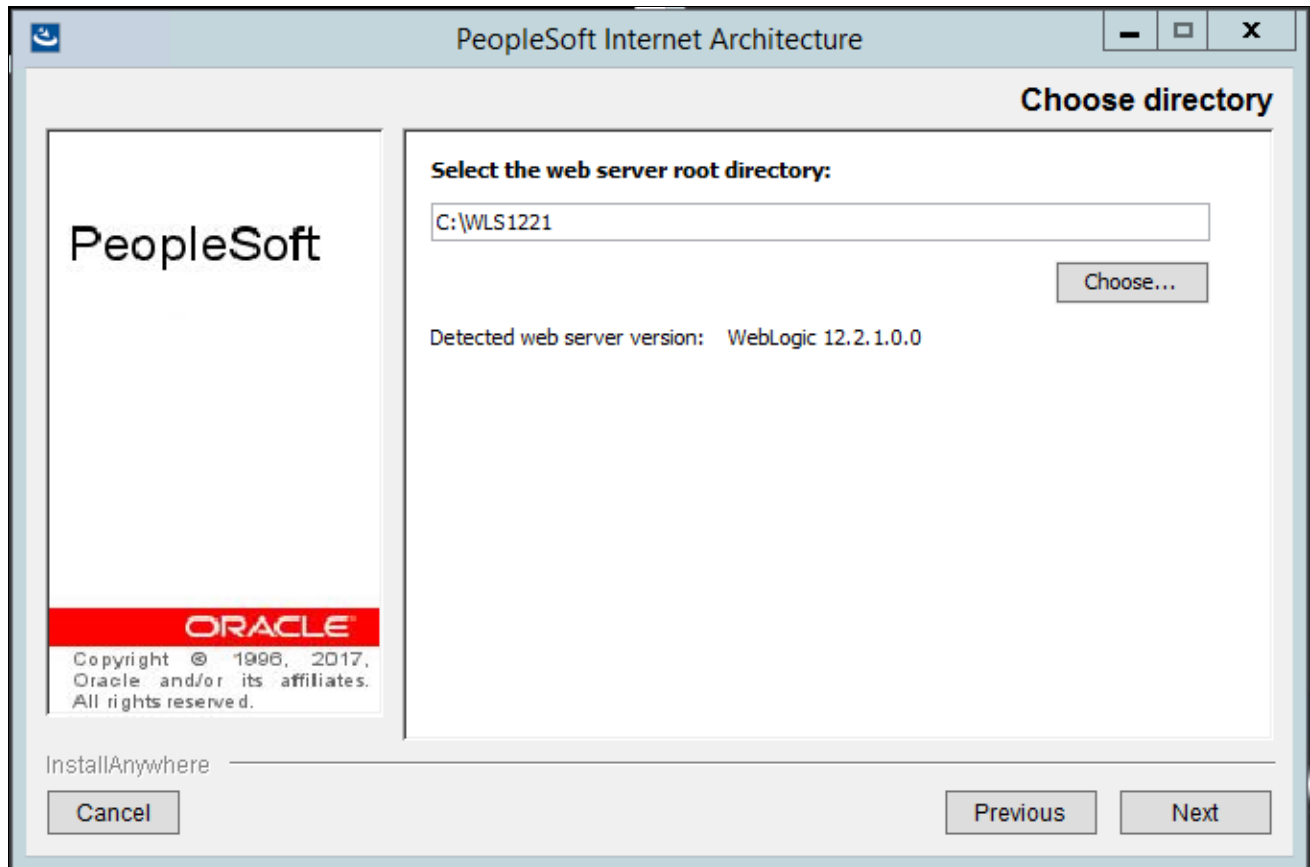


PeopleSoft Internet Architecture Choose the installation type that best suits your needs window

5. Specify the root directory where Oracle WebLogic is installed, *WLS\_HOME*, and click Next.

In this example, the root directory for Oracle WebLogic 12.2.1.0.0 is C:\WLS1221.

**Note.** If you enter an incorrect path for Oracle WebLogic, you receive an error message "Detected web server version: no choices available." Check that you have Oracle WebLogic installed, and in the designated directory.



PeopleSoft Internet Architecture Choose directory window for Oracle WebLogic

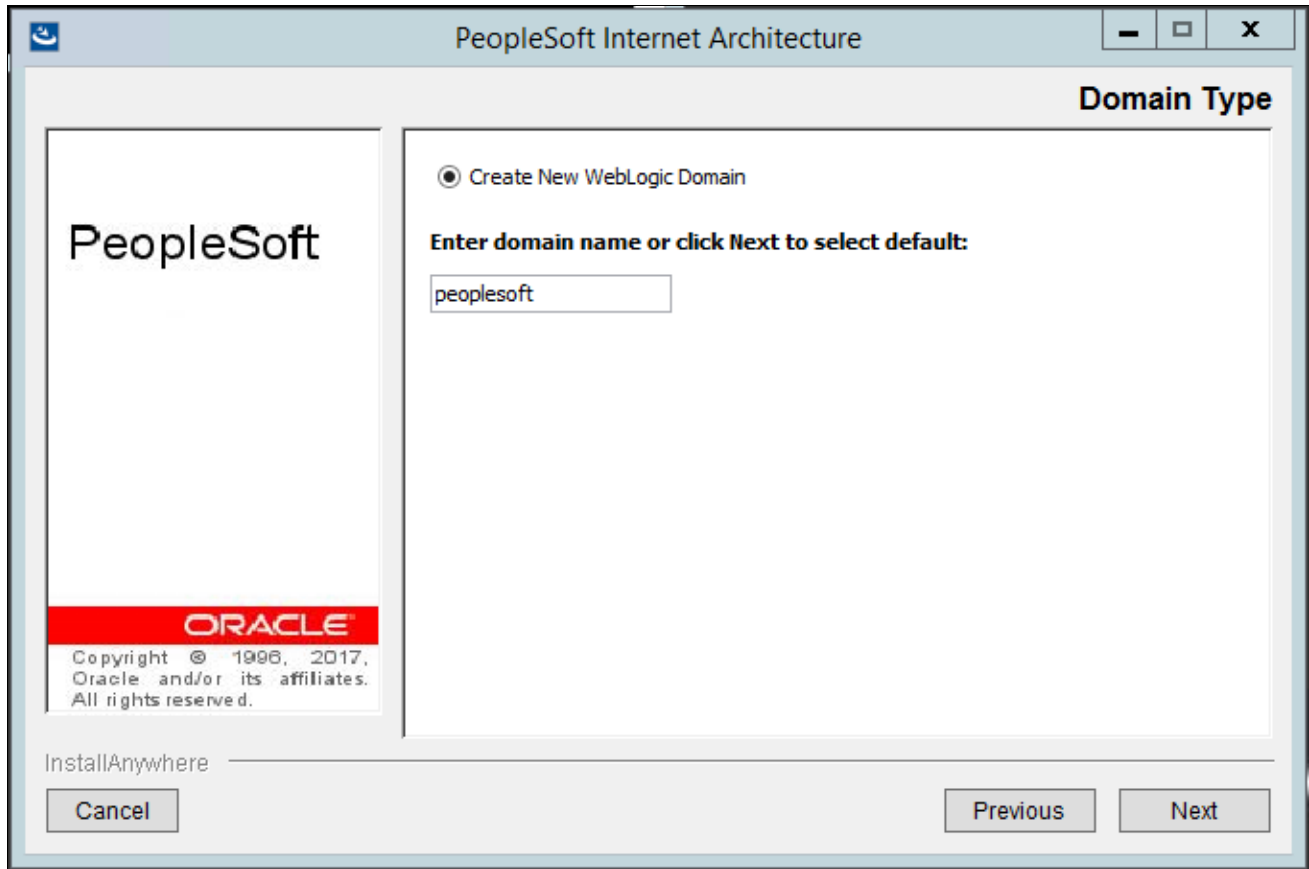
- 6. Enter a domain name or accept the default name on the Domain Type window.

If the PIA installer cannot detect any existing Oracle WebLogic domains, only the option Create New WebLogic Domain is available as shown in this example. The default name is peoplesoft.

**Note.** If the PIA installer detects an existing WebLogic domain, you also see the option Existing WebLogic Domain, which is discussed in the next section. Verify that the option Create New WebLogic Domain is selected for this procedure. The installation process automatically generates a valid domain name in the domain name field, such as peoplesoft1.

See Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain.

Click Next to continue.

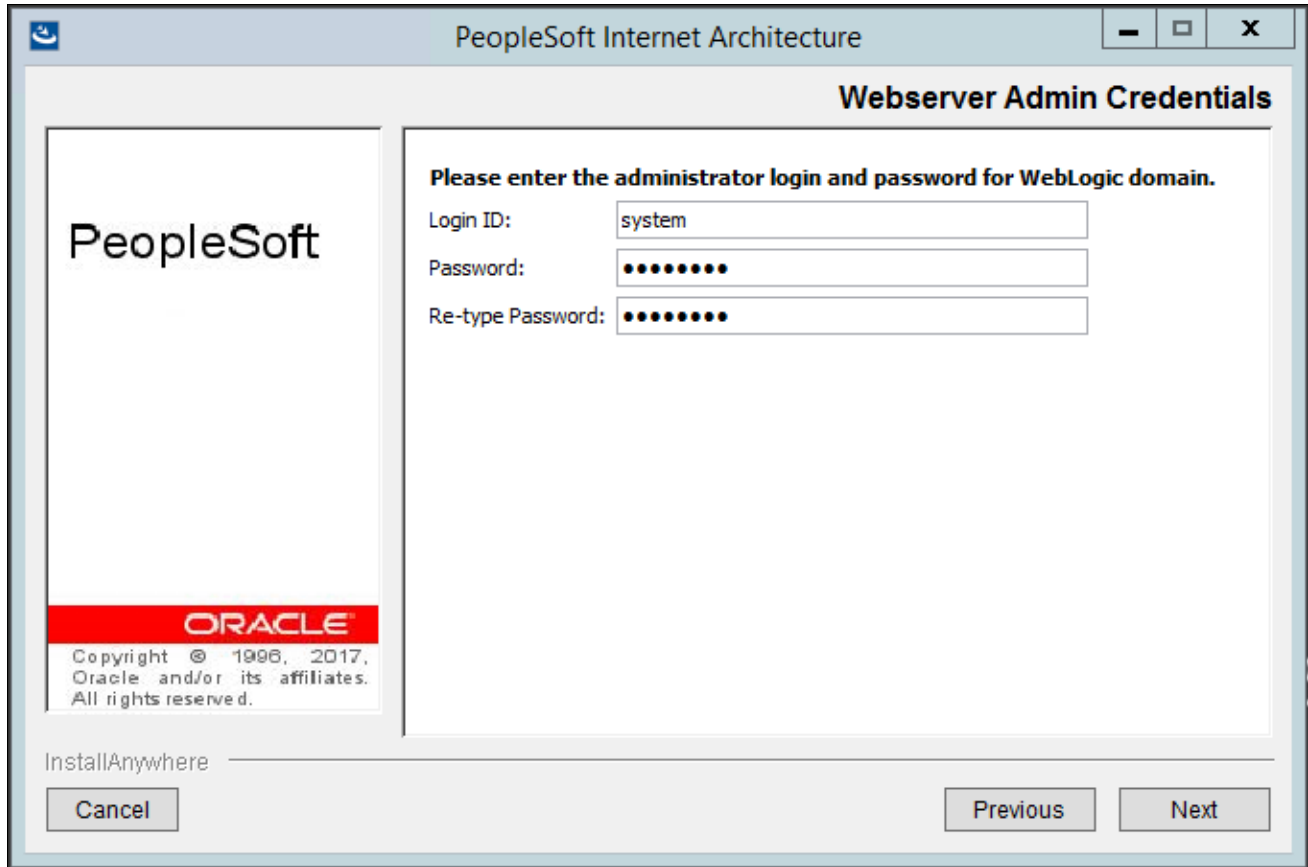


PeopleSoft Internet Architecture Domain Type window for creating a new domain

7. Enter the administrator login ID, and enter and re-enter the password for the new web server domain to be created.

The default login ID is system as shown in this example. The password must be at least 8 alphanumeric characters with at least one number or special character.

Click Next to continue.



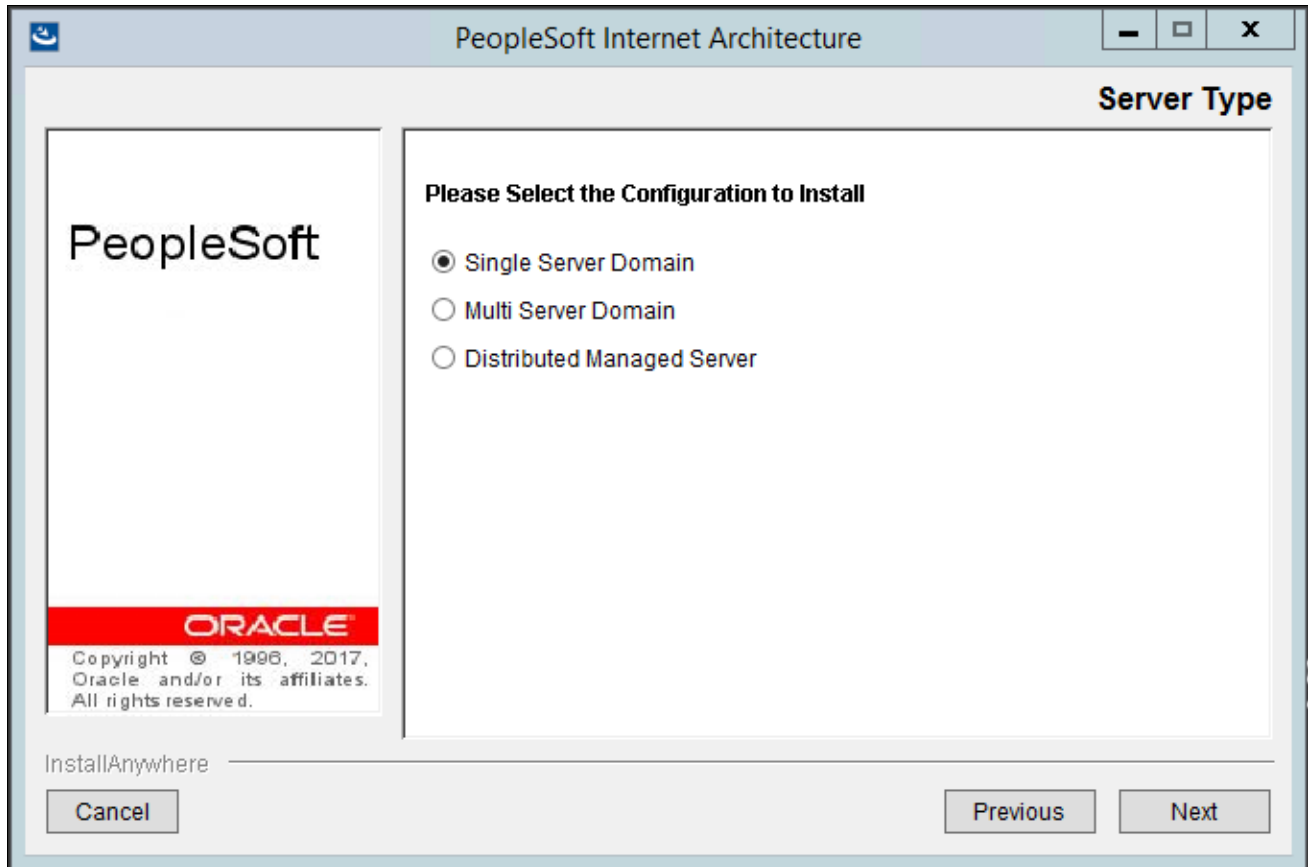
The screenshot shows a window titled "PeopleSoft Internet Architecture" with a subtitle "Webserver Admin Credentials". The window is divided into two main sections. On the left, there is a logo for "PeopleSoft" and the "ORACLE" logo with the text "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." Below this is the text "InstallAnywhere". On the right, there is a form with the heading "Please enter the administrator login and password for WebLogic domain." The form contains three input fields: "Login ID:" with the value "system", "Password:" with eight dots, and "Re-type Password:" with eight dots. At the bottom of the window, there are three buttons: "Cancel", "Previous", and "Next".

PeopleSoft Internet Architecture Webserver Admin Credentials window



8. Select the type of domain to create—single server, multi server, or distributed managed server.

In this example, Single Server Domain is selected.



PeopleSoft Internet Architecture Server Type window

There are three domain configuration options:

- *Single Server Domain*

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. This configuration is very similar to the Oracle WebLogic domain provided in PeopleSoft PeopleTools 8.40 through 8.44.

- *Multi Server Domain*

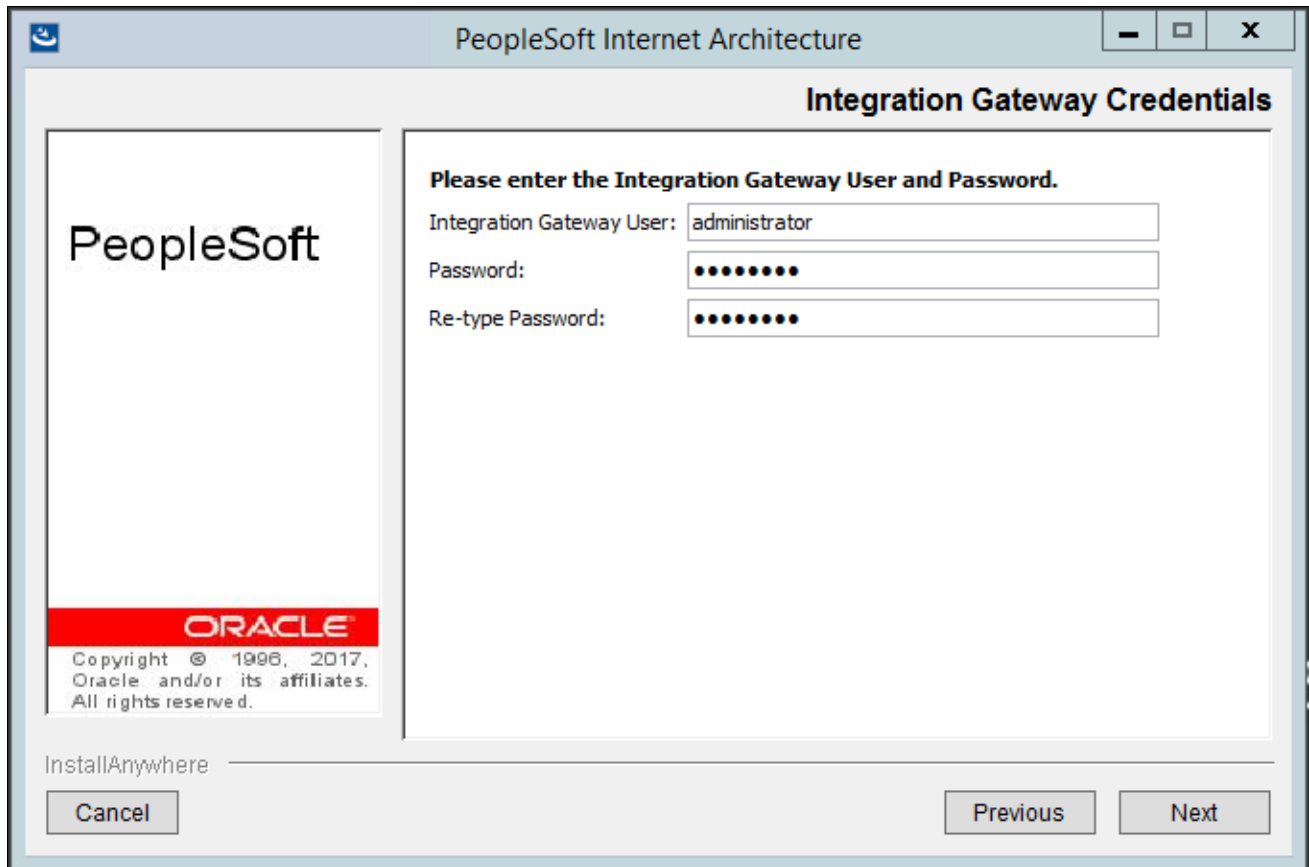
This domain configuration contains seven unique server definitions, an Oracle WebLogic cluster, and the PeopleSoft application split across multiple servers. This configuration is intended for a production environment.

- *Distributed Managed Server*

This option is an extension of the Multi Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

9. Enter the Integration Gateway User name. Enter and re-enter the password for the Integration Gateway User. The default Integration Gateway User is administrator as shown in this example. The password must be at least 8 alphanumeric characters.

See *PeopleTools: Integration Broker Administration*.



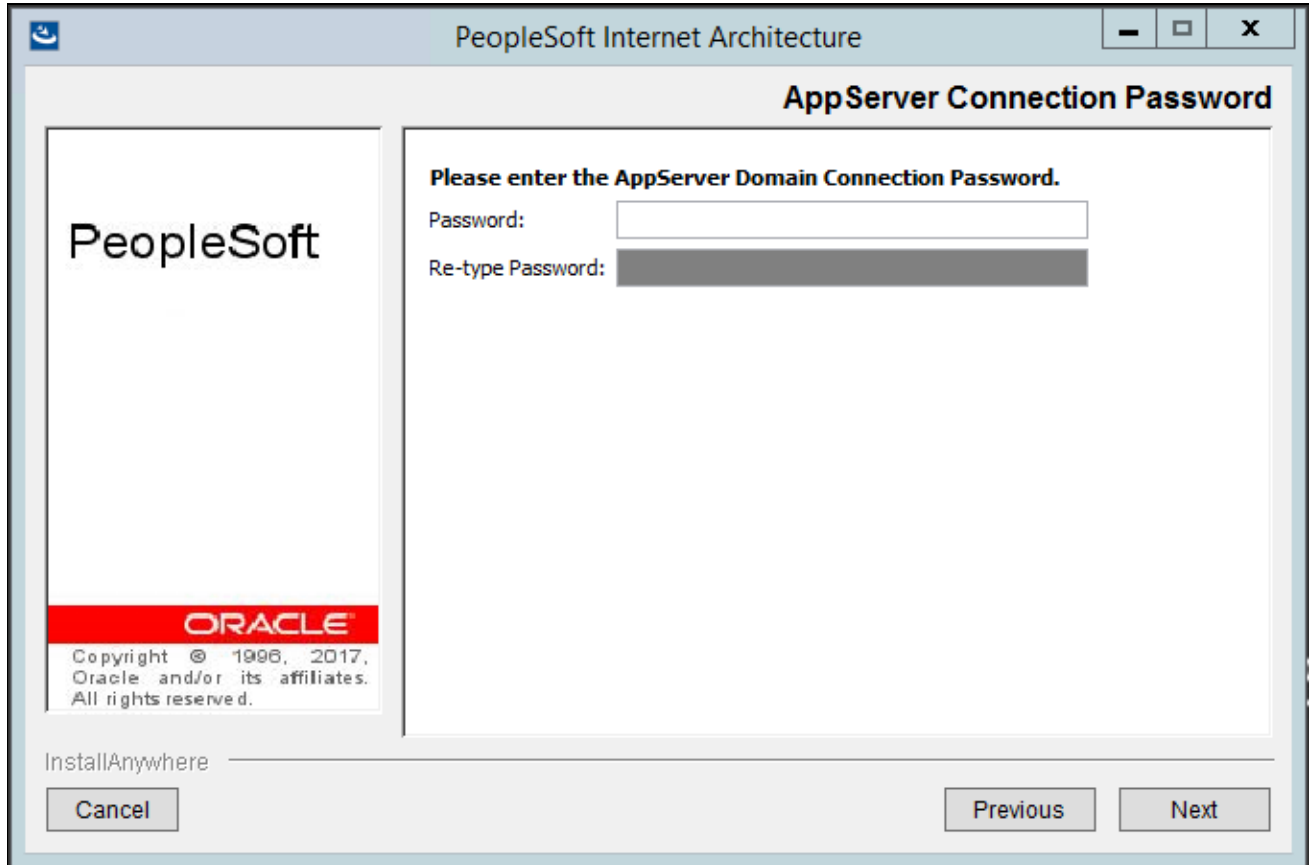
The screenshot shows a window titled "PeopleSoft Internet Architecture" with a subtitle "Integration Gateway Credentials". On the left, there is a logo for "PeopleSoft" and the "ORACLE" logo with copyright information: "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." Below the logo is the text "InstallAnywhere". The main area of the window contains the instruction "Please enter the Integration Gateway User and Password." followed by three input fields: "Integration Gateway User:" with the text "administrator", "Password:" with eight dots, and "Re-type Password:" with eight dots. At the bottom of the window, there are three buttons: "Cancel", "Previous", and "Next".

PeopleSoft Internet Architecture Integration Gateway Credentials window

10. Enter the AppServer Domain Connection password (optional).

If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank as shown in this example. This password will be propagated to the Integration Gateway.

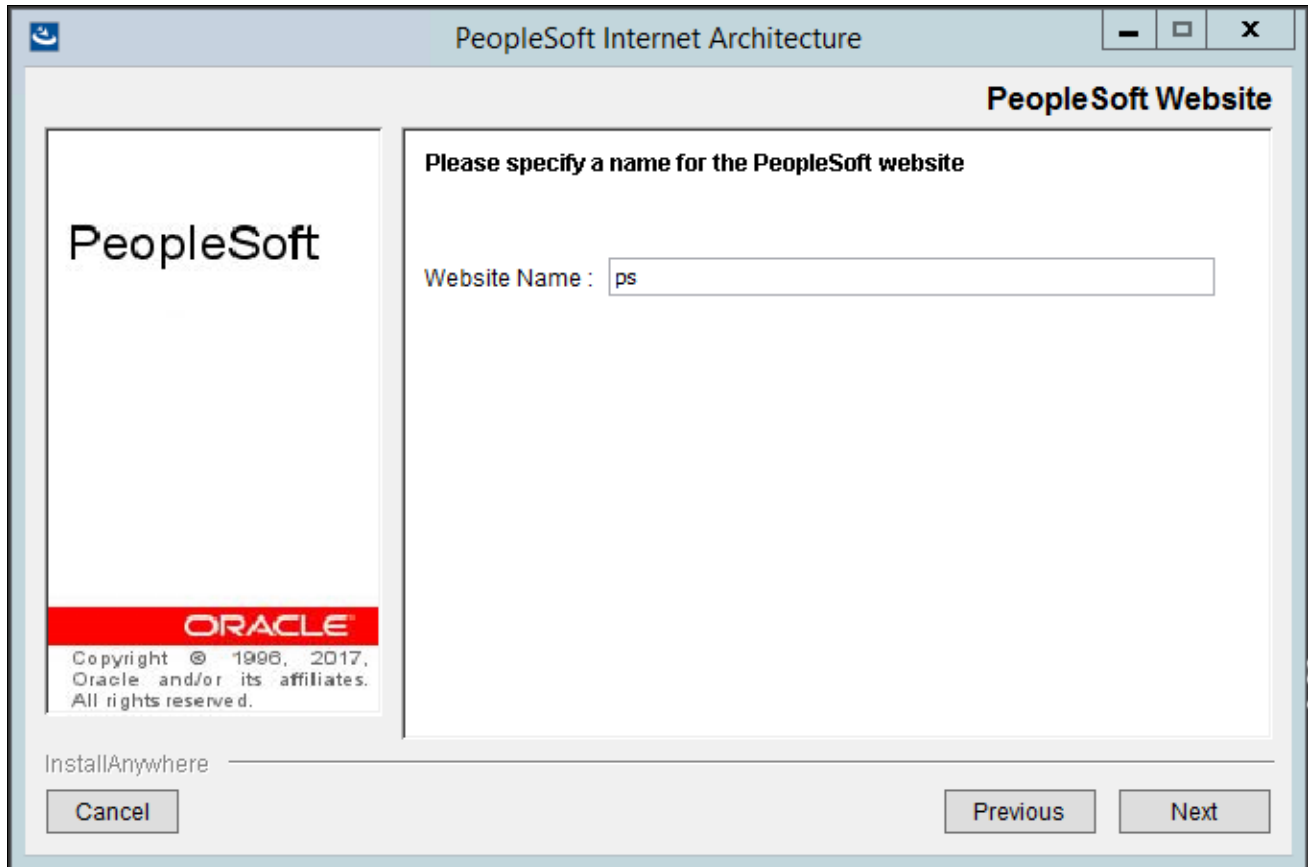
For more information about Application Server domain configuration and setting domain parameters, see the product documentation *PeopleTools: System and Server Administration*.



PeopleSoft Internet Architecture AppServer Connection Password window

11. Enter a PeopleSoft web site name; the default is ps as shown in this example.

**Warning!** The site name can include underscores ( \_ ), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my\_site\_3 or my\_newwin\_site).



PeopleSoft Internet Architecture PeopleSoft Website window

12. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the Authentication Token Domain (optional), and click Next.

The screenshot shows a window titled "PeopleSoft Internet Architecture" with a "Server Information" section. The section contains the following fields and values:

AppServer Host Name:	MACHINE_NAME
Jolt Listener (JSL) Port:	9000
HTTP Port:	80
HTTPS Port:	443
Authentication Token Domain:(optional)	.example.com

Below the fields is a note: "Note: Load balancing and failover can be directly defined in the configuration.properties f". At the bottom of the window are three buttons: "Cancel", "Previous", and "Next".

PeopleSoft Internet Architecture Server Information window

- *AppServer name*

For the AppServer name setting, enter the name of your application server, MACHINE\_NAME in this example.

- *JSL Port*

For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000 as in this example.)

See "Configuring the Application Server on Windows."

See "Configuring the Application Server on UNIX."

- *HTTP Port*

The default value for the HTTP port is 80, as shown in this example.

- *HTTPS Port*

The default value for the HTTPS port is 443, as shown in this example.

- *Authentication Token Domain*

---

**Note.** 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](#).

If you enter a value for Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName/ps/signon.html`. If you do enter a value for the authentication domain (for example, `.myCompany.com`), the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName.myCompany.com/ps/signon.html`. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example `http://MachineName:8080/ps/signon.html` if there is no authentication domain, or `http://MachineName.myCompany.com:8080/ps/signon.html` if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

See [Understanding the PeopleSoft Pure Internet Architecture](#).

13. Enter the details for the web profile, PROD, or enter another name.

Enter a Web Profile Name, and enter the password two times. The example below shows the default web profile name, PROD, and default user ID, PTWEBSERVER.

The web profile name will be used to configure this web site. You can specify one of the other pre-delivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, PTWEBSERVER, be sure to review the information on web profile configuration and security in the *PeopleTools: Portal Technology* product documentation.

**Note.** If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step. The password must be at least 8 alphanumeric characters.

See the *PeopleTools: Security Administration* product documentation for the steps required to add a User Profile.

The screenshot shows a window titled "PeopleSoft Internet Architecture" with a subtitle "Web Profile Credentials". On the left side, there is a "PeopleSoft" logo and the Oracle logo with the text "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." Below this is the "InstallAnywhere" logo. The main area of the window contains a form with the following fields:

- Web Profile Name: PROD
- User ID: PTWEBSERVER
- Password: [masked with dots]
- Re-type Password: [masked with dots]

At the bottom of the window, there is a "Cancel" button on the left and "Previous" and "Next" buttons on the right.

PeopleSoft Internet Architecture Web Profile Credentials window

14. Specify the root directory for the Report Repository, and click Next.

Make sure that the report repository directory is shared. You must have write access to the Report Repository directory. The default is C:\psreports, as shown in this example.

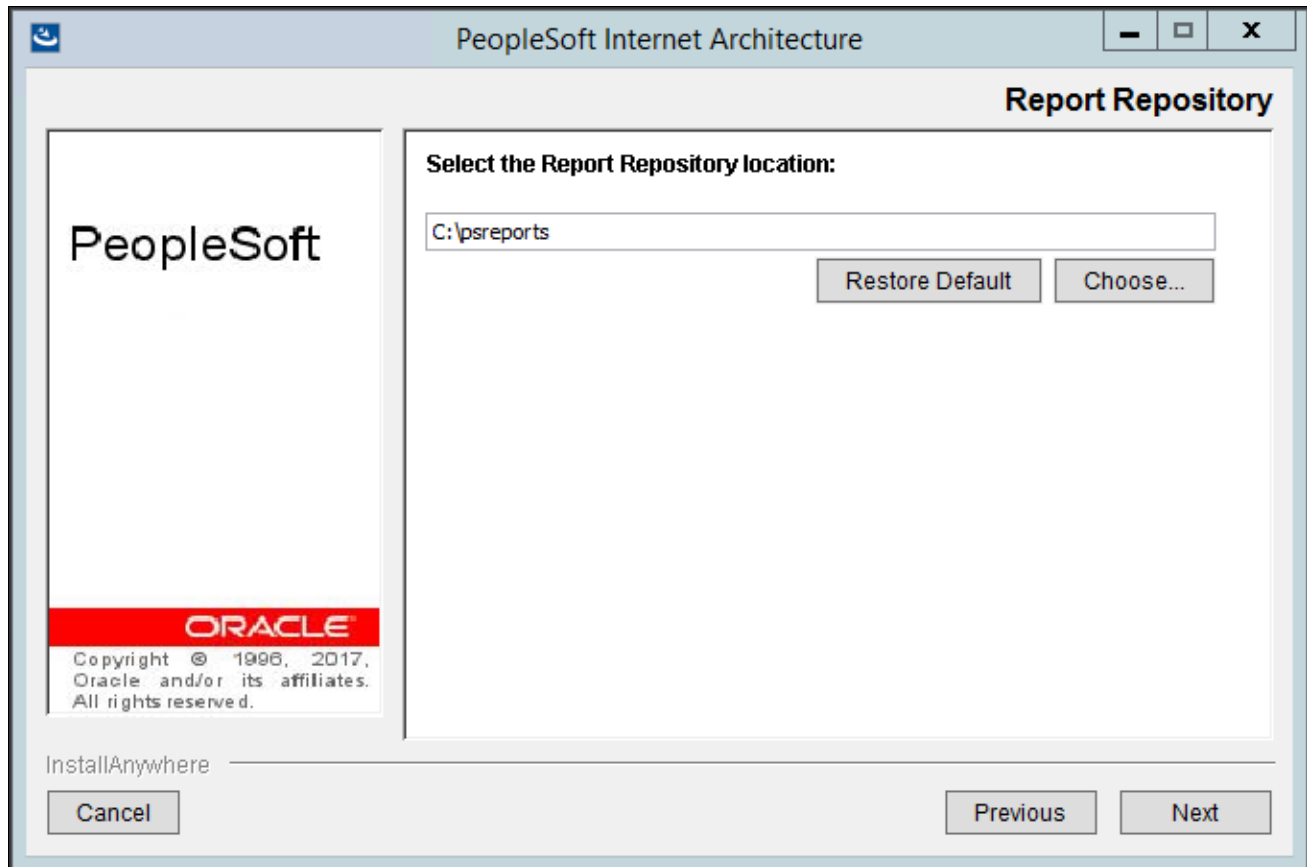
---

**Note.** In setting up the Process Scheduler to transfer reports, if you choose the FTP transfer protocol, use the same directory for the Home Directory as you use here for the report repository.

---

See *PeopleTools: Portal Technology*.

See "Setting Up Process Scheduler on Windows," Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository.

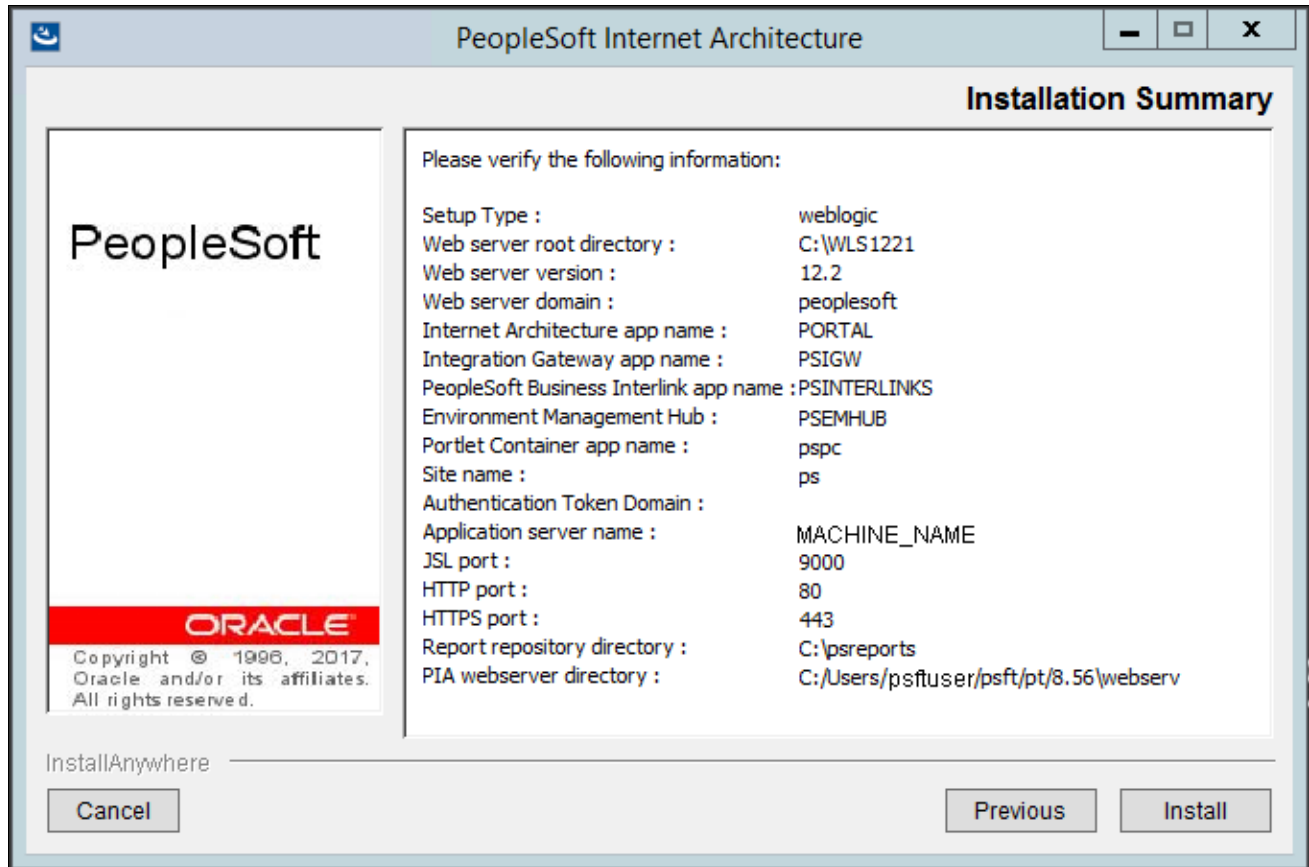


PeopleSoft Internet Architecture Report Repository window



15. Verify all of your selections (click Back if you need to make any changes), and click Install to begin the installation.

The window displays a summary of the installation information, such as web server software, web server root directory, version, and so on.



PeopleSoft Internet Architecture Installation Summary window

An indicator appears showing the progress of your installation.

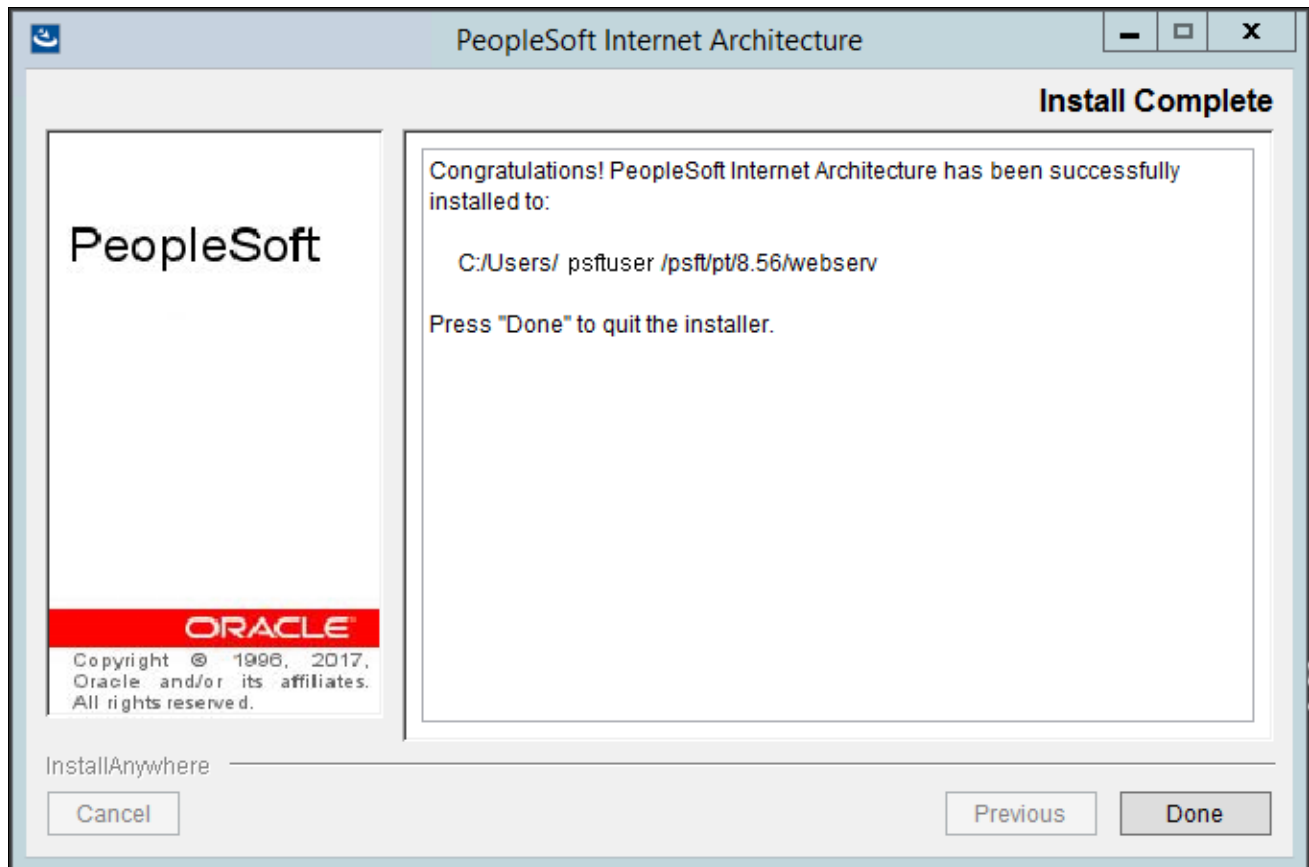
## 16. Click Finish to complete the installation.

The default installation directory for the PIA domain is `<PIA_HOME>\webserv\<domain_name>`. The Install Complete window displays the parent installation directory for the domain. In this example, this is `C:/Users/psftuser/psft/pt/8.56/webserv`.

---

**Note.** If you are installing into an existing domain, you need to restart that domain.

---



PeopleSoft Internet Architecture Install Complete window

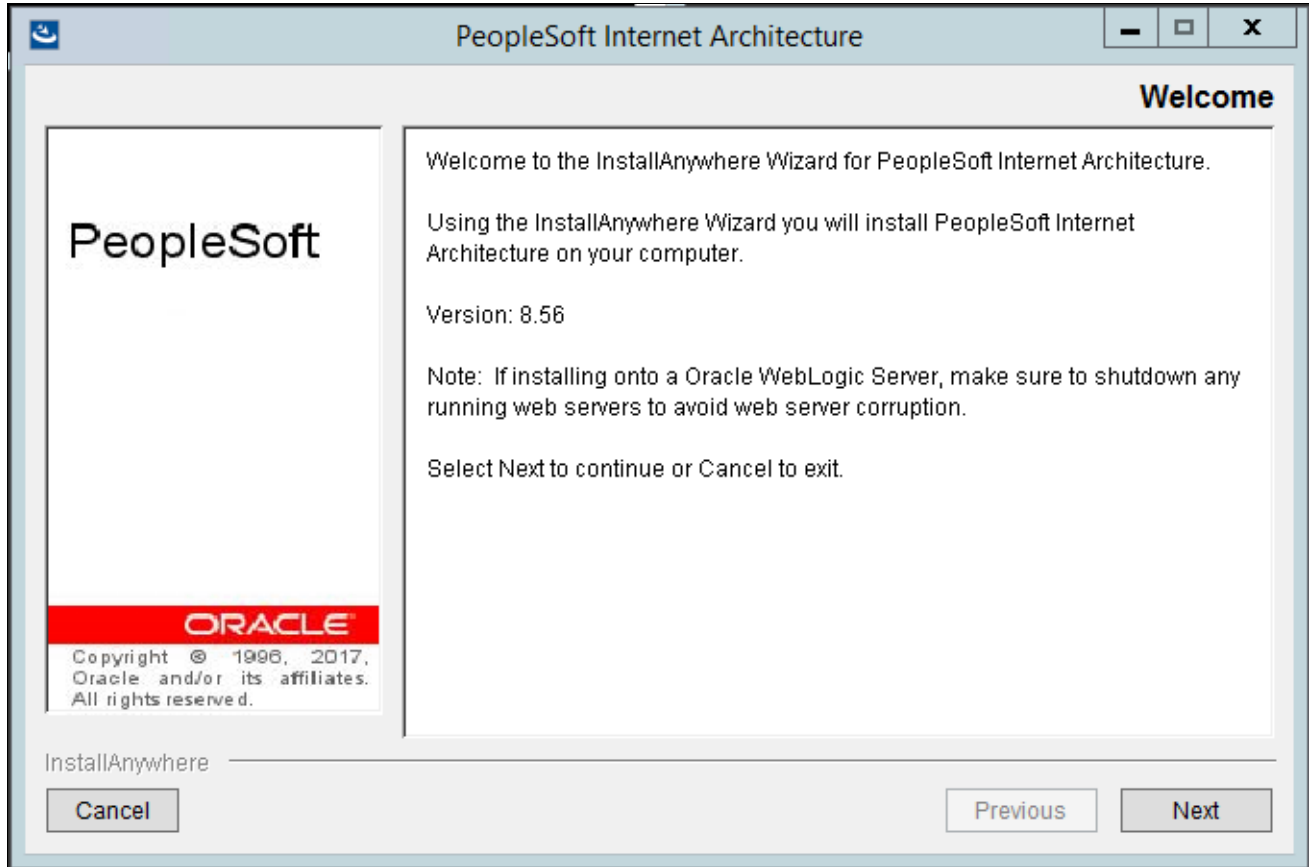
## Task 9A-2-2: Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain

Use these instructions to install the PeopleSoft Pure Internet Architecture on an existing Oracle WebLogic domain. See the previous section to install on a new Oracle WebLogic domain.

1. Go to `PS_HOME\setup\PsmPPIAInstall` and run `setup.bat`.

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

- 2. Click Next on the Welcome to the InstallAnywhere Wizard for PeopleSoft Internet Architecture window. The window displays the PeopleSoft PeopleTools version, 8.56 in this example, and includes this note: "If installing onto a Oracle WebLogic Server, make sure to shutdown any running web servers to avoid web server corruption."

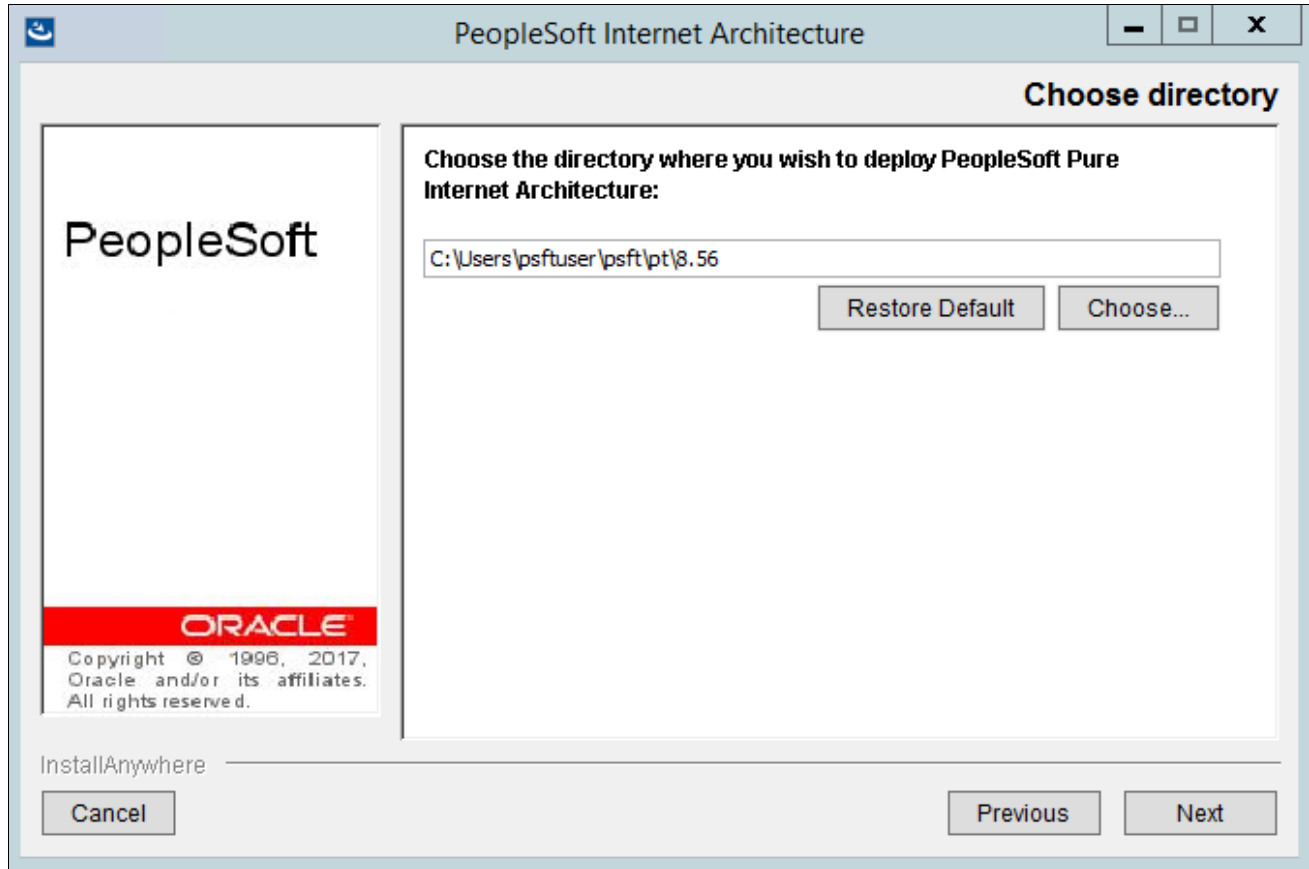


PeopleSoft Internet Architecture Welcome window

3. Enter the location where you want to install the PeopleSoft Pure Internet Architecture, referred to in this documentation as *PIA\_HOME*.

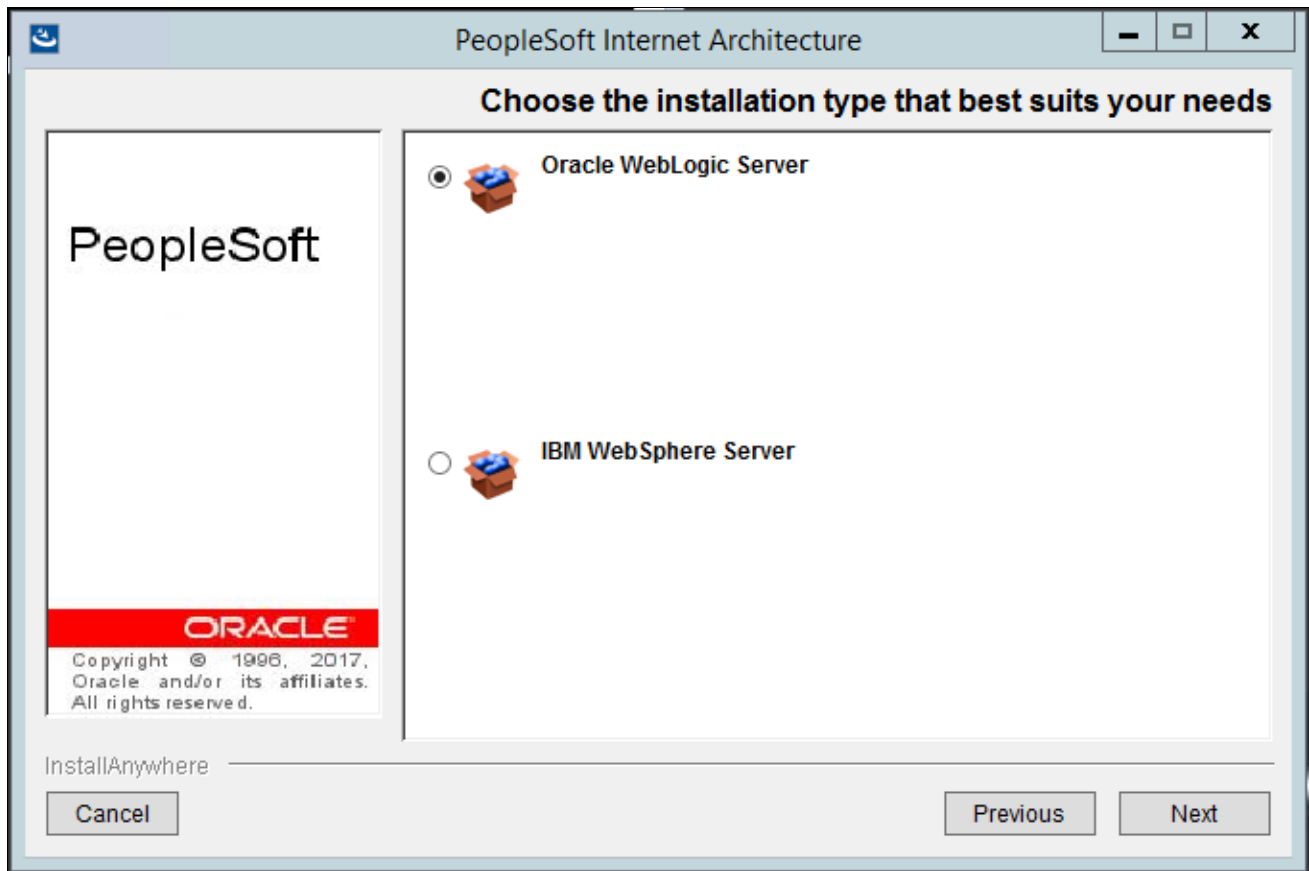
In this example, the directory is C:\Users\psftuser\psft\pt\8.56. The default location for *PIA\_HOME* is the same as *PS\_CFG\_HOME*.

See "Preparing for Installation," Planning Your Initial Configuration.



PeopleSoft Internet Architecture Choose directory window

- 4. Select Oracle WebLogic Server as in this example, and then click Next.

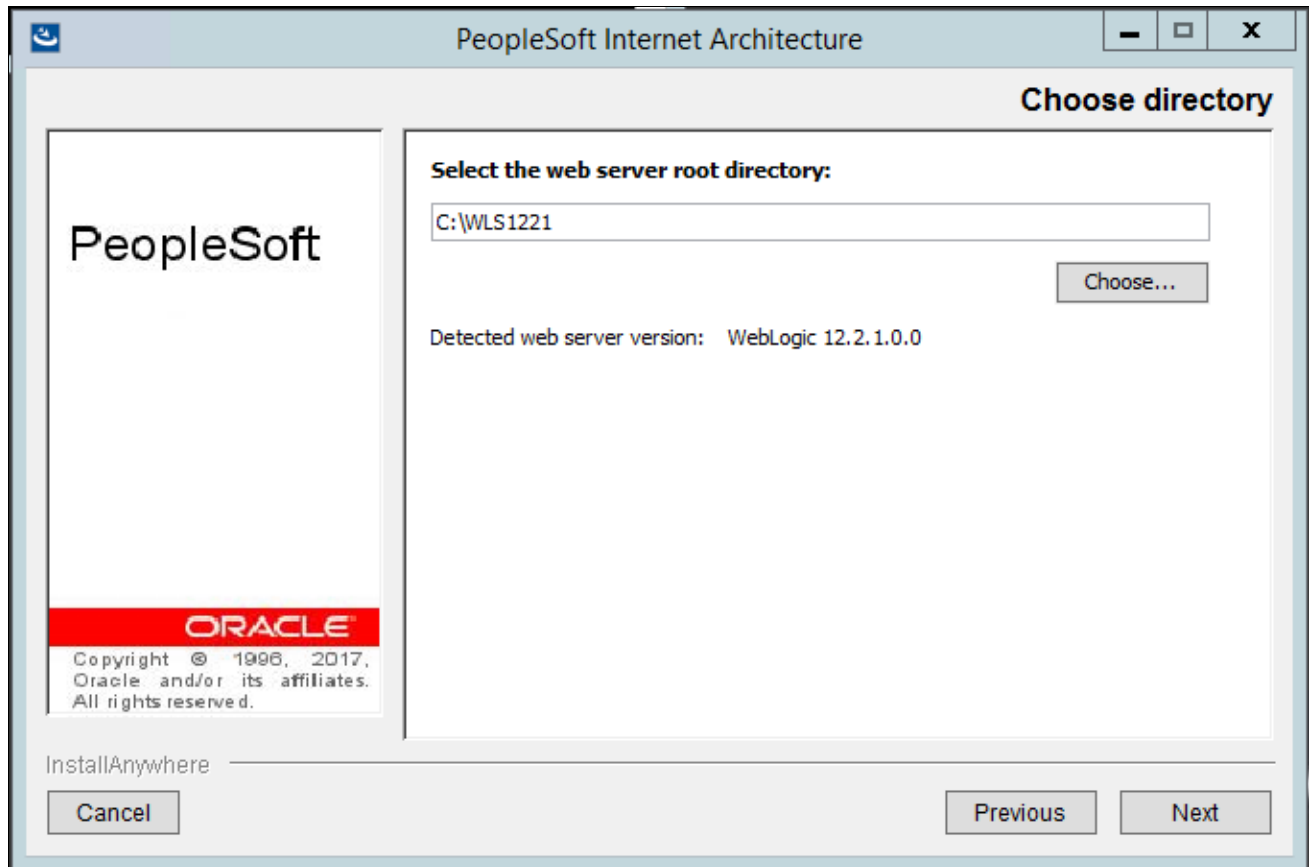


PeopleSoft Internet Architecture Choose the installation type that best suits your needs window

5. Specify the root directory where Oracle WebLogic is installed, *WLS\_HOME*, and click Next.

In this example, the root directory for Oracle WebLogic 12.2.1.0.0 is C:\WLS1221.

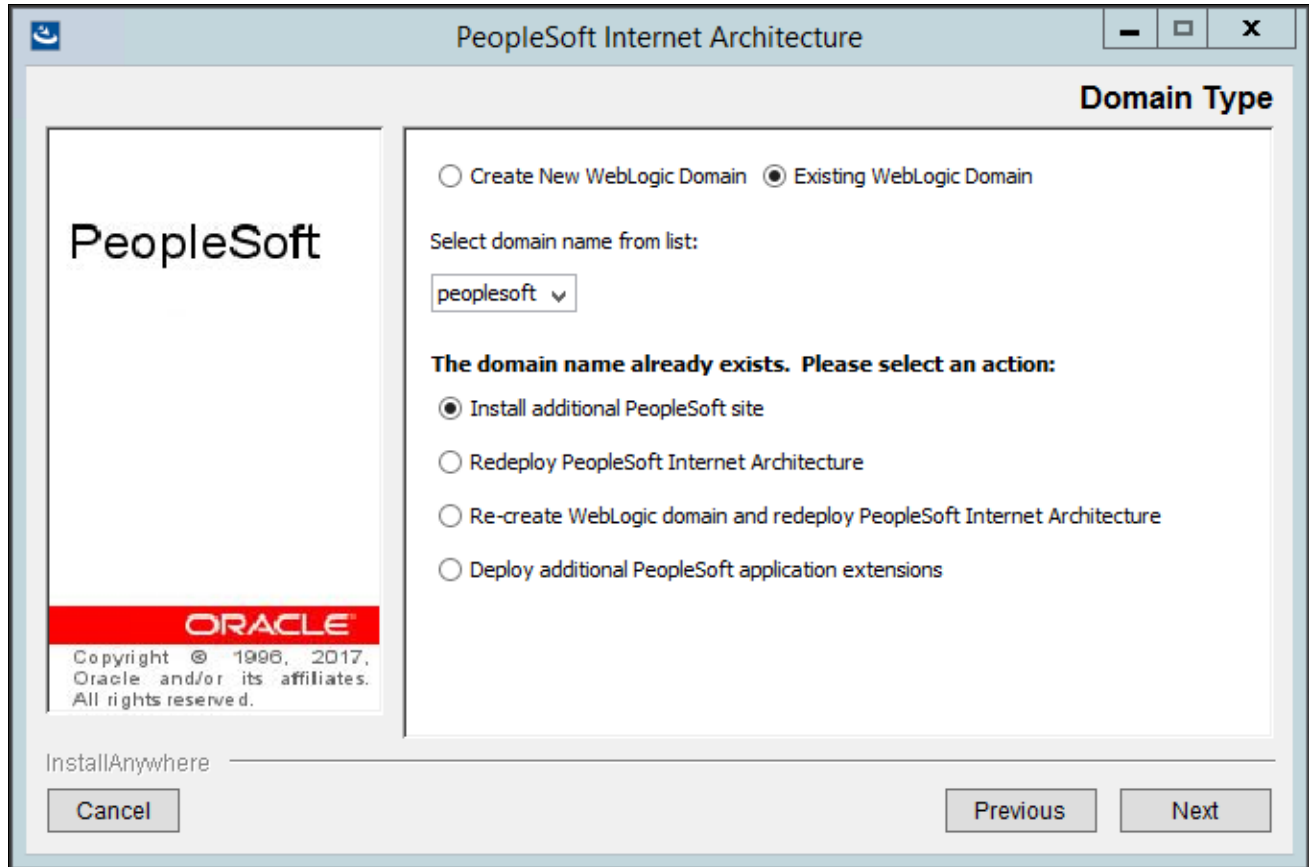
**Note.** If you enter an incorrect path for Oracle WebLogic, you receive an error message "Detected web server version: no choices available." Check that you have Oracle WebLogic installed, and in the designated directory.



PeopleSoft Internet Architecture Choose directory window for Oracle WebLogic

6. Select Existing WebLogic Domain on the Domain Type window.

7. Select the domain name from the drop-down list, peoplesoft in this example, and select one of the following options:



PeopleSoft Internet Architecture Domain Type window with options for Existing WebLogic Domain

- *Install additional PeopleSoft site*

This option is relevant only to the PeopleSoft PORTAL web application, and does not modify or revert any other configuration settings. Select this option to install only the necessary files for defining an additional PeopleSoft site onto an existing Oracle WebLogic configuration. The new site will be accessed using its name in the URL. A site named "CRM" would be accessed using a URL similar to `http://mywebserver_machine/CRM`. To reset or re-create an existing PeopleSoft site, simply enter that site's name as the site to create. On your web server, a PeopleSoft site is comprised of the following directories within the PORTAL web application:

```
<WEBLOGIC_DOMAIN>\applications\peoplesoft\PORTAL\<site>|*
```

```
<WEBLOGIC_DOMAIN>\applications\peoplesoft\PORTAL\WEB-INF\psftdocs\<site>|*
```

- *Redeploy PeopleSoft Internet Architecture*

This option affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to redeploy all of the web components of the PeopleSoft Pure Internet Architecture. The redeployment process updates all of the web components of the PeopleSoft Pure Internet Architecture, without modifying the configuration files or scripts that belong to the Oracle WebLogic server domain.

- *Re-create WebLogic domain and redeploy PeopleSoft Internet Architecture*

This option affects Oracle WebLogic Server domain configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to

completely remove an existing Oracle WebLogic domain and deploy the PeopleSoft Pure Internet Architecture components to create the newly specified PeopleSoft site.

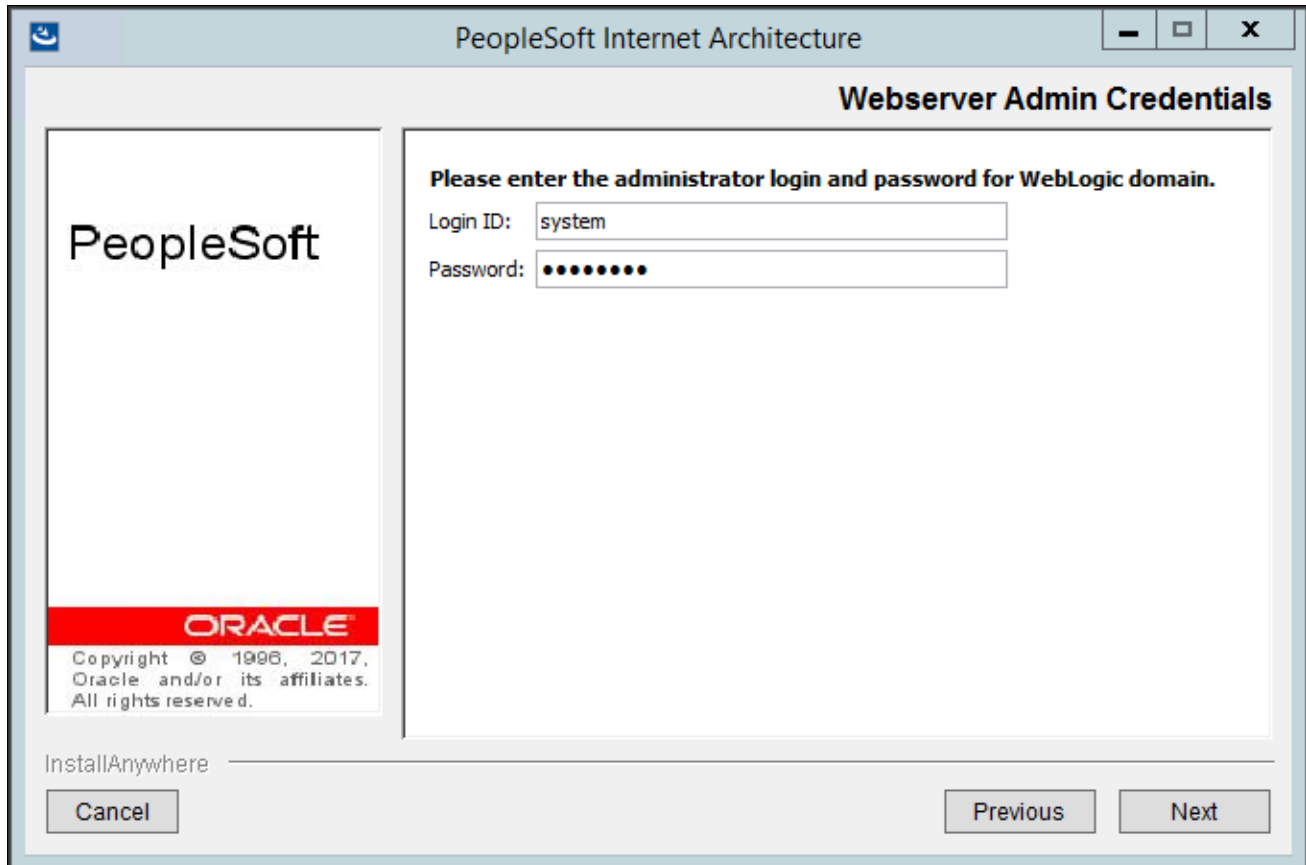
**Warning!** Re-creating an existing domain will delete everything previously installed into that domain.

See *PeopleTools: Portal Technology*.

- *Deploy additional PeopleSoft application extensions*

This option is solely for use with PeopleSoft applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see if this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

8. Enter the Login ID and password that you used when creating the existing domain:



PeopleSoft Internet Architecture

**Webserver Admin Credentials**

Please enter the administrator login and password for WebLogic domain.

Login ID:

Password:

PeopleSoft

ORACLE

Copyright © 1996, 2017,  
Oracle and/or its affiliates.  
All rights reserved.

InstallAnywhere

Cancel Previous Next

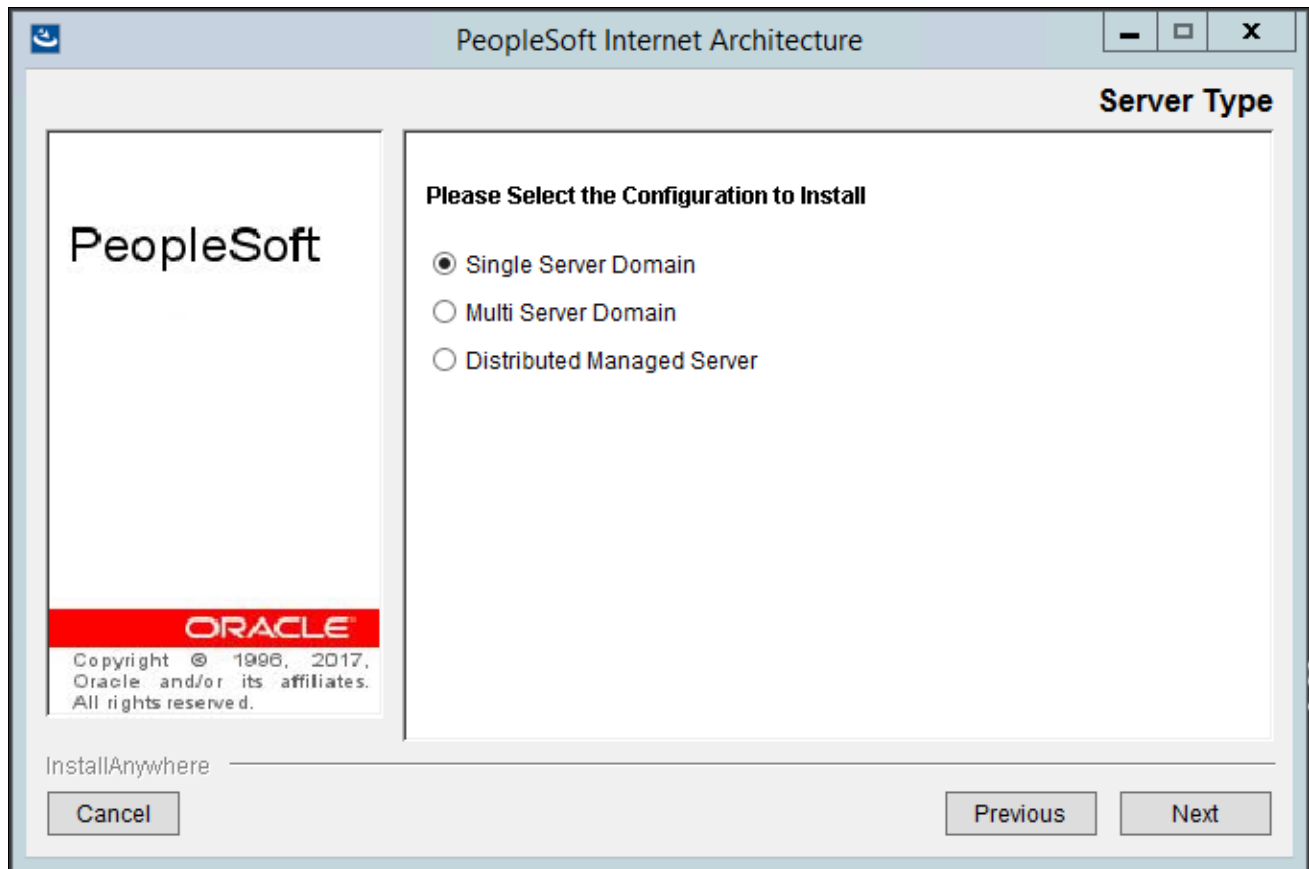
PeopleSoft Internet Architecture Webserver Admin Credentials window for an existing domain



9. Select the type of domain to create—single server, multi server, or distributed managed server.

In this example, Single Server Domain is selected.

**Note.** Depending upon the operation you are carrying out for an existing domain, you may not see this window.



PeopleSoft Internet Architecture Server Type window

There are three domain configuration options:

- *Single Server Domain*

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. This configuration is very similar to the Oracle WebLogic domain provided in PeopleSoft PeopleTools 8.40 through 8.44.

- *Multi Server Domain*

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.

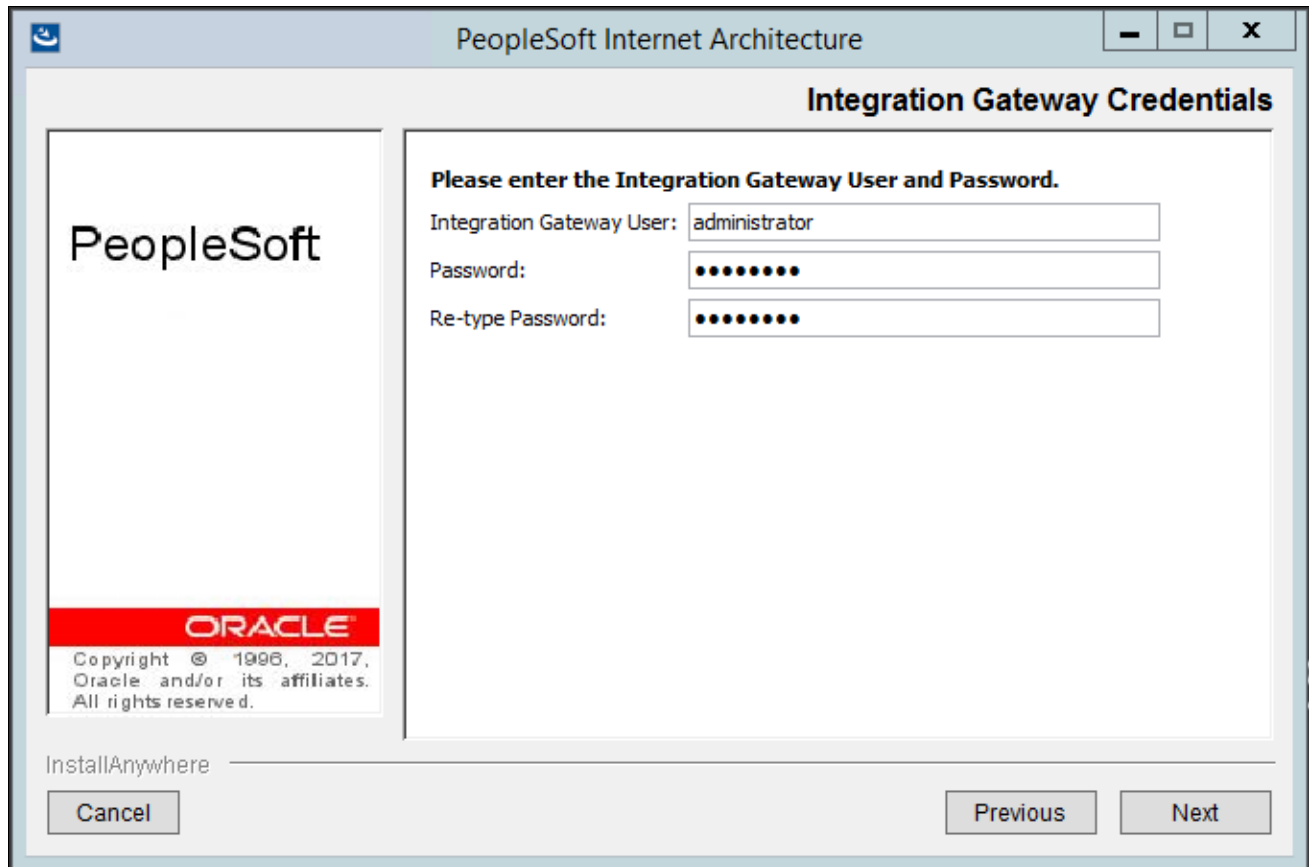
- *Distributed Managed Server*

This option is an extension of the Multi Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

10. Enter the Integration Gateway User name. Enter and re-enter the password for the Integration Gateway User.

The default Integration Gateway User is administrator as shown in this example. The password must be at least 8 alphanumeric characters.

See *PeopleTools: Integration Broker Administration*.



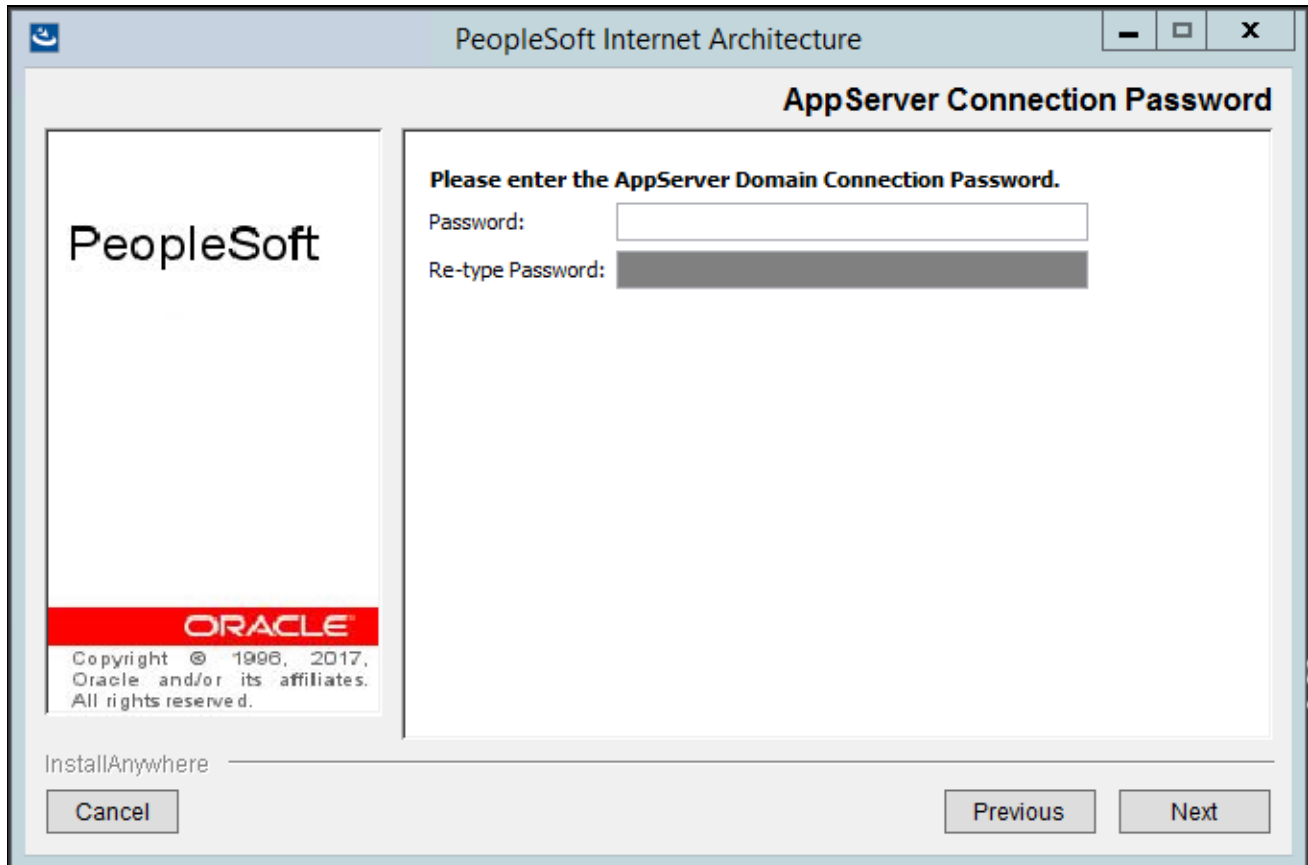
The screenshot shows a window titled "PeopleSoft Internet Architecture" with a subtitle "Integration Gateway Credentials". On the left, there is a logo for "PeopleSoft" and the "ORACLE" logo with copyright information: "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." Below the logo is the text "InstallAnywhere". The main area of the window contains the instruction "Please enter the Integration Gateway User and Password." followed by three input fields: "Integration Gateway User:" with the text "administrator", "Password:" with eight dots, and "Re-type Password:" with eight dots. At the bottom of the window, there are three buttons: "Cancel", "Previous", and "Next".

PeopleSoft Internet Architecture Integration Gateway Credentials window

11. Enter the AppServer Domain Connection password (optional).

If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank as shown in this example. This password will be propagated to the Integration Gateway.

For more information about Application Server domain configuration and setting domain parameters, see the product documentation *PeopleTools: System and Server Administration*.



PeopleSoft Internet Architecture AppServer Connection Password window

12. If you selected the option Deploy additional PeopleSoft application extensions on the Domain Type window, enter the location where you installed the PeopleSoft application software, *PS\_APP\_HOME*.
13. For the option Deploy additional PeopleSoft application extensions, select the application packages to deploy.

14. Enter a PeopleSoft web site name; in this example the name is psone.

**Warning!** The site name can include underscores ( \_ ), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my\_site\_3 or my\_newwin\_site).



PeopleSoft Internet Architecture PeopleSoft Website window

15. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the Authentication Token Domain (optional), and click Next.

**Note.** The fields that appear on this window may change depending upon the type of operation you are carrying out for an existing domain.

PeopleSoft Internet Architecture Server Information window

- *AppServer name*  
For the AppServer name setting, enter the name of your application server, MACHINE\_NAME in this example.
- *JSL Port*  
For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000 as in this example.)  
See the chapter on configuring the application server in this documentation.
- *HTTP Port*  
The default value for the HTTP port is 80, as shown in this example.
- *HTTPS Port*  
The default value for the HTTPS port is 443, as shown in this example.
- *Authentication Token Domain*

---

**Note.** 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](#).

If you enter a value for Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName/ps/signon.html`. If you do enter a value for the authentication domain (for example, `.myCompany.com`), the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName.myCompany.com/ps/signon.html`. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example `http://MachineName:8080/ps/signon.html` if there is no authentication domain, or `http://MachineName.myCompany.com:8080/ps/signon.html` if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

See [Understanding the PeopleSoft Pure Internet Architecture](#).

16. Enter the details for the web profile, PROD, or enter another name.

Enter a Web Profile Name, and enter the password two times. The example below shows the default web profile name, PROD, and default user ID, PTWEBSERVER.

The web profile name will be used to configure this web site. You can specify one of the other pre-delivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, PTWEBSERVER, be sure to review the information on web profile configuration and security in the *PeopleTools: Portal Technology* product documentation.

**Note.** If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step. The password must be at least 8 alphanumeric characters.

See the *PeopleTools: Security Administration* product documentation for the steps required to add a User Profile.

The screenshot shows a window titled "PeopleSoft Internet Architecture" with a subtitle "Web Profile Credentials". On the left side, there is a "PeopleSoft" logo and an "ORACLE" logo with the text "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." Below this is the "InstallAnywhere" logo. The main area of the window contains a text box with the following text: "Please enter the Name of the Web Profile used to configure the webserver. The user id and password will be used to retrieve the web profile from the database. (NOTE: Other available preset web profile names are 'TEST', 'DEV', and 'KIOSK'.)" Below this text are four input fields: "Web Profile Name:" with the value "PROD", "User ID:" with the value "PTWEBSERVER", "Password:" with a masked password of 8 dots, and "Re-type Password:" with a masked password of 8 dots. At the bottom left is a "Cancel" button, and at the bottom right are "Previous" and "Next" buttons.

PeopleSoft Internet Architecture Web Profile Credentials window

17. Specify the root directory for the Report Repository, and click Next.

Make sure that the report repository directory is shared. You must have write access to the Report Repository directory. The default is C:\psreports, as shown in this example.

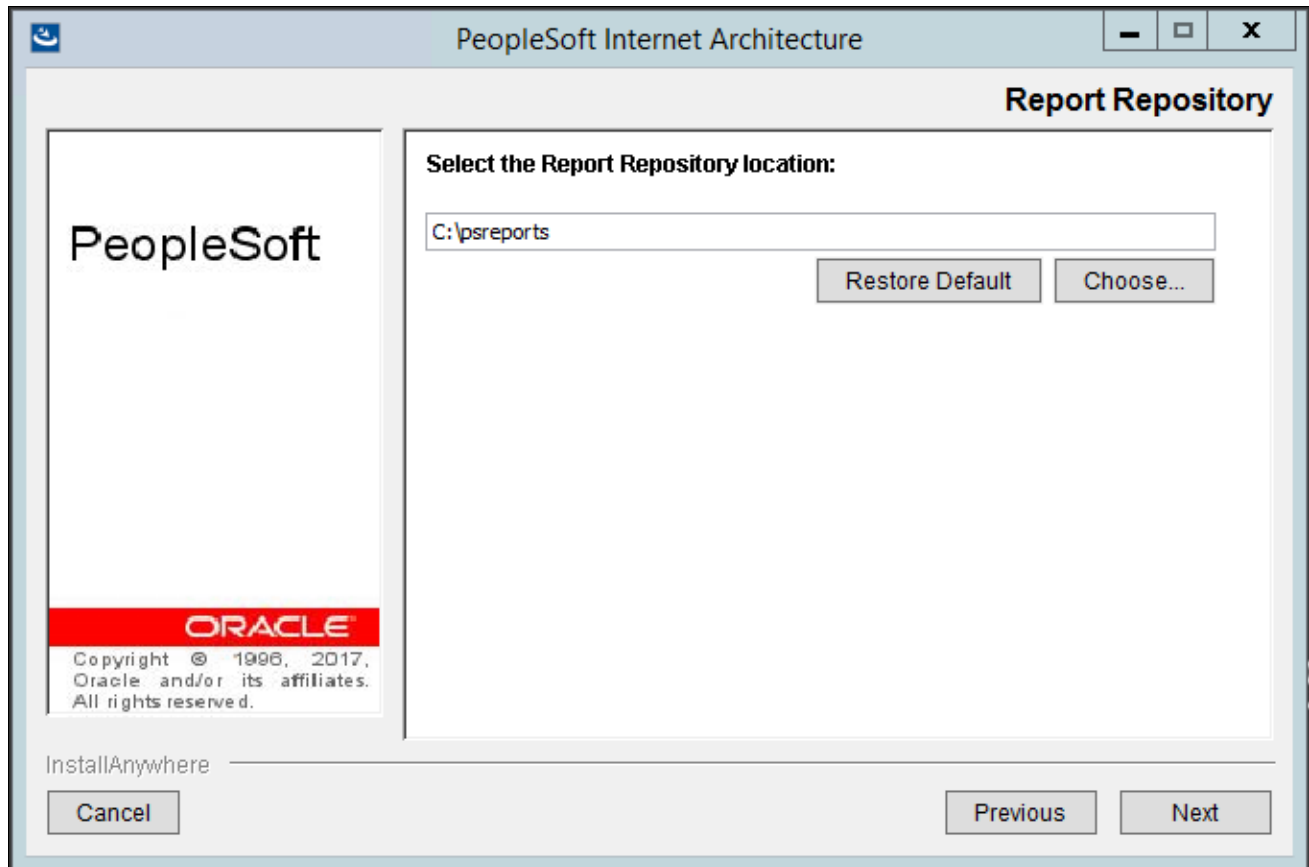
---

**Note.** In setting up the Process Scheduler to transfer reports, if you choose the FTP transfer protocol, use the same directory for the Home Directory as you use here for the report repository.

---

See *PeopleTools: Portal Technology*.

See "Setting Up Process Scheduler on Windows," Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository.

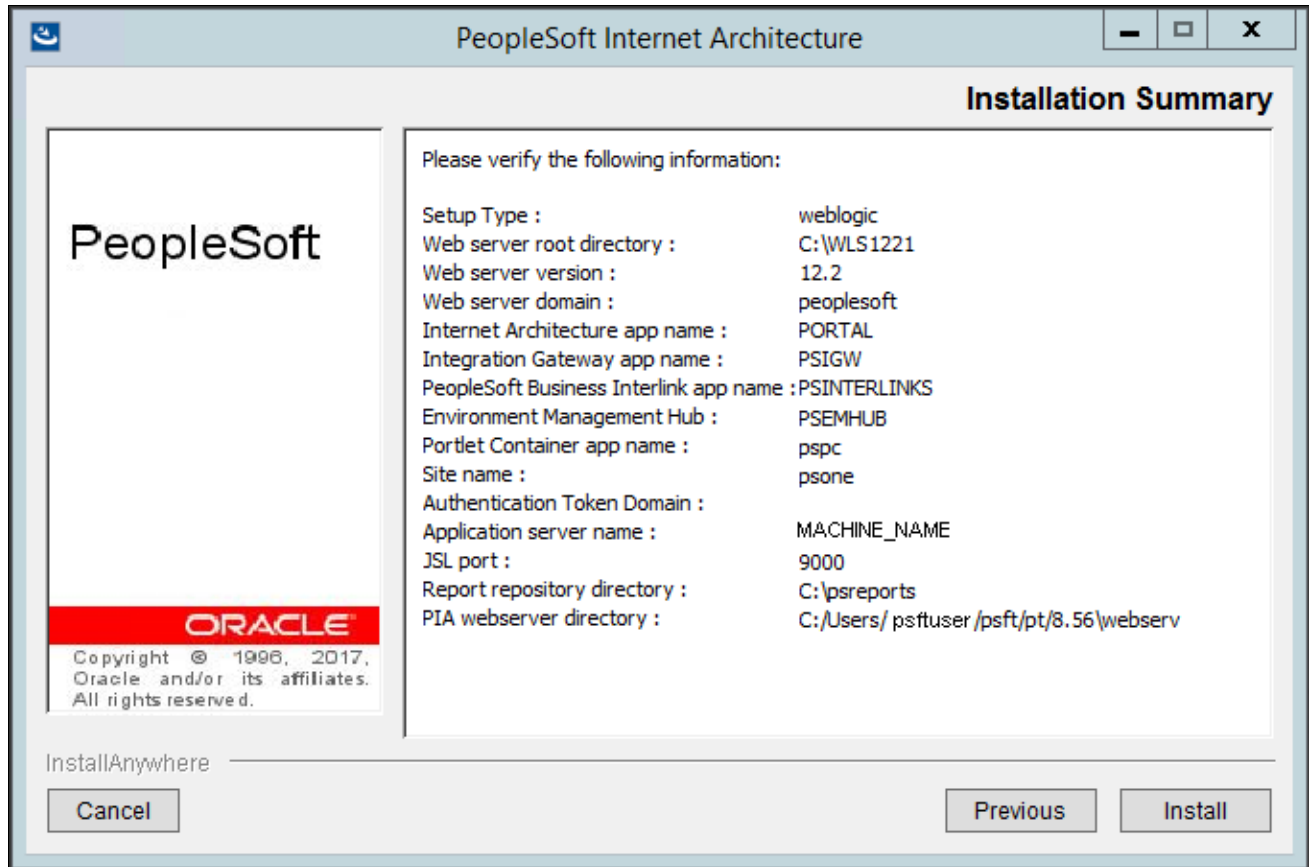


PeopleSoft Internet Architecture Report Repository window



18. Verify all of your selections (click Back if you need to make any changes), and click Install to begin the installation.

The window displays a summary of the installation information, such as web server software, web server root directory, version, and so on.



PeopleSoft Internet Architecture Installation Summary window

An indicator appears showing the progress of your installation.

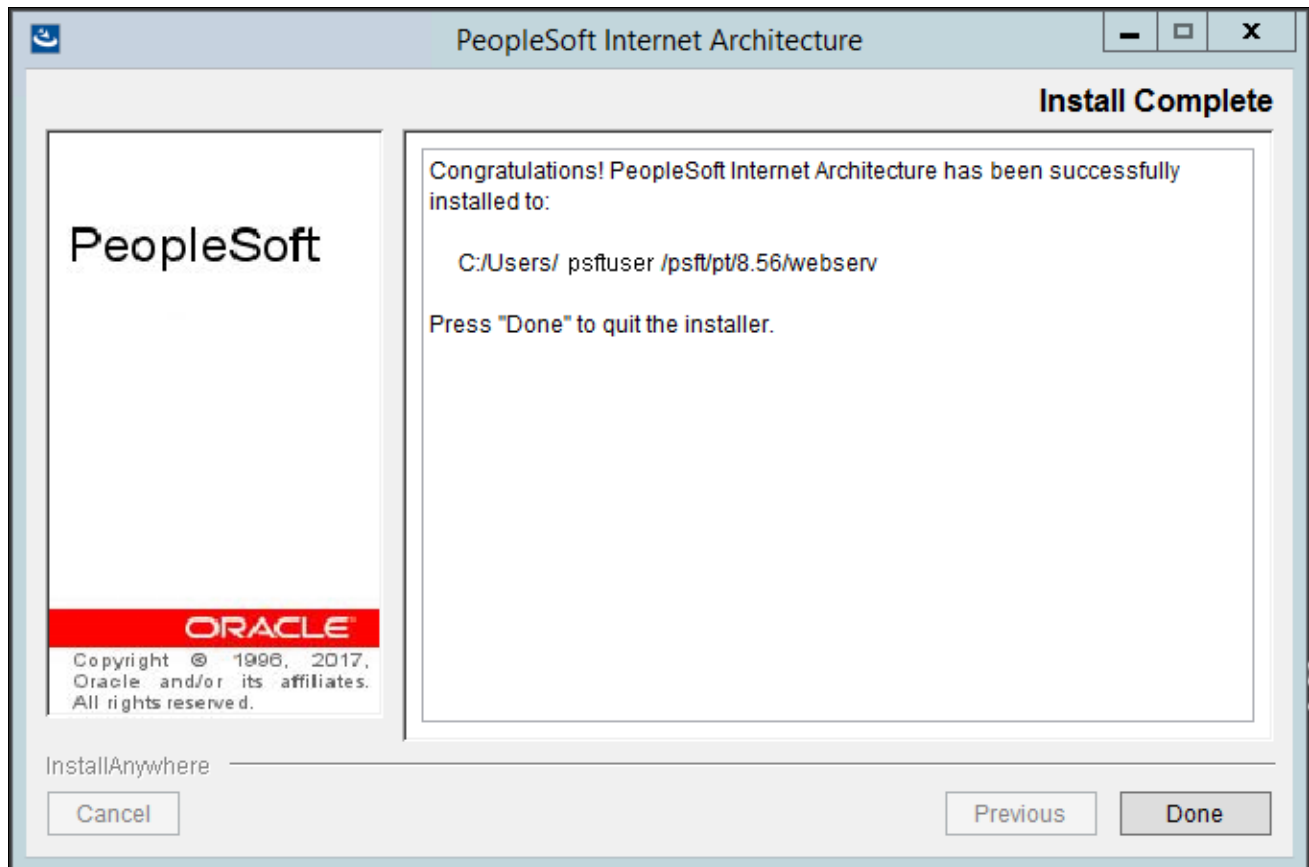
19. Click Finish to complete the installation.

The default installation directory for the PIA domain is `<PIA_HOME>\webserv\<domain_name>`. The Install Complete window displays the parent installation directory for the domain. In this example, this is `C:/Users/psftuser/psft/pt/8.56/webserv`.

---

**Note.** If you are installing into an existing domain, you need to restart that domain.

---



PeopleSoft Internet Architecture Install Complete window

### Task 9A-2-3: Uninstalling the PeopleSoft Pure Internet Architecture on Oracle WebLogic

To remove a PIA domain deployed on Oracle WebLogic, delete the folder `<PIA_HOME>\webserv\<domain_name>`. If there is more than one domain, delete the `domain_name` folder for every domain you want to remove.

### Task 9A-3: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in GUI Mode

---

This section discusses:

- Prerequisites

- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere
- Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

## Prerequisites

The information in this section applies to the installation of PeopleSoft Pure Internet Architecture (PIA) on an IBM WebSphere Application Server. PeopleSoft PeopleTools 8.52 and later releases require a 64-bit IBM WebSphere ND installation. PeopleSoft PeopleTools 8.56 supports 64-bit IBM WebSphere 9.0.0.0. Review the following points before beginning the installation:

- Before installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server Network Deployment, (referred to here as IBM WebSphere ND) you must have installed the IBM WebSphere ND software.
- Each IBM WebSphere Application Server runs one PeopleSoft Pure Internet Architecture application. If you need to install more than one PeopleSoft Pure Internet Architecture application on your IBM WebSphere Application Server, you must run the PIA installation again.
- When installing PIA on IBM WebSphere ND, you must work with a local copy of the PIA installation software; you cannot install remotely. If you are doing the installation on a machine other than the one on which you installed PeopleSoft PeopleTools, copy the *PS\_HOME\setup\PsmPPIAInstall* directory to the local machine and keep the same directory structure.
- Both IBM WebSphere Application Server Network Deployment and PeopleSoft Pure Internet Architecture need to be installed and deployed using the same user ID. Following this requirement avoids any security and profile management issues.

## See Also

"Installing Web Server Products," Installing IBM WebSphere Application Server

## Task 9A-3-1: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere

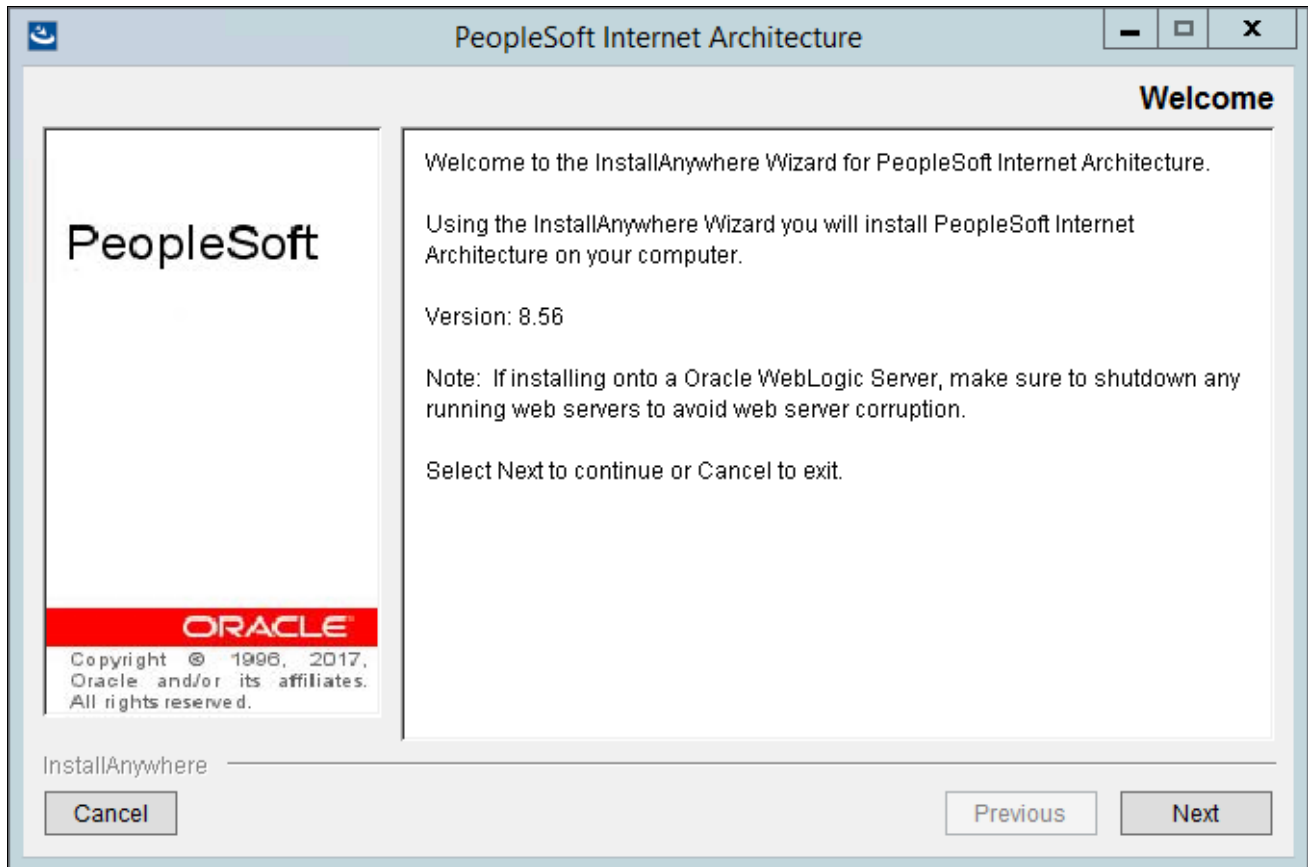
To install PIA on IBM WebSphere ND:

1. Go to *PS\_HOME\setup\PsmPPIAInstall*.

2. Double-click on `setup.bat`.

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

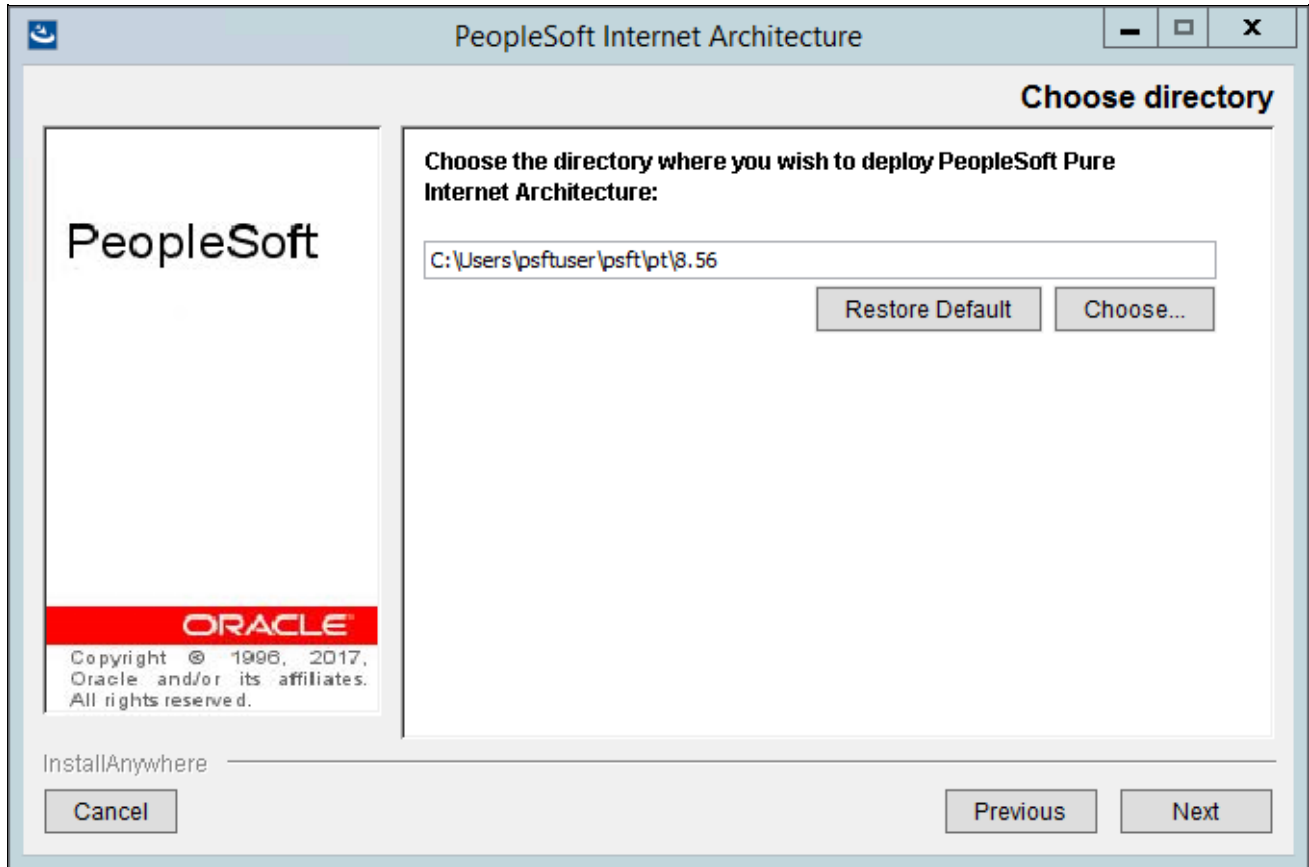
The Welcome window appears with the PeopleSoft PeopleTools version, which is 8.56 in this example.



PeopleSoft Internet Architecture Welcome window

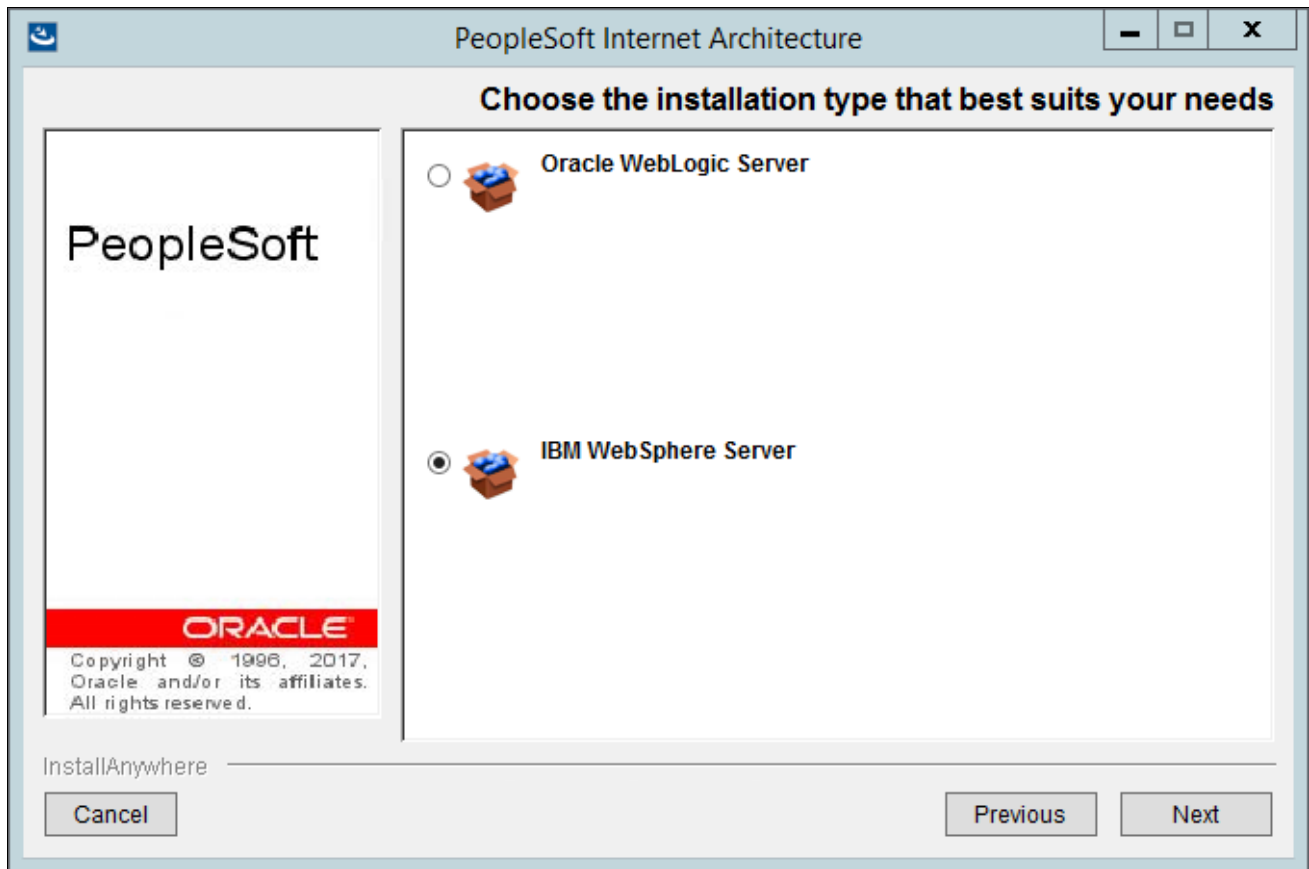
- 3. Click Next in the Welcome window, and specify the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to here as *PIA\_HOME*.

The default path for *PIA\_HOME* is the *PS\_CFG\_HOME* path. In this example, the directory is C:\Users\psftuser\psft\pt\8.56.



PeopleSoft Internet Architecture Choose directory window

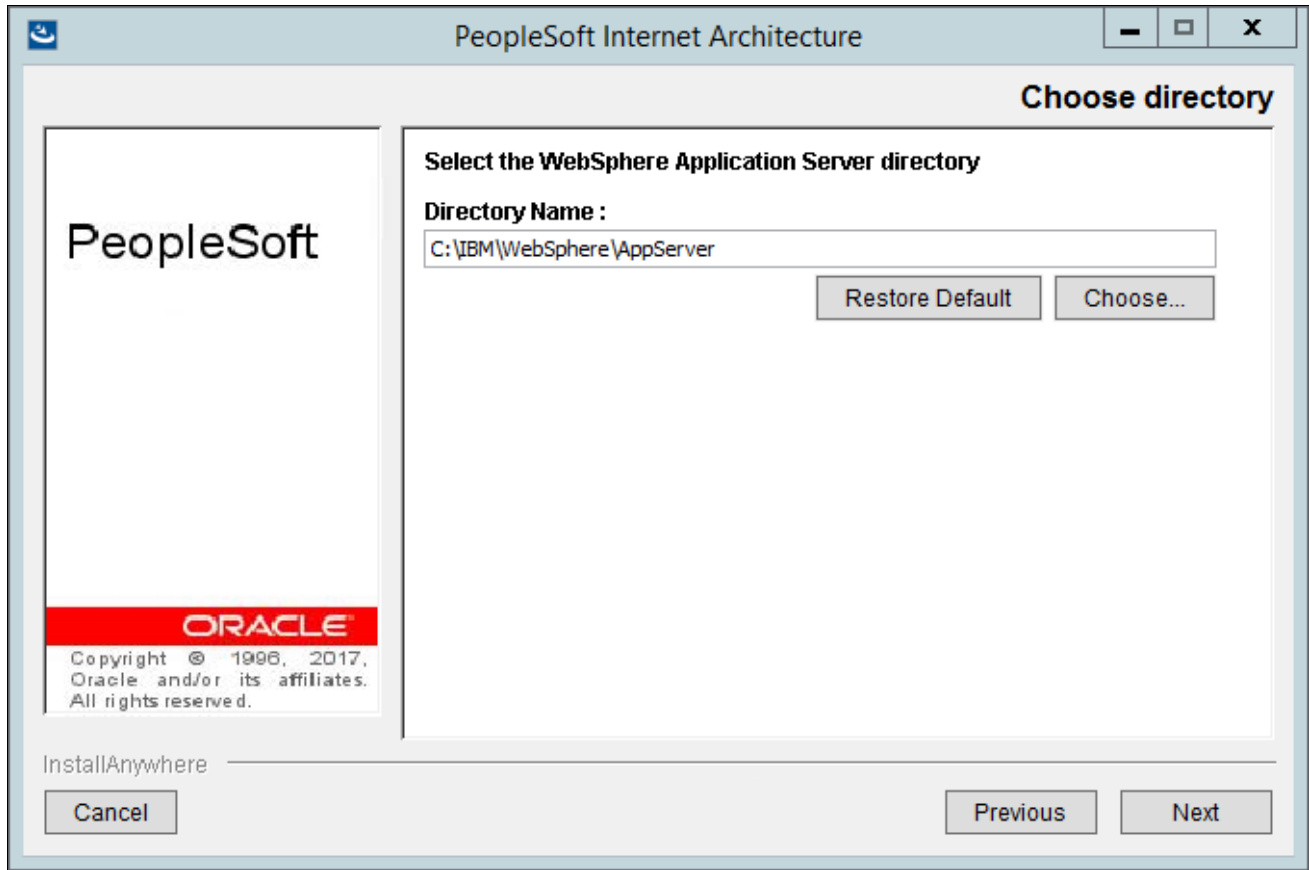
4. Select the option IBM WebSphere Server as the installation type as shown in this example, and click Next.



PeopleSoft Internet Architecture Choose the installation type that best suits your needs window

- 5. Specify the directory where IBM WebSphere ND was installed, referred to as *WAS\_HOME*.

The WebSphere Application Server directory in this example is C:\IBM\WebSphere\AppServer. Click Next.

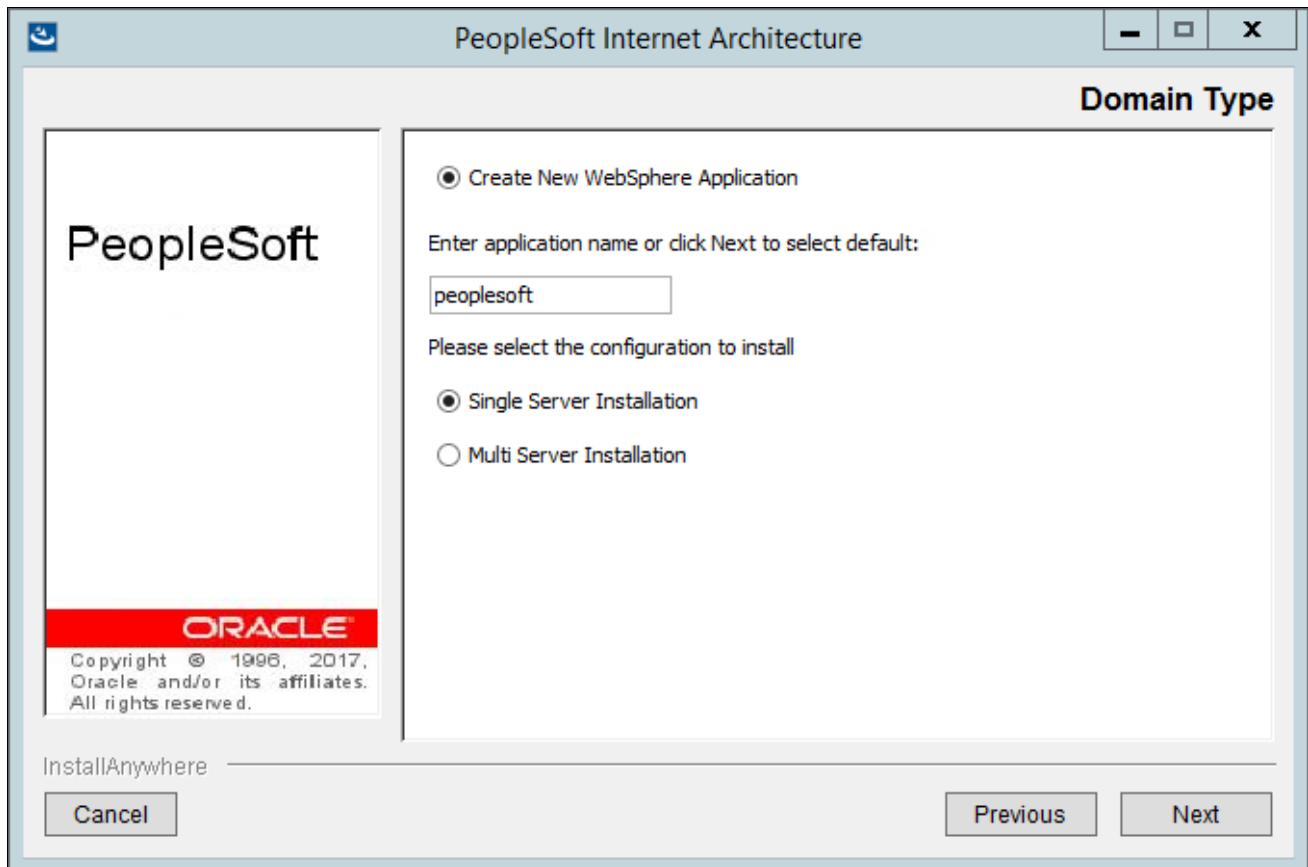


PeopleSoft Internet Architecture Choose directory window

- Enter an application (domain) name or accept the default name on the Domain Type window. Select the type of configuration from the options Single Server Installation or Multi Server Installation.

If the PIA installer cannot detect any existing IBM WebSphere applications, only the option Create New WebSphere Application is available. The default name is peoplesoft as shown in this example.

**Note.** The name you specify here for each application must be unique for each IBM WebSphere node.



PeopleSoft Internet Architecture Domain Type window for creating a new WebSphere Application

- Single Server Installation*

The Single Server Installation option creates one WebSphere Application Server profile to hold all the PeopleSoft web applications. The installer uses the application name you enter for the new profile's name.

- Multi Server Installation*

The Multi Server Installation option creates a single profile with the name you enter as the application name on this page. The profile includes two servers, which deploy discrete functionality and are found on different ports, as specified in the following table:

Server Name	Purpose	HTTP or HTTPS Port Number
server1	PORTAL applications	X
psemhub	PeopleSoft Environment Management Framework applications (PSEMHUB)	X+1



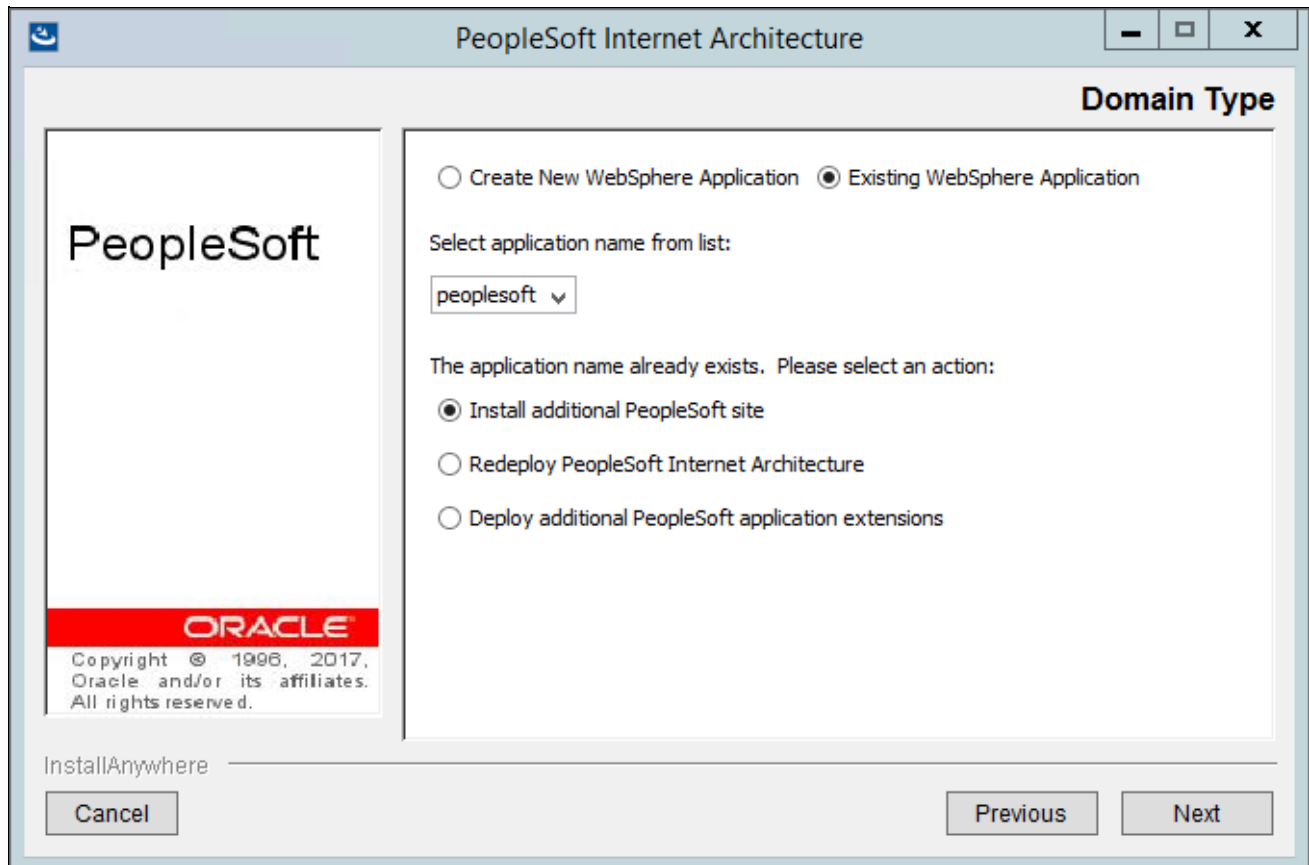
7. If there are existing IBM WebSphere applications on your system, select one of the options Create New WebSphere Application or Existing WebSphere Application.

If you select Create New WebSphere Application, the installation process automatically generates a valid domain name in the domain name field, such as peoplesoft1.

If you attempt to enter an invalid domain name, you see a prompt asking you to enter a new domain name or choose an existing domain.

8. If you select the Existing WebSphere Application option, you can choose from a drop-down list of existing application names, and can select whether to install an additional PeopleSoft site, redeploy PeopleSoft Internet Architecture, or deploy additional PeopleSoft application extensions.

**Note.** Make sure the server is up and running before installing an additional PeopleSoft site, redeploying PIA, or deploying additional PeopleSoft application extensions.



PeopleSoft Internet Architecture Domain Type window for an existing WebSphere Application

#### *Install additional PeopleSoft site*

Select this option to install only the necessary files for defining an additional PeopleSoft site onto the existing IBM WebSphere ND web server configuration.

#### *Redeploy PeopleSoft Internet Architecture*

This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local IBM WebSphere Application Server profile. The redeployment process updates all of the web components of the PeopleSoft Pure Internet Architecture.

#### *Deploy additional PeopleSoft application extensions*

This option is solely for use with PeopleSoft product applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see whether this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

9. Enter the IBM WebSphere administrator Login ID, and enter the password two times.

**Note.** The default administrator login ID is system as shown in this example. The password must be at least 8 alphanumeric characters with one number or special character. Use these criteria to log into the IBM WebSphere administrative console.

If you selected Create New WebSphere Application in the previous step, the following window appears.

The screenshot shows a window titled "PeopleSoft Internet Architecture" with a subtitle "Webserver Admin Credentials". On the left side, there is a "PeopleSoft" logo and an "ORACLE" logo with the text "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." Below this is the "InstallAnywhere" logo. On the right side, there is a form with the text "Please enter the administrator login and password for WebSphere profile." The form contains three input fields: "Login ID:" with the value "system", "Password:" with 8 dots, and "Re-type Password:" with 8 dots. At the bottom left, there is a "Cancel" button. At the bottom right, there are "Previous" and "Next" buttons.

PeopleSoft Internet Architecture Webserver Admin Credentials window

If you selected the Existing WebSphere Application option, and either Install additional PeopleSoft site or Redeploy PeopleSoft Internet Architecture, the following window appears. Enter the same Login ID and password as you entered for the original IBM WebSphere Application creation. If the Login ID and password do not match the original values, you cannot continue with the PIA installation.



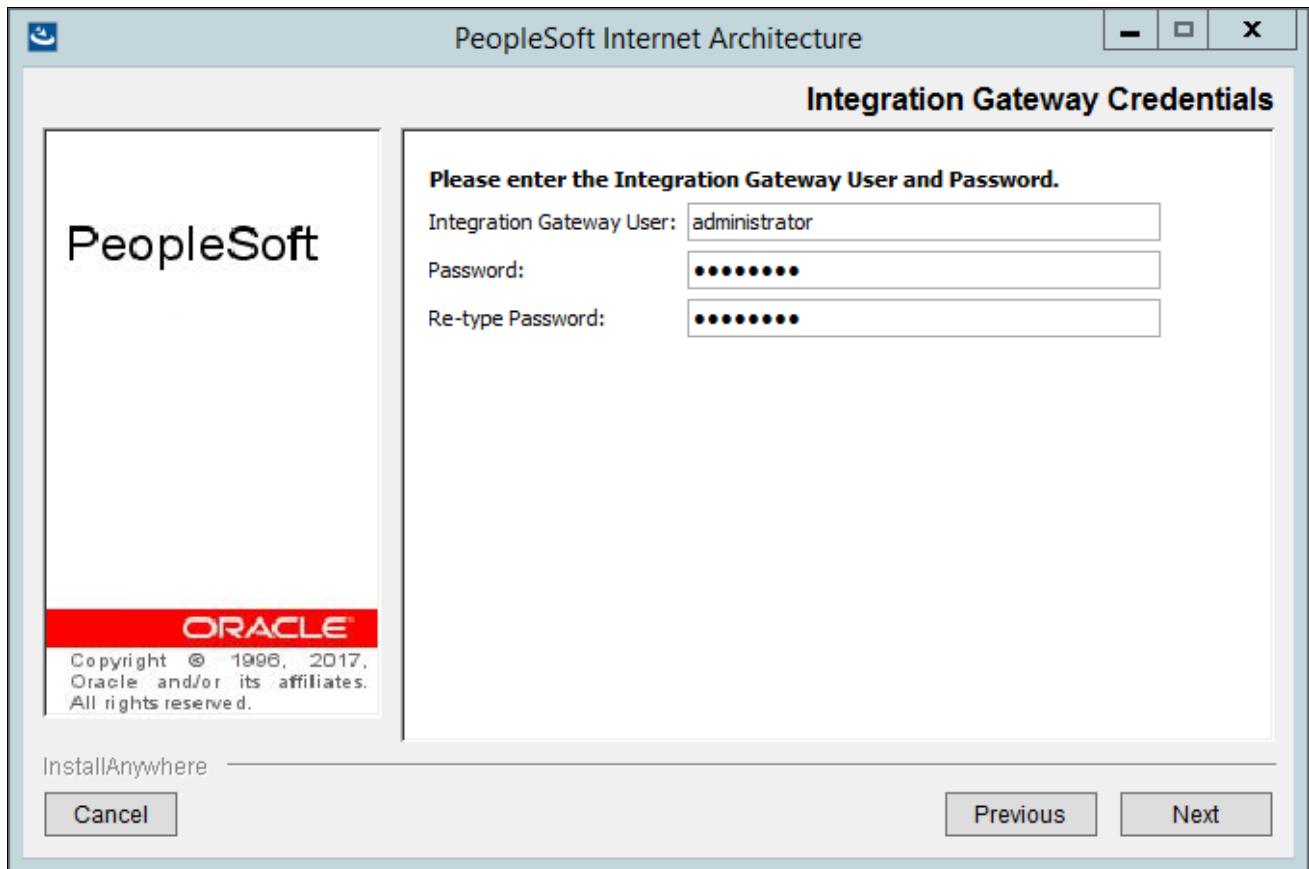
PeopleSoft Internet Architecture Webserver Admin Credentials window for existing WebSphere profile

10. If there are PeopleSoft application packages in the archives directory, the PIA installer asks whether you want to deploy them.

If you are using an existing domain, you will only be prompted if you selected Deploy additional PeopleSoft extensions.

11. Enter the Integration Gateway User and enter the password two times.

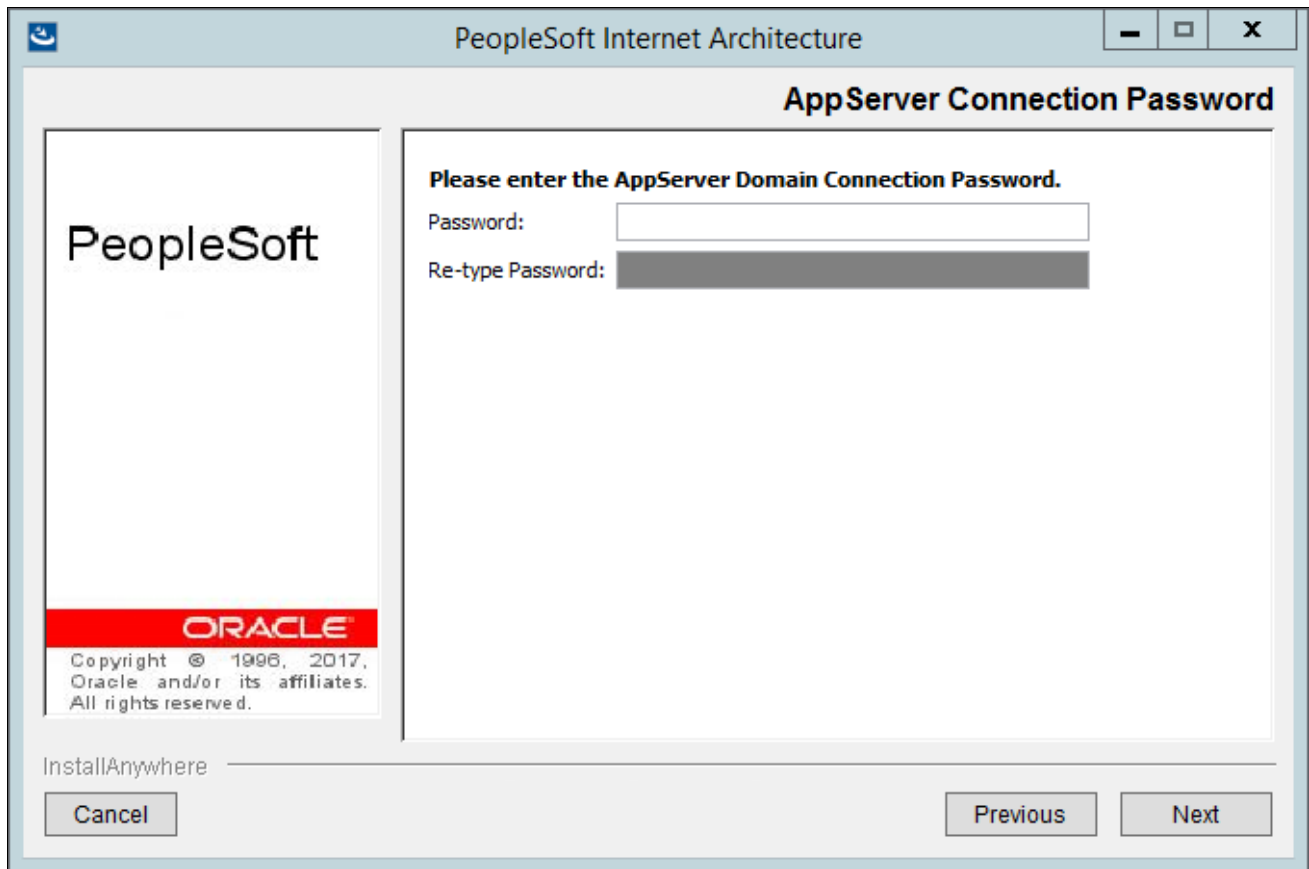
The default Integration Gateway User is administrator, as shown in this example.



PeopleSoft Internet Architecture Integration Gateway Credentials window

12. Enter the AppServer Domain Connection password two times (optional).

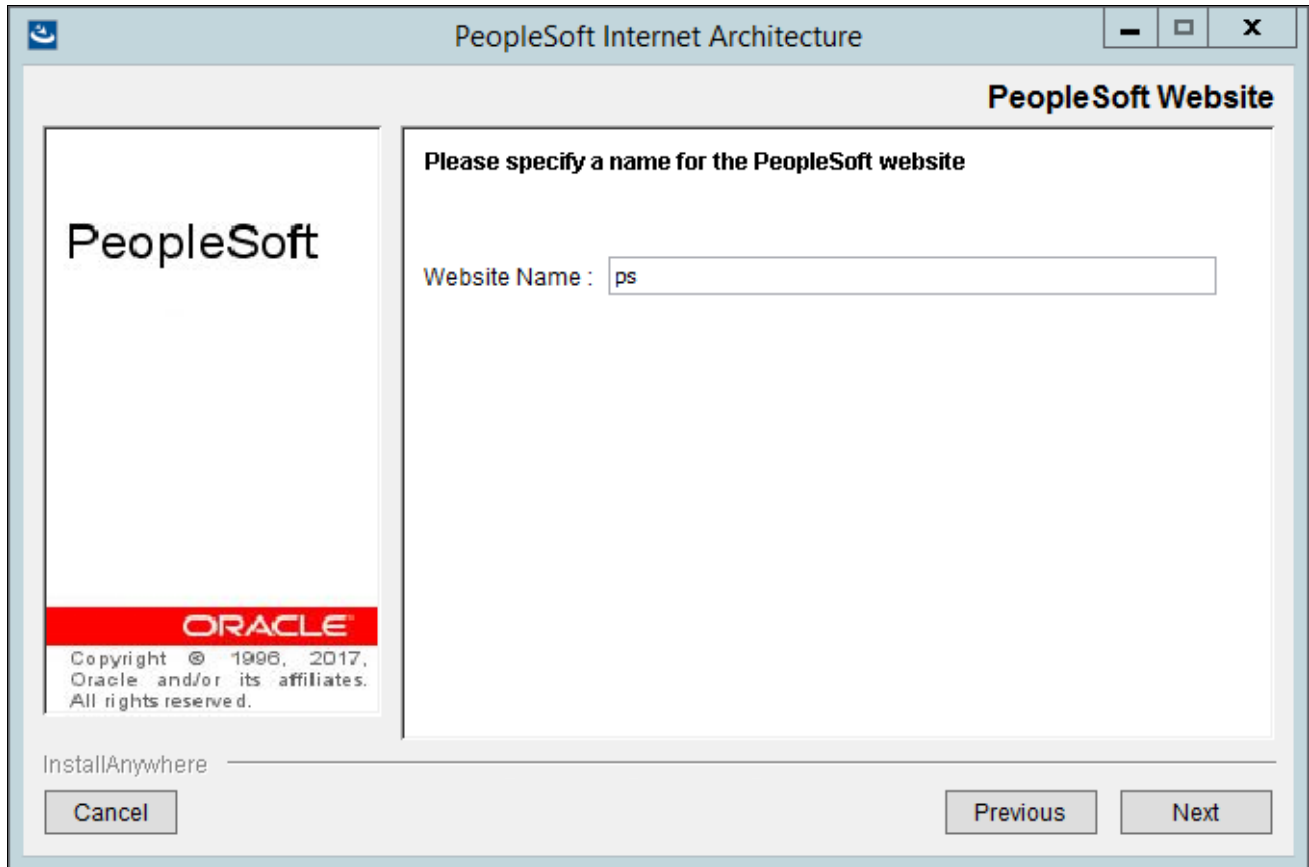
In this example, the password fields are blank.



PeopleSoft Internet Architecture AppServer Connection Password window

13. Enter a PeopleSoft web site name; the default is ps as shown in this example.

**Warning!** The site name can include underscores ( \_ ), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my\_site\_3 or my\_newwin\_site).



PeopleSoft Internet Architecture PeopleSoft Website window

14. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the authentication token domain, and click Next.

The screenshot shows a window titled "PeopleSoft Internet Architecture" with a "Server Information" section. The section contains the following fields and values:

Field	Value
AppServer Host Name:	MACHINE_NAME
Jolt Listener (JSL) Port:	9000
HTTP Port:	80
HTTPS Port:	443
Authentication Token Domain:(optional)	.example.com

Below the fields is a note: "Note: Load balancing and failover can be directly defined in the configuration.properties f". At the bottom of the window, there are three buttons: "Cancel", "Previous", and "Next".

PeopleSoft Internet Architecture Server Information window

- *AppServer name*

For AppServer name, enter the name of your application server. The name is MACHINE\_NAME in this example.

- *JSL port*

For the JSL port, enter the JSL port number you specified when setting up your application server. (The default value is 9000 as shown in this example.)

See "Configuring the Application Server on Windows."



- *HTTP and HTTPS ports*

The default HTTP port is 80, and the default HTTPS port is 443, as shown in this example.

When you enter HTTP and HTTPS port numbers, they will not be recognized until you restart your WebSphere server.

In the case of Multi Server Installation type, HTTP and HTTPS ports *cannot* be consecutive numbers. The range for port number will be <Port#>-<Port#>+1 for the two application servers that the install creates. For example, if you select HTTP Port as 5555 and HTTPS port as 5560 then the ports are assigned as given below.

Server Name	HTTP Port Number	HTTPS Port Number
server1	5555	5560
psemhub	5556	5561

- *Authentication Token Domain*

The value you enter for Authentication Token Domain must match the value you specify for the authentication domain 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.

If you enter a value for the Authentication Token Domain, the URL to invoke PIA must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PIA is `http://MachineName:port/ps/signon.html`. If you do enter a value for the authentication domain (for example, `.myCompany.com`), the URL to invoke PIA is `http://MachineName.myCompany.com:port/ps/signon.html`. The URL must also comply with the naming rules given earlier in this chapter.

See Understanding the PeopleSoft Pure Internet Architecture.

15. If you select the Existing WebSphere Application option, enter the server name and Jolt Listener Port.

PeopleSoft Internet Architecture

### Server Information

AppServer Host Name: MACHINE\_NAME

Jolt Listener (JSL) Port: 9000

Note: Load balancing and failover can be directly defined in the configuration.properties f

PeopleSoft

ORACLE

Copyright © 1996, 2017,  
Oracle and/or its affiliates.  
All rights reserved.

InstallAnywhere

Cancel Previous Next

PeopleSoft Internet Architecture Server Information window for an existing WebSphere application

16. Enter the details for the web profile, PROD, or enter another name.

The following example shows the default web profile name, PROD, and default user ID, PTWEBSERVER.

The web profile name will be used to configure this web site. You can specify one of the other pre-delivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security.

Enter and re-enter the password that you set for the User Profile for the User ID password in this step. The password must be at least 8 alphanumeric characters.

For more information on configuring web profiles, see the *PeopleTools: Portal Technology* product documentation.

**Note.** If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step, as shown in this example. See the product documentation *PeopleTools: Security Administration* for the steps required to add a User Profile.

PeopleSoft Internet Architecture

### Web Profile Credentials

Please enter the Name of the Web Profile used to configure the webserver. The user id and password will be used to retrieve the web profile from the database. (NOTE: Other available preset web profile names are "TEST", "DEV", and "KIOSK".)

Web Profile Name:

User ID:

Password:

Re-type Password:

PeopleSoft

ORACLE

Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved.

InstallAnywhere

Cancel Previous Next

PeopleSoft Internet Architecture Web Profile Credentials window

17. Specify the root directory for the Report Repository (c:\psreports by default as shown in this example), and click Next.

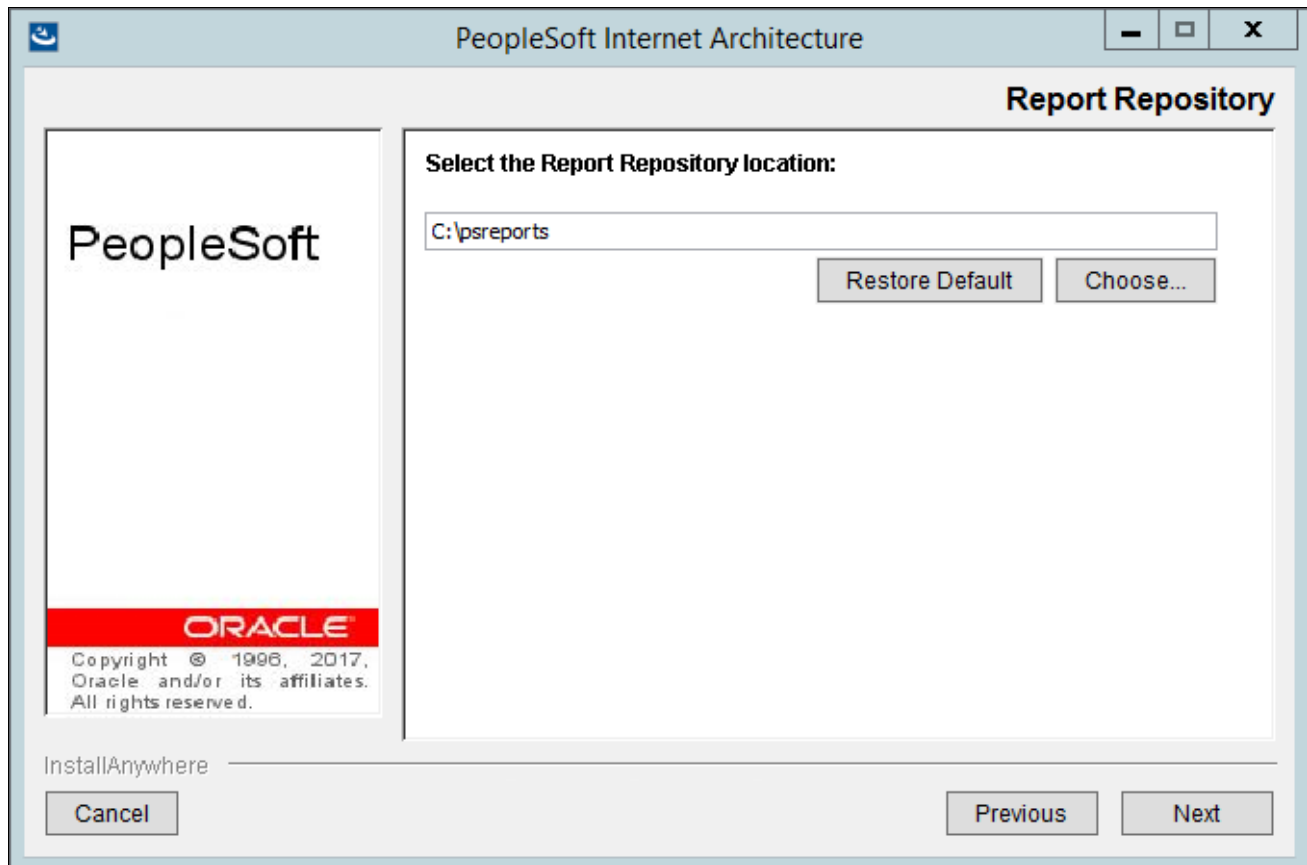
Make sure that the report repository directory is shared, and that you have write access.

---

**Note.** In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

---

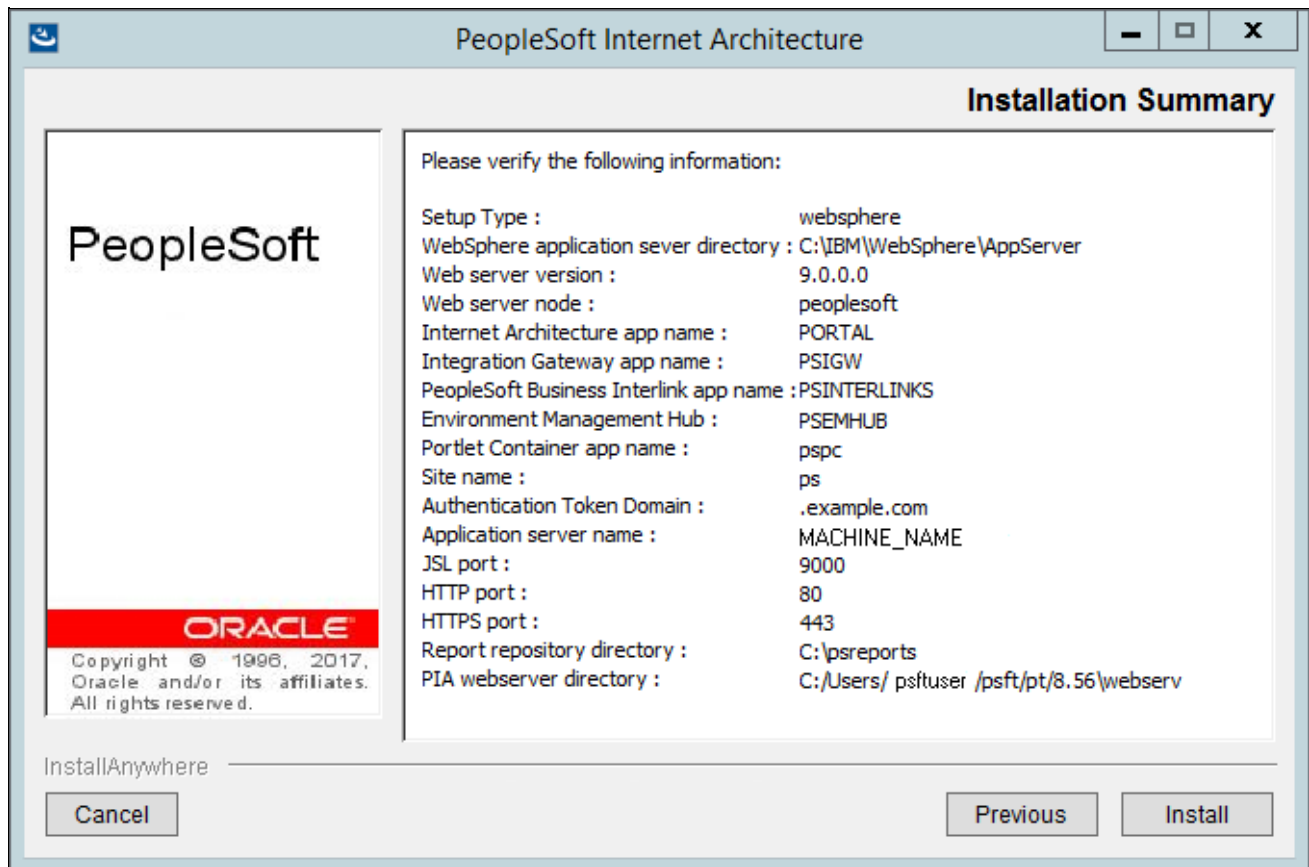
See "Setting Up Process Scheduler on Windows," Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository.



PeopleSoft Internet Architecture Report Repository window

## 18. Verify all your selections on the summary window.

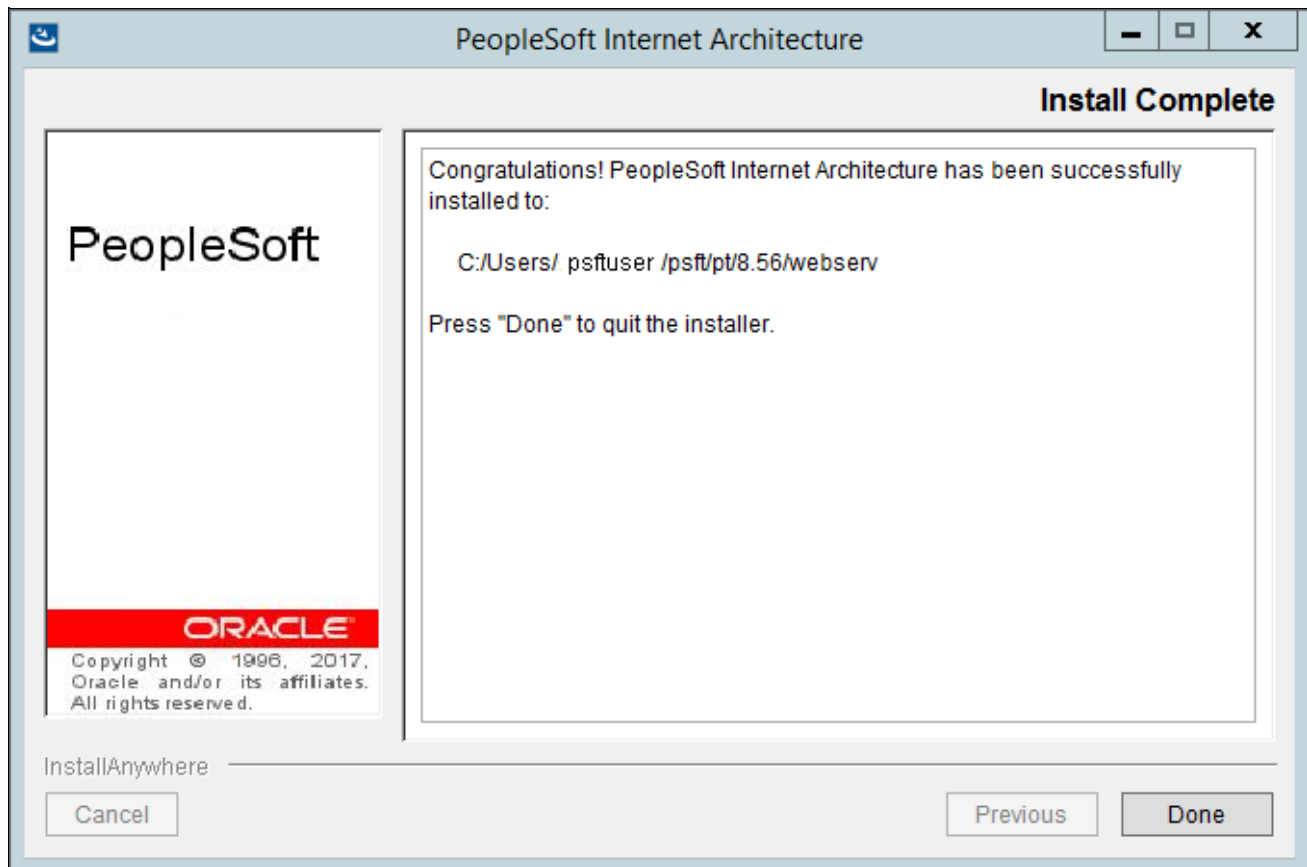
The window lists the installation information, such as the web server type, directory, version, and so on. Click Back if you need to make any changes and click Next to begin the installation. An indicator shows the progress of your installation.



PeopleSoft Internet Architecture Installation Summary window

## 19. Click Done to complete the installation.

The default installation directory for a specific PIA profile is `<PIA_HOME>\webserv\<profile_name>`. The Install Complete window displays the parent installation directory for the domain. In this example, this is `C:/Users/psftuser/psft/pt/8.56/webserv`.



PeopleSoft Internet Architecture Install Complete window

## Task 9A-3-2: Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

You cannot uninstall PeopleSoft Pure Internet Architecture simply by deleting `<PIA_HOME>\webserv\<profile_name>`, without uninstalling it from IBM WebSphere Administration Console. If you do so, the IBM WebSphere registry becomes corrupt, and subsequent attempts to install PeopleSoft Pure Internet Architecture will fail. Instead, if necessary, you must uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere as described here.

To uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere:

1. Open the IBM WebSphere Administration Console by entering the following URL in a browser:

`http://<machine-name>:<administrative_console_port>/ibm/console`

To find the value for `<administrative_console_port>`, refer to `<PIA_HOME>\webserv\<profile_name>\logs>AboutThisProfile.txt`.

2. Log in as any user.
3. Choose Applications, Application Types, Websphere enterprise applications.

4. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Stop.
5. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Uninstall.
6. Save your configuration.
7. Log out of the IBM WebSphere Administration Console.
8. Stop WebSphere server using one of the following commands:

On Microsoft Windows:

```
<PIA_HOME>\webserv\<profile_name>\bin\stopServer.bat server1
```

On UNIX or Linux:

```
<PIA_HOME>/webserv/<profile_name>/bin/stopServer.sh server1
```

9. In addition to uninstalling the application, you need to remove the WebSphere Application Server profile, which was created during PIA install, to complete the PIA uninstallation.

To uninstall the WebSphere Application Server profile, run the following steps:

- a. Go to `<PIA_HOME>\webserv\<profile_name>\bin`
- b. Run one of the following commands, where `<profile_name>` indicates the application name that you have selected during the PIA install.

On Microsoft Windows:

```
manageprofiles.bat -delete -profileName <profile_name>
```

On UNIX or Linux:

```
manageprofiles.sh -delete -profileName <profile_name>
```

- c. Delete the directory `<PIA_HOME>\webserv\<profile_name>`

## Task 9A-4: 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 9A-4-1: 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 Windows service, use the following command:

Single Server:

```
installNTservicePIA.cmd
```

Multiple Servers or Distributed Servers:

```
installNTservice.cmd ServerName
```

The resulting Windows service name will be *WebLogicDomain-WebLogicServer*. For example, to install a server named *PIA* as a Windows service in a domain named *peoplesoft*, run `installNTservice.cmd PIA` and you will see "peoplesoft-PIA" as a service.

- To remove an Oracle WebLogic server Windows service, use the following command:

```
uninstallNTservicePIA.cmd Server Name
```

---

**Note.** If you modify `setenv.cmd`, then you must uninstall the service using `uninstallNTServicePIA.cmd ServerName`, and then re-run `installNTServicePIA.cmd ServerName`.

---

- 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 9A-4-2: Starting and Stopping IBM WebSphere Application Servers

This section discusses:

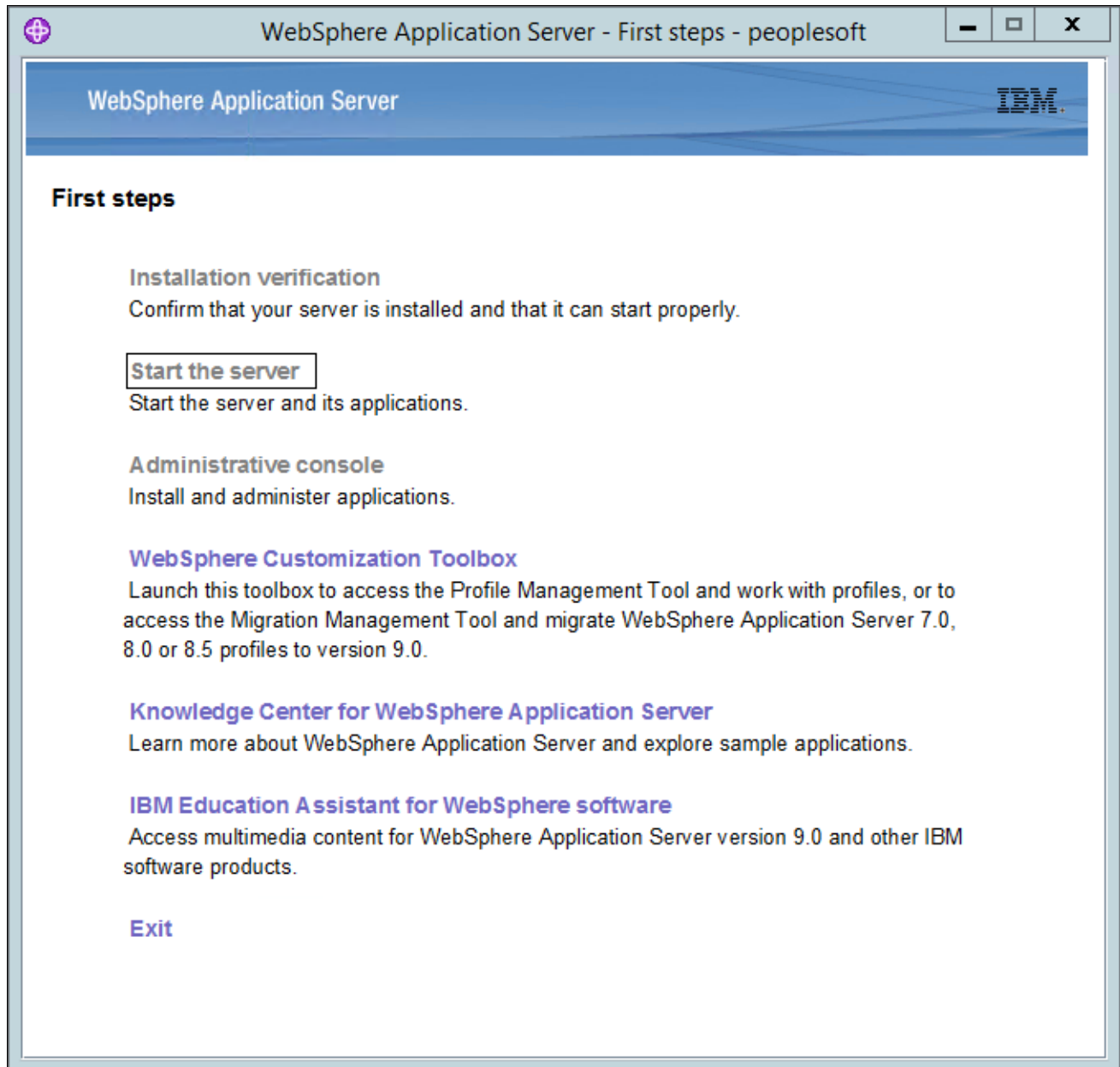
- Starting and Stopping IBM WebSphere Application Servers on Windows
- Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux
- Verifying the IBM WebSphere Installation

### 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.

- 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.

```

[5/17/17 18:34:55:850 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:35:04:917 MDT] 00000001 SibMessage W [ ] CWSJY0003W: MQJCA5001: WMQ messaging : '9.0.0.0-p900-L160509.1'.
[5/17/17 18:35:08:352 MDT] 0000004c AuthConfigFac W SECJ8032W: AuthConfigFactory implementation is not defined, using the default JASPI factory imple
[5/17/17 18:35:11:601 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:35:11:604 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:35:16:379 MDT] 0000004d FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:40:26:405 MDT] 00000001 WSKeyStore W CWPKI0041W: One or more key stores are using the default password.
[5/17/17 18:40:27:423 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:40:27:424 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:426 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:427 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:427 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:581 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:40:32:792 MDT] 00000001 SibMessage W [ ] CWSJY0003W: MQJCA5001: WMQ messaging : '9.0.0.0-p900-L160509.1'.
[5/17/17 18:40:34:404 MDT] 0000004c AuthConfigFac W SECJ8032W: AuthConfigFactory implementation is not defined, using the default JASPI factory imple
[5/17/17 18:40:36:487 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:40:36:489 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:40:41:741 MDT] 0000004b FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\w
[5/17/17 19:31:32:812 MDT] 000000a8 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/25/17 15:14:43:235 MDT] 00000001 WSKeyStore W CWPKI0041W: One or more key stores are using the default password.
[5/25/17 15:14:54:209 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\w
[5/25/17 15:14:54:210 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:54:215 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:54:217 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:54:219 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:55:452 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/25/17 15:15:12:355 MDT] 00000001 SibMessage W [ ] CWSJY0003W: MQJCA5001: WMQ messaging : '9.0.0.0-p900-L160509.1'.
[5/25/17 15:15:18:677 MDT] 0000004e AuthConfigFac W SECJ8032W: AuthConfigFactory implementation is not defined, using the default JASPI factory imple
[5/25/17 15:15:36:366 MDT] 0000004e webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/25/17 15:15:36:368 MDT] 0000004e webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/25/17 15:15:52:215 MDT] 0000004d FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
IVTL0040I: 42 errors/warnings are detected in the C:\Users\
ipsftpt8.56\webserver\peoplesoft\logs\server1\SystemOut.log file
IVTL0070I: The Installation Verification Tool verification succeeded.
IVTL0080I: The installation verification is complete.

```

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>
```

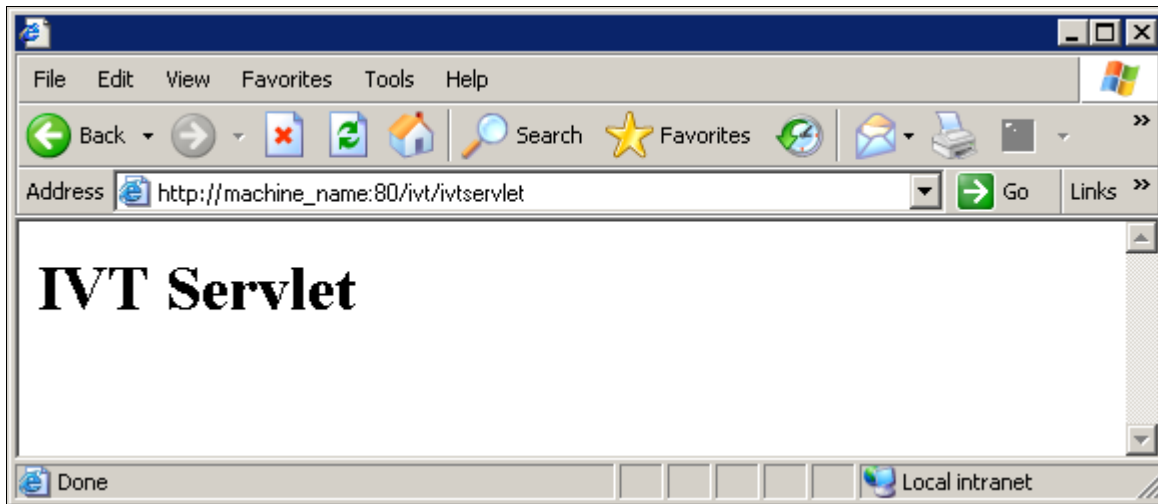
## Verifying the IBM WebSphere Installation

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 9A-4-3: 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. Go to the *PS\_HOME*/appserv directory and run the command `psadmin`.
2. Specify 4 for Web (PIA) Server.

```
-----
PeopleSoft Server Administration
-----
```

```
PS_HOME:      : C:\pt856
PS_CFG_HOME:  C:\psft_AppServ
```

- ```

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Service Setup
7) Replicate Config Home
q) Quit
```

```
Command to execute (1-7, q): 4
```

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.

3. Select *1* for Administer a domain.

```
-----
PeopleSoft PIA Administration
-----
```

```
PIA Home:    C:\psft_WebServ
```

- 1) Administer a domain
- 2) Create a domain
- 3) Delete a domain

q) Quit

Command to execute: **1**

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.

4. 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**

5. To start a web server domain, enter *1*, Boot this domain.

```
-----
PeopleSoft PIA Domain Administration
-----
```

```
PIA Home:      C:\psft_WebServ
PIA Domain:    peoplesoft
Domain Status: stopped
```

- 1) Boot this domain
- 2) Shutdown this domain
- 3) Get the status of this domain
- 4) Configure this domain
- 5) Edit configuration files
- 6) View log files
- 7) Administer a site
- 8) Delete a site
- 9) Windows Service Setup

q) Quit

Command to execute: **1**

The boot command invokes the startPIA.cmd script, and you see the progress and a status message on the console window.

```
Starting the domain.....
...
Verifying domain status..
The domain has started.
```

6. To stop a web server domain, select 2, Shutdown this domain.

The shutdown command invokes the stopPIA.cmd script, and you see the progress and a status message on the console window.

```
Stopping the domain.....
.....
Verifying domain status.....
The domain has stopped.
```

7. To set up a Windows service, select 9, Windows Service Setup.

8. 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 9A-4-4: 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 9A-5: 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 9A-5-1: 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:



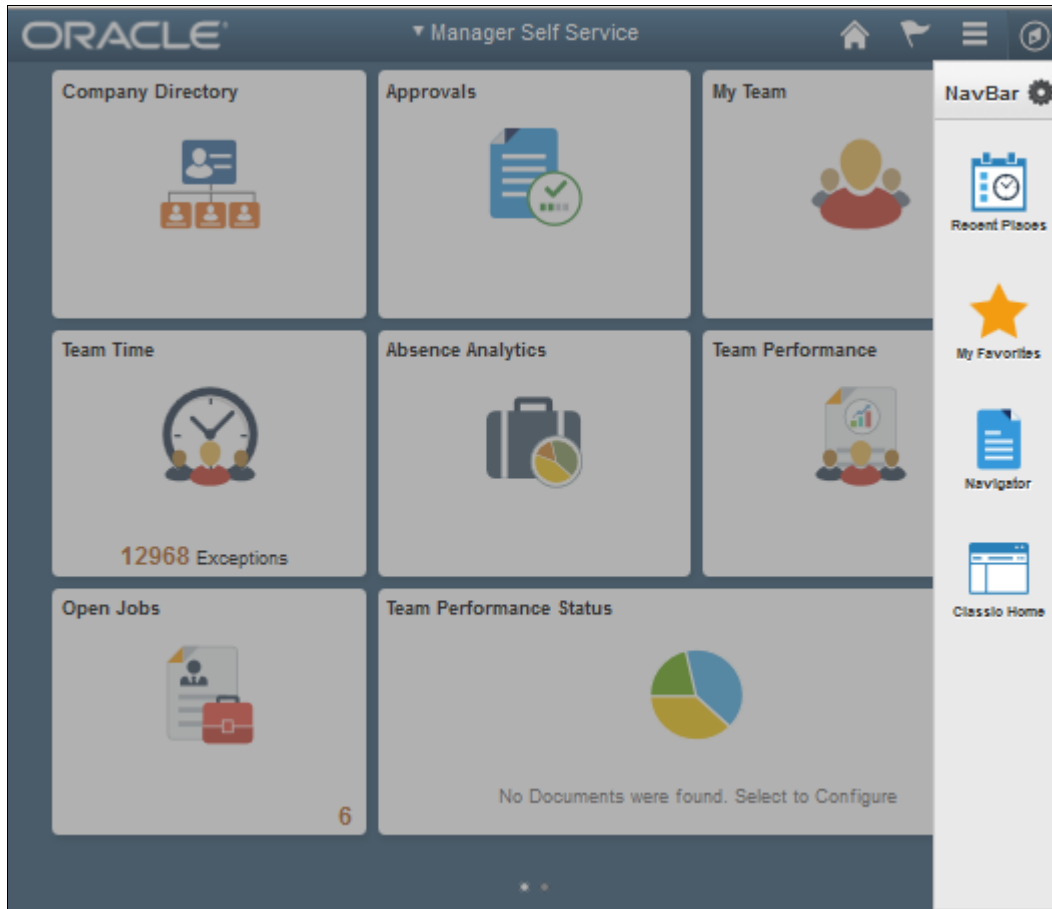
1. On the PeopleSoft Fluid User Interface, shown in this example, select (press) the NavBar button at the top right (diamond inside a circle).



PeopleSoft Fluid User Interface home page

The Navigation bar (NavBar) side page appears.

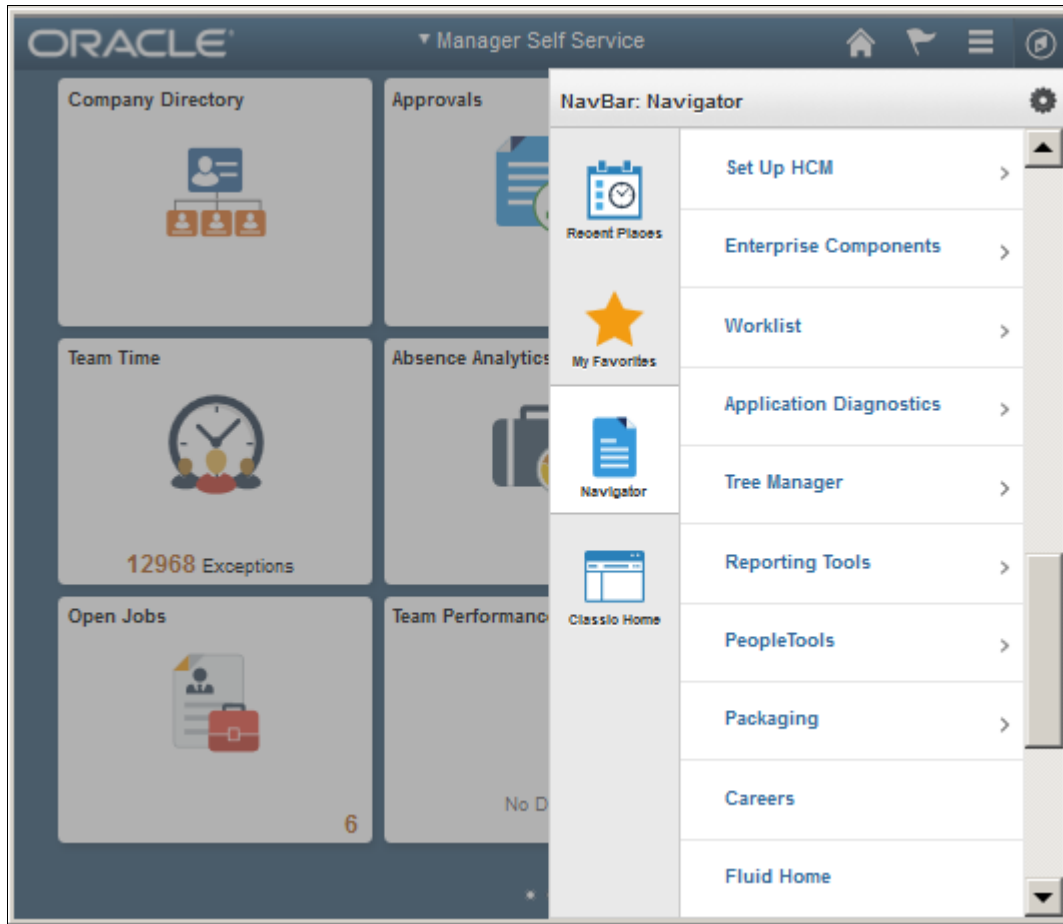
2. Select (press) Navigator.



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 9A-5-2: 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.DBLENGHTHYPE Value |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------|
| Unicode-encoded database or a non-Unicode SBCS database                                                                                     | Others                                                              | N                            |
| Japanese database on DB2 LUW                                                                                                                | DB2 MBCS                                                            | D                            |
| Non-Unicode Japanese database<br><b>Note.</b> If your installation uses the Shift-JIS character set for Japanese, you must use this option. | MBCS<br><b>Note.</b> 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 9A-5-3: 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 9A-5-4: 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 9A-5-5: 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 9B

# Setting Up the PeopleSoft Pure Internet Architecture in Console Mode

This chapter discusses:

- Understanding PeopleSoft Pure Internet Architecture
- Using Authentication Domains in the PeopleSoft Pure Internet Architecture Installation
- Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade
- Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in Console Mode
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in Console Mode
- Installing the PeopleSoft Pure Internet Architecture in Silent Mode
- 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 console mode and in silent mode. It includes instructions for installing the PeopleSoft files on Oracle WebLogic and IBM WebSphere. Only complete the instructions for the web server product that you installed.

---

**Note.** The console mode installation is typically used on UNIX platforms.

---

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.

Before performing the steps in this chapter, verify that Sun's international version of JRE version 7 or higher is properly installed on the system and its path is in the system's environment variable PATH.

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.

---

**Note.** If you encounter the error message "No Matching JVM," you need to specify the absolute path to the Java Runtime Environment (JRE) executable (including the executable file name) using the `-javahome` command line parameter; for example: `<PS_HOME>/setup/PsMpPIAInstall/setup.sh -tempdir <temporary_directory> -javahome <jredir>/bin/java.`

---

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.

---

**Note.** We do not support web servers on z/OS.

---

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 host must have a fully qualified domain name (FQDN). The requirement that you must have a domain name does not imply that you must have a DNS, but you do need some type of naming service such as DNS or some managed `../etc/hosts` file that contains a list of the servers with their domain name.
- 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 9B-1: Preparing the PeopleSoft Pure Internet Architecture File System for a PeopleTools-Only Upgrade**

---

When performing the installation of the PeopleSoft Pure Internet Architecture system using the separate upgrade *PS\_HOME* (which is different than your old release *PS\_HOME*), you may install and configure your PeopleSoft Pure Internet Architecture system at this point in time of the installation, but do not start your PeopleSoft Pure Internet Architecture system until directed to do so within the upgrade.

If you are installing into an existing *PS\_HOME* or *PIA\_HOME* after completing a PeopleTools-only upgrade, perform the following instructions to remove any obsolete files.

See "Preparing for Installation," Preparing for the PeopleTools-Only Upgrade.

Stop the web server before performing the PeopleSoft Pure Internet Architecture installation or uninstallation.

Depending on your web server platform, complete the following steps to clean up previous PeopleSoft Pure Internet Architecture sites:

- Oracle WebLogic
  - Shut down Oracle WebLogic and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform. Alternatively, delete the contents of one of the following directories:
    - For PeopleSoft PeopleTools 8.43.x or earlier: `<weblogic_home>\wlserver6.1\config\<domain_name>|*`
    - For PeopleSoft PeopleTools 8.44.x to 8.49.x: `<PS_HOME>\webserv\<domain_name>|*`
    - For PeopleSoft PeopleTools 8.50.x or later: `<PIA_HOME>\webserv\<domain_name>|*`
- IBM WebSphere
  - Shut down IBM WebSphere and follow the uninstallation instructions in the old release PeopleSoft PeopleTools installation guide for your database platform.

## **Task 9B-2: Installing the PeopleSoft Pure Internet Architecture on Oracle WebLogic in Console Mode**

---

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on a New Oracle WebLogic Domain in Console Mode
- Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain in Console Mode
- Uninstalling the PeopleSoft Pure Internet Architecture from Oracle WebLogic

## Task 9B-2-1: Prerequisites

This section describes how to install the PeopleSoft Pure Internet Architecture on Oracle WebLogic. Before you install the PeopleSoft Pure Internet Architecture (PIA) on Oracle WebLogic, you must have installed the Oracle WebLogic software. PeopleSoft PeopleTools 8.56 supports Java 8 enabled 64-bit Oracle WebLogic 12.2.1.0.

See "Installing Web Server Products," Installing Oracle WebLogic Server.

See the information on working with Oracle WebLogic in the *PeopleTools: System and Server Administration* product documentation.

## Task 9B-2-2: Installing the PeopleSoft Pure Internet Architecture on a New Oracle WebLogic Domain in Console Mode

To install the PeopleSoft Pure Internet Architecture on Oracle WebLogic:

1. Change directory to `PS_HOME/setup/PsMpPIAInstall` and run one of these commands:

```
setup.sh -tempdir <temporary_directory>
```

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

See "Using the PeopleSoft Installer," Prerequisites.

A welcome message appears.

2. Press ENTER at the Welcome prompt to continue.

```
Welcome to the InstallShield Wizard for PeopleSoft Internet=>
Architecture.
```

```
Using the InstallShield Wizard you will install PeopleSoft Internet=>
Architecture on your computer.
```

```
Version: 8.56
```

```
Note: If installing onto an Oracle WebLogic Server, make sure to=>
shutdown any running=>
webservers to avoid web server configuration.
```

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

3. Enter the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to here as *PIA\_HOME*.

```
Choose the directory where you wish to deploy the PeopleSoft Pure=>
Internet Architecture:
```

```
Please specify a directory name or press Enter
[/home/PT856]:
```

4. Enter *1* to select the Oracle WebLogic Server.

```
Choose the installation type that best suits your needs
```

```
->1- Oracle WebLogic Server
    2- IBM WebSphere Server
```

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

5. Enter the top-level directory where Oracle WebLogic is installed.

```
Select the web server root directory [/opt/oracle]: /data4/WLS_HOME
```

```
Detected web server version: WebLogic 12.2.1
```

---

**Note.** You will get an error message if you specify a directory that does not contain Oracle WebLogic, or that contains an incorrect Oracle WebLogic version.

---

6. Select *I*, Create New WebLogic Domain, at the following prompt:

```
->1- Create New WebLogic Domain
    2- Existing WebLogic Domain
```

---

**Note.** If the PIA installer cannot detect any existing Oracle WebLogic domains, only the option Create New WebLogic Domain is available. The installation on an existing domain is described in the following section.

See Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain in Console Mode.

---

7. The installation process automatically generates a valid domain name, which is peoplesoft in the following sample prompt.

If you attempt to enter an invalid domain name, you see a prompt asking you to enter a new domain name or choose an existing domain.

```
Enter domain name or click Next to select default [peoplesoft]:
```

8. Enter the administrator login, or accept the default value. Enter and re-enter the password for your Oracle WebLogic domain.

Press ENTER to continue.

The default login ID is system. The password must be at least 8 alphanumeric characters with at least one number or special character.

Please enter the administrator login and password for WebLogic domain.

```
Login ID [system]:
```

```
Password []:
```

```
Re-type Password []:
```

9. Select the type of domain to create—single server, multi server, or distributed managed server.

Please select the configuration to install.

```
->1- Single Server Domain
    2- Multi Server Domain
    3- Distributed Managed Server
```

There are three domain configuration options:

- *Single Server Domain*

This domain configuration contains one server, named PeopleSoft Pure Internet Architecture and the entire PeopleSoft application is deployed to it. This configuration is intended for single user or very small scale, non-production environments. This configuration is very similar to the Oracle WebLogic domain provided in PeopleSoft PeopleTools 8.40 through 8.44.

- *Multi Server Domain*

This domain configuration is contains seven unique server definitions, a Oracle WebLogic cluster, and the PeopleSoft Application split across multiple servers. This configuration is the intended for a production

environment.

- *Distributed Managed Server*

This option is an extension of the Multi Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

10. Enter the Integration Gateway User and password.

The password must be at least 8 alphanumeric characters.

See *PeopleTools: Integration Broker Administration*.

Please enter the Integration Gateway User and Password.

```
Integration Gateway User [administrator]:
Password []:
Re-type Password []:
```

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

11. Enter the AppServer Domain Connection password (optional).

If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank. This password will be propagated to the Integration Gateway.

See the information on setting Application Server domain parameters in the *PeopleTools: System and Server Administration* product documentation.

Please enter the AppServer Domain Connection Password.

```
Password []:
Re-type Password []:
```

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

12. Enter a PeopleSoft web site name; the default is ps.

---

**Warning!** The site name can include underscores ( \_ ), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my\_site\_3 or my\_newwin\_site).

---

Please specify a name for the PeopleSoft web site:  
Website name [ps]:

13. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the Authentication Token Domain (optional).

Enter port numbers and summaries.

AppServer name [APPSRVNAME]:

JSL Port [9000]:

HTTP Port [80]:

HTTPS Port [443]:

Authentication Token Domain (optional) []:

- *AppServer name*

For the AppServer name setting, enter the name of your application server.

See "Configuring the Application Server on UNIX."

See "Configuring the Application Server on Windows."

See Understanding the PeopleSoft Pure Internet Architecture.

- *JSL Port*

For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000.)

- *HTTP and HTTPS Port*

The values for the HTTP and HTTPS ports should be greater than 1024. Any port number less than 1024 is reserved and only Root has access to it.

- *Authentication Token Domain*

The value you enter for the 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.

If you enter a value for the Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName/ps/signon.html`. If you do enter a value for authentication domain (for example, `.myCompany.com`), the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName.myCompany.com/ps/signon.html`. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example `http://MachineName:8080/ps/signon.html` if there is no authentication domain, or `http://MachineName.myCompany.com:8080/ps/signon.html` if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

#### 14. Enter the details for the web profile, PROD, or enter another name.

The example below shows the default web profile name, PROD, and default user ID, PTWEBSERVER. The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security in the *PeopleTools: Portal Technology* product documentation.

```
Please enter the Name of the Web Profile used to configure the web=>
server. The user id and password will be used to retrieve the web=>
profile from the database. (NOTE: Other available preset web profile=>
names are "TEST", "DEV", and "KIOSK".)
```

```
Web Profile Name [PROD]:
User ID [PTWEBSERVER]:
Password []:
Re-type Password []:
```

---

**Note.** If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step, as shown in this example. The password must be at least 8 alphanumeric characters.

See the *PeopleTools: Security Administration* product documentation for the steps required to add a User Profile.

---

15. Specify the root directory for the Report Repository.

The default directory is `<user_home>/PeopleSoft Internet Architecture/psreports`, where `<user_home>` is the home directory for the current user.

You must have write access to the specified directory.

---

**Note.** In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

---

See "Setting Up Process Scheduler," Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository.

Select the Report Repository location:

Please specify a directory name or press Enter `[/ds1/home/PeopleSoft→  
Internet Architecture/psreports]`:

16. Verify all of your selections and press Enter to begin the installation.

Setup Type : weblogic

Web server root directory : /data4/WLS1213

Web server version : 12.1

Web server domain : peoplesoft

Internet Architecture app name : PORTAL

Integration Gateway app name : PSIGW

PeopleSoft Business Interlink app name : PSINTERLINKS

Environment Management Hub : PSEMHUB

Portlet Container app name : pspc

Site name : ps

Authentication Token Domain :

Application server name : APPSRVNAME

JSL port : 9000

Report repository directory : /ds1/home/PeopleSoft Internet→

```
Architecture/psreports
```

```
PIA webserver directory : /home/psftuser/psft/pt/8.56/webserv
```

You see a progress indicator showing the progress of your installation.

17. When the installation is complete, exit from the console window.

The default installation directory is for the PIA domain `<PIA_HOME>/webserv/<domain_name>/`, where `<domain>` is the web server domain (peoplesoft by default).

## Task 9B-2-3: Installing the PeopleSoft Pure Internet Architecture on an Existing Oracle WebLogic Domain in Console Mode

To install the PeopleSoft Pure Internet Architecture on Oracle WebLogic:

1. Change directory to `PS_HOME/setup/PsMpPIAInstall` and run one of these commands:

```
setup.sh -tempdir <temporary_directory>
```

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

See "Using the PeopleSoft Installer," Prerequisites.

A welcome message appears.

2. Press ENTER at the Welcome prompt to continue.

```
Welcome to the InstallShield Wizard for PeopleSoft Internet⇒
Architecture.
```

```
Using the InstallShield Wizard you will install PeopleSoft Internet⇒
Architecture on your computer.
```

```
Version: 8.56
```

```
If installing onto an Oracle WebLogic Server, make sure to shutdown any⇒
running⇒
```

```
webservers to avoid web server configuration.
```

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

3. Enter the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to here as `PIA_HOME`.

```
Choose the directory where you wish to deploy the PeopleSoft Pure⇒
Internet Architecture:
```

```
Please specify a directory name or press Enter
[/home/PT856]:
```

4. Enter `1` to select the Oracle WebLogic Server.

```
Choose the installation type that best suits your needs
```

```
->1- Oracle WebLogic Server
```

```
2- IBM WebSphere Server
```

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

5. Enter the top-level directory where Oracle WebLogic is installed.

```
Select the web server root directory [/opt/oracle]: /data4/WLS_HOME
```



Detected web server version: WebLogic 12.2.1

---

**Note.** You will get an error message if you specify a directory that does not contain Oracle WebLogic, or that contains an incorrect Oracle WebLogic version.

---

6. Select 2, Existing WebLogic Domain, at the following prompt:

---

**Note.** You only see the option Existing WebLogic Domain if there is already a domain in *PIA\_HOME*.

---

```
1- Create New WebLogic Domain
->2- Existing WebLogic Domain
```

7. Select the domain name from the list:

```
Select application name from list:
->1- ptwls
    2- ptwls2
```

8. Select one of these options for operations to run at the following prompt:

```
Select application name from list:

->1- Install additional PeopleSoft site
    2- Redeploy PeopleSoft Internet Architecture
    3- Re-create WebLogic domain and redeploy PeopleSoft Internet
Architecture
    4- Deploy additional PeopleSoft application extensions
```

To select an item enter its number, or 0 when you are finished [0] : 1

- *Install additional PeopleSoft site*

This option is relevant only to the PeopleSoft PORTAL web application, and does not modify or revert any other configuration settings. Select this option to install only the necessary files for defining an additional PeopleSoft site onto an existing Oracle WebLogic configuration. The new site will be accessed using its name in the URL. A site named "CRM" would be accessed using a URL similar to `http://<mywebserver_machine>/CRM`. To reset or re-create an existing PeopleSoft site, simply enter that site's name as the site to create. On your web server, a PeopleSoft site is comprised of the following directories within the PORTAL web application:

```
<WEBLOGIC_DOMAIN>/applications/peoplesoft/PORTAL/<site>/*
```

```
<WEBLOGIC_DOMAIN>/applications/peoplesoft/PORTAL/WEB-INF/psftdocs/<site>/*
```

- *Redeploy PeopleSoft Internet Architecture*

This option affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to redeploy all of the web components of the PeopleSoft Pure Internet Architecture. The redeployment process updates all of the web components of the PeopleSoft Pure Internet Architecture, without modifying the configuration files or scripts that belong to the Oracle WebLogic server domain.

- *Re-create WebLogic domain and redeploy PeopleSoft Internet Architecture*

This option affects Oracle WebLogic Server domain configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to completely remove an existing Oracle WebLogic domain and deploy the PeopleSoft Pure Internet Architecture components to create the newly specified PeopleSoft site.

---

**Warning!** Re-creating an existing domain will delete everything previously installed into that domain.

---

See *PeopleTools: Portal Technology*.

- *Deploy additional PeopleSoft application extensions*

This option is solely for use with PeopleSoft applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see if this option is appropriate. PeopleSoft PeopleTools does not use application extensions.

9. If there are application packages in the archives directory, select whether you want to deploy them. (If you are using an existing domain, you see a prompt for this only if you elected to Deploy Additional PeopleSoft Extensions.)
10. Enter the administrator login and password that you specified for the existing Oracle WebLogic domain. Press ENTER to continue.

The default login ID is system. The password must be at least 8 alphanumeric characters with at least one number or special character.

Please enter the administrator login and password for WebLogic domain.

Login ID [system]:

Password []:

11. Select the type of domain to create—single server, multi server, or distributed managed server.

---

**Note.** Depending upon the operation you are carrying out for an existing domain, you may not see this prompt.

---

Please select the configuration to install.

```
->1- Single Server Domain
    2- Multi Server Domain
    3- Distributed Managed Server
```

There are three domain configuration options:

- *Single Server Domain*

This domain configuration contains one server, named PeopleSoft Pure Internet Architecture and the entire PeopleSoft application is deployed to it. This configuration is intended for single user or very small scale, non-production environments. This configuration is very similar to the Oracle WebLogic domain provided in PeopleSoft PeopleTools 8.40 through 8.44.

- *Multi Server Domain*

This domain configuration is contains seven unique server definitions, a Oracle WebLogic cluster, and the PeopleSoft Application split across multiple servers. This configuration is the intended for a production environment.

- *Distributed Managed Server*

This option is an extension of the Multi Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

12. Enter the Integration Gateway User and password.

The password must be at least 8 alphanumeric characters.

See *PeopleTools: Integration Broker Administration*.

Please enter the Integration Gateway User and Password.

```
Integration Gateway User [administrator]:
Password []:
Re-type Password []:
```

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

13. Enter the AppServer Domain Connection password (optional).

If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank. This password will be propagated to the Integration Gateway.

See the information on setting Application Server domain parameters in the *PeopleTools: System and Server Administration* product documentation.

Please enter the AppServer Domain Connection Password.

```
Password []:
Re-type Password []:
```

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

14. If you selected Deploy additional PeopleSoft application extensions, enter the location where you installed the PeopleSoft application software, *PS\_APP\_HOME*.

Choose the directory where you previously installed PeopleSoft⇒ Applications, commonly known as "PS\_APP\_HOME".

Note: 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.

Please specify a directory name or press Enter [/home/FSCM92]

15. For the option Deploy additional PeopleSoft application extensions, select the application packages to deploy, EL PeopleSoft Enterprise Learning Mgmt in this sample prompt:

Please select the application package to deploy:

```
->1- EL PeopleSoft Enterprise Learning Mgmt
    2- FIN-SCM PeopleSoft eProcurement
```

16. Enter a PeopleSoft web site name; the default is ps.

---

**Warning!** The site name can include underscores ( \_ ), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my\_site\_3 or my\_newwin\_site).

---

Please specify a name for the PeopleSoft web site:  
Website name [ps]:

17. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the Authentication Token Domain (optional).

---

**Note.** This prompt may differ depending upon the type of operation you are carrying out for an existing domain.

---

Enter port numbers and summaries.

AppServer name [APPSRVNAME]:

JSL Port [9000]:

HTTP Port [80]:

HTTPS Port [443]:

Authentication Token Domain (optional) []:

- *AppServer name*

For the AppServer name setting, enter the name of your application server.

See "Configuring the Application Server on UNIX."

See "Configuring the Application Server on Windows."

See Understanding the PeopleSoft Pure Internet Architecture.

- *JSL Port*

For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000.)

- *HTTP and HTTPS Port*

The values for the HTTP and HTTPS ports should be greater than 1024. Any port number less than 1024 is reserved and only Root has access to it.

- *Authentication Token Domain*

The value you enter for the 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.

If you enter a value for the Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is

`http://MachineName/ps/signon.html`. If you do enter a value for authentication domain (for example, `.myCompany.com`), the URL to invoke PeopleSoft Pure Internet Architecture is

`http://MachineName.myCompany.com/ps/signon.html`. In addition, if the web server for the database is using an http port other than the default port of 80, the URL must include the port number, for example

`http://MachineName:8080/ps/signon.html` if there is no authentication domain, or

`http://MachineName.myCompany.com:8080/ps/signon.html` if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

#### 18. Enter the details for the web profile, PROD, or enter another name.

The example below shows the default web profile name, PROD, and default user ID, PTWEBSERVER. The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security in the *PeopleTools: Portal Technology* product documentation.

Please enter the Name of the Web Profile used to configure the web⇒  
server. The user id and password will be used to retrieve the web⇒  
profile from the database. (NOTE: Other available preset web profile⇒

names are "TEST", "DEV", and "KIOSK".)

```
Web Profile Name [PROD]:
User ID [PTWEBSERVER]:
Password []:
Re-type Password []:
```

---

**Note.** If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step, as shown in this example. The password must be at least 8 alphanumeric characters.

See the *PeopleTools: Security Administration* product documentation for the steps required to add a User Profile.

---

#### 19. Specify the root directory for the Report Repository.

The default directory is `<user_home>/PeopleSoft Internet Architecture/psreports`, where `<user_home>` is the home directory for the current user.

You must have write access to the specified directory.

---

**Note.** In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

---

See "Setting Up Process Scheduler," Setting Up the Process Scheduler to Transfer Reports and Logs to Report Repository.

Select the Report Repository location:

```
Please specify a directory name or press Enter [/dsl/home/PeopleSoft⇒
Internet Architecture/psreports]:
```

#### 20. Verify all of your selections and press Enter to begin the installation.

```
Setup Type : weblogic
```

```
Web server root directory : /data4/WLS1213
```

```
Web server version : 12.1
```

```
Web server domain : peoplesoft
```

```
Internet Architecture app name : PORTAL
```

```
Integration Gateway app name : PSIGW
```

```
PeopleSoft Business Interlink app name : PSINTERLINKS
```

```
Environment Management Hub : PSEMHUB
```

```
Portlet Container app name : pspc
```

```
Site name : ps
```

Authentication Token Domain :

Application server name : APPSRVNAME

JSL port : 9000

Report repository directory : /ds1/home/PeopleSoft Internet→  
Architecture/psreports

PIA webserver directory : /home/psftuser/psft/pt/8.56/webserv

You see a progress indicator showing the progress of your installation.

21. When the installation is complete, exit from the console window.

The default installation directory is for the PIA domain `<PIA_HOME>/webserv/<domain_name>/`, where `<domain_name>` is the web server domain (peoplesoft by default).

## Task 9B-2-4: Uninstalling the PeopleSoft Pure Internet Architecture from Oracle WebLogic

To remove a PIA domain deployed on Oracle WebLogic, delete the `<PIA_HOME>/webserv/<domain_name>` directory. If there is more than one PIA domain, delete the `domain_name` directory for every domain you want to remove.

## Task 9B-3: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere in Console Mode

---

This section discusses:

- Prerequisites
- Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server ND
- Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

### Prerequisites

The information in this section applies to the installation of PeopleSoft Pure Internet Architecture (PIA) on an IBM WebSphere Application Server. PeopleSoft PeopleTools 8.56 requires a 64-bit IBM WebSphere 9.0.0.0 installation. Review these points before you begin the installation:

- Before installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server, you must have installed the IBM WebSphere ND software.  
See "Installing Web Server Products," Installing IBM WebSphere Application Server.
- Each IBM WebSphere Application Server runs one PeopleSoft Pure Internet Architecture application. If you need to install more than one PeopleSoft Pure Internet Architecture application on your WebSphere Application Server, you must run the PIA installation again.
- When installing PIA on IBM WebSphere ND, you must work with a local copy of the PIA installation software; you cannot install remotely. If you are doing the installation on a machine other than the one on which you installed PeopleSoft PeopleTools, copy the `PS_HOME/setup/PsMpPIAInstall` directory to the local machine.

- Both IBM WebSphere Application Server Network Deployment and PeopleSoft Pure Internet Architecture must be installed and deployed using the same user id. Following this restriction avoids any security and profile management issues.

## See Also

"Installing Web Server Products," Installing IBM WebSphere Application Server

## Task 9B-3-1: Installing the PeopleSoft Pure Internet Architecture on IBM WebSphere Application Server ND

To install the PeopleSoft Pure Internet Architecture on IBM WebSphere ND:

1. Change directory to *PS\_HOME*/setup/PsMpPIAInstall and run this command:

```
setup.sh
```

A welcome message appears.

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

2. Select Enter to continue.
3. Choose the directory where you want to install the PeopleSoft Pure Internet Architecture, referred to in this documentation as *PIA\_HOME*.
4. Enter 2, to select the IBM WebSphere Application Server:

```
->1- Oracle WebLogic Server
   2- IBM WebSphere Server
```
5. Enter the directory where you installed IBM WebSphere ND, or press ENTER to accept the default:

```
Select the WebSphere Application Server directory:
Directory Name: [/opt/IBM/WebSphere/AppServer]
```
6. Choose whether to create a new application, or use an existing application:

```
->1- Create New WebSphere Application
   2- Existing WebSphere Application
```
7. If you specify 1, Create New WebSphere Application, enter an application name for this web server.

8. Select the type of server you want to install, and press ENTER to continue:

```
Select the server install type:
->1- Single Server Installation
    2- Multi Server Installation
```

The Single Server Installation option creates one IBM WebSphere Application Server profile to hold all the PeopleSoft web applications. The installer uses the Application Name you enter for the new profile's name.

The Multi Server Installation option creates a single profile with the name you entered above, *application\_name*. The *application\_name* profile includes two servers, which deploy discrete functionality and are found on different ports, as specified in the following table:

| Server Name | Purpose                                                            | HTTP or HTTPS Port Number |
|-------------|--------------------------------------------------------------------|---------------------------|
| server1     | PORTAL applications                                                | X                         |
| psemhub     | PeopleSoft Environment Management Framework applications (PSEMHUB) | X+1                       |

See the information on working with IBM WebSphere in the *PeopleTools: System and Server Administration* product documentation.

9. If you specify 2, Existing WebSphere Application, select a domain name from the list:

```
Select domain name from list
```

```
->1- AppSrv01
    2- ptwas
    3- peoplesoftA
    4- hcdmo
```

10. After specifying an existing domain, select one of the options below and press ENTER to continue.

The PeopleSoft application "peoplesoftA" already exists.

Select from the following:

```
->1- Install additional PeopleSoft site
    2- Redeploy PeopleSoft Internet Architecture
    3- Deploy additional PeopleSoft application extensions
```

---

**Note.** Make sure the server is up and running before choosing any of these options.

---

- *Install additional PeopleSoft site*

Select this option to install only the necessary files for defining an additional PeopleSoft site onto the existing IBM WebSphere web server configuration.

- *Redeploy PeopleSoft Internet Architecture*

This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local IBM WebSphere Application Server profile. The redeployment process updates all of the web components of the PeopleSoft Pure Internet Architecture.

- *Deploy additional PeopleSoft application extensions*

This option is solely for use with PeopleSoft product applications. PeopleSoft application extensions are provided with certain PeopleSoft applications, and this option allows you to deploy those extensions. Consult the installation documentation for your PeopleSoft application to see whether this option is appropriate. PeopleSoft PeopleTools does not use application extensions.



11. Enter the administrator login and password for the IBM WebSphere Application profile, or accept the default values.

The default login ID is system. The password must be at least 8 alphanumeric characters with at least one number or special character.

Please enter the administrator login ID and password for WebSphere⇒ profile.

Login ID [system]:

Password []:

Retype Password []:

If you selected the option Existing WebSphere Application, enter the same Login ID and password as you entered for the original IBM WebSphere profile creation. If the Login ID and password do not match the original values, you will not be able to continue with the PIA installation.

12. If you select the option Deploy additional PeopleSoft application extension, select the application packages you want to deploy:

->1- EMP PeopleSoft Activity Based Mgmt

13. Enter the Integration Gateway User and Password.

The password must be at least 8 alphanumeric characters .

Please enter the Integration Gateway User and Password.

Integration Gateway User [administrator]:

Password []:

Re-type Password []:

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

14. Enter the AppServer Domain Connection Password (optional).

If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank. This password will be propagated to the Integration Gateway.

See "Configuring the Application Server on UNIX," Creating, Configuring, and Starting an Initial Application Server Domain.

See the information on setting Application Server domain parameters in the *PeopleTools: System and Server Administration* product documentation.

Please enter the AppServer Domain Connection Password.

Password []:

Re-type Password []:

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

15. Enter a web site name; the default is ps.

---

**Warning!** The site name can include underscores ( \_ ), but an underscore cannot be followed by a numeric character or the string "newwin" (for example, my\_site\_3 or my\_newwin\_site).

---

16. Specify your application server name, its JSL (Jolt Station Listener) port number, its HTTP and HTTPS port numbers, the authentication token domain (optional).

Enter port numbers and summaries.

AppServer name:

[<App Server Machine Name>]

JSL Port:

[9000]

HTTP Port:

[80]

HTTPS Port:

[443]

Authentication Token Domain:(optional) []

- For the AppServer name setting, enter the name of your application server. For the JSL port setting, enter the JSL port number you specified when setting up your application server. (The default value is 9000.) See "Configuring the Application Server on UNIX."
- The HTTP/HTTPS port numbers are reset to those that you just specified when you restart your IBM WebSphere server.
- The value you enter for the 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.
- If you enter a value for the Authentication Token Domain, the URL to invoke PeopleSoft Pure Internet Architecture must include the network domain name in the URL. For example, if you do not enter an authentication domain, the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName/ps/signon.html`. If you do enter a value for the authentication domain (for example, `.myCompany.com`), the URL to invoke PeopleSoft Pure Internet Architecture is `http://MachineName.myCompany.com/ps/signon.html`. In addition, if the web server for the database is using an HTTP port other than the default port of 9080, the URL must include the port number, for example `http://MachineName:8080/ps/signon.html` if there is no authentication domain, or `http://MachineName.myCompany.com:8080/ps/signon.html` if there is an authentication domain. The URL must also comply with the naming rules given earlier in this chapter.

See Understanding PeopleSoft Pure Internet Architecture.

17. Enter the details for the web profile, PROD, or enter another name.

The sample prompt shows the default web profile name, PROD, and default User ID, PTWEBSERVER. The web profile name will be used to configure this web site. You can specify one of the other predelivered web profiles, DEV, TEST, or KIOSK, or enter a different name. If you intend to use a Web Profile User ID other than the default, be sure to review the information on web profile configuration and security in the *PeopleTools: Portal Technology* product documentation.

Please enter the Name of the Web Profile used to configure the web⇒  
server. The user id and password will be used to retrieve the web⇒  
profile from the database. (NOTE: Other available preset web profile⇒  
names are "TEST", "DEV", and "KIOSK".)

Web Profile Name [PROD]:

```
User ID : PTWEBSERVER
Password []:
Re-type Password []
```

---

**Note.** If the PeopleSoft PeopleTools version of your database is *below* 8.44, then you will need to add the PTWEBSERVER User Profile before you upgrade to the current PeopleSoft PeopleTools release. The User Profile must include the PeopleTools Web Server role, but do not grant any other roles. Enter the password that you set for the User Profile for the User ID password in this step. The password must be at least 8 alphanumeric characters. See the *PeopleTools: Security Administration* product documentation for the steps required to add a User Profile.

---

18. Specify the root directory for the Report Repository.

You can install to any location, but the directory must have write access. The default directory is *user\_home/PeopleSoft Internet Architecture/psreports*, where *user\_home* is the home directory for the current user.

---

**Note.** In setting up the Process Scheduler to transfer reports, if you choose the FTP protocol, use the same directory for the Home Directory as you use here for the report repository.

---

See "Setting Up Process Scheduler on UNIX," Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository.

19. Verify your selections and press Enter to start the installation. You see an indicator showing the progress of your installation.

20. When the installation is complete, exit from the console window.

The default installation directory for a specific PIA profile is *<PIA\_HOME>/webserv/<profile\_name>*.

## Task 9B-3-2: Uninstalling the PeopleSoft Pure Internet Architecture from IBM WebSphere

You cannot uninstall PeopleSoft Pure Internet Architecture simply by deleting the directory *<PIA\_HOME>/webserv/<profile\_name>*, without uninstalling it from IBM WebSphere Administration Console. If you do so, the IBM WebSphere registry becomes corrupt, and subsequent attempts to install PeopleSoft Pure Internet Architecture will fail. Instead, if necessary, you must uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere ND as described here:

To uninstall PeopleSoft Pure Internet Architecture on IBM WebSphere:

1. Open the IBM WebSphere Administration Console by entering the following URL in a browser:

```
http://<machine-name>:<administrative_console_port>/ibm/console
```

To find the value for *<administrative\_console\_port>*, refer to *<PIA\_HOME>\webserv\<profile\_name>\logs\AboutThisProfile.txt*.

2. Log in as any user.

3. Choose Applications, Application Types, Websphere enterprise applications.

4. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Stop.

5. Select the check boxes for the PeopleSoft Pure Internet Architecture applications you want to uninstall, and click Uninstall.

6. Save your configuration.

7. Log out of the IBM WebSphere Administration Console.

8. Stop IBM WebSphere server using one of the following commands:

On Microsoft Windows:

```
<PIA_HOME>\webserv\<profile_name>\bin\stopServer.bat server1
```

On UNIX or Linux:

```
<PIA_HOME>/webserv/<profile_name>/bin/stopServer.sh server1
```

9. In addition to uninstalling the application, you need to remove the IBM WebSphere Application Server profile (that was created during PIA install) to complete the PIA uninstallation.

To uninstall profile run the following steps:

- a. Go to `<PIA_HOME>/webserv/<profile_name>/bin`
- b. Run one of the following commands, where *profile\_name* indicates the application name that you have selected during the PIA install.

On Microsoft Windows:

```
manageprofiles.bat -delete -profileName profile_name
```

On UNIX or Linux:

```
manageprofiles.sh -delete -profileName profile_name
```

- c. Delete the directory `<PIA_HOME>/webserv/<profile_name>`

## Task 9B-4: 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 9B-4-1: 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. See the previous sections that discuss the installation in GUI and console mode for information on the parameters.

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 "PTWEBSEVER"
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 9B-4-2: 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 9B-5: 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 9B-5-1: 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 9B-5-2: Starting and Stopping IBM WebSphere Application Servers

This section discusses:

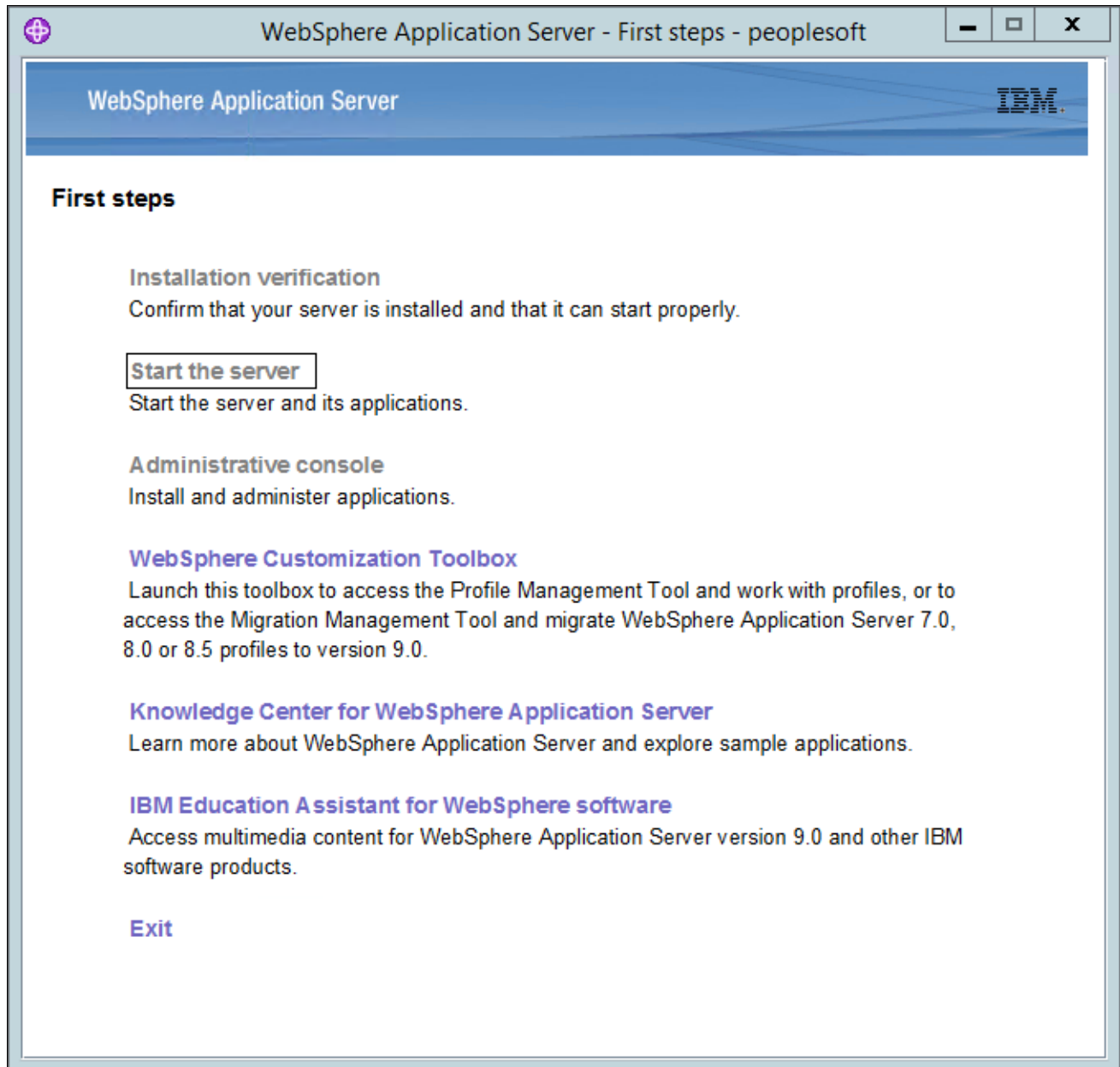
- Starting and Stopping IBM WebSphere Application Servers on Windows
- Starting and Stopping IBM WebSphere Application Servers on UNIX or Linux
- Verifying the IBM WebSphere Installation

### 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.

- 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.

```

[5/17/17 18:34:55:850 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:35:04:917 MDT] 00000001 SibMessage W [ ] CWSJY0003W: MQJCA5001: WMQ messaging : '9.0.0.0-p900-L160509.1'.
[5/17/17 18:35:08:352 MDT] 0000004c AuthConfigFac W SECJ8032W: AuthConfigFactory implementation is not defined, using the default JASPI factory imple
[5/17/17 18:35:11:601 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:35:11:604 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:35:16:379 MDT] 0000004d FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:40:26:405 MDT] 00000001 WSKeyStore W CWPKI0041W: One or more key stores are using the default password.
[5/17/17 18:40:27:423 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:40:27:424 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:426 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:427 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:427 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/17/17 18:40:27:581 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/17/17 18:40:32:792 MDT] 00000001 SibMessage W [ ] CWSJY0003W: MQJCA5001: WMQ messaging : '9.0.0.0-p900-L160509.1'.
[5/17/17 18:40:34:404 MDT] 0000004c AuthConfigFac W SECJ8032W: AuthConfigFactory implementation is not defined, using the default JASPI factory imple
[5/17/17 18:40:36:487 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:40:36:489 MDT] 0000004c webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/17/17 18:40:41:741 MDT] 0000004b FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\w
[5/17/17 19:31:32:812 MDT] 000000a8 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/25/17 15:14:43:235 MDT] 00000001 WSKeyStore W CWPKI0041W: One or more key stores are using the default password.
[5/25/17 15:14:54:209 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\w...
[5/25/17 15:14:54:210 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:54:215 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:54:217 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:54:219 MDT] 00000001 ModuleManifes E UTLS0002E: The shared library psSharedLibrary contains a classpath entry which does not resolve to
[5/25/17 15:14:55:452 MDT] 00000001 FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
[5/25/17 15:15:12:355 MDT] 00000001 SibMessage W [ ] CWSJY0003W: MQJCA5001: WMQ messaging : '9.0.0.0-p900-L160509.1'.
[5/25/17 15:15:18:677 MDT] 0000004e AuthConfigFac W SECJ8032W: AuthConfigFactory implementation is not defined, using the default JASPI factory imple
[5/25/17 15:15:36:366 MDT] 0000004e webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/25/17 15:15:36:368 MDT] 0000004e webcontainer W com.ibm.ws.webcontainer.VirtualHostImpl addVhostEntry SRVE8100W: VirtualHost alias already exists
[5/25/17 15:15:52:215 MDT] 0000004d FfdcProvider W com.ibm.ws.ffdc.impl.FfdcProvider logIncident FFDC1003: FFDC Incident emitted on C:\Users\
IVTL0040I: 42 errors/warnings are detected in the C:\Users\
ipsftpt8.56\webserver\peoplesoft\logs\server1\SystemOut.log file
IVTL0070I: The Installation Verification Tool verification succeeded.
IVTL0080I: The installation verification is complete.

```

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>
```

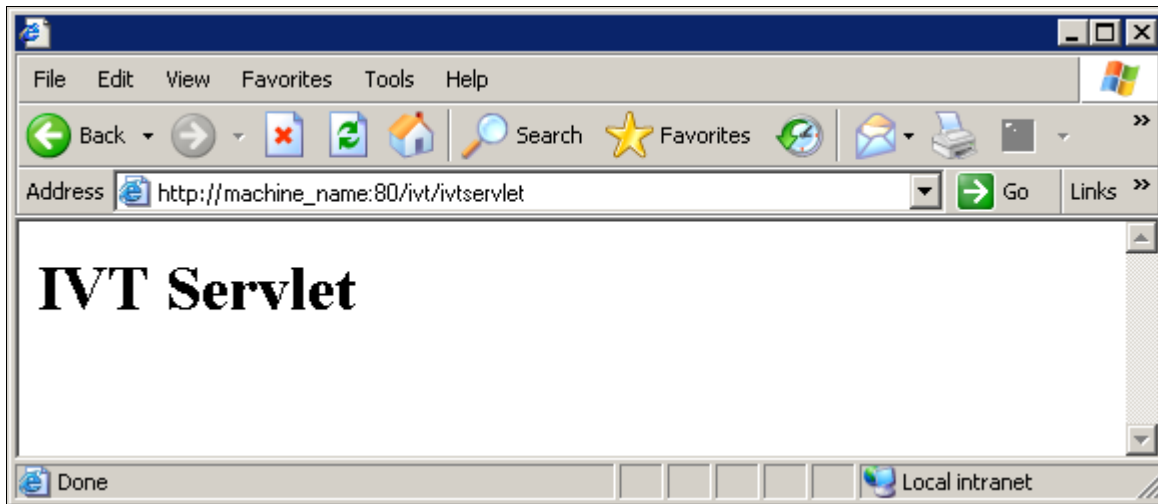
## Verifying the IBM WebSphere Installation

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 9B-5-3: 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. Run the `psadmin` command.
2. Specify `4` for Web (PIA) Server.

```
-----
PeopleSoft Server Administration
-----
```

```
PS_HOME:      /home/pt856
PS_CFG_HOME:  /home/psft_AppServ
```

- ```
1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Replicate Config Home
q) Quit
```

```
Command to execute (1-6, q): 4
```

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.

3. Select *1* for Administer a domain.

```
-----
PeopleSoft PIA Administration
-----

PIA Home:    /home/psft_WebServ

1) Administer a domain
2) Create a domain
3) Delete a domain

q) Quit
```

Command to execute: **1**

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.

4. 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**

5. To start a web server domain, enter *1*, Boot this domain.

```
-----
PeopleSoft PIA Domain Administration
-----

PIA Home:    /home/psft_websrv
PIA Domain:  peoplesoft
Domain Status: stopped

1) Boot this domain
2) Shutdown this domain
3) Get the status of this domain
4) Configure this domain
5) Edit configuration files
6) View log files
7) Administer a site
8) Delete a site

q) Quit
```

Command to execute: **1**

The boot command invokes the startPIA.sh script, and you see the progress and a status message on the console window.

```
Starting the domain.....
...
Verifying domain status..
The domain has started.
```

6. To stop a web server domain, select 2, Shutdown this domain.

The shutdown command invokes the stopPIA.sh script, and you see the progress and a status message on the console window.

```
Stopping the domain.....
.....
Verifying domain status.....
The domain has stopped.
```

7. 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 9B-5-4: 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 9B-6: 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 9B-6-1: 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:



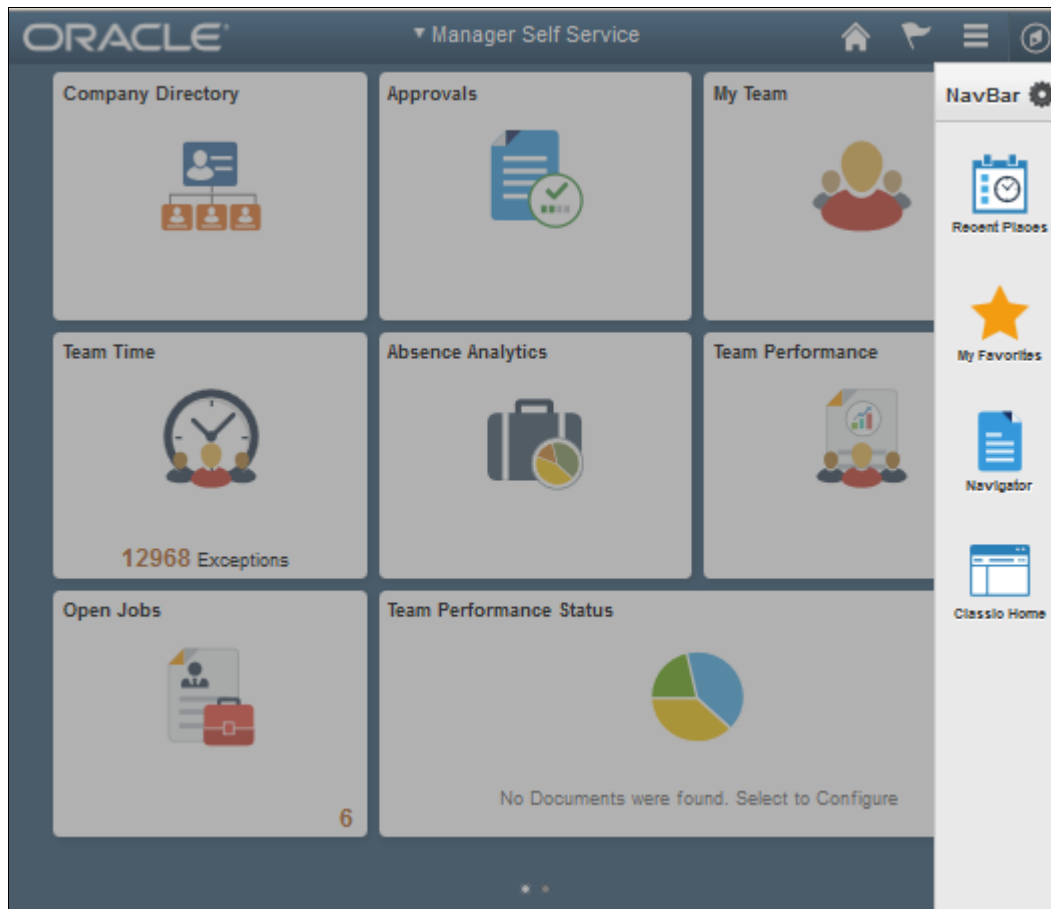
1. On the PeopleSoft Fluid User Interface, shown in this example, select (press) the NavBar button at the top right (diamond inside a circle).



PeopleSoft Fluid User Interface home page

The Navigation bar (NavBar) side page appears.

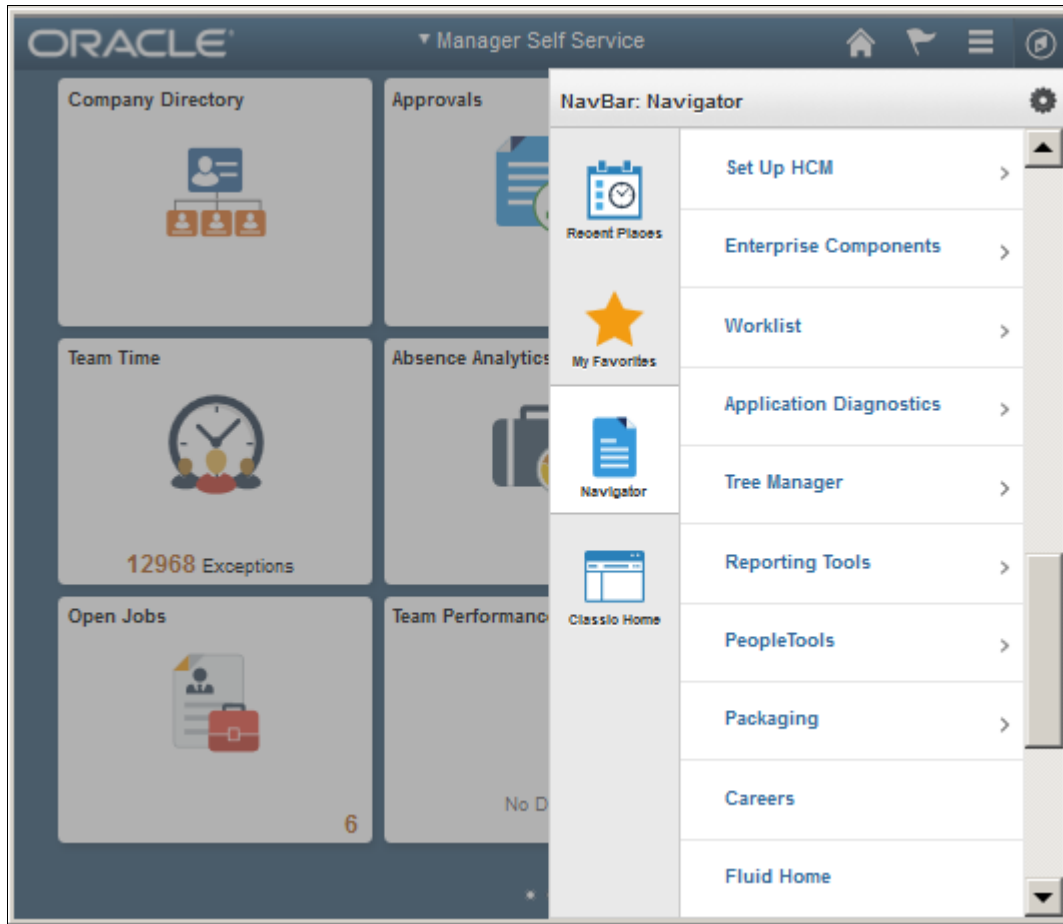
2. Select (press) Navigator.



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 9B-6-2: 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.DBLENGHTHYPE Value
Unicode-encoded database or a non-Unicode SBCS database	Others	N
Japanese database on DB2 LUW	DB2 MBCS	D
Non-Unicode Japanese database <b>Note.</b> If your installation uses the Shift-JIS character set for Japanese, you must use this option.	MBCS <b>Note.</b> 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 9B-6-3: 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 9B-6-4: 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 9B-6-5: 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 10A

# Setting Up Process Scheduler on Windows

This chapter discusses:

- Prerequisites
- Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Environment Variables
- Setting Up Process Scheduler Server Agent
- Starting Process Scheduler as a Windows Service (Optional)
- Configuring the Process Scheduler for Microsoft Word (Optional)
- Configuring Setup Manager
- Installing Products for PS/nVision

## Prerequisites

---

Before setting up your Process Scheduler, you must:

- Install Tuxedo (except for z/Linux).  
See "Installing Additional Components."
- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).  
See "Preparing for Installation."
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Set up your COBOL batch environment if you need to run COBOL processes through Process Scheduler. If the PeopleSoft modules purchased do not contain any COBOL modules, the COBOL run time libraries are not required. Also, COBOL is not required for applications that contain no COBOL programs. Consult My Oracle Support for the details on whether your application requires COBOL.  
See "Preparing for Installation," Planning Your Initial Configuration.
- Install the Microsoft Office products Microsoft Word and Microsoft Excel.
- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.

In PeopleSoft PeopleTools 8.50 and later, the configuration and log files for Process Scheduler server domains reside in *PS\_CFG\_HOME*. If you do not set a *PS\_CFG\_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
%USERPROFILE%\psft\pt\<peopletools_version>
```

See "Preparing for Installation," Defining Installation Locations.

See the product documentation *PeopleTools: System and Server Administration* for more information on the *PS\_CFG\_HOME* environment variable and working with server domain configuration.

## See Also

*PeopleTools: Process Scheduler*

My Oracle Support, Certifications

## **Task 10A-1: Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade**

---

When performing the installation of the separate upgrade *PS\_HOME* or *PS\_CFG\_HOME* (which is different than your old release *PS\_HOME*), you may configure your Process Scheduler at this point in time of the installation, but do not boot your Process Scheduler until directed to do so within the upgrade.

If you are installing into an existing *PS\_HOME* or *PS\_CFG\_HOME* after completing a PeopleTools-only upgrade, review your old *PS\_HOME* or *PS\_CFG\_HOME* for configuration files that you may want to reuse for the new PeopleSoft PeopleTools release. While you may configure your Process Scheduler at this point in time of the installation, do not boot your Process Scheduler until directed to do so within the upgrade.

See "Preparing for Installation," Preparing for the PeopleTools-Only Upgrade.

## **Task 10A-2: Setting Up Process Scheduler Security**

---

This section discusses:

- Understanding Process Scheduler Security
- Changing User Account to Start ORACLE ProcMGR V12.2.2.0.0\_VS2015
- Granting Process Scheduler Administrative Rights

## **Understanding Process Scheduler Security**

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly both in Microsoft Windows and within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.



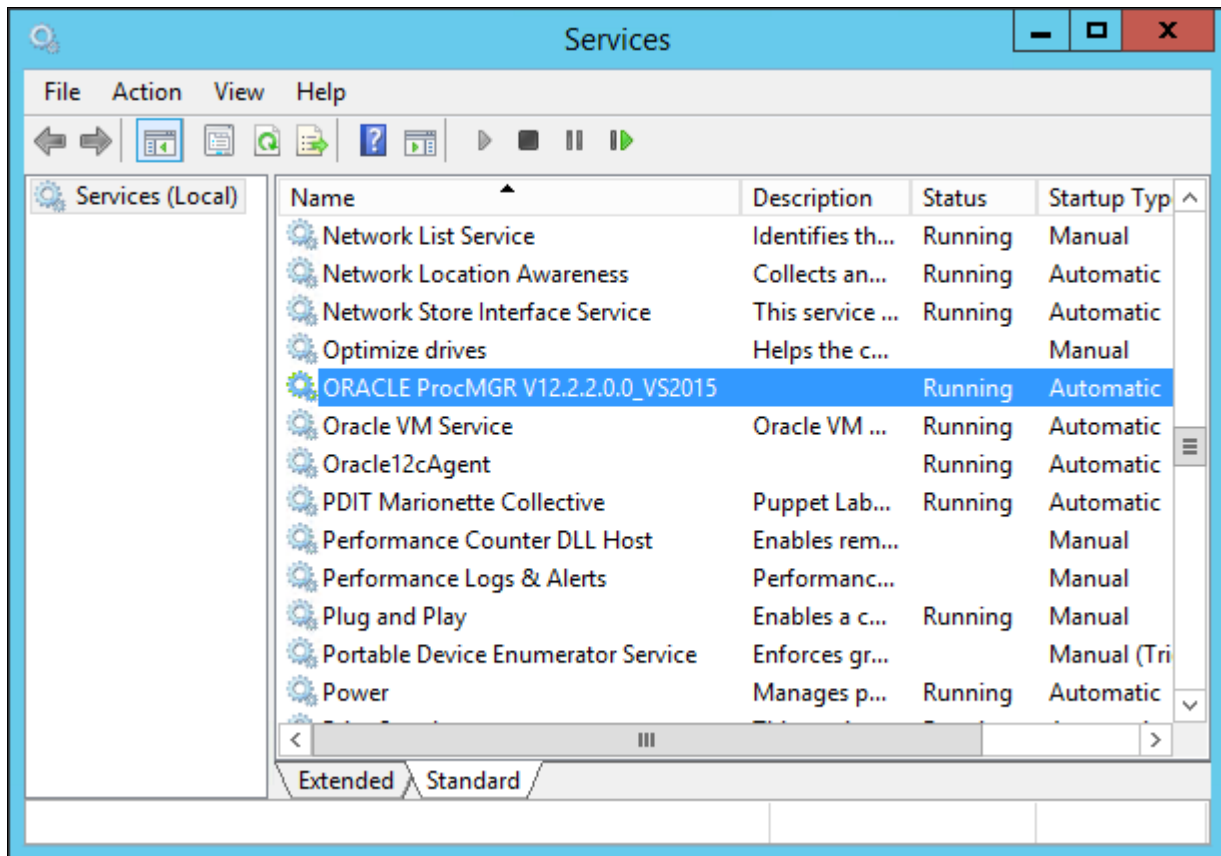
In the next section you set up ORACLE ProcMGR V12.2.2.0.0\_VS2015 with a network user ID. When you install Oracle Tuxedo, the ORACLE ProcMGR V12.2.2.0.0\_VS2015 service is set up by default to be started by local system account—a user account that does not have access to the Windows network. If the Process Scheduler server or processes initiated through Process Scheduler will be using a network printer, accessing files from a network drive, or using Microsoft Windows utilities such as XCOPY that may access UNC paths, you need to change the user account used to start ORACLE ProcMGR V12.2.2.0.0\_VS2015 with a network user account.

## Task 10A-2-1: Changing User Account to Start ORACLE ProcMGR V12.2.2.0.0\_VS2015

To change User Account to start ORACLE ProcMGR V12.12.2.0.0\_VS2015:

1. Launch the Services dialog box; for example, on Microsoft Windows 2012 R2, select Administrative Tools, Services.

In the Services dialog box, find the service labeled *ORACLE ProcMGR V12.2.2.0.0\_VS2015*. This service is installed automatically when you install Tuxedo, and is highlighted in this example.

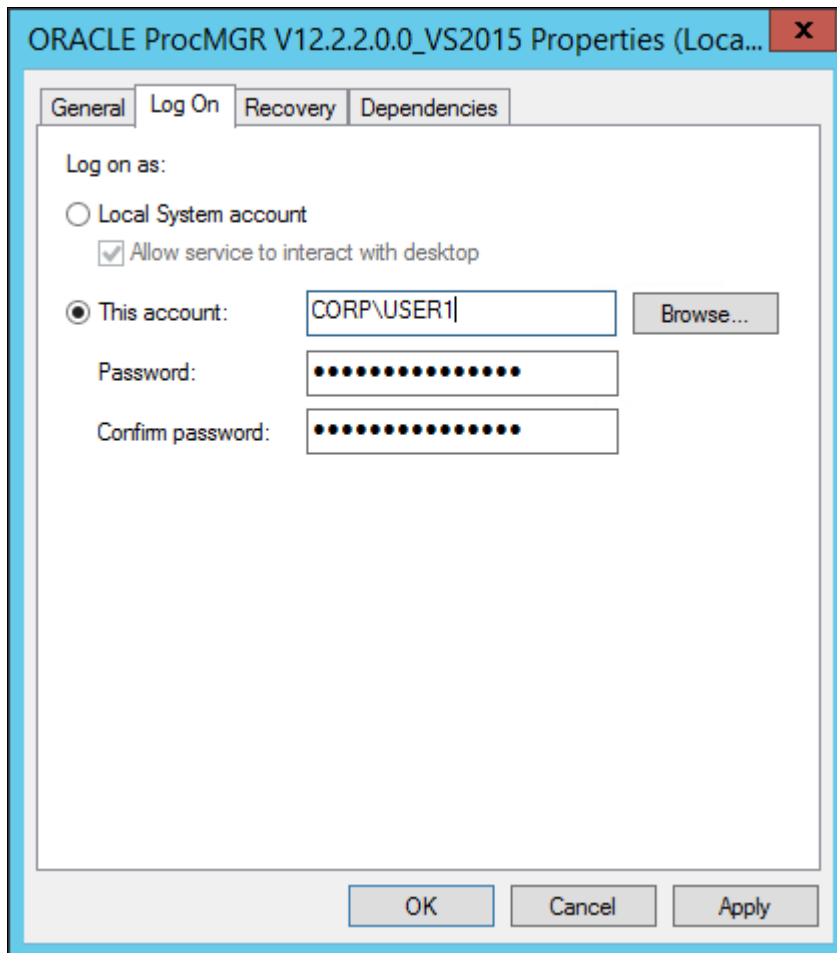


Microsoft Windows Services dialog box with ORACLE ProcMGR service highlighted

2. If the Stop button is enabled, click it to stop the current ORACLE ProcMGR V12.2.2.0.0\_VS2015 process.
  - a. Click Yes when a message informs you of the status change.
  - b. Double-click ORACLE ProcMGR V12.2.2.0.0\_VS2015.  
The Properties dialog box appears.

3. Select the option This account on the Log On tab.

Enter an account name and password. In this example, the account name is CORP\USER1.



ORACLE ProcMGR V12.2.2.0.0\_VS2015 Properties dialog box: Log On tab

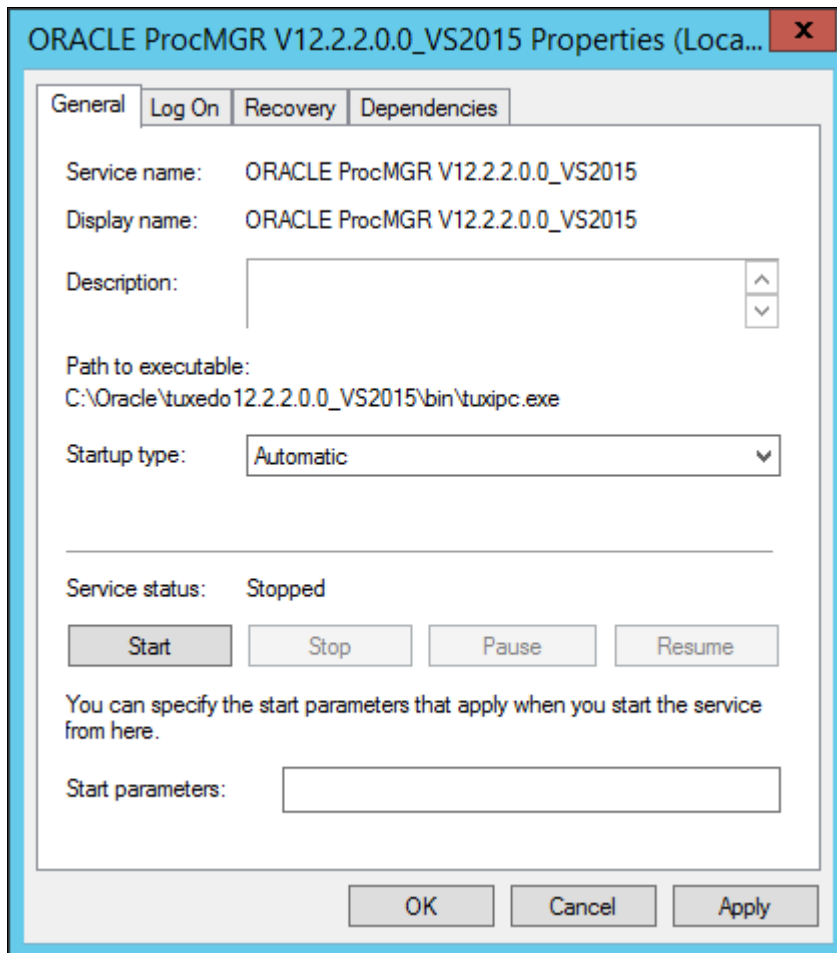
---

**Note.** When you configure your Oracle Tuxedo server as outlined in the chapter, "Configuring the Application Server on Windows," the user ID designated to be the Application Server Administrator must have read/write permissions to the PeopleSoft file directory and read permission to the %TUXDIR% directory, such as C:\oracle\tuxedo12.2.2.0.0\_VS2015.

---

4. Select the General tab.

Make sure that Startup Type is set to Automatic, as shown in this example, and click OK.



ORACLE ProcMGR V12.1.3.0.0\_VS2012 Properties dialog box: General tab

5. Click Start.

A message in the Properties dialog box will indicate the "Started" status. You also see the status in the Services dialog box. Click OK to close the dialog box.

## Task 10A-2-2: Granting Process Scheduler Administrative Rights

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools, Security, User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.

- Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.

The screenshot shows the Oracle PeopleTools Security User Profiles Roles tab. The user ID is QEDMO and the description is QE User. A table lists various roles including PTF Administrator, PeopleSoft Administrator, PeopleSoft User, Portal Administrator, Portal Manager, ProcessSchedulerAdmin, QE Role, Search Administrator, Search Developer, and ReportDistAdmin. The ProcessSchedulerAdmin role is highlighted.

Role Name	Description	Dynamic	View Definition
PTF Administrator	PTF Administrator	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
PeopleSoft Administrator	PeopleSoft Admin Privileges	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
PeopleSoft User	PeopleSoft User	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
Portal Administrator	Portal Administrator	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
Portal Manager	Portal Manager	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
ProcessSchedulerAdmin	Process Scheduler Admin	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
QE Role	QE Role	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
Search Administrator	Search Administrator	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
Search Developer	Search Developer	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>
ReportDistAdmin	Report Distribution Admin	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a>

Process Scheduler window: Roles tab

- Repeat the instructions in step 4 to add the role *ReportDistAdmin*.  
This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.
- Click Save to save your changes.
- Select the General tab and jot down the Permission List name assigned to the Process Profile field.
- From the Portal menu, choose PeopleTools, Security, Permissions & Roles, Permission Lists.
- In the Search dialog, enter the Permission List you noted in step 7.
- Select the Can Start Application Server check box.
- Click Save to save your changes.

## Task 10A-3: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution

- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol
- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

## Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS\_CDM\_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of *Posting* signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name>\<date yyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is *Web/Window*, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

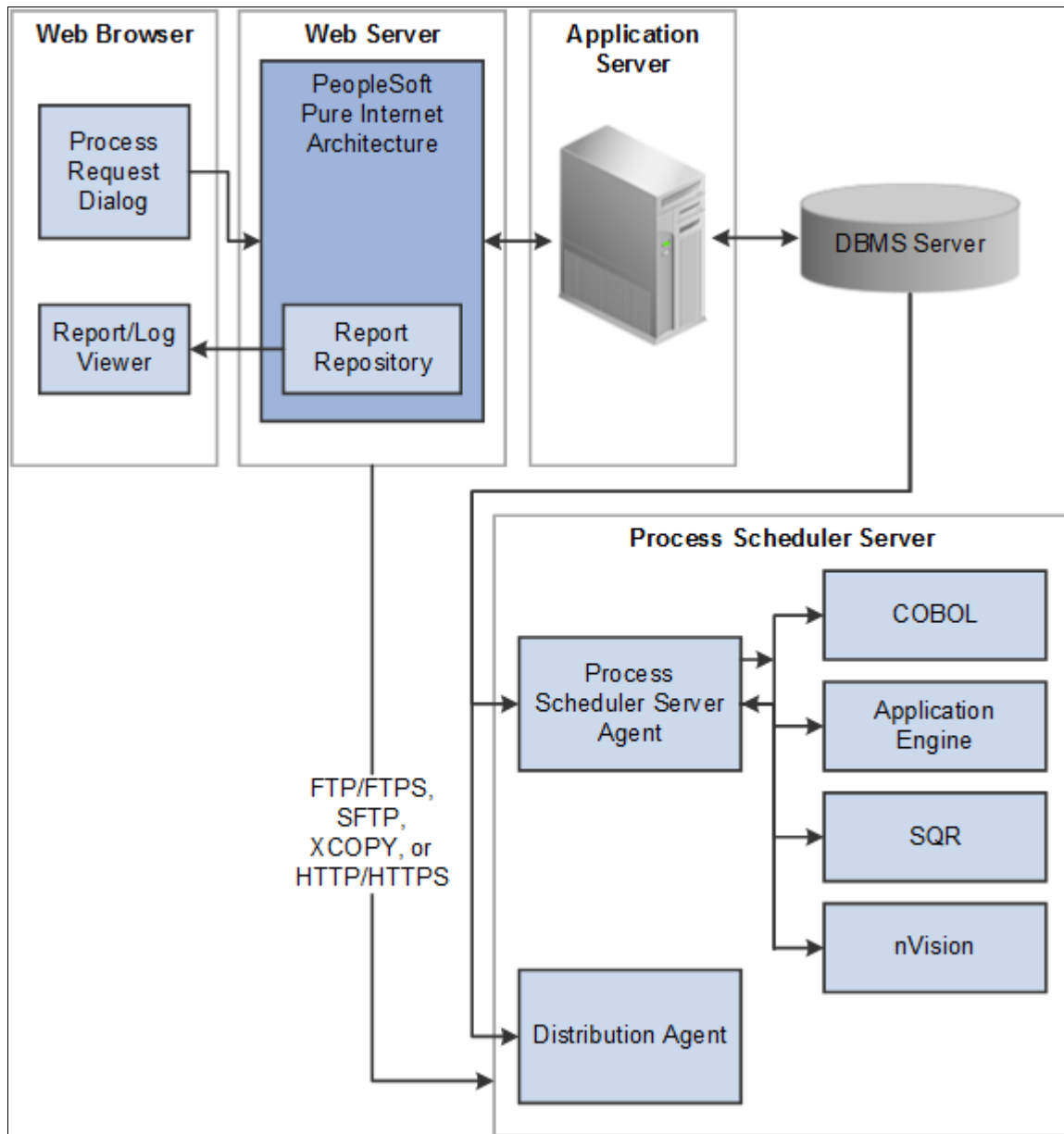
- The web browser gives access to the Process Request dialog and the Report or Log Viewer.
- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

---

**Note.** The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Report Repository.

---

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP/FTPS, XCOPY, HTTP/HTTPS, or SFTP.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security documentation.

See *PeopleTools: Security Administration*.

## Task 10A-3-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as PIA, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PIA, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter `http://<machineName>.peoplesoft.com/<site_name>/signon.html` instead of `http://<machineName>/<site_name>/signon.html`.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

See the information on implementing single signon in the *PeopleTools: Security Administration* product documentation.

- Set up single signon with a password, like this:
  - Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
  - Click Search and then select the node marked as Default Local Node.
  - Select *Password* for the Authentication Option.
  - Enter a password of your choice.
  - Enter the password again in the Confirm Password field.
  - Enter the user ID for which you are setting up single signon in the Default User ID field.
  - Save the Node Definition.
  - Sign out from the PeopleSoft application.
  - Reboot your application server.

### See Also

*PeopleTools: Security Administration*

## Task 10A-3-2: Determining the Transfer Protocol

*We recommend using HTTP as your transfer protocol.*

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. If you have a Microsoft Windows Process Scheduler and a Microsoft Windows web server, you can use either an XCOPY, FTP/FTPS, SFTP, or HTTP/HTTPS protocol. (If FTP information is not specified, Process Scheduler will perform an XCOPY.) If you have a PeopleSoft Process Scheduler on Microsoft Windows and a UNIX web server, you can use FTP/FTPS, SFTP, or HTTP/HTTPS. If the PeopleSoft Process Scheduler is on DB2 z/OS, use FTP/FTPS or HTTP/HTTPS. If you have a PeopleSoft Process Scheduler on UNIX, you can use FTP/FTPS, SFTP, or HTTP/HTTPS.

---

**Note.** If you are using FTP/FTPS or SFTP, the corresponding service must be set up in your web server.

---

**Note.** If you are on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

---

### Task 10A-3-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." After a node is defined for the Process Scheduler server, in the next cycle the Process Scheduler server checks the state of the system, and the Distribution Agent dynamically sets up its environment.

### Task 10A-3-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use XCOPY
- Defining the Report Node to Use FTP
- Defining the Report Node to Use FTPS
- Defining the Report Node to Use SFTP

#### Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools: Portal Technology*, "Configuring Web Profiles."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash (/) in both cases:

- *Microsoft Windows:* ReportRepositoryPath=c:/psreports
- *UNIX:* ReportRepositoryPath=<user\_home>/PeopleSoft Internet Architecture/psreports

For <user\_home> substitute the home directory for the current user.



## Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select the Add a New Value link and enter the Report node name.
3. On the Report Node Definition page, select HTTP or HTTPS from the Protocol drop-down list.

Select the HTTP option if you are *not* using SSL. Select the HTTPS option if you are using SSL. The pages for HTTP and HTTPS have the same fields. These examples show HTTP.

Note that if you are using SSL you need to have Client Certificates installed on your web server.

The screenshot shows the 'Report Node Definition' page for the HTTP protocol. The page is part of the Oracle PeopleTools interface, with a breadcrumb trail: 'Main Menu > PeopleTools > Process Scheduler > Report Nodes'. The Oracle logo is visible in the top left. The page title is 'Report Node Definition'. The form contains the following fields:

- Node Name:** HTTP
- \*Protocol:** HTTP (dropdown menu)
- Validate:** Button
- Distribution Node Details:**
  - URLID:** http://<machine\_name>:<port\_number>/psreports/<site\_name>
  - Description:** (empty text box)
  - Operating System:** Windows (dropdown menu)
- Login Details:**
  - Login ID:** (empty text box)
  - Password:** (empty text box)
  - Confirm Password:** (empty text box)
- URL Details:**
  - URI Host:** <machine\_name>
  - URI Port:** 80
  - URI Resource:** SchedulerTransfer/<site\_name>

At the bottom of the form, there are buttons for 'Save', 'Return to Search', 'Notify', and 'Refresh'.

Report Node Definition page for the HTTP protocol

4. Enter the following information in the Distribution Node Details area:

- **URLID:** Enter the URL of the web server using the following format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace `<machine_name>` with the name of your machine. Use the fully qualified host name for your web server. If you are using an HTTP or HTTPS port other than the defaults, you need to specify the port number.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the web server operating system, Windows or UNIX.
5. Enter the following information in the Login Details area:
- *Login ID:* Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
  - *Password and Confirm Password:* Enter the password, and confirm it, for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
- 

**Note.** The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools: Security Administration* product documentation.

---

6. Enter the following information in the URI Details area:
- *URI Host:* Enter the machine name for the report repository.
- 

**Note.** In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

---

- *URI Port:* Enter the port number, which must match the port number of your web server (defaults are HTTP = 80, HTTPS = 443). If you change a port number you will lose the default values for both protocols.
  - *URI Resource:* Enter SchedulerTransfer/<site name>.
7. Click Save to save your entries.
8. Click Validate to confirm that your entries are complete and correct.
- The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
9. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use XCOPY

Both the Process Scheduler machine and the Report Repository machine must be Microsoft Windows machines for XCOPY to be used.

To define the report node to use XCOPY:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select XCOPY from the Protocol drop-down list.

The screenshot shows the Oracle Report Node Definition page. The breadcrumb navigation is: Favorites > Main Menu > PeopleTools > Process Scheduler > Report Nodes. The Oracle logo is in the top left. A search bar contains 'All' and 'Search'. There are links for 'Advanced Search' and 'Last Search Results'. The page title is 'Report Node Definition'. The form has the following fields:

- Node Name: XCOPY
- \*Protocol: XCOPY (dropdown menu)
- Validate: (button)
- Distribution Node Details (header)
- URLID: http://<machine\_name>:<port\_number>/psreports/<site\_name>
- Description: (empty text box)
- Operating System: Windows (dropdown menu)
- Network Path: \\<machine\_name>\psreports
- Save: (button)
- Notify: (button)
- Refresh: (button)

Report Node Definition page for the XCOPY protocol

- Enter the following information in the Distribution Node Details area:

- URLID:** Enter the URL of the web server using this format:

`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. Replace *<site name>* with the directory where you installed the PIA files.

If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

- Description:** Enter an optional description for the node.
- Network Path:** Enter the path that points to your Report Repository share, using this format (where *<machine\_name>* refers to the web server machine):

`\\<machine_name>\psreports`

Make sure that this directory is shared with the login accounts used to start Process Scheduler. Use UNC format instead of mapped drive format.

- Select Save to save your entries.
- Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

- To add additional report nodes, select Add to return to the Search page.

## Defining the Report Node to Use FTP

If you use the FTP report node protocol, note that:

- If your FTP server is a Microsoft Windows server, you may have to set up the FTP service.
- The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be completed, it is critical that the value entered in the URL is accurate. Verify that the machine name, port number, and site number that you specify are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select FTP from the Protocol drop-down list.

The screenshot shows the Oracle Report Node Definition page for the FTP protocol. The page is titled "Report Node Definition" and contains several sections:

- Node Name:** FTP
- \*Protocol:** FTP (selected in a dropdown menu)
- Validate:** A button to validate the entered information.
- Distribution Node Details:**
  - URLID:** `http://<machine_name>:<port_number>/psreports/<site_name>`
  - Description:** FTP sample
  - Operating System:** Windows (selected in a dropdown menu)
  - Network Path:** (empty text field)
- Login Details:**
  - Login ID:** <user\_id>
  - Password:** (masked with dots)
  - Confirm Password:** (masked with dots)
- File Transfer Details:**
  - Home Directory:** \\<machine\_name>\psreports
  - FTP Address:** <machine\_name>
  - SSL Mode:** EXPLICIT (selected in a dropdown menu)
- Connection Properties:** A table with columns for Property Name and Property Value.
- Password Encryption:**
  - Password:** (text field)
  - Confirm Password:** (text field)
  - Encrypt:** A button to encrypt the password.
  - Encrypted Password:** (text field)

At the bottom of the page, there are four buttons: Save, Return to Search, Notify, and Refresh.

Report Node Definition page for the FTP protocol

- In the Distribution Node Details area, enter the following information:
  - URLID:** Enter the URL of the web server using this format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path:* This information is not required for the FTP protocol
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
  - *Password and Confirm Password:* Enter the password, and enter it a second time, for the FTP User ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
- For Microsoft Windows operating systems, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in c:\psreports\—because you are using the FTP protocol to interpret this parameter.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. If you need to specify additional properties, use the Connection Properties area. Specifying the Connection Properties is optional.

Click the lookup button (magnifying glass) and select one of the properties in the following table. Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to <i>Y</i> .  The default FTP connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name.  You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
ENABLEEPRPRT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPRT is set to <i>N</i> , then the system will use a PORT (IPv4) Active Mode connection.  By default, ENABLEEPRPRT is <i>Y</i> , if Active Mode is set to <i>Y</i> .
EXTENDEDPASSIVEMODE	<ul style="list-style-type: none"> <li>• <i>0</i>: Disable EPSV</li> <li>• <i>1</i>: Enable EPSV</li> </ul> <p>This property enables you to control whether extended passive mode (EPSV) will be used by FTP.</p> <p>EPSV is used by default. That is, by default, this value is considered to be 1.</p> <p>If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.</p>
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) path.
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
USER	Specify the FTP User ID used for authentication when accessing the FTP site.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
  - a. In the Password field, enter a password.
  - b. In the Confirm Password field, enter the password again.
  - c. Click Encrypt.  
The encrypted password is displayed in the Encrypted Password field.
  - d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.  
The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
11. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use FTPS

To define the report node to use FTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.



- On the Report Node Definition page, select FTPS from the Protocol drop-down list.

The screenshot shows the Oracle Report Node Definition page for the FTPS protocol. The page is titled "Report Node Definition" and includes a navigation bar with "Favorites", "Main Menu", "PeopleTools", "Process Scheduler", and "Report Nodes". The Oracle logo is visible in the top left. The page contains several sections for configuring the report node:

- Node Name:** FTPS
- \*Protocol:** FTPS (selected in a dropdown menu)
- Validate:** A button to validate the configuration.
- Distribution Node Details:**
  - URLID:** `http://<machine_name>:<port_number>/psreports/<site_name>`
  - Description:** FTPS sample
  - Operating System:** Windows (selected in a dropdown menu)
  - Network Path:** (empty text field)
- Login Details:**
  - Login ID:** <user\_id>
  - Password:** (masked with dots)
  - Confirm Password:** (masked with dots)
- File Transfer Details:**
  - Home Directory:** \\<machine\_name>\psreports
  - FTP Address:** <machine\_name>
  - SSL Mode:** EXPLICIT (selected in a dropdown menu)
- Connection Properties:** A table with columns for Property Name and Property Value, and buttons for adding and removing properties.
- Password Encryption:**
  - Password:** (text field)
  - Confirm Password:** (text field)
  - Encrypt:** A button to encrypt the password.
  - Encrypted Password:** (text field)

At the bottom of the page, there are buttons for "Save", "Notify", and "Refresh".

Report Node Definition page for the FTPS protocol

- In the Distribution Node Details area, enter the following information:
  - URLID:** Enter the URL of the web server using this format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path:* This information is not required for the FTPS protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
  - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.

For Microsoft Windows operating systems, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in c:\psreports\—because you are using the FTP protocol to interpret this parameter.

- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
- *SSL Mode:* Select Explicit or Implicit from the drop-down list.

These are two separate methods developed to invoke the client security for use with FTP clients. With the explicit mode, FTPS-aware clients can invoke security with an FTPS-aware server without breaking overall FTP functionality with non-FTPS-aware clients. The implicit method requires that all clients of the FTPS server be aware that SSL is to be used on the session, and thus is incompatible with non-FTPS-aware clients.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table:

Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to <i>Y</i> .  The default FTPS connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name.  You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
CERTALIAS	Certificate Alias: The Certificate Alias must be an alias name of a certificate stored in the database (using the PeopleSoft PeopleTools Digital Certificates page).  <b>Note.</b> Currently, only PEM certificates are supported for FTPS.
ENABLEEPRPT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPT is set to <i>N</i> , then the system will use a PORT (IPv4) Active Mode connection.  By default, ENABLEEPRPT is <i>Y</i> , if Active Mode is set to <i>Y</i> .
EXTENDEDPASSIVEMODE	<ul style="list-style-type: none"> <li>• <i>0</i>: Disable EPSV</li> <li>• <i>1</i>: Enable EPSV</li> </ul> <p>This property enables you to control whether extended passive mode (EPSV) will be used by FTP.</p> <p>EPSV is used by default. That is, by default, this value is considered to be 1.</p> <p>If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.</p>
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) user.

Property Name	Property Value
KEYSTOREPASSWORD	<p>This property is required for FTPS and HTTPS repositories. For attachments transferred from the PeopleSoft system to the FTPS or HTTPS repository, the system retrieves the key pair for the client certificate from the digital certificate store and writes the pair to a file in PKCS12 format with password protection. The value of this property will be used as the password for the PKCS12 file.</p> <p>The PKCS12 file enables connection and file transfer, and it exists only temporarily in &lt;PS_SERVDIR&gt;\files\&lt;CERT ALIAS NAME&gt; for the duration of the file transfer. The system deletes the file after the file transfer transaction.</p> <p><b>Note.</b> If the system fails to delete the certificate alias file, a message will be written to the application server log. The maximum number of files that can exist at any time is equal to the total number of FTPS and HTTPS URL identifiers defined in the system.</p> <p>For information on setting the PS_SERVDIR environment variable, see the <i>PeopleTools: Integration Broker</i> product documentation.</p>
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
SSLUAGELEVEL	<ul style="list-style-type: none"> <li>• <i>0 - No SSL:</i> No SSL will be used.</li> <li>• <i>1 - Try SSL:</i> Try using SSL, but proceed as normal otherwise.</li> <li>• <i>2 - Control:</i> Require SSL for the control connection.</li> <li>• <i>3 - SSL Only:</i> (Default) Require SSL for all communication.</li> </ul>
USER	Specify the FTP User ID used for authentication when accessing the FTP site.
VERIFYHOST	<ul style="list-style-type: none"> <li>• <i>0:</i> Do not verify the server for host name.</li> <li>• <i>1:</i> Check if there exists any value in the common name field in the server certificate. This check does not verify if it matches with what the client specifies.</li> <li>• <i>2:</i> (Default) Check for a match with the host name in the URL with the common name or Subject Alternate field in the server certificate.</li> </ul>
VERIFYPEER	<ul style="list-style-type: none"> <li>• <i>False:</i> Do not verify the peer.</li> <li>• <i>True:</i> (Default) Verify the peer by authenticating the certificate sent by the server.</li> </ul>

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:

- a. In the Password field, enter a password.
- b. In the Confirm Password field, enter the password again.
- c. Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
  10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use SFTP

To define the report node to use SFTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select SFTP from the Protocol drop-down list.

Report Node Definition

Node Name: SFTP  
 \*Protocol: SFTP [Validate]

**Distribution Node Details**

URLID: http://<machine\_name>:<port\_number>/psreports/<site\_name>  
 Description: SFTP sample  
 Operating System: Windows

**Login Details**

Login ID: <user\_id>  
 Password: ..... Confirm Password: .....

**File Transfer Details**

Home Directory: \\<machine\_name>\psreports  
 FTP Address: <machine\_name>

**Connection Properties**

Property Name	Property Value		
		+	-

**Password Encryption**

Password: ..... Confirm Password: .....  
 Encrypt Encrypted Password: .....

Save Notify Refresh

Report Node Definition page for the SFTP protocol

- In the Distribution Node Details area, enter the following information:
  - URLID:** Enter the URL of the web server using this format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path:* This information is not required for the SFTP protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
  - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
- For Microsoft Windows operating systems, the directory needs to match the Report Repository path. Make sure that you do not include any drive information—as in c:\psreports\—because you are using the FTP protocol to interpret this parameter.
- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table.

Click the plus sign to add additional connection properties.

Property Name	Property Value
AUTHTYPE	Select one of the following the authentication types: <ul style="list-style-type: none"> <li>• <i>PUBLICKEY</i></li> <li>• <i>PASSWORD</i></li> <li>• <i>ANY</i></li> </ul>
PASSWORD	Specify the user password. You can enter the password in the Password Encryption box, click Encrypt, and then copy the encrypted value to the Password property.
PASSWORDKEY	Enter the password for the private key.
PRIVATEKEY	Select the private key.
PUBLICKEY	Select the public key.
SSHKEYALIAS	<p>Select the SSH certificate saved to the database using the PeopleTools Security, Digital Certificates page (select PeopleTools, Security, Security Objects, Digital Certificates). The SSH certificate added through the Digital Certificates page contains both the public and private key data, identified by the Alias column value on the Digital Certificates page.</p> <p>If using the SSHKEYALIAS URL property, the Property Value prompt displays only the list of SSH certificates that have been added to the Digital Certificates page. If you have added the SSH certificate using the Digital Certificates page, and you have assigned an SSH certificate to the SSHKEYALIAS URL property, the system ignores the PUBLICKEY and PRIVATEKEY properties, regardless of whether they refer to valid key files in the file system.</p> <p>If you provided a password (or passphrase) when generating your SSH certificate, specify that value using the PASSWORDKEY URL property.</p> <p>See <i>PeopleTools: Security Administration</i>, "Configuring Digital Certificates."</p>
USER	Specify the user ID to be authenticated.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
- a. In the Password field, enter a password.
  - b. In the Confirm Password field, enter the password again.
  - c. Click Encrypt.



The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

## Task 10A-3-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Select PeopleTools, Process Scheduler, Servers.
2. Enter the Server Name (such as PSNT). The Server Definition page appears.
3. Select the Distribution tab.

The screenshot shows the Oracle PeopleTools interface for configuring a server. The breadcrumb trail indicates the path: Favorites > Main Menu > PeopleTools > Process Scheduler > Servers. The Oracle logo is visible in the top left. A search bar is present with a dropdown menu set to 'All'. Navigation links include 'New Window', 'Help', and 'Personalize Page'. The 'Server Definition' page is open for the server 'PSNT', and the 'Distribution' tab is selected. The 'Server Distribution Details' section contains the following fields:

- Server Name:** PSNT
- Distribution Node Name:** [Text input field with a lookup icon]
- Maximum Transfer Retries:** [Text input field]
- Interval for Transfer Attempt:** [Text input field] seconds
- Transfer System Files to Report Repository:** [Checkbox]

At the bottom of the form, there are several action buttons: 'Save', 'Return to Search', 'Notify', 'Add', and 'Update/Display'. A breadcrumb trail at the very bottom of the page reads: 'Server Definition | Distribution | Operation | Notification | Daemon'.

Server Definition page for PSNT: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.
5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.

7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PIA to Report Repository, you need to set up single signon in order to avoid getting a prompt for a second signon.

## **Task 10A-3-6: Setting Up Sending and Receiving of Report Folders in the Report Manager**

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools: Integration Broker*.

See *PeopleTools: Integration Broker Service Operations Monitor*.

## **Task 10A-4: Setting Environment Variables**

---

To set the appropriate Tuxedo environment variables, carry out these steps. (If you have already set these variables on the machine you are using as your Process Scheduler Server, you can skip this task.)

See "Installing Additional Components," Installing Oracle Tuxedo on Microsoft Windows.

To set the variables:

1. Choose Start, Settings, Control Panel.
2. Double-click the System icon.
3. Make sure that the NLSPATH environment variable is set.

NLSPATH does not need to be explicitly set since Oracle Tuxedo sets NLSPATH in its own registry tree. This value can be displayed using Control Panel, Tuxedo, on the Environment tab. However, the installation of certain products, such as IBM DB2 connectivity (DB2 for z/OS and DB2 for Linux, UNIX, and Windows) sets NLSPATH to a value that causes Oracle Tuxedo to fail. The solution is to either set NLSPATH=c:\tuxedo\locale\c, or to delete it entirely and let Oracle Tuxedo pick up the value from its registry tree. If you are running DB2 for Linux, UNIX, and Windows, the solution instead is to append the c:\tuxedo\locale\c directory in the NLSPATH directory.

Search the Oracle Tuxedo documentation for additional information on NLSPATH.

## **Task 10A-5: Setting Up Process Scheduler Server Agent**

---

This section discusses:

- Understanding Process Scheduler Server Agent
- Creating and Configuring a Process Scheduler Server
- Reconfiguring a Process Scheduler Server

- Verifying the Process Scheduler Server Status

## Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSNT	Microsoft Windows

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the *PeopleTools: Process Scheduler* product documentation.

**Note.** When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

## Task 10A-5-1: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure a Process Scheduler server.

You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file `psprcs.cfg` located in the `PS_CFG_HOME\appserv\prcs\database name` directory. The following steps assume you are using PSADMIN to specify parameter settings.

**Note.** For Cube Builder users, if Essbase Server is installed on a different machine than the Process Scheduler, you must install Essbase Client 11.1.2.1 on the process scheduler server machine. You must also ensure that the `%ESSBASEPATH%` and `%ARBORPATH%` environmental variables are properly set in the Process Scheduler.

**Note.** If you use the configuration file `psprcs.cfg`, be aware that in the PeopleSoft PeopleTools 8.49 release and later, the section [Output Dest Exceptions] has been modified to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

To create and configure a Process Scheduler Server:

1. From `PS_HOME\appserv` on the batch server, type `psadmin`.

You see the PeopleSoft Server Administration menu, as in this example:

```

-----
PeopleSoft Server Administration
-----
PS_CONFIG_HOME      C:\User\JSMITH\psft\pt\8.56
PS_HOME             C:\PT8.56
PS_APP_HOME         C:\HC9.2

```

- 1) Application Server
- 2) Process Scheduler
- 3) Search Server
- 4) Web (PIA) Server

- 5) Switch Config Home
- 6) Service Setup
- 7) Replicate Config Home
- 8) Refresh Config Home
- q) Quit

Command to execute (1-8 q):

2. Depending on your environment, you may see a message after the menu selection, which indicates that PSADMIN has modified the *PS\_CFG\_HOME*/peopletools.properties file with the current *PS\_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME*/peopletools.properties file. Continue with the next step.
3. Select 2 to access the Process Scheduler submenus.
  4. Select 2 for Create a domain from the PeopleSoft Process Scheduler Administration menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration

q) Quit
```

Command to execute (1-4, q) : **2**

5. Enter the name of the domain at the following prompt, such as HRDMO in this example, and press ENTER:

Please enter name of domain to create : **HRDMO**

6. Specify 1 for *nt* for the configuration templates.

The *nt* configuration is based on the operating system Process Scheduler server will be booted from.

Process Scheduler Configuration templates:

- 1) *nt*
- 2) *os390*

Select config template number:

7. After the system creates the domain, the Quick-configure menu appears:

```
-----
Quick-configure menu -- domain: HRDMO
-----

      Features                               Settings
      =====                               =====
1) App Engine           : Yes           9) DBNAME              : [HRDMO]
2) Master Scheduler    : Yes           10) DBTYPE             : [DB2ODBC]
3) Perf Collator       : No            11) PrcsServer        : [PSNT]
4) Domains Gateway     : No            12) UserId            : [PS]
5) Push Notifications  : No            13) UserPswd         : []
                                           14) ConnectID        : [people]
                                           15) ConnectPswd     : []
                                           16) Log/Output Dir  : [%PS_SERVDIR%\log_⇒
output]
                                           17) SQRBIN           : [%PS_HOME%\bin\sqr\ODB⇒
\binw]
                                           18) AddToPATH       : [%WINDIR%;%WINDIR%⇒
\SYSTEM32]
                                           19) DBBIN           : [C:\<connectivity⇒
directory>]
                                           20) DomainConnectPswd : []

      Actions
      =====
6) Load config as shown
7) Custom configuration
8) Edit environment settings
h) Help for this menu
q) Return to previous menu

HINT: Enter 9 to edit DBNAME, then 6 to load

Enter selection (1-20, h, or q):
```

8. If you need to modify any of these settings, enter the number next to the parameter name, type the new value, and press ENTER. This table lists the parameters and gives brief descriptions.

Parameter	Description
Master Scheduler	Select this option to enable the Master Scheduler Server (PSMSTPRC). The default is to enable the server.  See <i>PeopleTools: Process Scheduler</i> .
App Engine	Select this option to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). The default is set to run AE using PSAESRV.  See <i>PeopleTools: Process Scheduler</i> .
Perf Collator	Select this option to enable the PSPPMSRV server process.  See <i>PeopleTools: Performance Monitor</i> , "Enabling the Required Elements on the Monitoring System."
Domain Gateways	Select this option to enables inter domain communication, for example between Application Server and Process Scheduler domains.  See <i>PeopleTools: Fluid User Interface Developer's Guide</i> , "Setting Up Push Notification Configurations."
Push Notifications	Select this option to enables pushing server events from PeopleSoft PeopleTools server runtime, such as Application Server and Process Scheduler, to browser clients and other PeopleSoft PeopleTools server runtime components.  See <i>PeopleTools: Fluid User Interface Developer's Guide</i> , "Setting Up Push Notification Configurations."
Load config as shown	Load the selections you made in the Quick Configure menu.
Custom configuration	Make custom selections in PSADMIN, using options that are not available in the Quick Configure menu.
Edit environment settings	Edit, add, remove, comment out, and review domain-level environment variables.
DBNAME	Specify the database name that is associated with a PeopleSoft Process Scheduler Server Agent, such as HRDMO, FSDMO, SADMO, and so on.
DBTYPE	Specify the database type: DB2ODBC (for DB2 for z/OS).
PrCsServer	Specify the process server name. This must match the name defined in the Server Definition table, such as <i>PSNT</i> or <i>PSUNX</i> .

Parameter	Description
UserId	Enter the user ID, such as VP1 or PS.
UserPswd	Enter the password for the user ID, as you specified during the database configuration.  The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
ConnectID	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password, as you specified during the database configuration. This value is required.  The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
Log/Output Dir	Specify the directory in which files that are generated by the program are written. When PeopleSoft Process Scheduler initiates a process request, it creates a subdirectory in the format <Process Type ID>_<Program Name>_<Process Instance> that contains the generated files. For instance, the SQR program XRFWIN that ran with process instance 20 has all reports, trace, and log files in the subdirectory SQR_XRFWIN_20. It is also the optional directory used with the Output Destination field when scheduling a request. This variable (%%OutputDirectory%%) can be used in the File/Printer field of the Process Scheduler Request dialog box.
SQRBIN	Enter the path to the SQR executables.
AddToPATH	(Optional for Tuxedo) Specify an additional directory that is appended to the PATH environment variable.
DBBIN	Enter the path to the database drivers; that is, your connectivity software.
DomainConnectPswd	If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank.  The password is hidden by masking characters as you type, and in the Quick-configure menu after entry.  See the information on setting Application Server Domain Parameters in the <i>PeopleTools: System and Server Administration</i> product documentation.

For descriptions of the PSADMIN options that do not appear in the Quick-configure menu, see the information on using PSADMIN in the *PeopleTools: Process Scheduler* product documentation. For a basic installation, in most cases you can accept the defaults.

- When you have updated the settings as needed, choose 5, *Load config as shown*, from the Quick-Configure menu to save your settings to the Process Scheduler configuration file, `pstuxcfg`.

10. To start Process Scheduler, choose *I*, for Administer Domain.
11. On the PeopleSoft Process Scheduler Administration menu, choose *I* for Boot this domain.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

Domain Name: HRDMO

- 1) Boot this domain
- 2) Domain shutdown menu
- 3) Domain status menu
- 4) Configure this domain
- 5) TUXEDO command line (tmadmin)
- 6) Edit configuration/log files menu
- 7) Clean IPC resources of this domain
- q) Quit

Command to execute (1-7, q) :

12. Choose *I*, Boot (Serial Boot), or 2, Parallel Boot, from the PeopleSoft Domain Boot Menu.

---

**Note.** The messages you see and the number of processes started will depend on the options you chose during configuration.

---

13. If you want to stop Process Scheduler Server, from the PeopleSoft Domain Administration menu, choose 2, for Domain Shutdown menu, and then enter the number corresponding to the name of the appropriate database.

---

**Note.** If you see the following message, then the server is already down:

```
Command to execute (1-2, q) [q]: 1 Loading command line administration
utility ... tmadmin - Copyright (c) 2007-2008, Oracle. Portions *
Copyright 1986-1997 RSA Data Security, Inc. All Rights Reserved.
Distributed under license by Oracle. Tuxedo is a registered trademark. No
bulletin board exists. Entering boot mode. > TMADMIN_CAT:111: ERROR: No
such command.
```

---

## Task 10A-5-2: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. Alternatively, you can use PSADMIN as described in this section. Feel free to skip this procedure if you have already created and configured your Process Scheduler Server using the Quick-configure menu and want to move forward with your installation.

---

**Note.** If you want to configure the Process Scheduler Server while it is running, you need to stop and restart the server to load the new settings.

---

To reconfigure a Process Scheduler Server:

1. Go to `PS_HOME\appserv` and enter:
 

```
psadmin
```
2. Depending on your environment, you may see a message after the initial menu, which indicates that



PSADMIN has modified the *PS\_CFG\_HOME*/peopletools.properties file with the current *PS\_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME*/peopletools.properties file. Continue with the next step.
3. Select 2 for Process Scheduler in the PeopleSoft Server Administration menu.
  4. In the PeopleSoft Process Scheduler Administration menu, select 1 for Administer a domain.
  5. Select the database for which the Process Scheduler needs to be configured.
  6. You see the following prompt:

```
Do you want to change any config values (y/n)? [n]:
```

Specify y to start an interactive dialog that lets you examine or change parameter values.

7. Specify the configuration parameters one by one.

Configuration parameters are grouped into sections. At each section, you are asked whether to change any parameters—for example:

```
Values for config section - Startup
```

```
DBName=
DBType=
UserId=
UserPswd=
ConnectId=
ConnectPswd=
ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=
```

```
Do you want to change any values (y/n)? [n]:
```

- Specify y to change any parameter values for the current section. You are prompted for each parameter value. Either specify a new value or press ENTER to accept the default. After you press ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- The parameters StandbyDBName, StandbyDBType, StandbyUserID, and StandbyUserPswd are used for a standby database in an Oracle database environment.

See the information on implementing Oracle Active Data Guard in the *PeopleTools: Data Management*, product documentation.

- The parameters InMemoryDBName and InMemoryDBType are reserved for internal use.
- If you do not want to change any values, specify *n* and you are prompted for the next configuration section.

8. After you have selected all your parameters, you see this message:

```
You will need to shut down and start up the server to read the new=>
settings.
```

For descriptions of the Process Scheduler options in the PSADMIN, see the *PeopleTools: Process Scheduler* product documentation. In most cases you can accept the defaults.

### Task 10A-5-3: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose option 3, for Domain status menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
Domain Name: HRDMO
```

- ```
1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit
```

```
Command to execute (1-7, q) : 3
```

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

For example:

```
Database list:
```

- ```
1) HRDMO
```

```
Select item number to start: 1
```

```
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008 Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.
```

```

> Prog Name      Queue Name  Grp Name      ID RqDone Load Done Current=>
  Service
-----
-----
-----
-----
BBL.exe          46845      PSSERVER+    0      9      450 ( IDLE )
PSMONITORSRV.e  MONITOR    MONITOR      1      0      0 ( IDLE )
PSAESRV.exe     00101.00001 AESRV        1      0      0 ( IDLE )
PSAESRV.exe     00101.00002 AESRV        2      0      0 ( IDLE )
PSAESRV.exe     00101.00003 AESRV        3      0      0 ( IDLE )
PSPRCSRVR.exe   SCHEDQ     BASE         101    0      0 ( IDLE )
PSMSTPRC.exe    MSTRSCHQ   BASE         102    0      0 ( IDLE )
PSDSTSRV.exe    DSTQ       BASE         103    0      0 ( IDLE )
>

```

You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

If the user has the process security rights to update the server status, the *Refresh* button can be used to refresh the screen, too.

See Setting Up Process Scheduler Security.

This example of the Server List page shows two Process Scheduler servers with status Down, and one with status Running.

Process List		Server List									
<input type="button" value="Refresh"/>											
Server	Hostname	Last Update	Date/Time	Dist	Node	Master	CPU (%)	Memory (%)	Active	Status	Details
<a href="#">PSNT</a>	PTLAB95	10/28/2003	9:53:33AM	https		N	1	29	0	Down	<a href="#">Details</a>
<a href="#">QEPSNT2</a>	PTLAB95	10/28/2003	9:53:45AM	https		N	1	29	0	Down	<a href="#">Details</a>
<a href="#">QE_HPX1</a>	pt-hp07	10/28/2003	10:05:47AM	https		Y	21	34	1	Running	<a href="#">Details</a>

Process Monitor page: Server List tab

## Task 10A-6: Starting Process Scheduler as a Windows Service (Optional)

You can start the Process Scheduler server as a Windows service. This means that administrators do not need to manually boot each Process Scheduler server that runs on a Microsoft Windows machine. Instead, each time you boot the Microsoft Windows server where the Process Scheduler server resides, the Process Scheduler Server will boot automatically. You can also still manually boot Process Scheduler Servers on your Microsoft Windows server.

**Note.** If you have set up TUXDIR and TEMP as new SYSTEM variables, you need to reboot your machine before any Windows services will pick up the value of these environment variables.

**Note.** You can also set up application servers and search servers as a Windows service using the instructions provided here.

The following directions assume that the Process Scheduler is already configured on the Microsoft Windows server.

To set up the Windows Service for a Process Scheduler Server:

1. Open the System utility within the Control Panel, and set the variables, listed with a brief explanation in the following table, in the System Variables section of the Environment tab.

**Note.** Even if the following variables are in the User Variables section, they must also be in the System Variables section because the Windows service will be started under the System Account.

Variable	Value
TEMP	Specify the location of the TEMP directory on the Windows server, as in C:\TEMP.
TUXDIR	Specify the location of the Tuxedo directory on the Windows server, as in C:\tuxedo.

2. Reboot the Windows computer if any changes or additions were made for the system variables.
3. Run the PeopleSoft PSADMIN utility (psadmin.exe in the *PS\_HOME*\appserv directory), and press ENTER.
4. Select 6 for Service Setup from the PeopleSoft Server Administration menu.

```

-----
PeopleSoft Server Administration
-----
PS_CFG_HOME           C:\Users\JSMITH\psftuser\psft\pt\8.56
PS_HOME               C:\PT8.56
PS_APP_HOME           C:\HC9.2

1) Application Server
2) Process Scheduler
3) Search Server
4) Web (PIA) Server
5) Switch Config Home
6) Service Setup
7) Replicate Config Home
8) Refresh Config Home
q) Quit

```

Command to execute (1-8, q): **6**

5. Select 1 from the PeopleSoft Services Administration menu.

```

-----
PeopleSoft Services Administration
-----
1) Configure Windows Service
2) Install Windows Service
3) Delete Windows Service
4) Edit Service Configuration File
q) Quit

```

Command to execute (1-4, q) : **1**

When asked if you want to change configuration values, enter *y*.

- Enter the name of the Process Scheduler databases that you intend to include as part of the Windows service.

Values for config section - NT Services

```
Service Start Delay=60
Application Server Domains=HRDMO
Process Scheduler Databases=HRDMO
Search Server Domains=HRDMO
```

Do you want to change any values (y/n)? [n]:

If you specify more than one Process Scheduler database, separate each entry with a comma.

---

**Note.** You can use PSADMIN to set up Process Scheduler Servers, application servers, or search servers as a Windows service. The Windows Service psntrsvr.exe automatically starts application servers, Process Scheduler servers, and search servers that reside on the same Microsoft Windows machine. Occasionally, psntrsvr.exe would attempt to initiate a connection between an application server, Process Scheduler server, or search server and a database on the same machine that was not ready to receive requests. As a result the connection would fail. When you set up these servers as a Windows Service, you can specify a Service Start Delay, in seconds, that elapses before a service attempts to start any application server domains, Process Scheduler servers, or search servers. This allows the RDBMS to boot and become available to accept requests. The default setting for the Service Start Delay parameter is 60 seconds.

---



---

**Note.** The NT Services section of the PSADMIN modifies the psntrsvr.cfg file located in the *PS\_CFG\_HOME*\appserv directory. You can edit this file manually by selecting *4, Edit Service Configuration File* from the PeopleSoft Services Administration menu. If you edit it, you need to delete and then install the service again.

---

- Select option 2 from the PeopleSoft Services Administration menu.

```
-----
PeopleSoft Services Administration
-----
```

```
1) Configure Windows Service
2) Install Windows Service
3) Delete Windows Service
4) Edit Service Configuration File
q) Quit
```

Command to execute (1-4, q) : **2**

- Return to the Control Panel, choose *Administrative Tools*, and launch the Services utility.
- On the Services dialog, scroll to find the entry that adheres to the following naming convention, and select it:

```
PeopleSoft <PS_CFG_HOME>
```

For example:

```
PeopleSoft C:\Users\JSMITH\psftuser\psft\pt\8.56
```

---

**Note.** The default Startup mode is Manual.

---

- Click *Startup*.
- On the Service dialog in the Startup Type group, select *Automatic*, and in the Log On As group, select *Local System Account*. Then click OK.

---

**Note.** The *Log On As* setting needs to reflect that which you set for your ORACLE ProcMGR V12.1.3.0.0\_VS2012 and Tlisten processes. Oracle recommends that you set these services to *Local System Account* when you install Tuxedo. The *Log On As* value only affects the application server because Process Scheduler runs independently from Tuxedo. See the chapter "Installing Additional Components" for more information on installing Tuxedo, and refer to the chapter "Configuring the Application Server on Windows" for the details on configuring the application server.

---

12. On the Services dialog, make sure the PeopleSoft service is selected, and click Start.
13. Use the Process Monitor to verify that the Process Scheduler Server is running. You can also use Task Manager to verify that the executables involved with the service are running.

For the Process Scheduler, make sure that the `psprcsrv.exe` is running. If you have customized the name of `psprcsrv.exe`, make sure the appropriate executable is running.

## **Task 10A-7: Configuring the Process Scheduler for Microsoft Word (Optional)**

---

This section discusses:

- Configuring Process Scheduler
- Executing Winword on Mapped Drive

### **Task 10A-7-1: Configuring Process Scheduler**

Some applications process documents using Microsoft Word. Here is how to configure Microsoft Word to work with the Process Scheduler.

---

**Note.** Microsoft Word must already be installed on the server; it is not included with the PeopleSoft PeopleTools install.

---

To configure Process Scheduler for Microsoft Word:

1. Log in to the PeopleSoft application in a browser and select PeopleTools, Process Scheduler, Processes.
2. Search for Process Type *Winword* and select a process.

3. On the Process Definition page, select Override Options, as shown in this example.

The screenshot shows the Oracle Process Scheduler interface. At the top, there's a navigation bar with 'Home', 'Worklist', 'MultiChannel Console', 'Add to Favorites', and 'Sign out'. Below that, a breadcrumb trail reads 'Favorites > Main Menu > PeopleTools > Process Scheduler > Processes'. A secondary navigation bar includes 'New Window', 'Help', 'Personalize Page', and an 'http' icon. The main content area has tabs for 'Process Definition', 'Process Definition Options', 'Override Options' (which is selected), 'Destination', and 'Page Transfer'. Under the 'Override Options' tab, the 'Process Type' is 'Winword' and the 'Name' is 'WORDSAMP'. A section titled 'Override Options' contains three dropdown menus: '\*Parameter List' (set to 'Append'), '\*Command Line' (set to 'None'), and '\*Working Directory' (set to 'None'). To the right of these is a 'Parameters' field containing the text '%%PS\_HOME%%\WINWORD\WORDSAMP.DOCX /mWORDSAMI'. At the bottom of the form are buttons for 'Save', 'Return to Search', 'Notify', 'Add', and 'Update/Display'. A footer navigation bar contains links for 'Process Definition', 'Process Definition Options', 'Override Options', 'Destination', 'Page Transfer', 'Notification', 'Message', and 'Run'.

Process Definition page: Override Options

4. In the Parameter List field, enter %%PS\_HOME%%\WINWORD\WORDSAMP.DOCX/mWORDSAMP and save.
5. Locate the Process Scheduler configuration file psprcs.cfg in *PS\_CFG\_HOME*\appserv\prcs\*<database\_name>* directory and open it for editing.
6. In the [Process Scheduler] section, edit the WINWORD entry so that it points to the directory where winword.exe is installed—for example, "WINWORD=C:\Program Files\Microsoft Office\OFFICE 12" (include the quotes in the entry).
7. If spaces exist in the WINWORD path in the Process Scheduler configuration file (psprcs.cfg), Microsoft Word reports will fail. You will need to modify the Process Type Definition and add quotes around the entry in the Command Line field, for example " %%WINWORD%%\winword.exe".
8. Change the Microsoft Word macro security to allow macros to be run.  
Start Microsoft Word and select Tools, Macro, Security. Select the *Low* security setting and click OK.
9. If you are running on Microsoft Windows, modify your macros to include the following line:  
`Application.AutomationSecurity=msoAutomationSecurityLow`  
You can see an example by viewing the macros in *PS\_HOME*\winword\Wordsamp.doc.
10. Make sure that all the servers (that is, Application Server and Process Scheduler servers) are running in the context of the logged-in user, as WinWord is executed in the same context.

## Task 10A-7-2: Executing Winword on Mapped Drive

If you encounter a problem in executing the WinWord process on a mapped drive, there are a couple of solutions to try. If the first solution does not work, try the second one. Try the following workaround suggestions in the order given.

To perform the first workaround:

1. Copy the file WORDSAMP.dotm from *PS\_HOME*\WINWORD\.
2. Locate the WinWord templates folder and place the file WORDSAMP.dotm there.

In general, you can find the templates folder under the logged-in user's directory. For example, for user psftuser, this would be:

C:\Users\psftuser\Microsoft\Templates

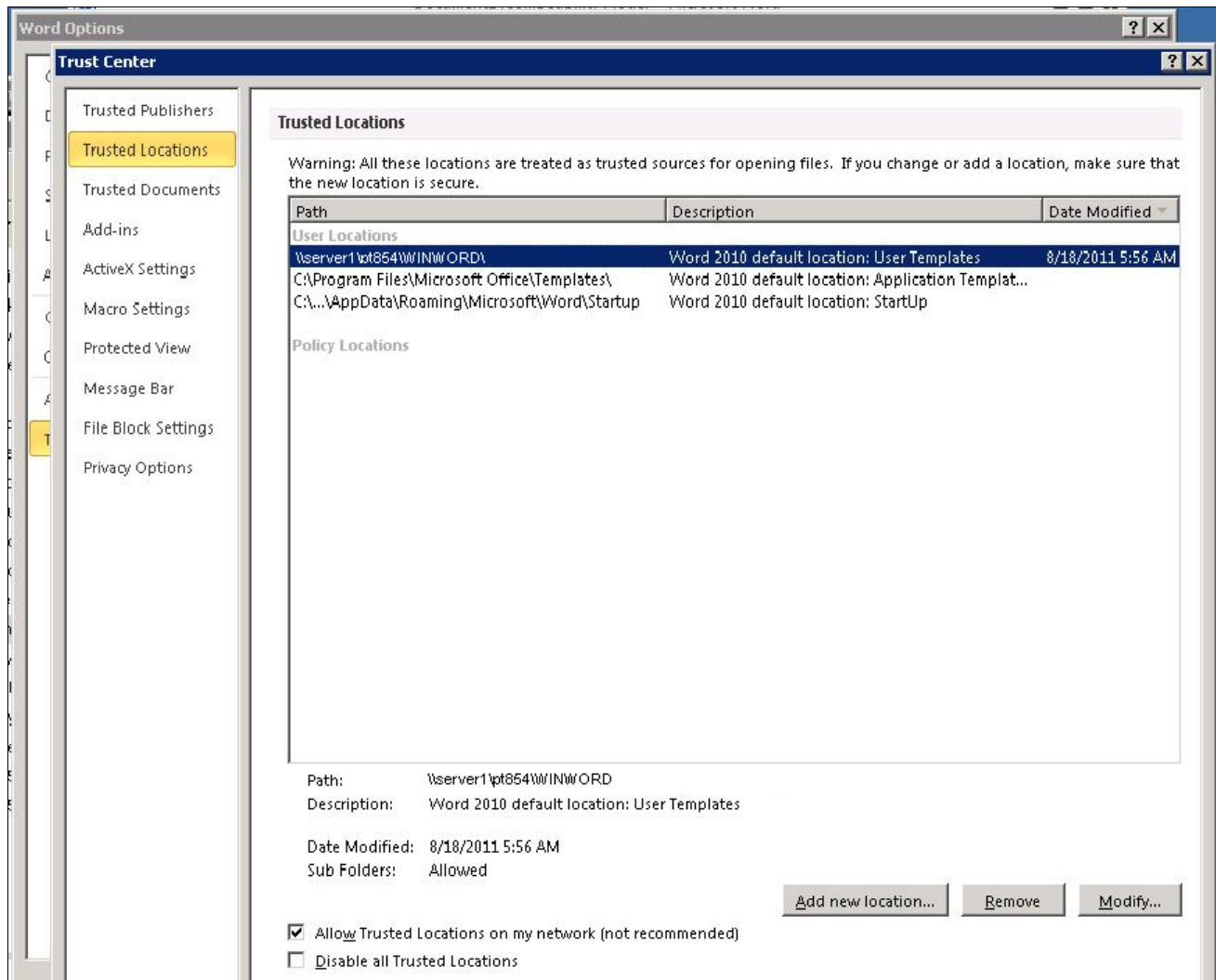
3. Open the WinWord.docx file under *PS\_HOME*\WINWORD folder and verify macro is present.
4. Sign in to the PeopleSoft application to execute the WinWord process and verify its status in Process Monitor.

To perform the second workaround:

1. In Microsoft Word, click the Microsoft Office button, and click Word Options.
2. Select Trust Center, and then click Trust Center Settings, Trusted Locations.
3. Select the check box for Allow Trusted Locations on my network, and clear the check box Disable all Trusted Locations.



4. Create a new trusted location with path pointing to the *PS\_HOME\WINWORD* folder on your mapped drive. In this example, the trusted location is `\\server1\pt854\WINWORD`:



Microsoft Word Trusted Locations window

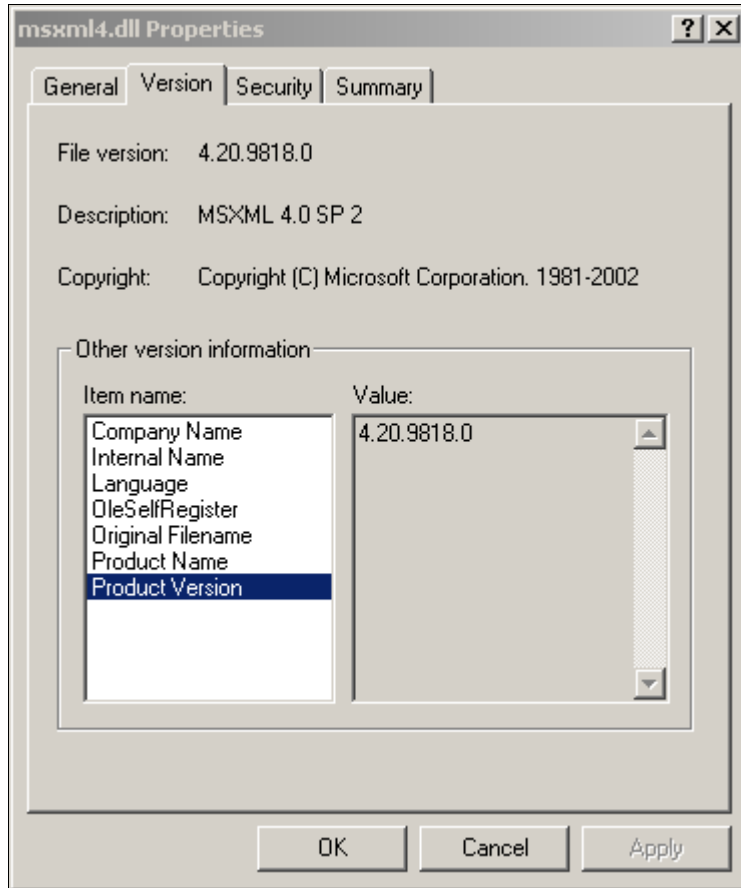
## Task 10A-8: Configuring Setup Manager

Before you can use Setup Manager, you must fulfill these requirements:

- To use the Excel to CI template-generation feature of Setup manager, the Process Scheduler must be PSNT. That is, Process Scheduler must be installed on a Microsoft Windows machine.
- Process Scheduler must be running.
- Any Process Scheduler environment variables (especially %PS\_FILEDIR%) must be specified.
- A supported version Microsoft Office must be present on the process scheduler server, and Microsoft Excel must be installed.
- The MSXML COM object for Microsoft Excel, msxml4.dll, must be present on the system.

For confirmation, navigate to %SystemRoot%\system32\msxml4.dll. Right-click and select Properties. On the

msxml4.dll Properties dialog box, select the Version tab, and then Product Version. As shown on this example of the msxml4.dll Properties dialog box, the version number must be 4.20 or above.



msxml4.dll Properties dialog box: Version tab

## See Also

*PeopleTools: Setup Manager*

Microsoft support, [support.microsoft.com](http://support.microsoft.com)

## Task 10A-9: Installing Products for PS/nVision

---

This section discusses:

- Understanding the PS/nVision Setup
- Installing Products for PS/nVision in Excel Automation Mode
- Installing Microsoft .NET Framework 4.6.1
- Installing Microsoft Open XML SDK for PS/nVision

## Understanding the PS/nVision Setup

PS/nVision can operate in the following three modes for PS/nVision:

- OpenXML mode

OpenXML is the default mode for PeopleSoft PeopleTools.

- Excel automation mode
- Cross-platform mode

Cross Platform is the only supported mode on the UNIX platforms that are certified for executing PS/nVision Reports on the web.

See "Setting Up Process Scheduler on UNIX," Using PS/nVision in Cross-Platform Mode on UNIX.

The different modes of executing PS/nVision are enabled by setting the UseExcelAutomation parameter in the Process Scheduler configuration file (psprcs.cfg) as follows:

- 0 - OpenXML mode
- 1 - Excel Automation mode
- 2 - Cross Platform mode

### See Also

*PeopleTools: PS/nVision*

*PeopleTools: Process Scheduler*

## Task 10A-9-1: Installing Products for PS/nVision in Excel Automation Mode

To set up PS/nVision in Excel automation mode:

- For all batch servers, install Microsoft Excel on the batch server. PeopleSoft PeopleTools supports 64-bit versions of Microsoft Excel 2010, Excel 2013, and Excel 2016.

---

**Note.** The 32-bit version of Microsoft Excel should not be installed on the machine where PS/nVision needs to run in Excel Automation Mode, as that would cause issues with running PS/nVision with 64-bit Microsoft Excel.

---

- If the batch server is on a 64-bit Microsoft Windows machine, create an empty "Desktop" folder with this path:  
C:\Windows\System32\config\systemprofile\Desktop

## Task 10A-9-2: Installing Microsoft .NET Framework 4.6.1

Before setting up PS/nVision in OpenXML mode, use these instructions to install Microsoft .NET Framework. Microsoft Open XML SDK 2.0 requires Microsoft .NET Framework versions 4.6.1.

---

**Note.** Microsoft .NET Framework 4.6.1 may be included as a feature on your operating system. See your operating system instructions to verify whether it is installed and enabled.

---

To install Microsoft .NET Framework 4.6.1:

1. If there is an existing installation of Microsoft .NET Framework 4.0 or 4.6 installed on your computer:

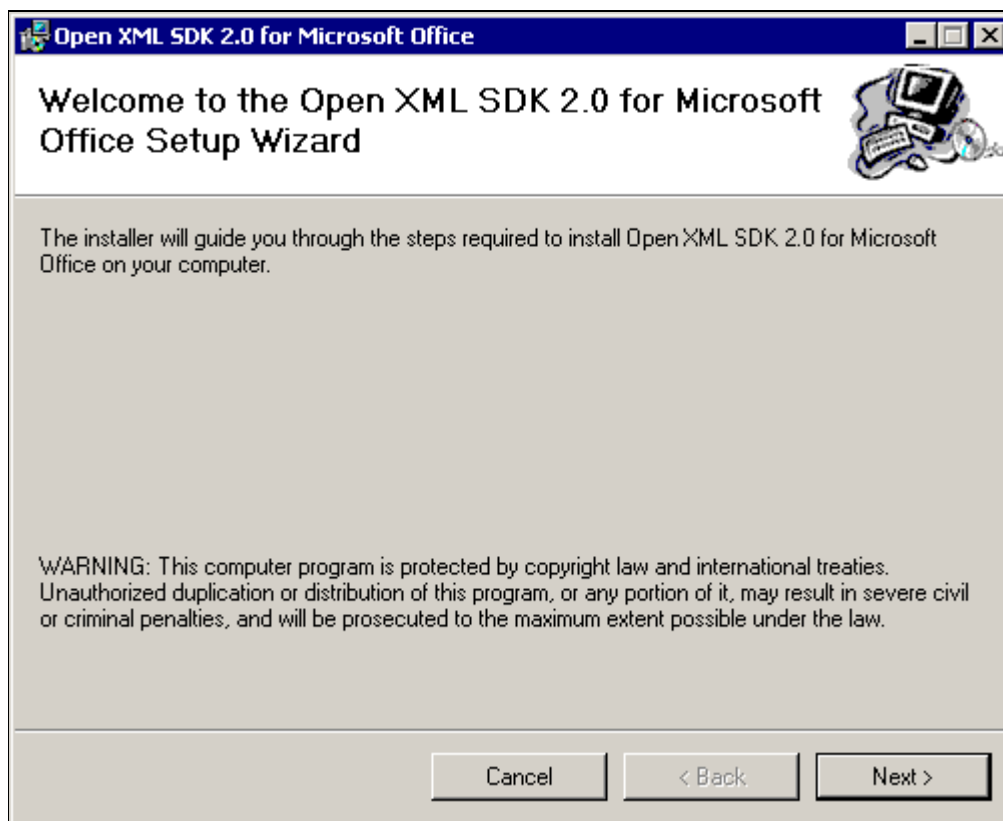
- a. Select Start, Programs, Control Panel, Add/Remove Programs
  - b. Locate the existing Microsoft .NET Framework installation and remove it.
2. Go to *PS\_HOME*\setup\dotnetredist.
  3. Run the dotNetFx461\_Full\_x86\_x64.exe file.
  4. Review the license agreement, select the option I have read and accept the license terms, and then click Install.  
A progress indicator appears.
  5. Click Finish when the installation is complete.

### Task 10A-9-3: Installing Microsoft Open XML SDK for PS/nVision

As described in the previous section, you must have installed Microsoft .NET Framework versions 4.6.1 before beginning this installation.

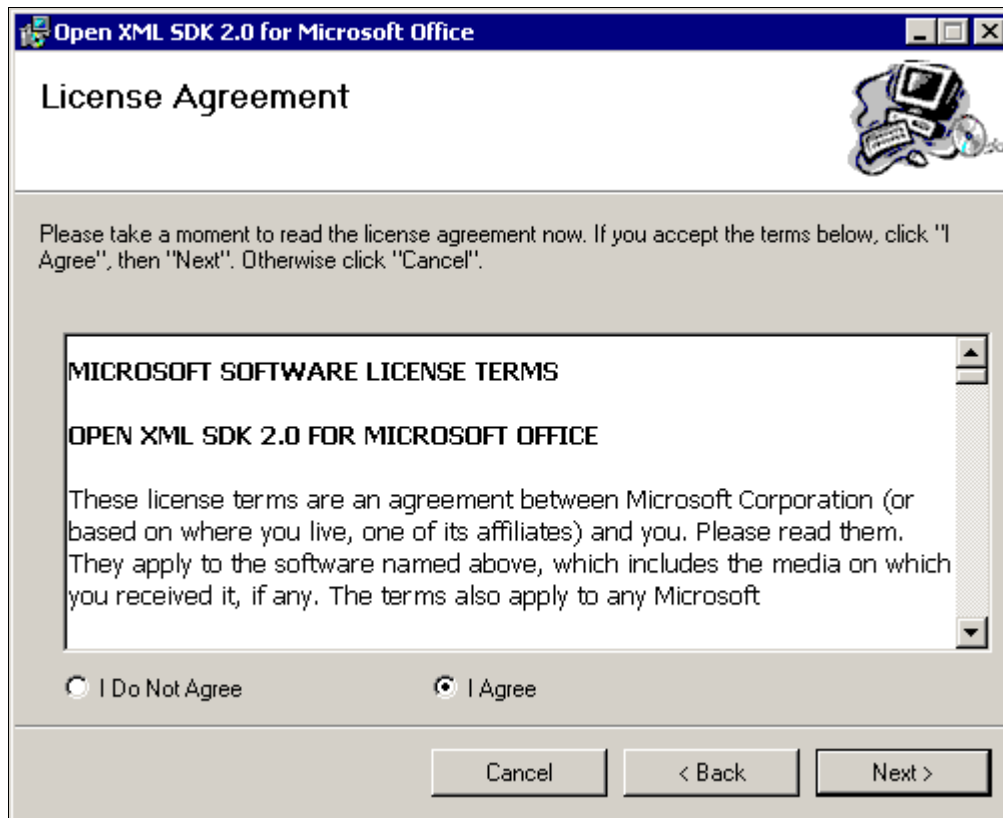
To install Microsoft Open XML SDK V2.0:

1. Go to *PS\_HOME*\setup\OpenXmlSDK.
2. Run the OpenXMLSDKv2.msi file.
3. Click Next on the welcome window.



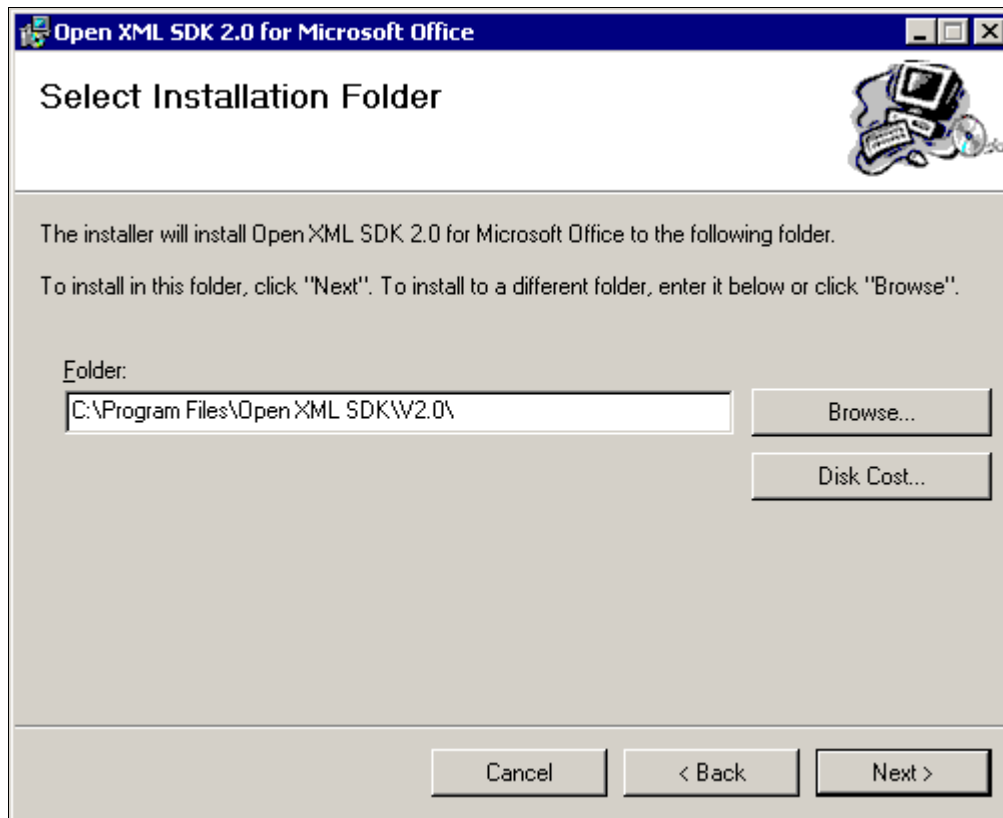
Microsoft Open XML SDK 2.0 welcome window

4. Review the license agreement, select the option I agree, and then click Next.



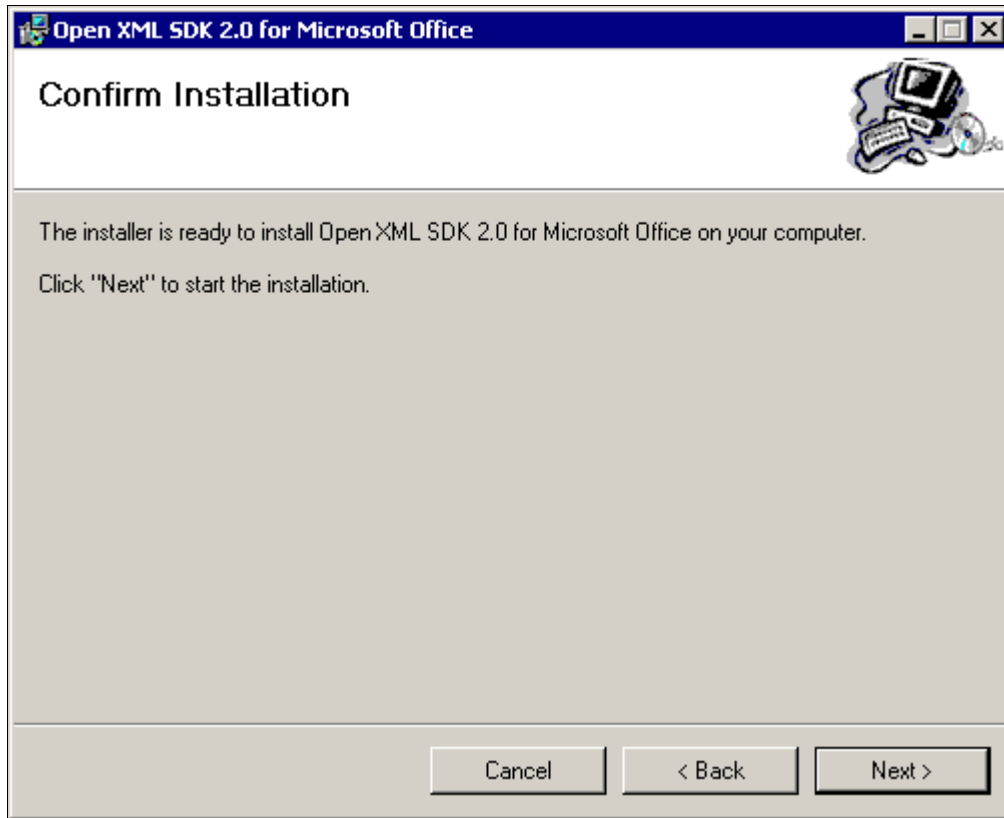
Microsoft Open XML SDK 2.0 License Agreement window

5. Accept the default location for the installation, C:\Program Files\Open XML SDK\V2.0, and then click Next.



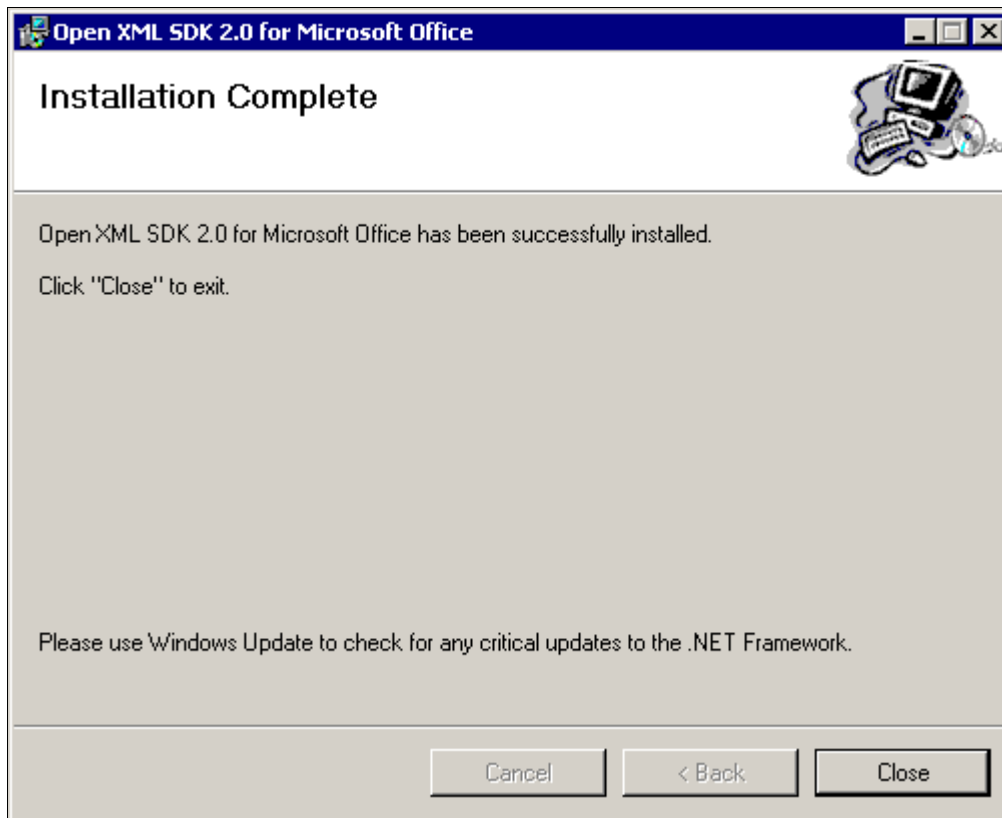
Microsoft Open XML SDK 2.0 Select Installation Folder window

6. Click Next on the Confirm Installation window to begin the installation.



Microsoft Open XML SDK 2.0 Confirm Installation window

7. Click Close when the installation is complete.



Microsoft Open XML SDK 2.0 Installation Complete window



## Chapter 10B

# Setting Up Process Scheduler on UNIX

This chapter discusses:

- Prerequisites
- Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Up Process Scheduler Server Agent

## Prerequisites

---

If your database runs on z/OS, you need to set up a Microsoft Windows batch environment on a Microsoft Windows application server or on a dedicated Microsoft Windows workstation for Microsoft Windows-specific batch processes, such as nVision reports, Cube Builder, or Microsoft Word. These processes are Microsoft Windows-specific applications that cannot be executed by the Process Scheduler on z/OS.

Before setting up your Process Scheduler, you must:

- Install Tuxedo (except for z/Linux).  
See "Installing Additional Components."
- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).  
See "Preparing for Installation."
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.

In PeopleSoft PeopleTools 8.50 and later, the configuration and log files for Process Scheduler server domains reside in *PS\_CFG\_HOME*. If you do not set a *PS\_CFG\_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
$HOME/psft/pt/<peopletools_version>
```

See "Preparing for Installation," Defining Installation Locations.

See the product documentation *PeopleTools: System and Server Administration* for more information on the *PS\_CFG\_HOME* environment variable and working with server domain configuration.

## See Also

*PeopleTools: Process Scheduler*

My Oracle Support, Certifications

## **Task 10B-1: Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade**

---

When performing the installation of the separate upgrade *PS\_HOME* or *PS\_CFG\_HOME* (which is different than your old release *PS\_HOME*), you may configure your Process Scheduler at this point in time of the installation, but do not boot your Process Scheduler until directed to do so within the upgrade.

If you are installing into an existing *PS\_HOME* or *PS\_CFG\_HOME* after completing a PeopleTools-only upgrade, review your old *PS\_HOME* or *PS\_CFG\_HOME* for configuration files that you may want to reuse for the new PeopleSoft PeopleTools release. While you may configure your Process Scheduler at this point in time of the installation, do not boot your Process Scheduler until directed to do so within the upgrade.

See "Preparing for Installation," Preparing for the PeopleTools-Only Upgrade.

If you were using PeopleSoft PeopleTools 8.50 or earlier, remove *PS\_HOME/appserv/PSADMIN* prior to installing the new release. If you have any customized configuration files (such as *psappsrv.cfg*, *psconfig.sh*, *pscbl.mak*, *psrun.mak*, *psprcs.cfg*, and so on), copy them to another directory so that they are not overwritten during the upgrade process. This enables you to preserve any tuned variables.

Configuration files are typically overwritten when you install the new release using the PeopleSoft Installer.

## **Task 10B-2: Setting Up Process Scheduler Security**

---

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

### **Understanding Process Scheduler Security**

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

### **Task 10B-2-1: Granting Process Scheduler Administrative Rights**

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools, Security, User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.

- Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.

The screenshot shows the Oracle PeopleTools Security User Profiles Roles tab. The user ID is QEDMO and the description is QE User. A table lists various roles including PTF Administrator, PeopleSoft Administrator, PeopleSoft User, Portal Administrator, Portal Manager, ProcessSchedulerAdmin, QE Role, Search Administrator, Search Developer, and ReportDistAdmin. The ProcessSchedulerAdmin role is highlighted.

Role Name	Description	Dynamic	View Definition
PTF Administrator	PTF Administrator	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
PeopleSoft Administrator	PeopleSoft Admin Privileges	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
PeopleSoft User	PeopleSoft User	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
Portal Administrator	Portal Administrator	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
Portal Manager	Portal Manager	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
ProcessSchedulerAdmin	Process Scheduler Admin	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
QE Role	QE Role	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
Search Administrator	Search Administrator	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
Search Developer	Search Developer	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -
ReportDistAdmin	Report Distribution Admin	<input type="checkbox"/>	<a href="#">Route Control</a> <a href="#">View Definition</a> + -

Process Scheduler window: Roles tab

- Repeat the instructions in step 4 to add the role *ReportDistAdmin*.  
This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.
- Click Save to save your changes.
- Select the General tab and jot down the Permission List name assigned to the Process Profile field.
- From the Portal menu, choose PeopleTools, Security, Permissions & Roles, Permission Lists.
- In the Search dialog, enter the Permission List you noted in step 7.
- Select the Can Start Application Server check box.
- Click Save to save your changes.

## Task 10B-3: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution

- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol
- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

## Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS\_CDM\_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of Posting signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name>\<date yyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is *Web/Window*, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

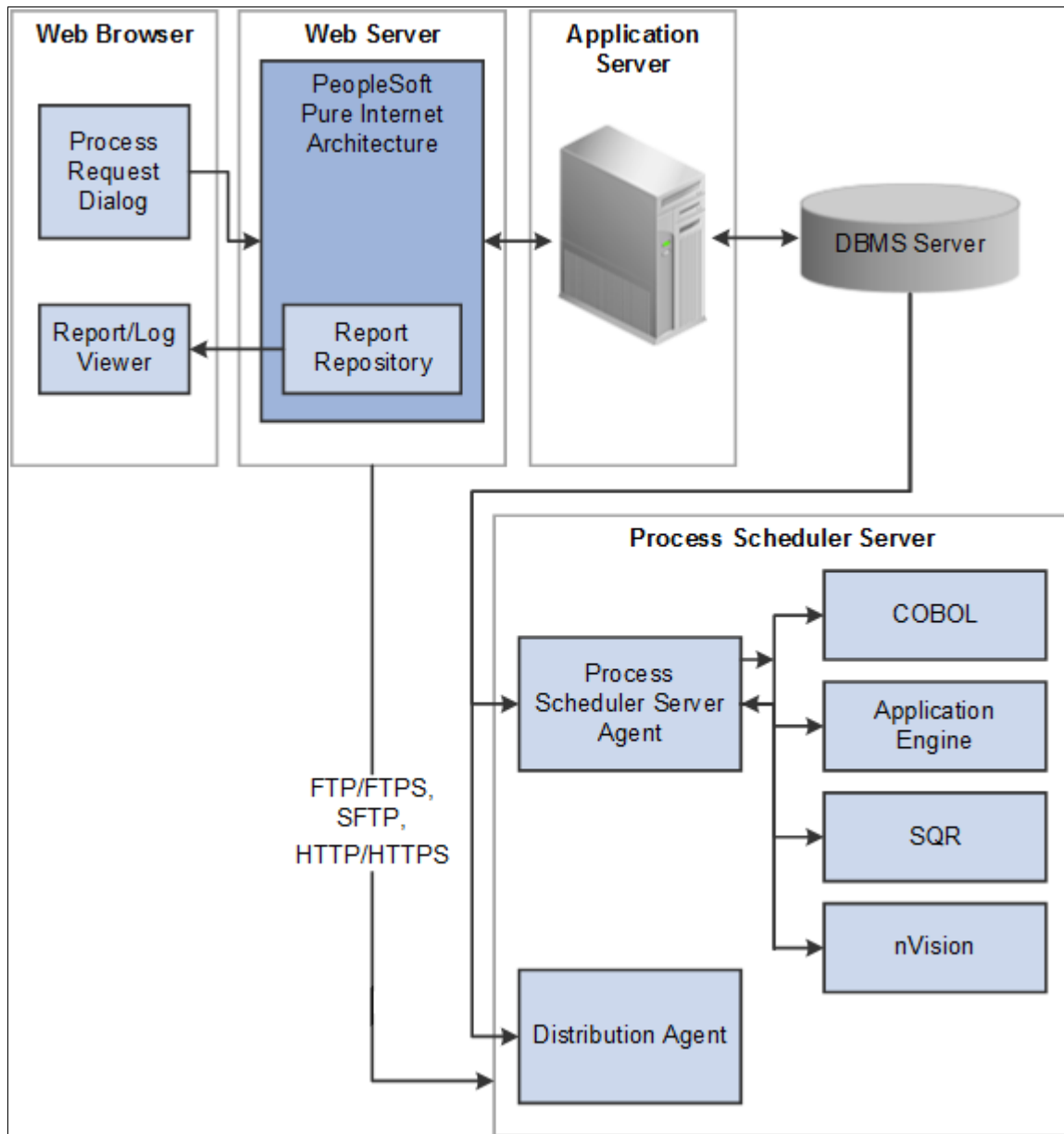
- The web browser gives access to the Process Request dialog and the Report or Log Viewer.
- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

---

**Note.** The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Report Repository.

---

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP/FTPS, HTTP/HTTPS, or SFTP.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security documentation.

See *PeopleTools: Security Administration*.

## Task 10B-3-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as PIA, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PIA, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter `http://<machineName>.peoplesoft.com/<site_name>/signon.html` instead of `http://<machineName>/<site_name>/signon.html`.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

See the information on implementing single signon in the *PeopleTools: Security Administration* product documentation.

- Set up single signon with a password, like this:
  - Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
  - Click Search and then select the node marked as Default Local Node.
  - Select *Password* for the Authentication Option.
  - Enter a password of your choice.
  - Enter the password again in the Confirm Password field.
  - Enter the user ID for which you are setting up single signon in the Default User ID field.
  - Save the Node Definition.
  - Sign out from the PeopleSoft application.
  - Reboot your application server.

### See Also

*PeopleTools: Security Administration*

## Task 10B-3-2: Determining the Transfer Protocol

*We recommend using HTTP as your transfer protocol.*

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. If you have a Microsoft Windows Process Scheduler and a Microsoft Windows web server, you can use either an XCOPY, FTP/FTPS, SFTP, or HTTP/HTTPS protocol. (If FTP information is not specified, Process Scheduler will perform an XCOPY.) If you have a PeopleSoft Process Scheduler on Microsoft Windows and a UNIX web server, you can use FTP/FTPS, SFTP, or HTTP/HTTPS. If the PeopleSoft Process Scheduler is on DB2 z/OS, use FTP/FTPS or HTTP/HTTPS. If you have a PeopleSoft Process Scheduler on UNIX, you can use FTP/FTPS, SFTP, or HTTP/HTTPS.

---

**Note.** If you are using FTP/FTPS or SFTP, the corresponding daemon must be set up in your web server.

---

**Note.** If you are on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

---

### Task 10B-3-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." After a node is defined for the Process Scheduler server, in the next cycle the Process Scheduler server checks the state of the system, and the Distribution Agent dynamically sets up its environment.

### Task 10B-3-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use FTP
- Defining the Report Node to Use FTPS
- Defining the Report Node to Use SFTP

#### Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools: Portal Technology*, "Configuring Web Profiles."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash (/) in both cases:

- *Microsoft Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<user\_home>/PeopleSoft Internet Architecture/psreports

For <user\_home> substitute the home directory for the current user.

#### Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select the Add a New Value link and enter the Report node name.
3. On the Report Node Definition page, select HTTP or HTTPS from the Protocol drop-down list.

Select the HTTP option if you are *not* using SSL. Select the HTTPS option if you are using SSL. The pages for HTTP and HTTPS have the same fields. These examples show HTTP.

Note that if you are using SSL you need to have Client Certificates installed on your web server.

The screenshot shows the 'Report Node Definition' page in Oracle PeopleTools. The breadcrumb trail is 'PeopleTools > Process Scheduler > Report Nodes'. The page title is 'Report Node Definition'. The 'Node Name' is 'HTTP' and the '\*Protocol' is 'HTTP'. There is a 'Validate' button. The 'Distribution Node Details' section includes 'URLID' (http://<machine\_name>:<port\_number>/psreports/<site\_name>), 'Description' (empty), and 'Operating System' (UNIX). The 'Login Details' section includes 'Login ID', 'Password', and 'Confirm Password' fields. The 'URL Details' section includes 'URI Host' (<machine\_name>), 'URI Port' (80), and 'URI Resource' (SchedulerTransfer/<site\_name>). At the bottom, there are buttons for 'Save', 'Return to Search', 'Notify', and 'Refresh'.

Report Node Definition page for the HTTP protocol

4. Enter the following information in the Distribution Node Details area:
  - *URLID*: Enter the URL of the web server using the following format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine\_name>* with the name of your machine. Use the fully qualified host name for your web server. If you are using an HTTP or HTTPS port other than the defaults, you need to specify the port number.

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

- *Description*: Enter a description of the server (optional).



- *Operating System:* Select the web server operating system, Windows or UNIX.
5. Enter the following information in the Login Details area:
    - *Login ID:* Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
    - *Password and Confirm Password:* Enter the password, and confirm it, for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.

---

**Note.** The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools: Security Administration* product documentation.

---

6. Enter the following information in the URI Details area:
  - *URI Host:* Enter the machine name for the report repository.

---

**Note.** In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

---

- *URI Port:* Enter the port number, which must match the port number of your web server (defaults are HTTP = 80, HTTPS = 443). If you change a port number you will lose the default values for both protocols.
  - *URI Resource:* Enter SchedulerTransfer/<site name>.
7. Click Save to save your entries.
  8. Click Validate to confirm that your entries are complete and correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

9. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use FTP

If you use the FTP report node protocol, note that:

- If your FTP server is a Microsoft Windows server, you may have to set up the FTP service.
- The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be completed, it is critical that the value entered in the URL is accurate. Verify that the machine name, port number, and site number that you specify are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select FTP from the Protocol drop-down list.

The screenshot shows the Oracle Report Node Definition page for the FTP protocol. The page is titled "Report Node Definition" and contains several sections:

- Node Name:** FTP
- \*Protocol:** FTP (selected from a dropdown menu)
- Validate:** A button to validate the entered information.
- Distribution Node Details:**
  - URLID:** `http://<machine_name>:<port_number>/psreports/<site_name>`
  - Description:** FTP sample
  - Operating System:** UNIX (selected from a dropdown menu)
- Login Details:**
  - Login ID:** <user\_id>
  - Password:** [masked]
  - Confirm Password:** [masked]
- File Transfer Details:**
  - Home Directory:** /home/psreports
  - FTP Address:** <machine\_name>
  - SSL Mode:** EXPLICIT (selected from a dropdown menu)
- Connection Properties:** A table with columns for Property Name and Property Value.
- Password Encryption:**
  - Password:** [input field]
  - Confirm Password:** [input field]
  - Encrypt:** A button to encrypt the password.
  - Encrypted Password:** [input field]

The page also includes a search bar, navigation buttons (Home, New Window, Help, Personalize Page), and a footer with Save, Return to Search, Notify, and Refresh buttons.

Report Node Definition page for the FTP protocol

- In the Distribution Node Details area, enter the following information:
  - URLID:** Enter the URL of the web server using this format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path:* This information is not required for the FTP protocol
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
  - *Password and Confirm Password:* Enter the password, and enter it a second time, for the FTP User ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.  
For UNIX, the default directory is <user\_home>/PeopleSoft Internet Architecture/psreports/.
  - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. If you need to specify additional properties, use the Connection Properties area. Specifying the Connection Properties is optional.

Click the lookup button (magnifying glass) and select one of the properties in the following table. Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to <i>Y</i> .  The default FTP connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name.  You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
ENABLEEPRPRT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPRT is set to <i>N</i> , then the system will use a PORT (IPv4) Active Mode connection.  By default, ENABLEEPRPRT is <i>Y</i> , if Active Mode is set to <i>Y</i> .
EXTENDEDPASSIVEMODE	<ul style="list-style-type: none"> <li>• <i>0</i>: Disable EPSV</li> <li>• <i>1</i>: Enable EPSV</li> </ul> <p>This property enables you to control whether extended passive mode (EPSV) will be used by FTP.</p> <p>EPSV is used by default. That is, by default, this value is considered to be 1.</p> <p>If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.</p>
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) path.
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
USER	Specify the FTP User ID used for authentication when accessing the FTP site.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
  - a. In the Password field, enter a password.
  - b. In the Confirm Password field, enter the password again.
  - c. Click Encrypt.  
The encrypted password is displayed in the Encrypted Password field.
  - d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.  
The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
11. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use FTPS

To define the report node to use FTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select FTPS from the Protocol drop-down list.

Report Node Definition

Node Name: FTPS  
\*Protocol: FTPS [Validate]

**Distribution Node Details**

URLID: http://<machine\_name>:<port\_number>/psreports/<site\_name>  
Description: FTPS sample  
Operating System: UNIX [Network Path: ]

**Login Details**

Login ID: <user\_id>  
Password: [Confirm Password: ]

**File Transfer Details**

Home Directory: /home/psreports  
FTP Address: <machine\_name> [SSL Mode: EXPLICIT]

**Connection Properties**

Property Name	Property Value

**Password Encryption**

Password: [Confirm Password: ]  
[Encrypt] Encrypted Password: [ ]

[Save] [Notify] [Refresh]

Report Node Definition page for the FTPS protocol

- In the Distribution Node Details area, enter the following information:
  - URLID:** Enter the URL of the web server using this format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---



---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path:* This information is not required for the FTPS protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
  - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.

For UNIX, the default directory is <user\_home>/PeopleSoft Internet Architecture/psreports/.

- *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
- *SSL Mode:* Select Explicit or Implicit from the drop-down list.

These are two separate methods developed to invoke the client security for use with FTP clients. With the explicit mode, FTPS-aware clients can invoke security with an FTPS-aware server without breaking overall FTP functionality with non-FTPS-aware clients. The implicit method requires that all clients of the FTPS server be aware that SSL is to be used on the session, and thus is incompatible with non-FTPS-aware clients.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table:

Click the plus sign to add another connection property.

Property Name	Property Value
ACTIVEMODE	To enable active mode, add the ACTIVEMODE property to the URL and set it to <i>Y</i> .  The default FTPS connection mode is extended passive mode.
ACTIVEPORTOPTION	This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name.  You can also specify a port range. For example: <i>10.176.147.111:10000-13000</i>
CERTALIAS	Certificate Alias: The Certificate Alias must be an alias name of a certificate stored in the database (using the PeopleSoft PeopleTools Digital Certificates page).  <b>Note.</b> Currently, only PEM certificates are supported for FTPS.
ENABLEEPRPT	This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPT is set to <i>N</i> , then the system will use a PORT (IPv4) Active Mode connection.  By default, ENABLEEPRPT is <i>Y</i> , if Active Mode is set to <i>Y</i> .
EXTENDEDPASSIVEMODE	<ul style="list-style-type: none"> <li>• <i>0</i>: Disable EPSV</li> <li>• <i>1</i>: Enable EPSV</li> </ul> <p>This property enables you to control whether extended passive mode (EPSV) will be used by FTP.</p> <p>EPSV is used by default. That is, by default, this value is considered to be 1.</p> <p>If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.</p>
JKSPASSWORD	Specify the Java keystore (JKS) password.
JKSPATH	Specify the Java keystore (JKS) user.



Property Name	Property Value
KEYSTOREPASSWORD	<p>This property is required for FTPS and HTTPS repositories. For attachments transferred from the PeopleSoft system to the FTPS or HTTPS repository, the system retrieves the key pair for the client certificate from the digital certificate store and writes the pair to a file in PKCS12 format with password protection. The value of this property will be used as the password for the PKCS12 file.</p> <p>The PKCS12 file enables connection and file transfer, and it exists only temporarily in &lt;PS_SERVDIR&gt;\files\&lt;CERT ALIAS NAME&gt; for the duration of the file transfer. The system deletes the file after the file transfer transaction.</p> <p><b>Note.</b> If the system fails to delete the certificate alias file, a message will be written to the application server log. The maximum number of files that can exist at any time is equal to the total number of FTPS and HTTPS URL identifiers defined in the system.</p> <p>For information on setting the PS_SERVDIR environment variable, see the <i>PeopleTools: Integration Broker</i> product documentation.</p>
PASSWORD	Specify the password associated with the USER property, which identifies the FTP User ID.
SSLUAGELEVEL	<ul style="list-style-type: none"> <li>• <i>0 - No SSL:</i> No SSL will be used.</li> <li>• <i>1 - Try SSL:</i> Try using SSL, but proceed as normal otherwise.</li> <li>• <i>2 - Control:</i> Require SSL for the control connection.</li> <li>• <i>3 - SSL Only:</i> (Default) Require SSL for all communication.</li> </ul>
USER	Specify the FTP User ID used for authentication when accessing the FTP site.
VERIFYHOST	<ul style="list-style-type: none"> <li>• <i>0:</i> Do not verify the server for host name.</li> <li>• <i>1:</i> Check if there exists any value in the common name field in the server certificate. This check does not verify if it matches with what the client specifies.</li> <li>• <i>2:</i> (Default) Check for a match with the host name in the URL with the common name or Subject Alternate field in the server certificate.</li> </ul>
VERIFYPEER	<ul style="list-style-type: none"> <li>• <i>False:</i> Do not verify the peer.</li> <li>• <i>True:</i> (Default) Verify the peer by authenticating the certificate sent by the server.</li> </ul>

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:

- a. In the Password field, enter a password.
- b. In the Confirm Password field, enter the password again.
- c. Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
  10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use SFTP

To define the report node to use SFTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.

- On the Report Node Definition page, select SFTP from the Protocol drop-down list.

The screenshot shows the Oracle Report Node Definition page for the SFTP protocol. The page is titled "Report Node Definition" and includes a navigation bar with "Favorites", "Main Menu", "PeopleTools", "Process Scheduler", and "Report Nodes". The Oracle logo and a search bar are also visible. The main content area is divided into several sections:

- Node Name:** SFTP
- \*Protocol:** SFTP (selected in a dropdown menu)
- Validate:** A button to validate the entered information.
- Distribution Node Details:**
  - URLID:** `http://<machine_name>:<port_number>/psreports/<site_name>`
  - Description:** SFTP sample
  - Operating System:** UNIX (selected in a dropdown menu)
- Login Details:**
  - Login ID:** <user\_id>
  - Password:** [Masked with dots]
  - Confirm Password:** [Masked with dots]
- File Transfer Details:**
  - Home Directory:** /home/psreports
  - FTP Address:** <machine\_name>
- Connection Properties:** A table with columns for Property Name and Property Value, and buttons for adding (+) and removing (-) properties.
- Password Encryption:** A section with a checkbox for "Password Encryption" and fields for Password, Confirm Password, and Encrypted Password, along with an "Encrypt" button.

At the bottom of the page, there are buttons for "Save", "Notify", and "Refresh".

Report Node Definition page for the SFTP protocol

- In the Distribution Node Details area, enter the following information:
  - URLID:** Enter the URL of the web server using this format:  
`http://<machine_name>:<port_number>/psreports/<site_name>`

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to *ps* for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description:* Enter a description of the server (optional).
  - *Operating System:* Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path:* This information is not required for the SFTP protocol.
5. In the Login Details area, enter the following information:
- *Login ID:* Enter the FTP User ID.
  - *Password and Confirm Password:* Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
6. In the File Transfer Details area, enter the following information:
- *Home Directory:* Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.  
For UNIX, the default directory is <user\_home>/PeopleSoft Internet Architecture/psreports/.
  - *FTP Address:* Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table.

Click the plus sign to add additional connection properties.

Property Name	Property Value
AUTHTYPE	Select one of the following the authentication types: <ul style="list-style-type: none"> <li>• <i>PUBLICKEY</i></li> <li>• <i>PASSWORD</i></li> <li>• <i>ANY</i></li> </ul>
PASSWORD	Specify the user password. You can enter the password in the Password Encryption box, click Encrypt, and then copy the encrypted value to the Password property.
PASSWORDKEY	Enter the password for the private key.
PRIVATEKEY	Select the private key.
PUBLICKEY	Select the public key.
SSHKEYALIAS	<p>Select the SSH certificate saved to the database using the PeopleTools Security, Digital Certificates page (select PeopleTools, Security, Security Objects, Digital Certificates). The SSH certificate added through the Digital Certificates page contains both the public and private key data, identified by the Alias column value on the Digital Certificates page.</p> <p>If using the SSHKEYALIAS URL property, the Property Value prompt displays only the list of SSH certificates that have been added to the Digital Certificates page. If you have added the SSH certificate using the Digital Certificates page, and you have assigned an SSH certificate to the SSHKEYALIAS URL property, the system ignores the PUBLICKEY and PRIVATEKEY properties, regardless of whether they refer to valid key files in the file system.</p> <p>If you provided a password (or passphrase) when generating your SSH certificate, specify that value using the PASSWORDKEY URL property.</p> <p>See <i>PeopleTools: Security Administration</i>, "Configuring Digital Certificates."</p>
USER	Specify the user ID to be authenticated.

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
- a. In the Password field, enter a password.
  - b. In the Confirm Password field, enter the password again.
  - c. Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

## Task 10B-3-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Select PeopleTools, Process Scheduler, Servers.
2. Enter the Server Name (such as PSUNX). The Server Definition page appears.
3. Select the Distribution tab.

The screenshot shows the Oracle PeopleTools interface for configuring a Process Scheduler Server. The breadcrumb trail is: Favorites > Main Menu > PeopleTools > Process Scheduler > Servers. The Oracle logo and search bar are at the top. Below the search bar are links for 'New Window', 'Help', and 'Personalize Page'. The 'Server Definition' page is active, with tabs for 'Server Definition', 'Distribution', 'Operation', 'Notification', and 'Daemon'. The 'Distribution' tab is selected, showing the following fields:

- Server Name: PSUNX
- Server Distribution Details (header)
- Distribution Node Name:  (with a lookup icon)
- Maximum Transfer Retries:
- Interval for Transfer Attempt:  seconds
- Transfer System Files to Report Repository:

At the bottom of the form are buttons: Save, Return to Search, Notify, Add, and Update/Display. Below the buttons are links: Server Definition | Distribution | Operation | Notification | Daemon.

Server Definition page for PSUNX: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of the required report node.
5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.

7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PIA to Report Repository, you need to set up single signon in order to avoid getting a prompt for a second signon.

### Task 10B-3-6: Setting Up Sending and Receiving of Report Folders in the Report Manager

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools: Integration Broker*.

See *PeopleTools: Integration Broker Service Operations Monitor*.

## Task 10B-4: Setting Up Process Scheduler Server Agent

This section discusses:

- Understanding Process Scheduler Server Agent
- Changing the Default Operating System
- Creating and Configuring a Process Scheduler Server
- Reconfiguring a Process Scheduler Server
- Verifying the Process Scheduler Server Status

### Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

Server Name	Operating System
PSUNIX	UNIX

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the *PeopleTools: Process Scheduler* product documentation.

**Note.** When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

## Task 10B-4-1: Changing the Default Operating System

By default, Process Scheduler is set up to run a process request from a Process Scheduler Server Agent started in a Microsoft Windows server when the value of the *ServerName* field in the Process Request Dialog page is left blank. If you plan to run all processes other than Microsoft Windows-based programs (such as nVision) from UNIX, you must change the default operating system.

---

**Note.** If you do not change the default operating system from Windows to UNIX and you do not plan to set up a Process Scheduler Server Agent in Microsoft Windows, process requests that are created will be directed to a Microsoft Windows-based operating system and will remain in the "Queued" status.

---

To change the default operating system for process requests that were not assigned a Process Scheduler Server Name:

1. Select PeopleTools, Process Scheduler, System Settings.
2. Under *Primary Operating System*, choose *UNIX* from the drop-down list.
3. Click on the *System Purge Options* tab. Enter the date for the next purge of process requests in the *Next Purge Date* field.
4. Enter the time for the next purge of process requests in the *Next Purge Time* field. The default time is 12:00:00AM.
5. Enter a *Recurrence* if you want to set a regular purging basis.
6. Choose *Save*.

## Task 10B-4-2: Creating and Configuring a Process Scheduler Server

This section describes how to create and configure a Process Scheduler server.

You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file `psprcs.cfg` located in the `PS_CFG_HOME/appserv/prcs/database name` directory. The following steps assume you are using PSADMIN to specify parameter settings.

---

**Note.** If you use the configuration file `psprcs.cfg`, be aware that in the PeopleSoft PeopleTools 8.49 release and later, the section [Output Dest Exceptions] has been modified to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

---

To create and configure a Process Scheduler Server:

1. Run the `psadmin` command.

You see the PeopleSoft Server Administration menu, as in this example:

```
-----
PeopleSoft Server Administration
-----
PS_CONFIG_HOME      /home/JSMITH/psft/pt/8.56
PS_HOME             /home/PT856
PS_APP_HOME         /home/HC9.2
```

- 1) Application Server
- 2) Process Scheduler
- 3) Search Server



- 4) Web (PIA) Server
- 5) Switch Config Home
- 6) Replicate Config Home
- 7) Refresh Config Home
- q) Quit

Command to execute (1-7 q):

2. Depending on your environment, you may see a message after the menu selection, which indicates that PSADMIN has modified the *PS\_CFG\_HOME*/peopletools.properties file with the current *PS\_HOME* location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****
```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME*/peopletools.properties file. Continue with the next step.
3. Select 2 to access the Process Scheduler submenus.
  4. Select 2 for Create a domain from the PeopleSoft Process Scheduler Administration menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration

q) Quit
```

Command to execute (1-4, q) : **2**

5. Enter the name of the domain at the following prompt, such as HRDMO in this example, and press ENTER:

```
Please enter name of domain to create : HRDMO
```

6. After the system creates the domain, the Quick-configure menu appears:

```
-----
Quick-configure menu -- domain: HRDMO
-----

      Features                               Settings
      =====                               =====
1) App Engine       : Yes          9) DBNAME           : [HRDMO]
2) Master Scheduler : Yes          10) DBTYPE          : [DB2ODBC]
```

```
3) Perf Collator      : No      11) PrcsServer : [PSUNX]
4) Domains Gateway   : No      12) UserId      : [QEDMO]
5) Push Notifications: No      13) UserPswd   : []
                                14) ConnectID  : [people]
                                15) ConnectPswd: []
                                16) Log/Output Dir: [%PS_SERVDIR%/log_⇒
output]
                                17) SQRBIN        : [%PS_HOME%/bin/sqr/ODB⇒
/bin]
                                18) AddToPATH     : [%PS_HOME%/cblbin]
                                19) DomainConnectPswd: []
```

#### Actions

=====

- 6) Load config as shown
- 7) Custom configuration
- 8) Edit environment settings
- h) Help for this menu
- q) Return to previous menu

HINT: Enter 9 to edit DBNAME, then 6 to load

Enter selection (1-18, h, or q):

7. If you need to modify any of these settings, enter the number next to the parameter name, type the new value, and press ENTER. This table lists the parameters and gives brief descriptions.

Parameter	Description
Master Scheduler	Select this option to enable the Master Scheduler Server (PSMSTPRC). The default is to enable the server.  See <i>PeopleTools: Process Scheduler</i> .
App Engine	Select this option to initiate Application Engine programs through the AE Tuxedo Server (PSAESRV). The default is set to run AE using PSAESRV.  See <i>PeopleTools: Process Scheduler</i> .
Perf Collator	Select this option to enable the PSPPMSRV server process.  See <i>PeopleTools: Performance Monitor</i> , "Enabling the Required Elements on the Monitoring System."
Domain Gateways	Select this option to enables inter domain communication, for example between Application Server and Process Scheduler domains.  See <i>PeopleTools: Fluid User Interface Developer's Guide</i> , "Setting Up Push Notification Configurations."
Push Notifications	Select this option to enables pushing server events from PeopleSoft PeopleTools server runtime, such as Application Server and Process Scheduler, to browser clients and other PeopleSoft PeopleTools server runtime components.  See <i>PeopleTools: Fluid User Interface Developer's Guide</i> , "Setting Up Push Notification Configurations."
Load config as shown	Load the selections you made in the Quick Configure menu.
Custom configuration	Make custom selections in PSADMIN, using options that are not available in the Quick Configure menu.
Edit environment settings	Edit, add, remove, comment out, and review domain-level environment variables.
DBNAME	Specify the database name that is associated with a PeopleSoft Process Scheduler Server Agent, such as HRDMO, FSDMO, SADMO, and so on.
DBTYPE	Specify the database type: DB2ODBC (for DB2 for z/OS).
PrCsServer	Specify the process server name. This must match the name defined in the Server Definition table, such as <i>PSNT</i> or <i>PSUNX</i> .

Parameter	Description
UserId	Enter the user ID, such as VP1 or PS.
UserPswd	Enter the password for the user ID, as you specified during the database configuration.  The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
ConnectID	Enter the connect ID. This value is required.
ConnectPswd	Enter the connect password, as you specified during the database configuration. This value is required.  The password is hidden by masking characters as you type, in the Quick-configure menu after entry.
Log/Output Dir	Specify the directory in which files that are generated by the program are written. When PeopleSoft Process Scheduler initiates a process request, it creates a subdirectory in the format <Process Type ID>_<Program Name>_<Process Instance> that contains the generated files. For instance, the SQR program XRFWIN that ran with process instance 20 has all reports, trace, and log files in the subdirectory SQR_XRFWIN_20. It is also the optional directory used with the Output Destination field when scheduling a request. This variable (%%OutputDirectory%%) can be used in the File/Printer field of the Process Scheduler Request dialog box.
SQRBIN	Enter the path to the SQR executables.
AddToPATH	(Optional for Tuxedo) Specify an additional directory that is appended to the PATH environment variable.
DomainConnectPswd	If you configured your Application Server domain to require a Domain Connection password, enter it here. Otherwise, leave it blank.  The password is hidden by masking characters as you type, and in the Quick-configure menu after entry.  See the information on setting Application Server Domain Parameters in the <i>PeopleTools: System and Server Administration</i> product documentation.

For descriptions of the PSADMIN options that do not appear in the Quick-configure menu, see the information on using PSADMIN in the *PeopleTools: Process Scheduler* product documentation. For a basic installation, in most cases you can accept the defaults.

8. When you have updated the settings as needed, choose *5, Load config as shown*, from the Quick-Configure menu to save your settings to the Process Scheduler configuration file, `pstuxcfg`.
9. To start Process Scheduler, choose *1, for Administer Domain*.
10. On the PeopleSoft Process Scheduler Administration menu, choose *1* for Boot this domain.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

Domain Name: HRDMO

- 1) Boot this domain
- 2) Domain shutdown menu
- 3) Domain status menu
- 4) Configure this domain
- 5) TUXEDO command line (tmadmin)
- 6) Edit configuration/log files menu
- 7) Clean IPC resources of this domain
- q) Quit

Command to execute (1-7, q) :

11. Choose 1, Boot (Serial Boot), or 2, Parallel Boot, from the PeopleSoft Domain Boot Menu.

---

**Note.** The messages you see and the number of processes started will depend on the options you chose during configuration.

---

12. If you want to stop Process Scheduler Server, from the PeopleSoft Domain Administration menu, choose 2, for Domain Shutdown menu, and then enter the number corresponding to the name of the appropriate database.

---

**Note.** If you see the following message, then the server is already down:

```
Command to execute (1-2, q) [q]: 1 Loading command line administration
utility ... tmadmin - Copyright (c) 2007-2008, Oracle. Portions *
Copyright 1986-1997 RSA Data Security, Inc. All Rights Reserved.
Distributed under license by Oracle. Tuxedo is a registered trademark. No
bulletin board exists. Entering boot mode. > TMADMIN_CAT:111: ERROR: No
such command.
```

---

### Task 10B-4-3: Reconfiguring a Process Scheduler Server

If you create and then immediately configure a Process Scheduler server, you can use the Quick-configure menu. Alternatively, you can use PSADMIN as described in this section. Feel free to skip this procedure if you have already created and configured your Process Scheduler Server using the Quick-configure menu and want to move forward with your installation.

---

**Note.** If you want to configure the Process Scheduler Server while it is running, you need to stop and restart the server to load the new settings.

---

To reconfigure a Process Scheduler Server:

1. Run the command:

```
psadmin
```

2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the *PS\_CFG\_HOME*/peopletools.properties file with the current *PS\_HOME* location:

```

*****
PS_CFG_HOME/peopletools.properties file has been updated.
You should use the Config Home Refresh feature in PSAdmin
to ensure that all of your domains are current.
Alternatively, you may recreate all of your domains.
Please press any key to continue...
*****

```

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.
3. Select 2 for Process Scheduler in the PeopleSoft Server Administration menu.
  4. In the PeopleSoft Process Scheduler Administration menu, select 1 for Administer a domain.
  5. Select the database for which the Process Scheduler needs to be configured.
  6. You see the following prompt:

```
Do you want to change any config values (y/n)? [n]:
```

Specify *y* to start an interactive dialog that lets you examine or change parameter values.

7. Specify the configuration parameters one by one.

Configuration parameters are grouped into sections. At each section, you are asked whether to change any parameters—for example:

```
Values for config section - Startup
```

```

DBName=
DBType=
UserId=
UserPswd=
ConnectId=
ConnectPswd=
ServerName=
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=
InMemoryDBName=
InMemoryDBType=

```

```
Do you want to change any values (y/n)? [n]:
```

- Specify *y* to change any parameter values for the current section. You are prompted for each parameter value. Either specify a new value or press ENTER to accept the default. After you press ENTER, you are positioned at the next parameter in that section. When you are done with that section, you are again asked whether you want to re-edit any of the values you changed.
- The parameters StandbyDBName, StandbyDBType, StandbyUserID, and StandbyUserPswd are used for a standby database in an Oracle database environment.

See the information on implementing Oracle Active Data Guard in the *PeopleTools: Data Management*, product documentation.

- The parameters `InMemoryDBName` and `InMemoryDBType` are reserved for internal use.
  - If you do not want to change any values, specify `n` and you are prompted for the next configuration section.
8. After you have selected all your parameters, you see this message:
- ```
You will need to shut down and start up the server to read the new⇒
settings.
```

For descriptions of the Process Scheduler options in the PSADMIN, see the *PeopleTools: Process Scheduler* product documentation. In most cases you can accept the defaults.

## Task 10B-4-4: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose option 3, for Domain status menu.

```
-----
PeopleSoft Process Scheduler Administration
-----
```

```
Domain Name: HRDMO
```

- ```
1) Boot this domain
2) Domain shutdown menu
3) Domain status menu
4) Configure this domain
5) TUXEDO command line (tmadmin)
6) Edit configuration/log files menu
7) Clean IPC resources of this domain
q) Quit
```

```
Command to execute (1-7, q) : 3
```

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

For example:

```
Database list:
```

- ```
1) HRDMO
```

```
Select item number to start: 1
```

```
Loading command line administration utility ...
tmadmin - Copyright (c) 2007-2008 Oracle.
Portions * Copyright 1986-1997 RSA Data Security, Inc.
All Rights Reserved.
Distributed under license by Oracle.
Tuxedo is a registered trademark.
```

```
> Prog Name          Queue Name  Grp Name          ID RqDone Load Done Current⇒
```





## Chapter 10C

# Setting Up Process Scheduler on z/OS

This chapter discusses:

- Prerequisites
- Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade
- Granting Required Authorization in DB2 and UNIX System Services
- Setting Up Process Scheduler Security
- Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository
- Setting Up Process Scheduler Server Agent

## Prerequisites

---

If your database runs on z/OS, you need to set up a Microsoft Windows batch environment on a Microsoft Windows application server or on a dedicated Microsoft Windows workstation for Microsoft Windows-specific batch processes, such as nVision reports, Cube Builder, or Microsoft Word. These processes are Microsoft Windows-specific applications that cannot be executed by the Process Scheduler on z/OS.

Before setting up your Process Scheduler, you must:

- Install database connectivity to be able to communicate with your database server (Process Scheduler requires a direct connection to the database).  
The Process Scheduler running on z/OS USS uses the DB2 ODBC component to connect to DB2. DB2 ODBC must be installed by your DB2 systems programmer; installation details are available in the IBM DB2 Installation Guide.
- Set up the web server with the PeopleSoft Pure Internet Architecture, as described in the previous chapter. This is required to set up the Process Scheduler to transfer reports or log files to the Report Repository.
- Set up your COBOL batch environment if you need to run COBOL processes through Process Scheduler. If the PeopleSoft modules purchased do not contain any COBOL modules, the COBOL run time libraries are not required. Also, COBOL is not required for applications that contain no COBOL programs. Consult My Oracle Support for the details on whether your application requires COBOL.  
See "Preparing for Installation," Planning Your Initial Configuration.
- Install JDK/JRE 1.6.0 (z/OS Java 2 kit) on z/OS.
- Apply all the required IBM patches listed in the document "Important PTFs for the PeopleSoft on DB2 for z/OS."  
See Important PTFs for the PeopleSoft on DB2 for z/OS, My Oracle Support (search for the article name).
- Set up your database connectivity to access the PeopleSoft database from UNIX System Services with ODBC for z/OS.
- Install IBM's system stored procedure DSNUTILS. This is only required if you intend to run

%UPDATESTAT meta-SQL coded in Application Engine, COBOL and Process Scheduler. If you do not have DSNUUTILS installed, make sure you set the DBFLAGS parameter in the Process Scheduler Configuration file to "1" to disable performing this statistics within.

See "Creating a Database," Planning Your Installation.

- Have both your application server and the PeopleSoft Pure Internet Architecture started. In this chapter, you must modify security options of the designated PeopleSoft user ID that will be used to boot up Process Scheduler. This requires that the user ID's profile be modified through the User Security component. Please refer to earlier chapters for the details on starting the application server and the PeopleSoft Pure Internet Architecture.
- PeopleSoft binaries are compiled and linked with IBM's XPLINK (Extra option Linkage) option enabled. In order for all PeopleSoft executables to successfully run from UNIX System Services (USS), it is recommended to include the IBM Language Environment Run Time library CEE.SCEERUN2 dataset concatenated into your system library using IBM's LNKLIST utility. This IBM library CEE.SCEERUN2 may have been renamed in your system. It will be the dataset containing the CELHV003 load module.

In PeopleSoft PeopleTools 8.50 and later, the configuration and log files for Process Scheduler server domains reside in *PS\_CFG\_HOME*. If you do not set a *PS\_CFG\_HOME* environment variable before beginning the application server configuration, the system installs it in a default location based on the current user's settings, as follows:

```
%USERPROFILE%\psft\pt\<peopletools_version>
```

See "Preparing for Installation," Defining Installation Locations.

See the product documentation *PeopleTools: System and Server Administration* for more information on the *PS\_CFG\_HOME* environment variable and working with server domain configuration.

## See Also

*PeopleTools: Process Scheduler*

My Oracle Support, Certifications

## Task 10C-1: Preparing the Process Scheduler File System for a PeopleTools-Only Upgrade

---

When performing the installation of the separate upgrade *PS\_HOME* or *PS\_CFG\_HOME* (which is different than your old release *PS\_HOME*), you may configure your Process Scheduler at this point in time of the installation, but do not boot your Process Scheduler until directed to do so within the upgrade.

If you are installing into an existing *PS\_HOME* or *PS\_CFG\_HOME* after completing a PeopleTools-only upgrade, review your old *PS\_HOME* or *PS\_CFG\_HOME* for configuration files that you may want to reuse for the new PeopleSoft PeopleTools release. While you may configure your Process Scheduler at this point in time of the installation, do not boot your Process Scheduler until directed to do so within the upgrade.

See "Preparing for Installation," Preparing for the PeopleTools-Only Upgrade.

## Task 10C-2: Granting Required Authorization in DB2 and UNIX System Services

---

This section discusses:

- Setting UNIX System Services Authorization
- Setting DB2 Authorization

## Task 10C-2-1: Setting UNIX System Services Authorization

This section discusses:

- Providing Read/Write Access to the Designated Log/Output Directory
- Providing Access to TSO and USS

### Providing Read/Write Access to the Designated Log/Output Directory

All processes released by Process Scheduler will create and write files to an Hierarchical File System (HFS) directory in UNIX System Services (USS). This HFS directory is designated by the *Log/Output Directory* parameter found in the *Process Scheduler* section of the Process Scheduler configuration file. By default the log/output directory will be

```
$PS_HOME/appserv/prcs/<database name>/log_output
```

JCL's generated by Process Scheduler to submit COBOL or SQR include step(s) that will copy the log file(s) and reports (for SQR) to the Log/Output directory in USS. If the JCL job card includes the USER/PASSWORD parameter, the user ID specified in the USER parameter must also be given read/write access to this HFS directory. In this case, where multiple mainframe ID's will be writing to this directory, you need to set up a group ID (GID) in RACF and assign the mainframe user ID to this GID. Once you have established this in RACF, make sure the group ID is the owning group of the log/output directory.

As an example, HRASB and PSOFT IDs are required to write to the log/output directory. A DBAUNIX group ID is set up so both HRASB and PSOFT are connected to this group in RACF. For the group to have read/write access, the mode of the directory is changed (using the UNIX command `chmod`) so UID and GID have read/write access.

```
$ ls -l
total 152
drwxrwx---  11 HRASB      DBAUNIX      8192 Dec  5 17:43 log_output
```

### Providing Access to TSO and USS

All mainframe user IDs involved in submitting a JCL in TSO or Process Scheduler and Application Engine in USS must be set up in RACF to have access to both TSO and USS environments. Certain procedures in Process Scheduler will perform an OCOPY (from a JCL) or OPUT as a TSO command in USS to transfer files from a PDS into an HFS directory. These procedures are triggered when posting reports and log files from a COBOL and/or SQR. The Distribution Agent will temporarily copy the files from a partitioned dataset (PDS) or sequential file into a designated HFS directory before posting the files to the repository.

To verify that the mainframe ID has all the proper authorization to perform the transfer, you can issue this test from USS.

To verify the mainframe ID's authorization:

1. Log in to the USS with the user ID that will be used to boot Process Scheduler
2. Enter the following command in USS:

```
tso OPUT "'<Partitioned data set(member)>' '<HFS file>'"
```

As an example:

```
$ tso OPUT "'FS.FS840A8.JCLLIB(SQRSAMP)' '/tmp/test.txt'"
OPUT 'FS.FS840A8.JCLLIB(SQRSAMP)' '/tmp/test.txt'
IGD103I SMS ALLOCATED TO DDNAME SYS00001
```

In this example, the PDS member SQRSAMP is copied into the HFS file /tmp/test.txt.

## See Also

IBM publications, <http://www-1.ibm.com/servers/eserver/zseries/zos/unix/bpxa1pub.html>

*Systems Planning Guide (SA22-7800)*

*User's Guide (SA22-7801)*

## Task 10C-2-2: Setting DB2 Authorization

This section discusses:

- Setting Authorization for DB2 Plan for ODBC for OS390
- Setting Authorization for DB2 Plans for COBOL
- Setting Authorization for DB2 Plan for SQR

### Setting Authorization for DB2 Plan for ODBC for OS390

The privilege to execute the DB2 plan for the CLI/ODBC package DSNAOCLI must be given to the mainframe ID used to login to UNIX System Services to start Process Scheduler Server Agent. When Process Scheduler or Application Engine program connects to the DB2 database, CLI/ODBC authenticates the connection based on the user ID that initiates the program from UNIX System Services.

```
Grant EXECUTE on PLAN <PLAN for CLI Package DSNAOCLI> To <Unix Service=>
  Login ID>
```

### Setting Authorization for DB2 Plans for COBOL

Enter the following command to set authorization for DB2 Plans for COBOL:

```
Grant EXECUTE on PLAN <SQLRT Plan PTPSQLRA and PTPSQLRE> To <Access-Id> or=>
  <Ownerid>;
```

The variable *<SQLRT Plan PTPSQLRA and PTPSQLRE >* refers to the plans created during database creation.

See "Creating a Database," Binding DB2 Plans.

### Setting Authorization for DB2 Plan for SQR

Enter the following command to set authorization for DB2 Plan for SQR:

```
Grant EXECUTE on PLAN <SQR PLAN> To <Access-Id> or <Ownerid>;
```

The variable *<SQR PLAN>* refers to the plan created when installing SQR for z/OS.

## **Task 10C-3: Setting Up Process Scheduler Security**

---

This section discusses:

- Understanding Process Scheduler Security
- Granting Process Scheduler Administrative Rights

### **Understanding Process Scheduler Security**

This task—in which you set up the PeopleSoft User ID that will be used to boot Process Scheduler server so it has administrative rights to both Process Scheduler and Report Manager—guarantees that security is set up properly within your PeopleSoft database.

You must carry out this task to start Process Scheduler successfully.

### **Task 10C-3-1: Granting Process Scheduler Administrative Rights**

To grant Process Scheduler administrative rights:

1. Log onto your PeopleSoft database through the PeopleSoft Pure Internet Architecture.
2. Select PeopleTools, Security, User Profiles.
3. Select the User Profiles component. Use the Search dialog to select the PeopleSoft User ID you plan to use to boot the Process Scheduler server.

- Click the Roles tab, click the plus icon to insert a new row, and there enter the *ProcessSchedulerAdmin* role to grant the user ID with administrative rights in the Process Scheduler components.

The screenshot shows the Oracle PeopleSoft Security User Profiles Roles tab. The 'User Roles' table is as follows:

| Role Name                | Description                 | Dynamic                  | Route Control                 | View Definition                 |
|--------------------------|-----------------------------|--------------------------|-------------------------------|---------------------------------|
| PTF Administrator        | PTF Administrator           | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| PeopleSoft Administrator | PeopleSoft Admin Privileges | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| PeopleSoft User          | PeopleSoft User             | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| Portal Administrator     | Portal Administrator        | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| Portal Manager           | Portal Manager              | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| ProcessSchedulerAdmin    | Process Scheduler Admin     | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| QE Role                  | QE Role                     | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| Search Administrator     | Search Administrator        | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| Search Developer         | Search Developer            | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |
| ReportDistAdmin          | Report Distribution Admin   | <input type="checkbox"/> | <a href="#">Route Control</a> | <a href="#">View Definition</a> |

Process Scheduler window: Roles tab

- Repeat the instructions in step 4 to add the role *ReportDistAdmin*.

This will grant the user ID administrative rights to the Report Manager component. Carry out this step only if the same user is also responsible for maintaining the content of Report Manager.

**Note.** When setting up Process Scheduler on UNIX or Windows, you must have the right user ID to start an application server. This authorization is not required to bring up Process Scheduler in z/OS UNIX System Services because Process Scheduler is not booted through Tuxedo in this platform.

## Task 10C-4: Setting Up Process Scheduler to Transfer Reports and Logs to the Report Repository

This section discusses:

- Understanding Report Distribution
- Setting Up Single Signon to Navigate from PIA to Report Repository
- Determining the Transfer Protocol

- Starting the Distribution Agent
- Setting Up the Report Repository
- Setting Up the Distribution for Your Process Scheduler Server
- Setting Up Sending and Receiving of Report Folders in the Report Manager

## Understanding Report Distribution

The PeopleSoft PeopleTools Report Distribution lets you access reports and log files generated from process requests run by a Process Scheduler Server Agent. Using the PeopleSoft Pure Internet Architecture, you can view reports and log files from the web browser through the Report Manager or Process Monitor Detail page. Report Distribution enables you to restrict access to these reports to authorized users based either on user ID or role ID.

This product also includes the Distribution Agent component, which runs on the same server as the Process Scheduler Server Agent. The Distribution Agent, a process that runs concurrently with the Process Scheduler Server Agent, transfers to the Report Repository files generated by process requests initiated by the Process Scheduler Server Agent.

The Distribution Agent transfers files to the Report Repository when one of these criteria is true:

- The Process Scheduler Server Agent is set up in the *Server Definition* to transfer all log files to the Report Repository.
- The process request output destination type is *Web/Window*.

In either case, the Process Scheduler Server Agent inserts a row in the Report List table (PS\_CDM\_LIST). The server agent then updates the distribution status for a process request to *Posting* upon completion of the program associated with the process request. The distribution status of *Posting* signals that the files for the process request are ready for transfer to the Report Repository. The Distribution Agent is notified by Process Scheduler for any process requests that are ready for transferring. As part of the process to transfer files to the Report Repository, the Distribution Agent performs the following steps:

- *Transfer files to the Report Repository.* All the report and log files are transferred to the Report Repository. For each process request transferred, a directory is created in the Report Repository using the following format: \<database name>\<date yyymmdd>\<report id>. All the files for a process request are stored in this directory.
- *Delete the directory from the Process Scheduler Agent's Log/Output directory.* When the output destination type specified for a process request is *Web/Window*, all the files and directory associated with the process request are deleted from the Process Scheduler Log/Output directory after the files are transferred to the Report Repository.

The following diagram illustrates the Process Scheduler and Report Repository architecture. The diagram includes the following items:

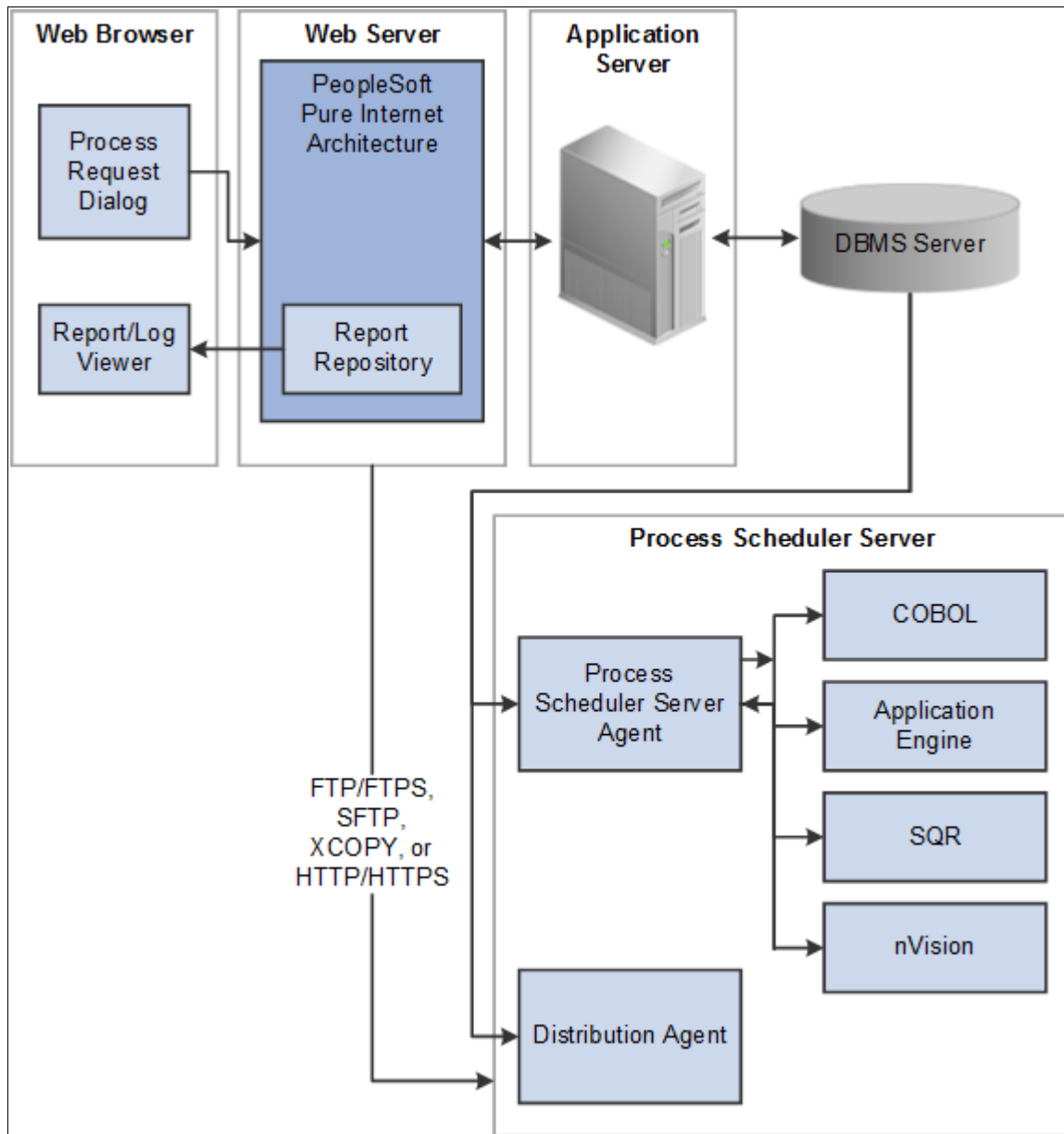
- The web browser gives access to the Process Request dialog and the Report or Log Viewer.
- The Report Repository is part of the PeopleSoft Pure Internet Architecture.

---

**Note.** The PeopleSoft Pure Internet Architecture must be installed for Process Scheduler to be able to transfer reports to the Report Repository.

---

- The Process Scheduler Server includes the Process Scheduler Server Agent and the Distribution Agent.
- The transfer protocol between Process Scheduler and the Report Repository may be FTP/FTPS, XCOPY, HTTP/HTTPS, or SFTP.



Process Scheduler and Report Repository Architecture

Before users can view a report, they are authenticated against the PeopleSoft database.

You should set up single signon if you do not want users to have to log on an additional time to view reports in the Report Repository. For the details on setting up single signon, consult the security documentation.

See *PeopleTools: Security Administration*.



## Task 10C-4-1: Setting Up Single Signon to Navigate from PIA to Report Repository

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PeopleSoft Pure Internet Architecture (PIA) to Report Repository, you need to set up single signon to avoid getting a prompt for a second signon. This section includes some considerations for setting up single signon to navigate from PIA to Report Repository.

If Report Repository resides on the same web server as PIA, make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.

If Report Repository resides on a different web server than PIA, do the following:

- Make sure your Local Message Node is set up to be a "trusted" node for single signon for your system.
- Use a fully qualified domain name when addressing the web server for both PIA and Report Repository. For example, enter `http://<machineName>.peoplesoft.com/<site_name>/signon.html` instead of `http://<machineName>/<site_name>/signon.html`.
- Specify the Authentication Domain for your application during installation. If you have multiple applications, and you want them to employ single signon, it is important to specify the same Authentication Domain for all applications.

See the information on implementing single signon in the *PeopleTools: Security Administration* product documentation.

- Set up single signon with a password, like this:
  - Choose PeopleTools, Integration Broker, Integration Setup, Nodes.
  - Click Search and then select the node marked as Default Local Node.
  - Select *Password* for the Authentication Option.
  - Enter a password of your choice.
  - Enter the password again in the Confirm Password field.
  - Enter the user ID for which you are setting up single signon in the Default User ID field.
  - Save the Node Definition.
  - Sign out from the PeopleSoft application.
  - Reboot your application server.

### See Also

*PeopleTools: Security Administration*

## Task 10C-4-2: Determining the Transfer Protocol

*We recommend using HTTP as your transfer protocol.*

Before transferring the files to the Report Repository, you need to determine which transfer protocol to use. If you have a Microsoft Windows Process Scheduler and a Microsoft Windows web server, you can use either an XCOPY, FTP/FTPS, SFTP, or HTTP/HTTPS protocol. (If FTP information is not specified, Process Scheduler will perform an XCOPY.) If you have a PeopleSoft Process Scheduler on Microsoft Windows and a UNIX web server, you can use FTP/FTPS, SFTP, or HTTP/HTTPS. If the PeopleSoft Process Scheduler is on DB2 z/OS, use FTP/FTPS or HTTP/HTTPS. If you have a PeopleSoft Process Scheduler on UNIX, you can use FTP/FTPS, SFTP, or HTTP/HTTPS.

---

**Note.** If you are on DB2 z/OS, you need to have JRE set up on your Process Scheduler server.

---

### Task 10C-4-3: Starting the Distribution Agent

The Distribution Agent is automatically started as another Oracle Tuxedo server when a Process Scheduler Server is booted. If a Process Scheduler Server was set up without specifying a Distribution Node in the *Server Definition* page, the Process Scheduler server will have a status in Process Monitor of "Running with No Report Node." After a node is defined for the Process Scheduler server, in the next cycle the Process Scheduler server checks the state of the system, and the Distribution Agent dynamically sets up its environment.

### Task 10C-4-4: Setting Up the Report Repository

This section discusses:

- Defining ReportRepositoryPath
- Defining the Report Node to Use HTTP/HTTPS
- Defining the Report Node to Use FTP
- Defining the Report Node to Use FTPS
- Defining the Report Node to Use SFTP

#### Defining ReportRepositoryPath

The ReportRepositoryPath specifies the location of a directory for the Report Repository. You can specify the location for the Report Repository Path on the General page of the Web Profile during installation. If you do not set the location in the Web Profile, the location given by ReportRepositoryPath in the configuration.properties file is used for the default location. Note that the value entered for Report Repository Path in the Web Profile overrides any entry in the configuration.properties file.

See *PeopleTools: Portal Technology*, "Configuring Web Profiles."

Use the following formats to enter the name for the directory that you want to use for the ReportRepositoryPath. The examples below give the default values. Note that you must use a forward slash ("/") in both cases:

- *Microsoft Windows*: ReportRepositoryPath=c:/psreports
- *UNIX*: ReportRepositoryPath=<user\_home>/PeopleSoft Internet Architecture/psreports

For <user\_home> substitute the home directory for the current user.

#### Defining the Report Node to Use HTTP/HTTPS

To define the report node to use HTTP/HTTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.

2. Select the Add a New Value link and enter the Report node name.
3. On the Report Node Definition page, select HTTP or HTTPS from the Protocol drop-down list.  
Select the HTTP option if you are *not* using SSL. Select the HTTPS option if you are using SSL. The pages for HTTP and HTTPS have the same fields. These examples show HTTP.

Note that if you are using SSL you need to have Client Certificates installed on your web server.

4. Enter the following information in the Distribution Node Details area:

- *URLID*: Enter the URL of the web server using the following format:

```
http://<machine_name>:<port_number>/psreports/<site_name>
```

Replace *<machine\_name>* with the name of your machine. Use the fully qualified host name for your web server. If you are using an HTTP or HTTPS port other than the defaults, you need to specify the port number.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

- *Description*: Enter a description of the server (optional).
- *Operating System*: Select the web server operating system, Windows or UNIX.

5. Enter the following information in the Login Details area:

- *Login ID*: Enter the Login ID. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.
- *Password and Confirm Password*: Enter the password, and confirm it, for the user ID specified in the Login ID field. This is not required, unless basic authentication has been set up on the web server by the Web Administrator.

---

**Note.** The setup of authentication is optional, but is recommended for security of the Report Repository when using the HTTP to transfer files. For information on setting up authentication on the web server where the Report Repository resides, refer to the *PeopleTools: Security Administration* product documentation.

---

6. Enter the following information in the URI Details area:

- *URI Host*: Enter the machine name for the report repository.

---

**Note.** In a basic setup, the machine name for the report repository will match the machine name of the web server URL. However, under certain circumstances—for example, if you are using a reverse proxy server—the URL and URI Host may have different machine names.

---

- *URI Port*: Enter the port number, which must match the port number of your web server (defaults are HTTP = 80, HTTPS = 443). If you change a port number you will lose the default values for both protocols.
- *URI Resource*: Enter SchedulerTransfer/<site name>.

7. Click Save to save your entries.

8. Click Validate to confirm that your entries are complete and correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

9. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use FTP

If you use the FTP report node protocol, note that:

- If your FTP server is a Microsoft Windows server, you may have to set up the FTP service.
- The Distribution Agent will perform a validation after FTP has transferred files into the Report Repository by sending a query request to the web server. For this task to be completed, it is critical that the value entered in the URL is accurate. Verify that the machine name, port number, and site number that you specify are correct.

If this setup is not completed, the process request will get a status of NOT POSTED in the Process Monitor Detail page and will log the message "Unable to verify files posted."

To define the report node to use FTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. On the Report Node Definition page, select FTP from the Protocol drop-down list.
4. In the Distribution Node Details area, enter the following information:

- *URLID*: Enter the URL of the web server using this format:

```
http://<machine_name>:<port_number>/psreports/<site_name>
```

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to ps for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description*: Enter a description of the server (optional).
  - *Operating System*: Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path*: This information is not required for the FTP protocol
5. In the Login Details area, enter the following information:
    - *Login ID*: Enter the FTP User ID.
    - *Password and Confirm Password*: Enter the password, and enter it a second time, for the FTP User ID specified in the Login ID field.
  6. In the File Transfer Details area, enter the following information:
    - *Home Directory*: Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
    - *FTP Address*: Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.

7. If you need to specify additional properties, use the Connection Properties area. Specifying the Connection Properties is optional.

Click the lookup button (magnifying glass) and select one of the properties in the following table. Click the plus sign to add another connection property.

| Property Name       | Property Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACTIVEMODE          | To enable active mode, add the ACTIVEMODE property to the URL and set it to <i>Y</i> .<br><br>The default FTP connection mode is extended passive mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ACTIVEPORTOPTION    | This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name.<br><br>You can also specify a port range. For example:<br><i>10.176.147.111:10000-13000</i> |
| ENABLEEPRPT         | This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPT is set to <i>N</i> , then the system will use a PORT (IPv4) Active Mode connection.<br><br>By default, ENABLEEPRPT is <i>Y</i> , if Active Mode is set to <i>Y</i> .                                                                                                                                                                                                                                                                                                                                          |
| EXTENDEDPASSIVEMODE | <ul style="list-style-type: none"> <li>• <i>0</i>: Disable EPSV</li> <li>• <i>1</i>: Enable EPSV</li> </ul> <p>This property enables you to control whether extended passive mode (EPSV) will be used by FTP.</p> <p>EPSV is used by default. That is, by default, this value is considered to be 1.</p> <p>If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.</p>                                                                                                 |
| JKSPASSWORD         | Specify the Java keystore (JKS) password.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| JKSPATH             | Specify the Java keystore (JKS) path.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PASSWORD            | Specify the password associated with the USER property, which identifies the FTP User ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| USER                | Specify the FTP User ID used for authentication when accessing the FTP site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
  - a. In the Password field, enter a password.
  - b. In the Confirm Password field, enter the password again.
  - c. Click Encrypt.  
The encrypted password is displayed in the Encrypted Password field.
  - d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.  
The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
11. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use FTPS

To define the report node to use FTPS:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. On the Report Node Definition page, select FTPS from the Protocol drop-down list.
4. In the Distribution Node Details area, enter the following information:

- *URLID*: Enter the URL of the web server using this format:

```
http://<machine_name>:<port_number>/psreports/<site_name>
```

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to ps for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---



---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description*: Enter a description of the server (optional).
  - *Operating System*: Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path*: This information is not required for the FTPS protocol.
5. In the Login Details area, enter the following information:
    - *Login ID*: Enter the FTP User ID.
    - *Password and Confirm Password*: Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
  6. In the File Transfer Details area, enter the following information:

- *Home Directory*: Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.
- *FTP Address*: Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
- *SSL Mode*: Select Explicit or Implicit from the drop-down list.

These are two separate methods developed to invoke the client security for use with FTP clients. With the explicit mode, FTPS-aware clients can invoke security with an FTPS-aware server without breaking overall FTP functionality with non-FTPS-aware clients. The implicit method requires that all clients of the FTPS server be aware that SSL is to be used on the session, and thus is incompatible with non-FTPS-aware clients.

7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table:

Click the plus sign to add another connection property.

| Property Name       | Property Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACTIVEMODE          | To enable active mode, add the ACTIVEMODE property to the URL and set it to <i>Y</i> .<br><br>The default FTPS connection mode is extended passive mode.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| ACTIVEPORTOPTION    | This property can be used along with ACTIVEMODE. When active mode is enabled, you can use ACTIVEPORTOPTION to specify the IP address and port on which the FTP server can be accessed. This is useful when the server is behind a firewall. By default, ACTIVEPORTOPTION uses the default IP address of your system. If you want to use a particular IP address, set the ACTIVEPORTOPTION value to either the full IP address, a host name to resolve to an IP address, or a local network interface name.<br><br>You can also specify a port range. For example:<br><i>10.176.147.111:10000-13000</i> |
| CERTALIAS           | Certificate Alias: The Certificate Alias must be an alias name of a certificate stored in the database (using the PeopleSoft PeopleTools Digital Certificates page).<br><br><b>Note.</b> Currently, only PEM certificates are supported for FTPS.                                                                                                                                                                                                                                                                                                                                                      |
| ENABLEEPRPT         | This option can be used only with Active Mode. If Active Mode is enabled and ENABLEEPRPT is set to <i>N</i> , then the system will use a PORT (IPv4) Active Mode connection.<br><br>By default, ENABLEEPRPT is <i>Y</i> , if Active Mode is set to <i>Y</i> .                                                                                                                                                                                                                                                                                                                                          |
| EXTENDEDPASSIVEMODE | <ul style="list-style-type: none"> <li>• <i>0</i>: Disable EPSV</li> <li>• <i>1</i>: Enable EPSV</li> </ul> <p>This property enables you to control whether extended passive mode (EPSV) will be used by FTP.</p> <p>EPSV is used by default. That is, by default, this value is considered to be 1.</p> <p>If the client fails to connect to the server with EPSV, then the system will try passive mode (PASV). To use PASV only, add EXTENDEDPASSIVEMODE to the URL Properties and set it to 0.</p>                                                                                                 |
| JKSPASSWORD         | Specify the Java keystore (JKS) password.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| JKSPATH             | Specify the Java keystore (JKS) user.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



| Property Name    | Property Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KEYSTOREPASSWORD | <p>This property is required for FTPS and HTTPS repositories. For attachments transferred from the PeopleSoft system to the FTPS or HTTPS repository, the system retrieves the key pair for the client certificate from the digital certificate store and writes the pair to a file in PKCS12 format with password protection. The value of this property will be used as the password for the PKCS12 file.</p> <p>The PKCS12 file enables connection and file transfer, and it exists only temporarily in &lt;PS_SERVDIR&gt;\files\&lt;CERT ALIAS NAME&gt; for the duration of the file transfer. The system deletes the file after the file transfer transaction.</p> <p><b>Note.</b> If the system fails to delete the certificate alias file, a message will be written to the application server log. The maximum number of files that can exist at any time is equal to the total number of FTPS and HTTPS URL identifiers defined in the system.</p> <p>For information on setting the PS_SERVDIR environment variable, see the <i>PeopleTools: Integration Broker</i> product documentation.</p> |
| PASSWORD         | Specify the password associated with the USER property, which identifies the FTP User ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SSLUAGELEVEL     | <ul style="list-style-type: none"> <li>• <i>0 - No SSL:</i> No SSL will be used.</li> <li>• <i>1 - Try SSL:</i> Try using SSL, but proceed as normal otherwise.</li> <li>• <i>2 - Control:</i> Require SSL for the control connection.</li> <li>• <i>3 - SSL Only:</i> (Default) Require SSL for all communication.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| USER             | Specify the FTP User ID used for authentication when accessing the FTP site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| VERIFYHOST       | <ul style="list-style-type: none"> <li>• <i>0:</i> Do not verify the server for host name.</li> <li>• <i>1:</i> Check if there exists any value in the common name field in the server certificate. This check does not verify if it matches with what the client specifies.</li> <li>• <i>2:</i> (Default) Check for a match with the host name in the URL with the common name or Subject Alternate field in the server certificate.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| VERIFYPEER       | <ul style="list-style-type: none"> <li>• <i>False:</i> Do not verify the peer.</li> <li>• <i>True:</i> (Default) Verify the peer by authenticating the certificate sent by the server.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:

- a. In the Password field, enter a password.
- b. In the Confirm Password field, enter the password again.
- c. Click Encrypt.

The encrypted password is displayed in the Encrypted Password field.

- d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
  10. Click Validate to confirm that your entries are correct.

The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.

11. To add additional report nodes, click Add to return to the Search page.

## Defining the Report Node to Use SFTP

To define the report node to use SFTP:

1. Select PeopleTools, Process Scheduler, Report Nodes.
2. Select Add a New Value, enter the Report node name, and click Add.
3. On the Report Node Definition page, select SFTP from the Protocol drop-down list.
4. In the Distribution Node Details area, enter the following information:

- *URLID*: Enter the URL of the web server using this format:

```
http://<machine_name>:<port_number>/psreports/<site_name>
```

Replace *<machine name>* with the name of your web server. If you are using an HTTP port other than 80, you need to specify the port number. The variable *<site name>* refers to the directory where you installed the PIA files; this will default to ps for the first installation.

---

**Note.** If you specify the Authentication Token Domain name during the PIA installation, you must include a fully qualified domain name for the URL instead of the IP address.

---



---

**Note.** If you installed the web server software with the default TCP port of 80, you do not need to specify the port number in the URL path. However, if you installed the web server to some other port, you must specify the port number in the URL path.

---

- *Description*: Enter a description of the server (optional).
  - *Operating System*: Select the operating system of the Report Repository, Windows or UNIX.
  - *Network Path*: This information is not required for the SFTP protocol.
5. In the Login Details area, enter the following information:
    - *Login ID*: Enter the FTP User ID.
    - *Password and Confirm Password*: Enter the password, and enter it a second time, for the user ID specified in the Login ID field.
  6. In the File Transfer Details area, enter the following information:
    - *Home Directory*: Enter the directory specified during the PIA installation as the Report Repository. The FTP User ID must have write access to this directory. Note that this is not a required field for FTP

transfer, as the system uses the Report Repository directory specified at install time or the current directory assigned to ReportRepositoryPath in configuration.properties. Note that the value you enter for the Report Repository Path in the Web Profile at install time overrides any entry for ReportRepositoryPath in configuration.properties.

- *FTP Address*: Enter the machine name or the IP address of the Report Repository. If the name of the machine is used, it must be included on a DNS server.
7. In the Connection Properties area, click the lookup button (magnifying glass) and select one of the properties in the following table.

Click the plus sign to add additional connection properties.

| Property Name | Property Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AUTHTYPE      | Select one of the following the authentication types: <ul style="list-style-type: none"> <li>• <i>PUBLICKEY</i></li> <li>• <i>PASSWORD</i></li> <li>• <i>ANY</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| PASSWORD      | Specify the user password. You can enter the password in the Password Encryption box, click Encrypt, and then copy the encrypted value to the Password property.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| PASSWORDKEY   | Enter the password for the private key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| PRIVATEKEY    | Select the private key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| PUBLICKEY     | Select the public key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| SSHKEYALIAS   | <p>Select the SSH certificate saved to the database using the PeopleTools Security, Digital Certificates page (select PeopleTools, Security, Security Objects, Digital Certificates). The SSH certificate added through the Digital Certificates page contains both the public and private key data, identified by the Alias column value on the Digital Certificates page.</p> <p>If using the SSHKEYALIAS URL property, the Property Value prompt displays only the list of SSH certificates that have been added to the Digital Certificates page. If you have added the SSH certificate using the Digital Certificates page, and you have assigned an SSH certificate to the SSHKEYALIAS URL property, the system ignores the PUBLICKEY and PRIVATEKEY properties, regardless of whether they refer to valid key files in the file system.</p> <p>If you provided a password (or passphrase) when generating your SSH certificate, specify that value using the PASSWORDKEY URL property.</p> <p>See <i>PeopleTools: Security Administration</i>, "Configuring Digital Certificates."</p> |
| USER          | Specify the user ID to be authenticated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

8. If you need to specify an encrypted password in any of the property fields, use the Password Encryption area to generate the encrypted password, as follows:
  - a. In the Password field, enter a password.
  - b. In the Confirm Password field, enter the password again.
  - c. Click Encrypt.  
The encrypted password is displayed in the Encrypted Password field.
  - d. From the Encrypted Password field, cut the encrypted password and then copy the encrypted value to the appropriate location.
9. Select Save to save your entries.
10. Click Validate to confirm that your entries are correct.  
The validation confirms that the necessary parameters are present and correct, and simulates a file transfer with the entered information. You either see a message that confirms the success of the validation, or a message that displays an error for missing parameters or an unsuccessful transfer simulation.
11. To add additional report nodes, click Add to return to the Search page.

## Task 10C-4-5: Setting Up the Distribution for Your Process Scheduler Server

To set up the Distribution Settings for your Process Scheduler Server:

1. Select PeopleTools, Process Scheduler, Servers.
2. Enter the Server Name (such as PSOS390). The Server Definition page appears.
3. Select the Distribution tab.

The screenshot shows the Oracle PeopleTools interface for the 'Servers' page. The breadcrumb trail is 'PeopleTools > Process Scheduler > Servers'. The page title is 'ORACLE' and there is a search bar. The 'Server Name' is 'PSOS390'. The 'Distribution' tab is selected, showing 'Server Distribution Details' with the following fields: 'Distribution Node Name' (with a lookup button), 'Maximum Transfer Retries', 'Interval for Transfer Attempt' (with a 'seconds' label), and 'Transfer System Files to Report Repository' (with a checkbox). At the bottom, there are buttons for 'Save', 'Return to Search', 'Notify', 'Add', and 'Update/Display'. The breadcrumb trail at the bottom of the page is 'Server Definition | Distribution | Operation | Notification | Daemon'.

Server Definition page for PSOS390: Distribution tab

4. Click the lookup button for Distribution Node Name to display the report node names and select the name of

the required report node.

5. Enter a number for the Maximum Transfer Retries. This is the maximum number of times the server can try to send a report before it errors out.
6. Enter the number of seconds for the Interval for Transfer Attempt field. This is the interval between attempts to send the report.
7. Select the check box Transfer Log Files to Report Repository if you want to transfer all log and trace files from processes that do not generate reports.
8. Click Save to save your entries.
9. If Process Scheduler is running, you must reboot for any new settings to take effect.

To view reports (log files or system files) from Report Repository, you need to pass the authentication. Report Repository should be treated as a separate PeopleSoft application. To navigate from PIA to Report Repository, you need to set up single signon in order to avoid getting a prompt for a second signon.

## **Task 10C-4-6: Setting Up Sending and Receiving of Report Folders in the Report Manager**

To be able to view reports in the Report Manager Explorer and List pages, you need to set up the sending and receiving of report folders in the Report Manager by activating the domain on which a sending and receiving server resides. Consult the documentation covering the PeopleSoft Integration Broker to learn how to activate the sending and receiving server domain.

See *PeopleTools: Integration Broker*.

See *PeopleTools: Integration Broker Service Operations Monitor*.

## **Task 10C-5: Setting Up Process Scheduler Server Agent**

This section discusses:

- Understanding Process Scheduler Server Agent
- Changing the Default Operating System
- Setting Up Your Environment
- Validating and Editing the ODBC Initialization File
- Creating a Process Scheduler Server
- Configuring Process Scheduler Server
- Working with Shell JCL Templates
- Starting a Process Scheduler Server
- Verifying the Process Scheduler Server Status
- Stopping the Process Scheduler Server

## Understanding Process Scheduler Server Agent

For installation purposes, you can use predefined server names and other definitions. The predefined name that you might use is as follows:

| Server Name | Operating System |
|-------------|------------------|
| PSOS390     | z/OS             |

To test this, use processes already defined in your PeopleSoft database. To set up a new server definition in your PeopleSoft database, refer to the *PeopleTools: Process Scheduler* product documentation.

**Note.** When creating multiple Process Scheduler Servers for the same database, each server must have a unique server name. For example, two Process Scheduler Servers, both named PSNT, cannot run against the same database.

### Task 10C-5-1: Changing the Default Operating System

By default, Process Scheduler is set up to run a process request from a Process Scheduler Server Agent started in a Microsoft Windows server when the value of the *ServerName* field in the Process Request Dialog page is left blank. If you plan to run all processes other than Microsoft Windows-based programs (such as nVision) from z/OS, you must change the default operating system.

**Note.** If you do not change the default operating system from Microsoft Windows to z/OS and you do not plan to set up a Process Scheduler Server Agent in Windows, process requests that are created will be directed to a Windows-based operating system and will remain in the "Queued" status.

To change the default operating system for process requests that were not assigned a Process Scheduler Server Name:

1. Select PeopleTools, Process Scheduler, System Settings.
2. Under *Primary Operating System*, choose *OS390* from the drop-down list.
3. Click on the *System Purge Options* tab. Enter the date for the next purge of process requests in the *Next Purge Date* field.
4. Enter the time for the next purge of process requests in the *Next Purge Time* field. The default time is 12:00:00AM.
5. Enter a *Recurrence* if you want to set a regular purging basis.
6. Choose *Save*.

### Task 10C-5-2: Setting Up Your Environment

Alternatively, make sure the following environment variables are set in the profile file in the user's home directory:

Run `psconfig.sh` file from *PS\_HOME*:

```
. ./psconfig.sh
```

### Task 10C-5-3: Validating and Editing the ODBC Initialization File

The PeopleSoft Batch Transfer program generates the ODBC initialization file based on the parameters entered in the PeopleSoft Server Transfer panel. The ODBC initialization file is written to:

```
$PS_HOME/appserv/odbc.ini
```

The ODBC initialization file contains the following key information:

- DB2 subsystem name
- Plan name for the DSNAOCLI CLI package
- Method used to attach to DB2 (default is RRSAF)

Here is an example of an initialization file for a DB2 subsystem called DSNW with DB2 plan DSNACLI:

```
[COMMON]
MVSDEFAULTSSID=DSNW
APPLTRACE=0
APPLTRACEFILENAME=
MULTICONTEXT=1
CONNECTTYPE=1

; Set up the DB2 Subsystem Definition
[DSNW]
MVSATTACHTYPE=RRSAF
PLANNAME=DSNACLI
```

Verify that all the information contained in this file is accurate. If you plan to set up multiple Process Scheduler Server Agents for different instances of a PeopleSoft database and these databases reside in different DB2 subsystems, you must create a different ODBC initialization file for each DB2 subsystem.

### Task 10C-5-4: Creating a Process Scheduler Server

This section describes how to create a Process Scheduler server.

---

**Note.** You can set Process Scheduler configuration parameters either by using PSADMIN, which provides an interactive dialog, or by editing the configuration file `psprcs.cfg` located in the `PS_CFG_HOME/appserv/prcs/database name` directory. The following steps assume you are using PSADMIN to specify parameter settings.

---

**Note.** If you use the configuration file `psprcs.cfg`, be aware that in the PeopleSoft PeopleTools 8.49 release and later, the section [Output Dest Exceptions] has been modified to trap metastring exceptions not only in the output destination but in other process parameters as well. In this section the entry `OUTDEST_EXCEPT01=%ANYMETASTRING%` has been changed to `PARAMETER_EXCEPT01=%ANYMETASTRING%`.

---

To create a Process Scheduler Server:

1. From `PS_HOME/appserv` on the batch server, type `psadmin`.
2. Depending on your environment, you may see a message after the initial menu, which indicates that PSADMIN has modified the `PS_CFG_HOME/peopletools.properties` file with the current `PS_HOME` location:

```
*****
PS_CFG_HOME/peopletools.properties file has been updated.
```

You should use the Config Home Refresh feature in PSAdmin to ensure that all of your domains are current. Alternatively, you may recreate all of your domains. Please press any key to continue...

\*\*\*\*\*

This indicates that one of these situations exists:

- The *PS\_CFG\_HOME* that you are working with was used previously from a different *PS\_HOME*. In this case, you should recreate any existing Application Server, Process Scheduler, Search, or PIA domains in this *PS\_CFG\_HOME*.
  - You configured your environment such that *PS\_CFG\_HOME* is the same as *PS\_HOME*. The first time you use PSADMIN to create a domain, it updates the *PS\_CFG\_HOME/peopletools.properties* file. Continue with the next step.
3. Select 2 to access the PeopleSoft Process Scheduler Administration menu.
  4. Select 2 for Create a Process Scheduler Server Configuration:

```
-----
PeopleSoft Process Scheduler Administration
-----

1) Administer a Process Scheduler Server
2) Create a Process Scheduler Server Configuration
3) Delete a Process Scheduler Server Configuration
4) Import an existing Process Scheduler Configuration
q) Quit
```

Command to execute (1-4, q) : 2

5. When prompted for the name of the database that your server will access, enter the name of the database, such as HRDMO in this example, and press ENTER:

Please enter name of Database that server will access :

**HRDMO**

You see screen messages like these:

Process Scheduler Configuration templates:

1) os390

Selecting the only Process Scheduler Configuration template available...

Creating Process Scheduler Server for Database HRDMO...

Copying Process Scheduler Server configuration file(s)...

Copying Process Scheduler JCL template files...

Process Scheduler Shell JCL template files copied.

Process Scheduler Server configuration created.

At this point, you are returned to the PeopleSoft Process Scheduler Administration menu.

## Task 10C-5-5: Configuring Process Scheduler Server

This section discusses:

- Configuring a Process Scheduler Server
- Using [Startup]



- Using [OS390]
- Using [Process Scheduler]
- Using [Application Engine]

---

**Note.** The section may not mention certain PSADMIN sections, if you do not need to change any of their defaults. For more in depth descriptions of the Process Scheduler options in the PSADMIN, consult the *PeopleTools: Process Scheduler* product documentation.

---

## Configuring a Process Scheduler Server

To configure a Process Scheduler Server:

1. The PeopleSoft Process Scheduler Server Administration interface should already be on your screen from the last step, but if it is not, go to *PS\_HOME/appserv* and enter:

```
psadmin
```

Press ENTER, and then 2 to access the PeopleSoft Process Scheduler Administration menu.

2. From the PeopleSoft Process Scheduler Administration menu, select option 1 to Administer a domain:

```
-----
PeopleSoft Process Scheduler Administration
-----
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit
```

Command to execute (1-4, q) : 1

3. Select the database for which the Process Scheduler needs to be configured.

Database list:

```
1) HRDMO
```

Select item number to configure: 1

4. At the following prompt:

```
Do you want to change any config values (y/n):
```

Specify y to start an interactive dialog to change or examine parameter values, as described in the next step. Specify n if you have already edited *psprcs.cfg*.

See *PeopleTools: Process Scheduler*.

## Using [Startup]

When using PSADMIN to configure a Process Scheduler Server Agent, you first encounter the Startup section:

Values for config section - Startup

```
DBName=
DBType=DB2ODBC
UserId=
```

```

UserPswd=
ConnectId=
ConnectPswd=
ServerName
StandbyDBName=
StandbyDBType=
StandbyUserId=
StandbyUserPswd=

```

Do you want to change any values (y/n)? [n]: y

The following table describes each value in the Startup section:

| Value           | Description                                                                                                                    |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------|
| DBName          | Specify the database name associated with a particular Process Scheduler Server Agent, such as HRDMO, FSDMO, SADMO, and so on. |
| DBType          | Specify the database type. The default for DB2 for z/OS is DB2ODBC.                                                            |
| UserId          | Enter the user ID.                                                                                                             |
| UserPswd        | Enter the user password.<br>The password is hidden by masking characters as you type.                                          |
| ConnectId       | Enter the connect ID. This value is required.                                                                                  |
| ConnectPswd     | Enter the connect password. This value is required.<br>The password is hidden by masking characters as you type.               |
| ServerName      | For DB2 for z/OS, ignore this item.                                                                                            |
| StandbyDBName   | For DB2 for z/OS, ignore this item.                                                                                            |
| StandbyDBType   | For DB2 for z/OS, ignore this item.                                                                                            |
| StandbyUserId   | For DB2 for z/OS, ignore this item.                                                                                            |
| StandbyUserPswd | For DB2 for z/OS, ignore this item.                                                                                            |

When you change the UserPswd or ConnectPswd field, you are prompted for an option to encrypt the value entered for the password field:

Do you want to encrypt this password? [y]: y

Enter y if you want the password stored in encrypted form in the Process Scheduler configuration file. (The default is to encrypt the password.)

## Using [OS390]

The OS390 section contains OS/390-specific values:

```

Values for config section - OS390
  ODBC Initialization File=%PS_HOME%/appserv/odbc.ini
  Shell JCL Library=%PS_SERVDIR%/shelljcl
  High Level Qualifier for System Datasets=
  High Level Qualifier for Log Datasets=
  Plan name for PTPSQLRT with CAF=
  Plan name for PTPSQLRT with TSO=
  DB2 Sub-System=
  VIO eligible unit group=SYSDA
  Enable Parallel Processing=0
DECIMAL=PERIOD
TSO Character Set=cp037

```

Do you want to change any values (y/n)? [n]:

The following table describes each parameter in the OS390 section.

| Parameter                                | Description                                                                                                                             |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| ODBC Initialization File                 | File containing ODBC setting to connect to the DB2 subsystem where the PS database is created.                                          |
| Shell JCL Library                        | The subdirectory containing all JCL templates used for submitting COBOL or SQR in native z/OS.                                          |
| High Level Qualifier for System Datasets | Datasets to which PeopleSoft installations are copied during batch transfer. For example, PT.PT810TA.                                   |
| High Level Qualifier for Log Datasets    | Datasets that represent the high level qualifier for all logs and reports generated from processes submitted through Process Scheduler. |
| Plan name for PTPSQLRT with CAF          | DB2 plan used to run COBOL called within an Application Engine program via Remote Call                                                  |
| Plan name for PTPSQLRT with TSO          | DB2 plan used to run COBOL from TSO via JCL created from the COBOL shell JCL template (SHECBL.JCT)                                      |
| DB2 Sub-System                           | DB2 subsystem name where your database resides—for example, DSND                                                                        |
| VIO eligible unit group                  | DASD volume group used by Remote COBOL invoked by an Application Engine program                                                         |
| Enable Parallel Processing               | A Y/N flag which sets the Parallel processing parameter in the COBOL shell JCL template (SHECBL.JCT)                                    |

| Parameter         | Description                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DECIMAL           | The value should reflect the setting for the DECIMAL parameter found in the ZPARM of the DB2 subsystem where the database resides. Valid values are DECIMAL or COMMA. |
| TSO Character Set | The codepage for the TSO environment. The default value is CP037 (IBM037: Latin1 code page).                                                                          |

## Using [Process Scheduler]

After you have set your Trace values, the Process Scheduler section allows you to set all of the environment variables associated with the Process Scheduler.

Values for config section - Process Scheduler

```

PrCs Job Name=
PrCs Job Account=
PrCsServerName=PSOS390
PS Configuration File=%PS_HOME%/psconfig.sh
Max Reconnect Attempt=12
Reconnection Interval=300
Authentication Timeout=5
TOOLBIN=%PS_HOME%/bin
Log/Output Directory=%PS_SERVDIR%/log_output
LogFence=5
DEFAULTTPRINTER=

```

Do you want to change any values (y/n)? [n]:

The following table describes the parameters you must update in the Process Scheduler section:

| Parameter        | Description                                                                                                                       |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| PrCs Job Name    | Job name assigned to the Process Scheduler program. This is set in USS using the __BPX_JOBNAME environment variable setting.      |
| PrCs Job Account | Job Account assigned to the Process Scheduler program. This is set in USS using the __BPX_ACCT_DATA environment variable setting. |

## Using [Application Engine]

This section contains Application Engine values:

Values for config section - Application Engine

```

AE Job Name=%JOBNAME%%SFX%
AE Job Account=%JOBACCT%

```

Do you want to change any values (y/n)? [n]:

The following table describes each parameter in the *Application Engine* section:

| Parameter      | Description                                                                                                                                |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| AE Job Name    | Job name assigned to an Application Engine program. This is set in USS using the <code>__BPX_JOBNAME</code> environment variable setting.  |
| AE Job Account | Account assigned to an Application Engine program. This is set in USS using the <code>__BPX_ACCT_DATA</code> environment variable setting. |

**Note.** After you complete your changes in PSADMIN, you must shut down and restart the server to put the new settings into place.

## Task 10C-5-6: Working with Shell JCL Templates

This section discusses:

- Understanding Shell JCL Templates
- Editing a Shell JCL Template
- Customizing the Process Scheduler's Shell JCL Template

### Understanding Shell JCL Templates

When starting a Process Scheduler Server, shell JCL template files are read once and stored into memory as part of the initialization procedure. Process Scheduler will generate a JCL for COBOL and SQR based on the JCL stored in memory. If you have modified any of the shell JCL templates after the Process Scheduler Server was started, Process Scheduler will refresh the JCL stored in memory before submitting the next COBOL or SQR request.

The PeopleSoft Server Transfer program creates a directory `PS_HOME/appserv/prcs/shelljcl` in UNIX Services to store a master copy of the shell JCL templates. When you create a Process Scheduler Server Configuration, it copies this shell JCL templates into the `<PS_HOME>/appserv/prcs/<database_name>/shelljcl` directory. This includes all the JCLs used for running COBOL and SQR through Process Scheduler.

See "Creating a Database."

The following table lists the shell JCL templates used in Process Scheduler:

| JCL          | Description                                                                                                                                                      |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SHELCBL.JCT  | Invoked by Process Scheduler when user requests to run a COBOL program                                                                                           |
| SHELSQLF.JCT | Invoked by Process Scheduler when user requests to run an SQR program and specifies from the Process Scheduler page to route the output to a file, web or email. |

| JCL              | Description                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SHELSQLRP.JCT    | Invoked by Process Scheduler when user requests to run an SQR program and specifies from the Process Scheduler panel to route the output to a printer.                                                                                                                                                                                                                                                            |
| SHELSQLROUTP.JCT | Used in conjunction with SHELSQLRP.JCT or SHELSQLRF.JCT. This template contains the file definition for creating a partitioned data set for SQR report files. Process Scheduler will use this template when the SQR output format is one of the following: <ul style="list-style-type: none"> <li>• Acrobat Reader (PDF)</li> <li>• Post Script (PS)</li> <li>• Line Printer (HP)</li> <li>• HP format</li> </ul> |
| SHELSQLROUTS.JCT | Used in conjunction with SHELSQLRP.JCT or SHELSQLRF.JCT. This template contains the file definition for creating a sequential data set for SQR report files. Process Scheduler will use this template when the SQR output format is one of the following: <p>HTM</p> <p>SPF</p>                                                                                                                                   |

These shell JCL templates need to be modified to comply with your site standards.

**Note.** Process Scheduler does not use a JCL to submit an Application Engine program. Instead, Process Scheduler will fork another (child) process in UNIX System Services and run Application Engine in this new process. This schema is similar to Windows or UNIX operating system.

## Editing a Shell JCL Template

To edit a shell JCL template:

1. Select option *1* for Administer a Process Scheduler Server from the PeopleSoft Process Scheduler Administration menu:

```
-----
PeopleSoft Process Scheduler Administration
-----
```

- ```

1) Administer a Process Scheduler Server
2) Create a Process Scheduler Server Configuration
3) Delete a Process Scheduler Server Configuration
4) Import an existing Process Scheduler Configuration
q) Quit
```

Command to execute (1-4, q): **1**

2. Select *7* for Edit a Shell JCL:

```
-----
PeopleSoft Process Scheduler Administration
-----
```

Scheduler Name: HRDMO

- 1) Start Process Scheduler Server
- 2) Stop Process Scheduler Server
- 3) Show Status
- 4) Configure Process Scheduler Server
- 5) Edit Process Scheduler Configuration File
- 6) Kill a Process Scheduler Server
- 7) Edit a Shell JCL
- q) Quit

Command to execute (1-7, q) : **7**

3. Select the database for which the Process Scheduler needs to be configured.

Database list:

- 1) HRDMO

Select item number to edit: **1**

4. Select the JCL from the list you intend to modify.

This opens the JCL in a vi editor screen.

JCL list:

- 1) shelcbl.jct
- 2) shelsqrf.jct
- 3) shelsqroutp.jct
- 4) shelsqrouts.jct
- 5) shelsqrp.jct

Select JCL file to edit: **1**

5. Modify the JCL using vi commands
6. Save your changes by using the vi command *:wq*

If you are not familiar with the vi editor and would prefer to edit the JCLs using ISPF editor, you can use the TSO *oedit* command in the TSO session. IBM's TSO *oedit* command allows you to modify any files residing in UNIX System Services from a TSO session. You can edit any of the shell JCL templates found in `<PS_HOME>/appserv/prcs/<database_name>/shelljcl` directory as shown below. Consult your z/OS system administrator for using the *oedit* command at your site.

```

----- EDIT - ENTRY PANEL -----
Command ===>

Directory      ===> /u/data007/pt812rc7/appserv/prcs/HRDMO/shelljcl

Filename       ===> shelcbl.jcl

Profile name   ===>

Initial macro  ===>

```

Editing a shell JCL template

## Customizing the Process Scheduler's Shell JCL Template

All the Process Scheduler's shell JCLs use meta-strings to pass data stored in the database or Process Scheduler configuration files. Process Scheduler takes advantage of meta-strings to generate the JCL based on one of these sources:

- User's profile who initiated the request
- Parameters defined in the Process Scheduler Configuration file.
- Parameters defined in the Process Type Definition Page or Process Definition Page

A good example of data that can be passed includes job account and job name. To enter the values of some of these variables you need to identify the Process Profile being used. Choose PeopleTools, Security, User Profiles, User Profiles. Then search on the ID used to log on to the PeopleSoft Pure Internet Architecture. Make note of the Process Profile Name. Then choose PeopleTools, Security, Permissions & Roles, Permission Lists and select the Process Profile Name that was identified. Select Process tab, Process Profile Permissions.

The shell JCL templates are tunable and should be changed according to your site-specific standards. The table below identifies all the available meta-strings you can use in a shell JCL template.

If you create a new JCL template, you must be aware of the following:

- The Shell ID is restricted to three characters.



- The Shell ID is associated with the Process Type Definition.

Meta-Strings	Description
%JOBNAME%	Specifies the value entered in z/OS Job Controls Name field of the Process Profile Permission page for the Permission Lists specified as the User ID's Process Profile. The Process Profile for a User ID can be set using the User Profiles page in the Maintain Security component.
%JOBACCT%	Specifies the value entered in z/OS Job Controls Account field of the Process Profile Permission page.
%OUTDEST%	Specifies the output destination based on the value entered in the Server Destinations File or Printer fields of the Process Profile Permission page.
%SFX%	A one-character code issued by Process Scheduler. The system will randomly assign a value from A to Z.
%OPRID%	The user ID used to submit the request from Process Scheduler.
%PRCSLOGFILE%	The name of the log file Process Scheduler used to redirect all data written to output for Application Engine or SYSOUT in COBOL or SQR
%PRCSLOGDIR%	The directory where all log files or reports are written to in UNIX System Services for a process.
%ACCESSID%	The access ID assigned for a user ID defined in PSOPRDEFN.
%INSTANCE%	The process instance number assigned to a process request.
%RUNID%	The run control ID used to submit the process request.
%OWNERID%	The owner ID for the PeopleSoft database.
%PRCSNAME%	The program name as defined in the Process Definition page.
%DB2SUB%	The name of the DB2 subsystem specified in the <i>DB2 Sub-System</i> parameter of the <i>OS390</i> section found in the Process Scheduler Configuration file.
%PERFSTAT%	The flag used to set the Performance Statistic option in the COBOL shell JCL. This is set to 'Y' when the bit value of 128 is assigned to the TraceSQL parameter of the <i>Trace</i> section found in the Process Scheduler Configuration file.

Meta-Strings	Description
%DYNEXPLN%	The flag used to set the Dynamic Explain option in the COBOL shell JCL. This is set to 'Y' when the bit value of 256 is assigned to the TraceSQL parameter of the <i>Trace</i> section found in the Process Scheduler Configuration file.
%PARALLEL%	The flag used to set the Dynamic Explain option in the COBOL shell JCL. This is based on the flag set in the <i>Enable Parallel Processing</i> parameter of the <i>OS390</i> section found in the Process Scheduler Configuration file.
"%TSOPLAN%	The DB2 plan name subsystem specified in the <i>Plan name for PTPSQLRT with TSO</i> parameter of the <i>OS390</i> section found in the Process Scheduler Configuration file.
%PSHLQ%	The high level qualifier of the PeopleSoft dataset specified in <i>High Level Qualifier for Datasets</i> parameter of the <i>OS390</i> section found in the Process Scheduler Configuration file.

Here is a sample job control card in one of the shell JCLs:

```
//%JOBNAME%%SFX% JOB %JOBACCT%, 'PS-PRCS ', CLASS=E, MSGCLASS=X,
//          NOTIFY=%OPRID%
```

If you choose not to use meta-strings, you can also update the job cards to remove all these variables and replace them with actual values.

In the SHELL JCL for SQR, OUTNODE denotes either a z/OS partitioned data set (PDS) or sequential data set. The PDS is a requirement for SQR output. If the SQR report XRFPANEL were directed to file output, the following substitution would occur:

The following line in SHELSQRF.JCT

```
//          OUTNODE='%OUTDEST%'
```

would be changed to:

```
//          OUTNODE='HR.H800RAB',
```

If an SQR process were directed to print, the following substitutions would occur:

SQR:

```
//          OUTNODE='DEST=U3',    OPTIONAL:USER-DEF OUTPUT
..
//*****
//* Main portion of JCL Shell
*
//*****
..
//SQROUTP DD SYSOUT=*,DEST=U3
```

*z/OS Job Controls:*

z/OS job controls specify the z/OS job name you want assigned to each process submitted. This value can be up to seven characters. Do not use lowercase letters or any quotation marks. If you included the %SFX% meta-string as part of your job name, Process Scheduler will append a one-character alphabetical suffix to this

name (A through Z, chosen randomly), before job submission.

For example, if you entered USRMVS1, the assigned job name would become USRMVS1A through USRMVS1Z. After you enter the z/OS job name, enter the job account number used in your installation. Specify an account code to be inserted as the JCL accounting code.

## Task 10C-5-7: Starting a Process Scheduler Server

Once you have configured the Process Scheduler Server, you are ready to start it.

To start a Process Scheduler Server:

1. Select option *1* for Administer a domain.

```
-----
PeopleSoft Process Scheduler Administration
-----
1) Administer a domain
2) Create a domain
3) Delete a domain
4) Import domain configuration
q) Quit
```

Command to execute (1-4, q) : **1**

2. Select the domain that you want to start.

Database list:

```
1) HRDMO
```

Select item number to start: **1**

3. On the PeopleSoft Process Scheduler Administration menu, choose *1* for Start Process Scheduler Server.

```
-----
PeopleSoft Process Scheduler Administration
-----
Scheduler Name: HRDMO

1) Start Process Scheduler Server
2) Stop Process Scheduler Server
3) Show Status
4) Configure Process Scheduler Server
5) Edit Process Scheduler Configuration File
6) Kill a Process Scheduler Server
7) Edit a Shell JCL
q) Quit
```

Command to execute (1-7, q) : **1**

This will launch the Process Scheduler program.

```
Starting Process Scheduler Server PSOS390 for Database HRDMO ...
PeopleSoft Process Scheduler Started Normally
```

## Task 10C-5-8: Verifying the Process Scheduler Server Status

At this stage it is a good idea to verify the Process Scheduler Server status.

To verify the Process Scheduler Server status:

1. From the PeopleSoft Process Scheduler Administration menu, choose 3, for Show Status:

```

-----
PeopleSoft Process Scheduler Administration
-----
    Scheduler Name: HRDMO

    1) Start Process Scheduler Server
    2) Stop Process Scheduler Server
    3) Show Status
    4) Configure Process Scheduler Server
    5) Edit Process Scheduler Configuration File
    6) Kill a Process Scheduler Server
    7) Edit a Shell JCL
    q) Quit
  
```

Command to execute (1-7, q) : **3**

2. To verify the status of the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

For example:

Database list:

- 1) HRDMO

Select item number to start: **1**

Process Scheduler Server PSOS390 for Database PT84x is currently running

Process Agents	PID
-----	----
Process Scheduler	1144
Distribution Agent	35163243
Monitor	50332247

---

**Note.** You can also verify the status of the Process Scheduler Server from Process Monitor in PeopleSoft Pure Internet Architecture. To verify the Process Scheduler Server status from the Process Monitor page, go to PeopleTools, Process Scheduler, Process Monitor, and select *Server List*.

---

**Note.** If you have not configured z/OS with a Distribution Node, the Distribution Agent will not be started. You must execute that task before the Distribution Agent will be booted with the Process Scheduler server. See Validating and Editing the ODBC Initialization File.

---

## Task 10C-5-9: Stopping the Process Scheduler Server

To stop the Process Scheduler Server:

1. From the PeopleSoft Process Scheduler menu, choose option 2, for Stop Process Scheduler Server.

```

-----
PeopleSoft Process Scheduler Administration
-----
Scheduler Name: HRDMO

1) Start Process Scheduler Server
2) Stop Process Scheduler Server
3) Show Status
4) Configure Process Scheduler Server
5) Edit Process Scheduler Configuration File
6) Kill a Process Scheduler Server
7) Edit a Shell JCL
q) Quit

```

Command to execute (1-7, q) : **2**

2. To stop the Process Scheduler Server for a specific database, type the number corresponding to the appropriate database.

Example (to stop Process Scheduler Server for the database HRDMO):

Database list:

```
1) HRDMO
```

Select item number to stop: **1**

Command sent to stop Process Scheduler Server PSOS390 for Database⇒  
 HRDMO. The⇒  
 Server Will stop the next time that it wakes up.



# 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 11A

# 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.

---

**Warning!** If your database server is DB2 for z/OS and your CCSID is not 37, you must read the CCSID discussion under Defining DB2 for z/OS Subsystem Configuration in the chapter "Preparing for Installation."

For information on %BINARYSORT, see the product documentation on sorting in *PeopleTools: Global Technology*.

For information on PeopleTools options and PSOPTIONS, see the product documentation on PeopleTools utilities in *PeopleTools: System and Server Administration*.

---

## 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"*

*PeopleTools: Global Technology, "Understanding Running COBOL in a z/OS 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 pspres.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 11A-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 11A-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 a 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 11A-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 11A-2-2: Installing Micro Focus Net Express Wrap Pack 6

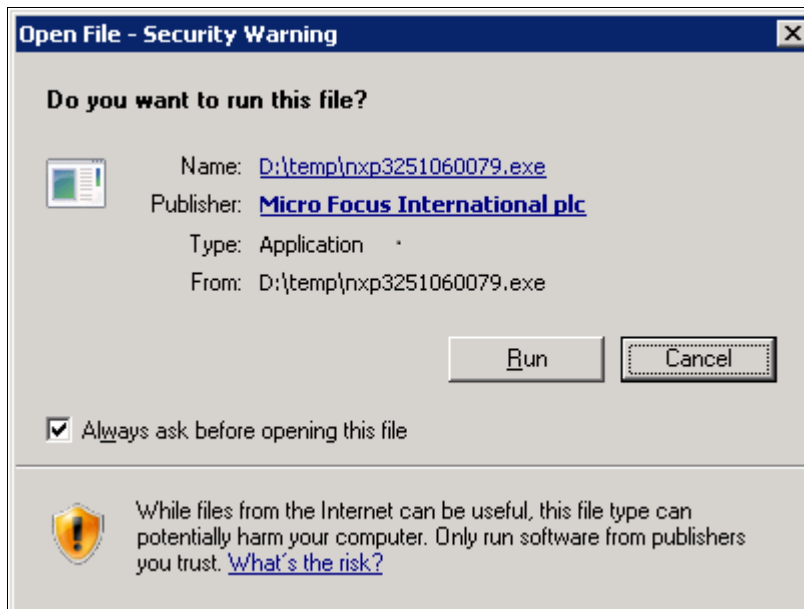
The following procedure assumes that you saved the installation files from Oracle Software Delivery Cloud in the directory *NE\_INSTALL*.

**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.

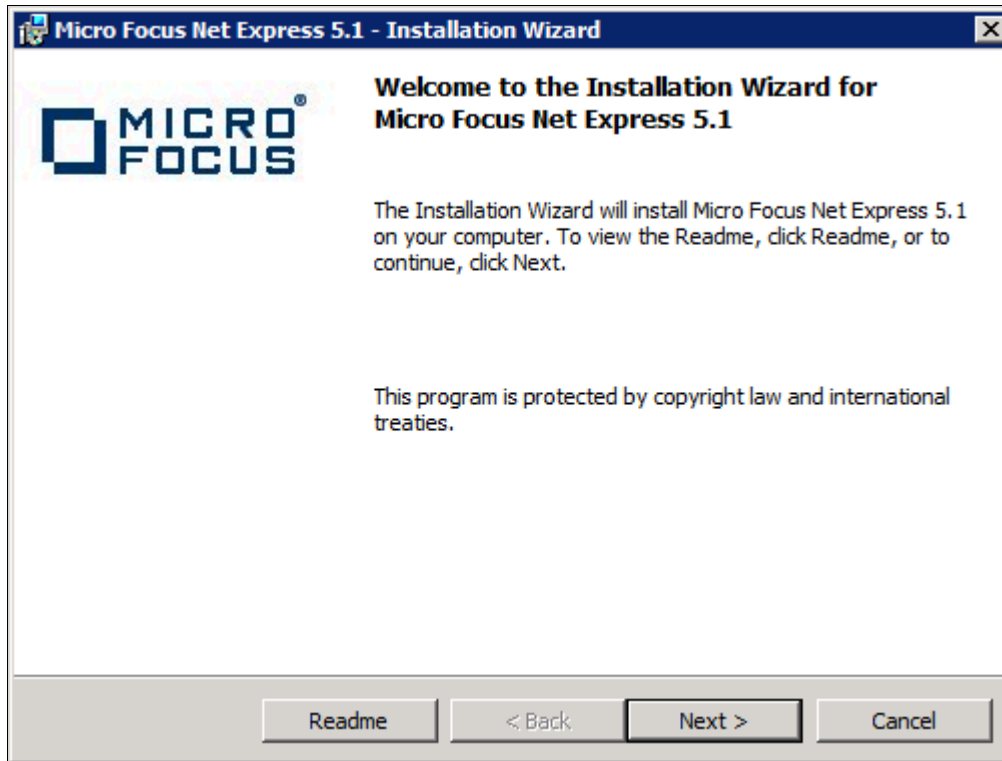


Open File - Security Warning for the Micro Focus installation executable

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.

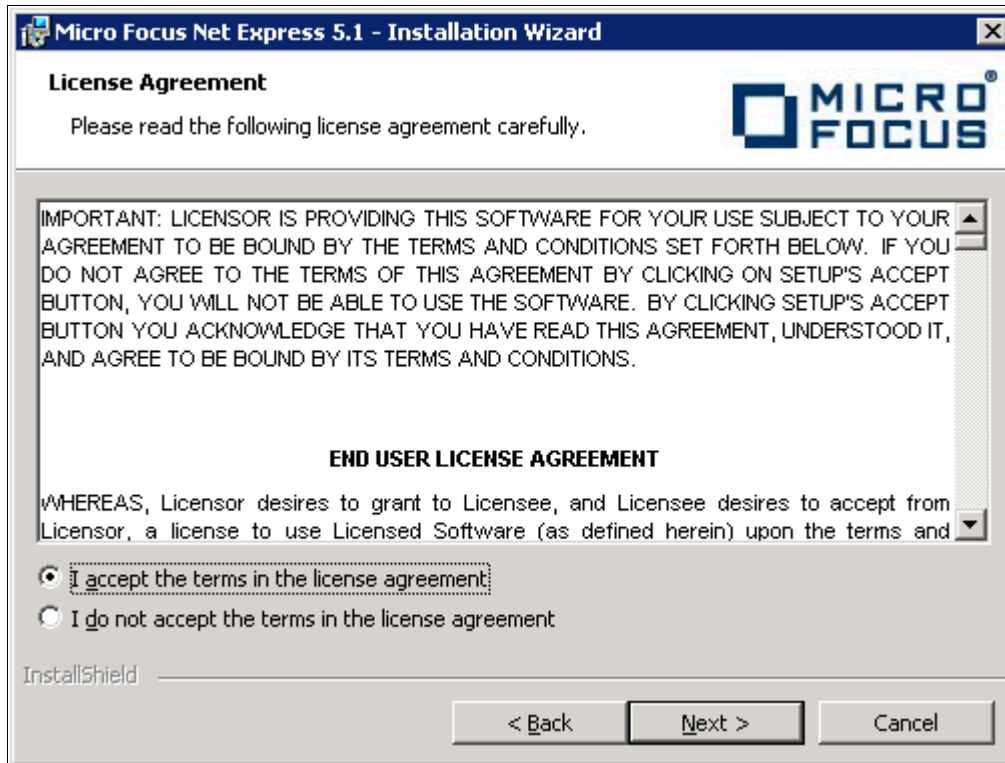
2. Click Next on the welcome window.

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

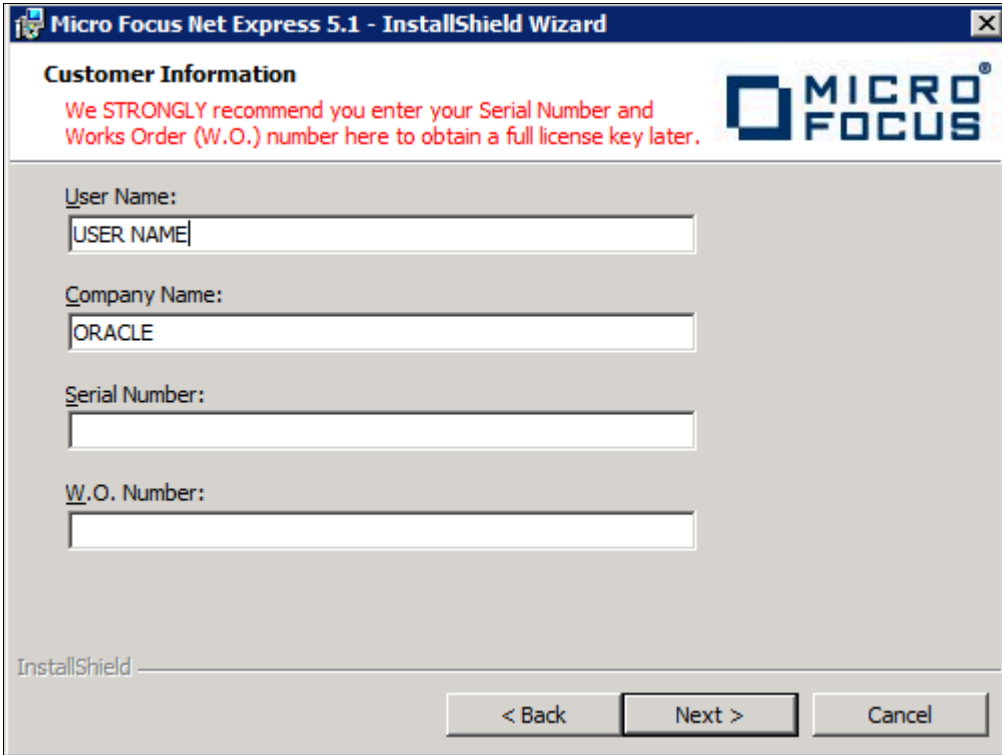
4. Complete the Customer Information window:
  - a. Enter your name in the User Name field, and enter your Company Name.  
In the example shown below, the user name is USER NAME, and the Company Name is ORACLE.
  - b. Leave the Serial Number and W.O. Number fields blank. Oracle does not provide these 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.

---

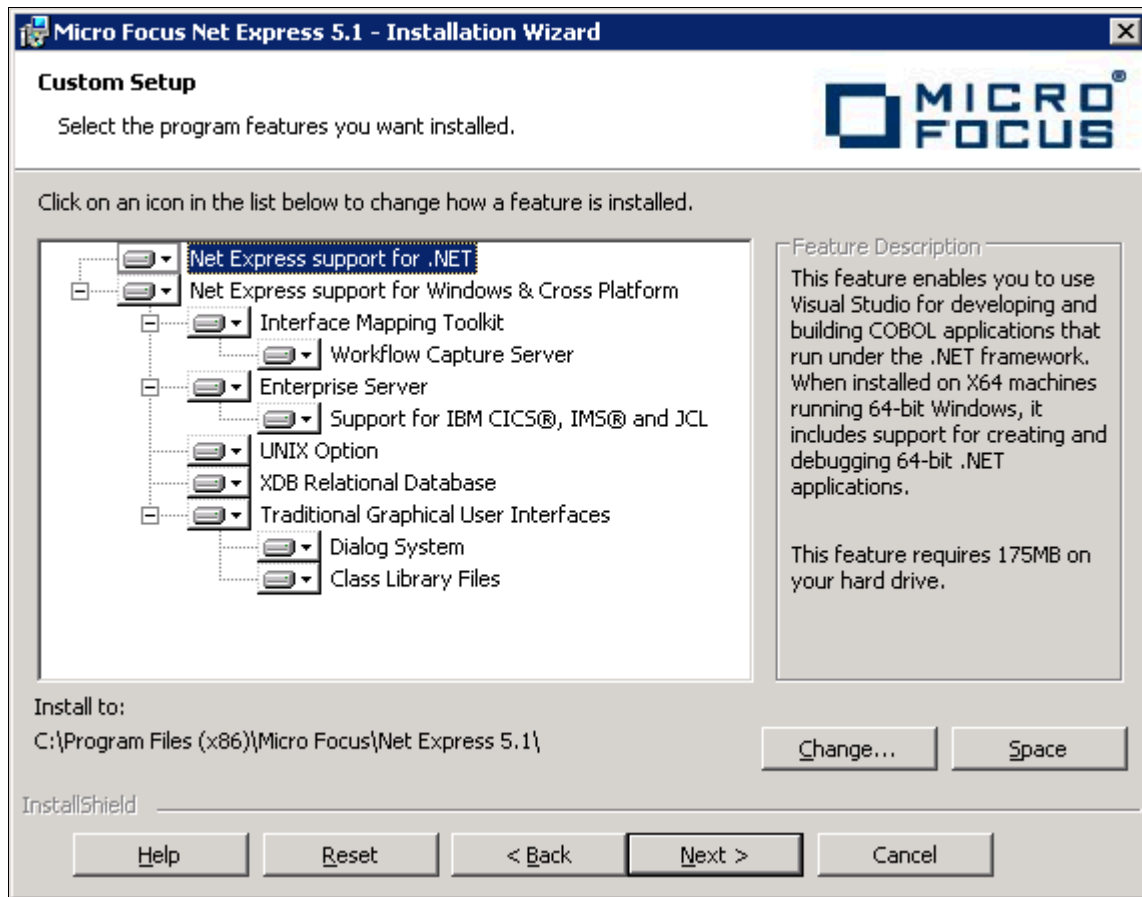
c. Click Next.



The screenshot shows a Windows-style dialog box titled "Micro Focus Net Express 5.1 - InstallShield Wizard". The window has a blue title bar with a close button (X) in the top right corner. The main content area is titled "Customer Information" and features the Micro Focus logo in the top right. A red text message reads: "We STRONGLY recommend you enter your Serial Number and Works Order (W.O.) number here to obtain a full license key later." Below this, there are four input fields: "User Name:" with the text "USER NAME", "Company Name:" with the text "ORACLE", "Serial Number:" which is empty, and "W.O. Number:" which is empty. At the bottom of the window, there are three buttons: "< Back", "Next >", and "Cancel". The "Next >" button is highlighted with a dark border. The text "InstallShield" is visible in the bottom left corner of the window's content area.

Customer Information window

5. The Custom Setup window appears as in this example, with all of the options selected initially:

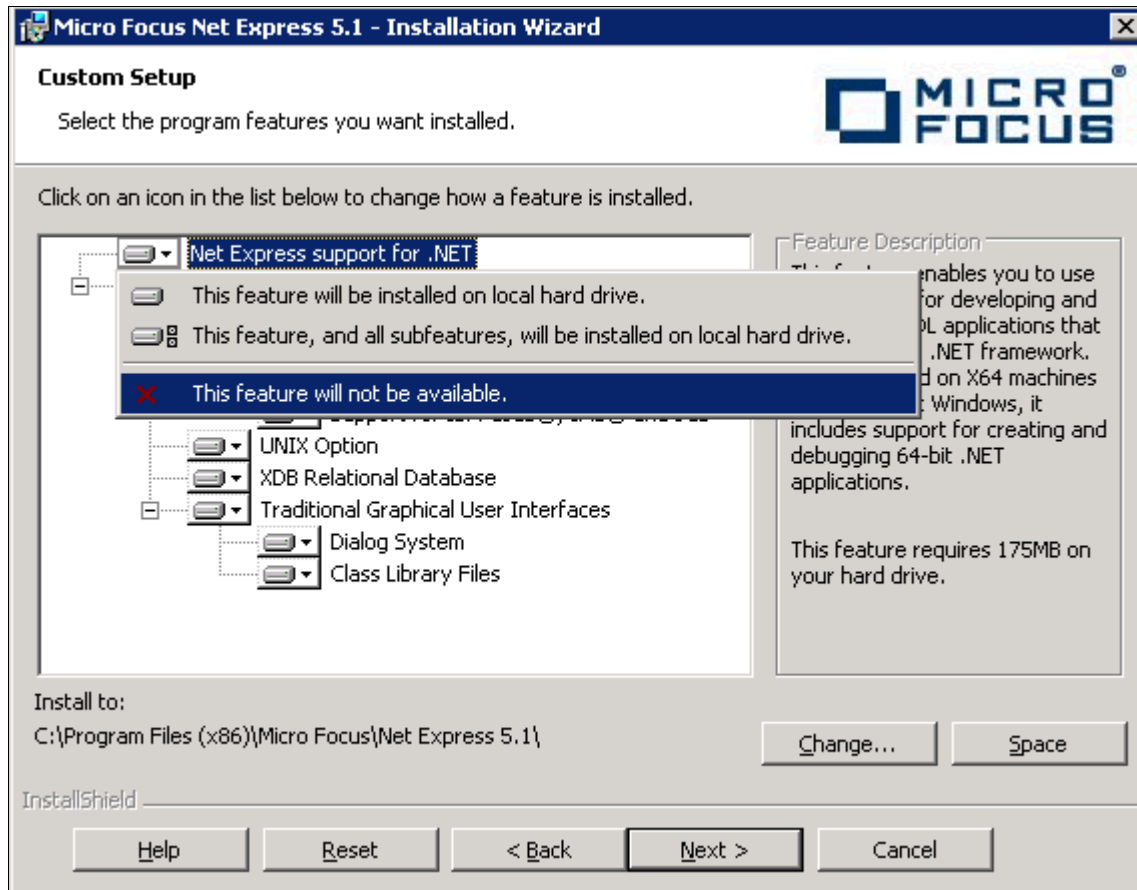


Custom Setup window before selecting features



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

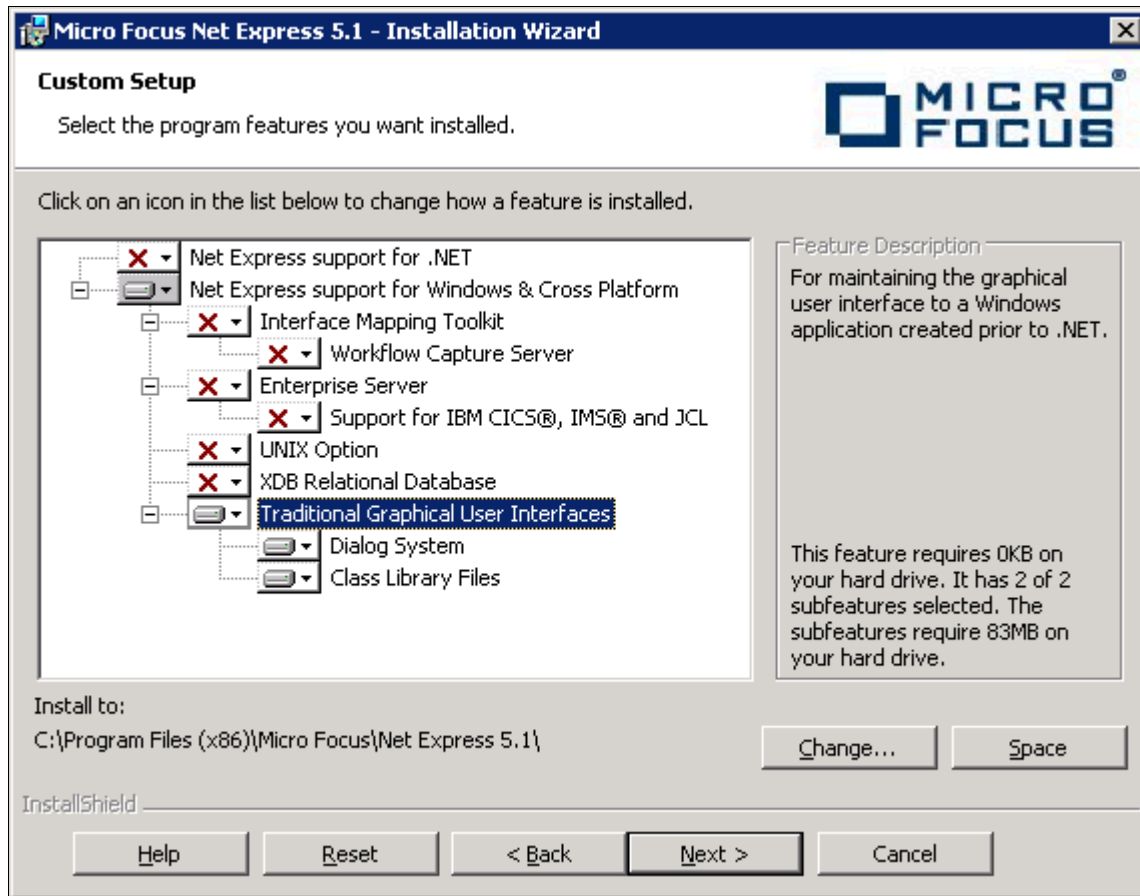
---

**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

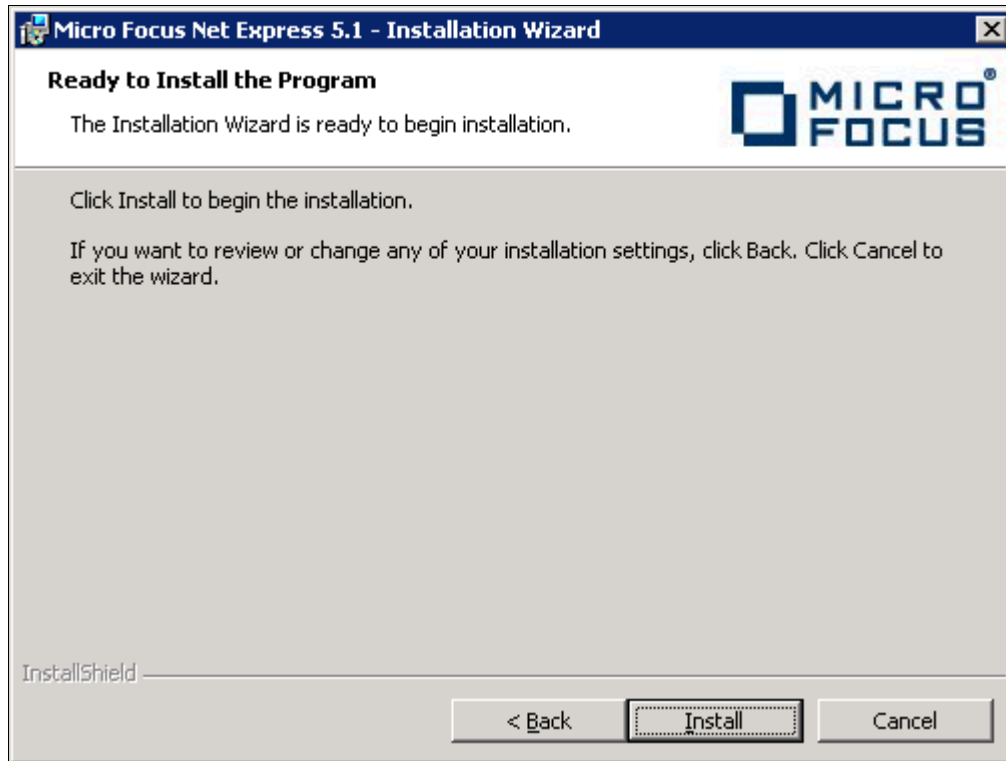
8. Highlight Traditional Graphical User Interfaces.

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:

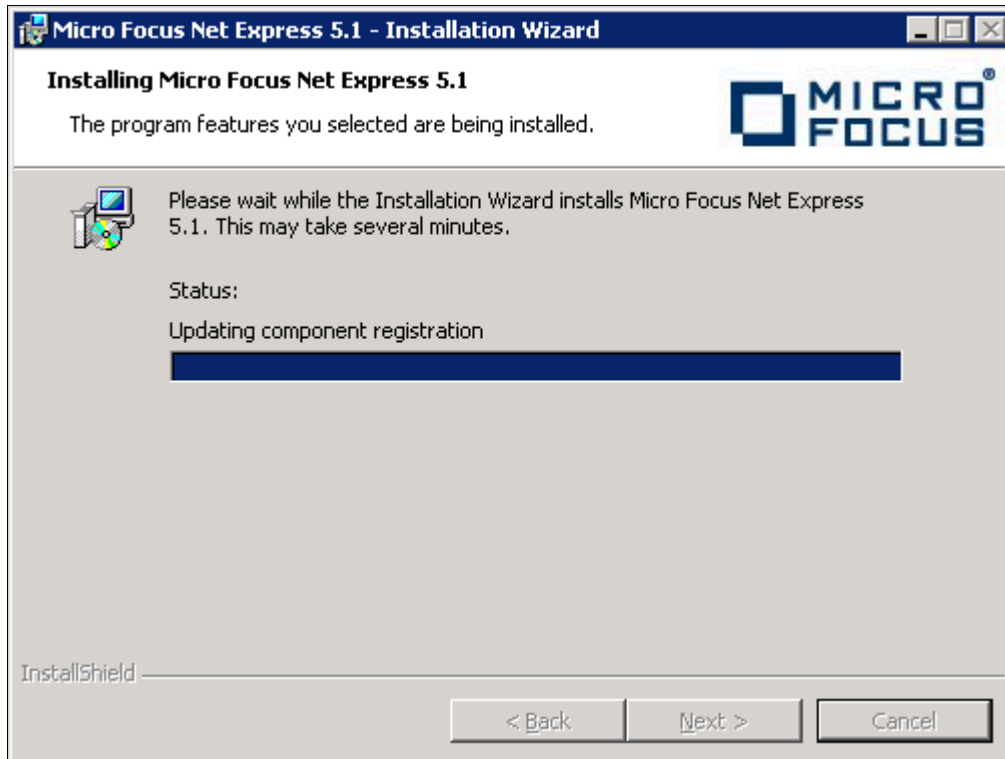
C:\Program Files (x86)\Micro Focus\Net Express 5.1

## 9. Click Install.



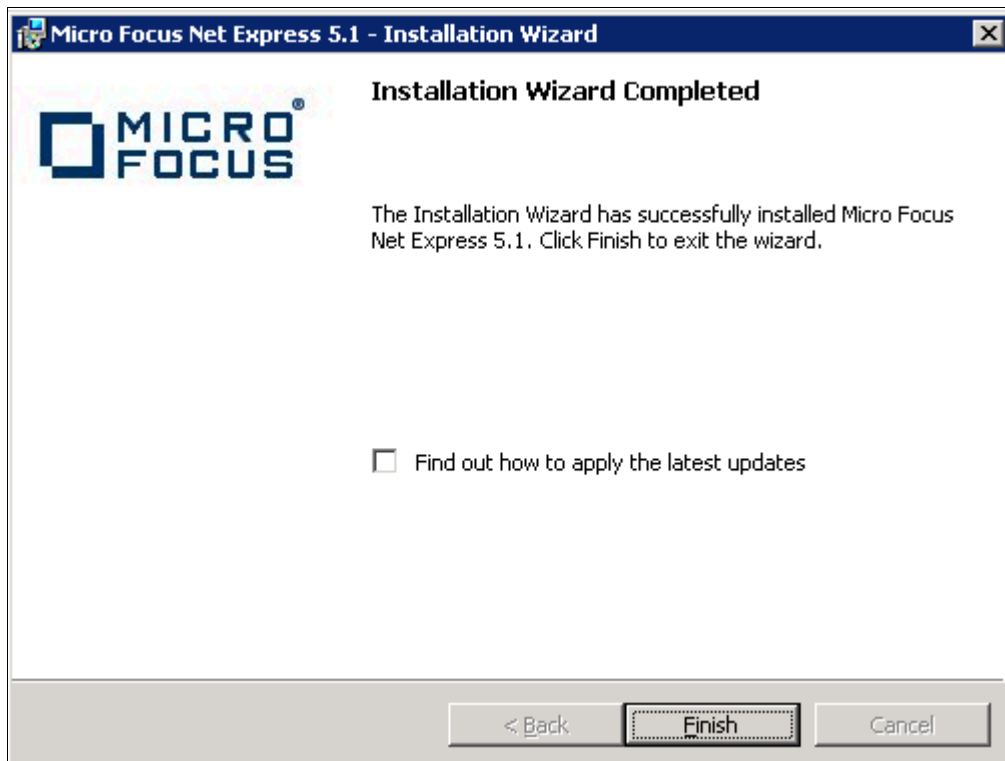
Micro Focus Net Express Installation window: Ready to Install the Program

The installation status window appears, tracking the installation progress.



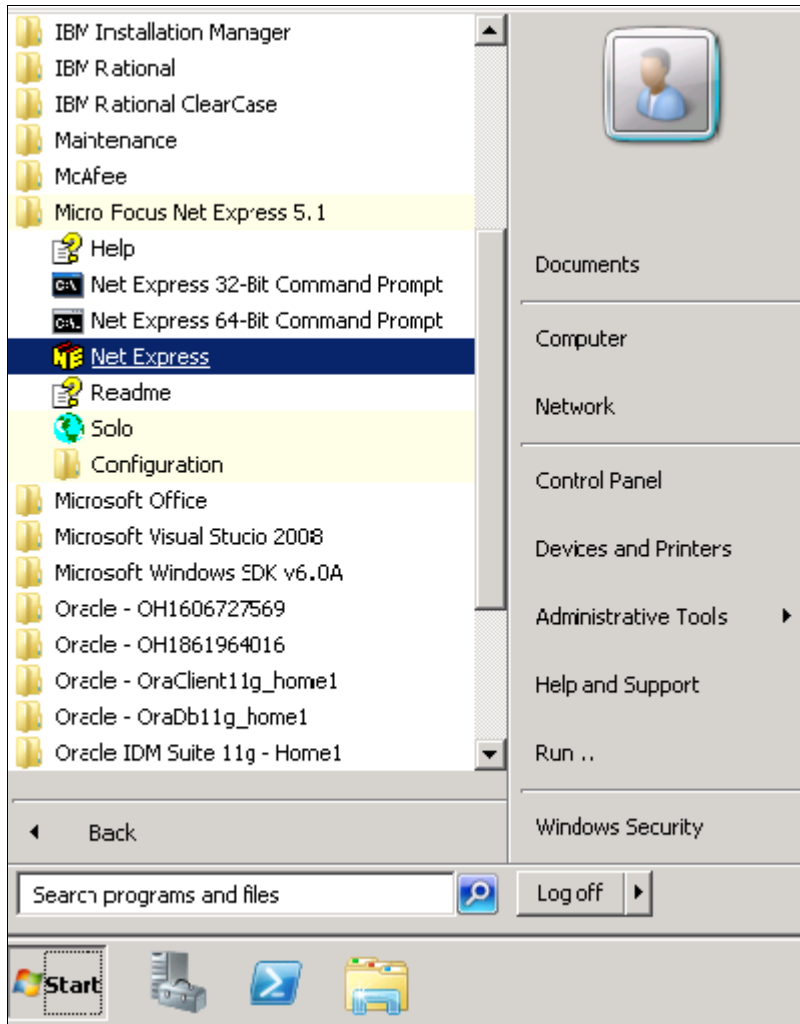
Installation status for the Micro Focus Net Express Installation

10. Click Finish.



Installation Wizard Completed window

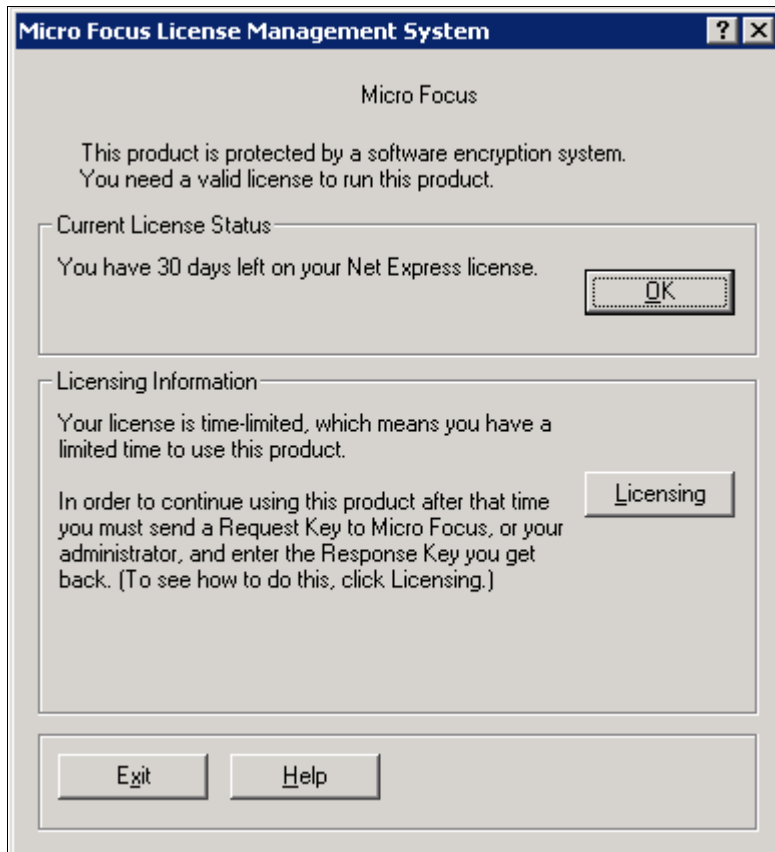
11. To confirm the installation, select Start, All Programs, Micro Focus Net Express 5.1, Net Express.



Selecting Micro Focus Net Express from the Microsoft Windows Start menu

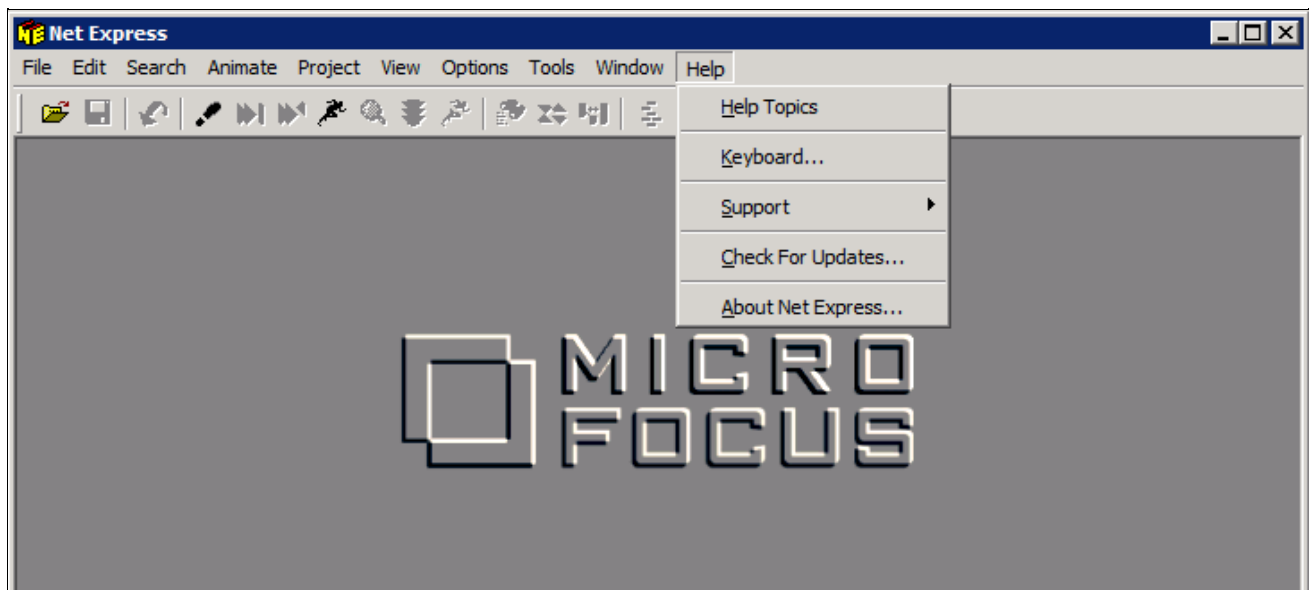
The Net Express Integrated Development Environment (IDE) appears.

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.

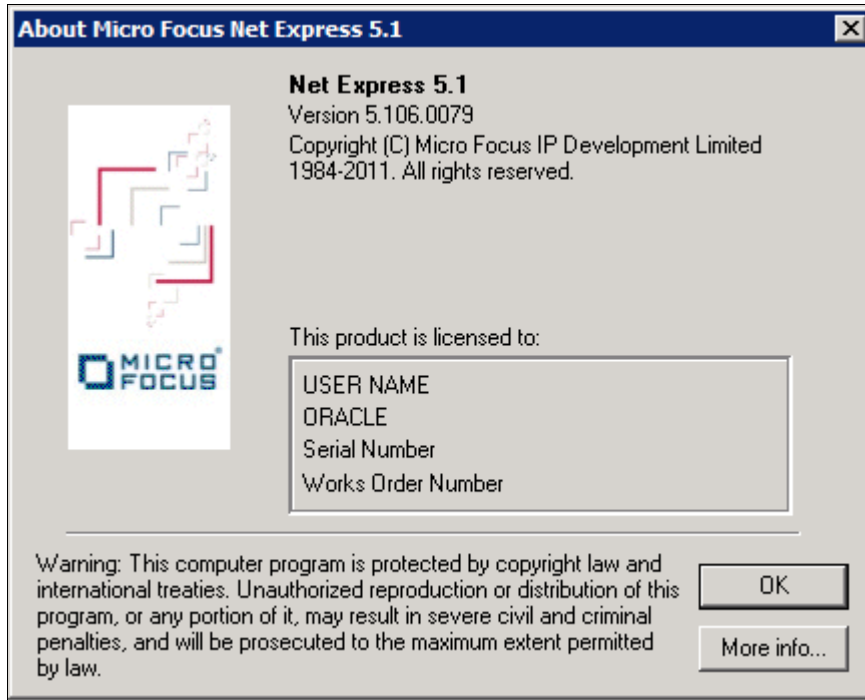


Micro Focus Net Express Integrated Development Environment Help menu

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

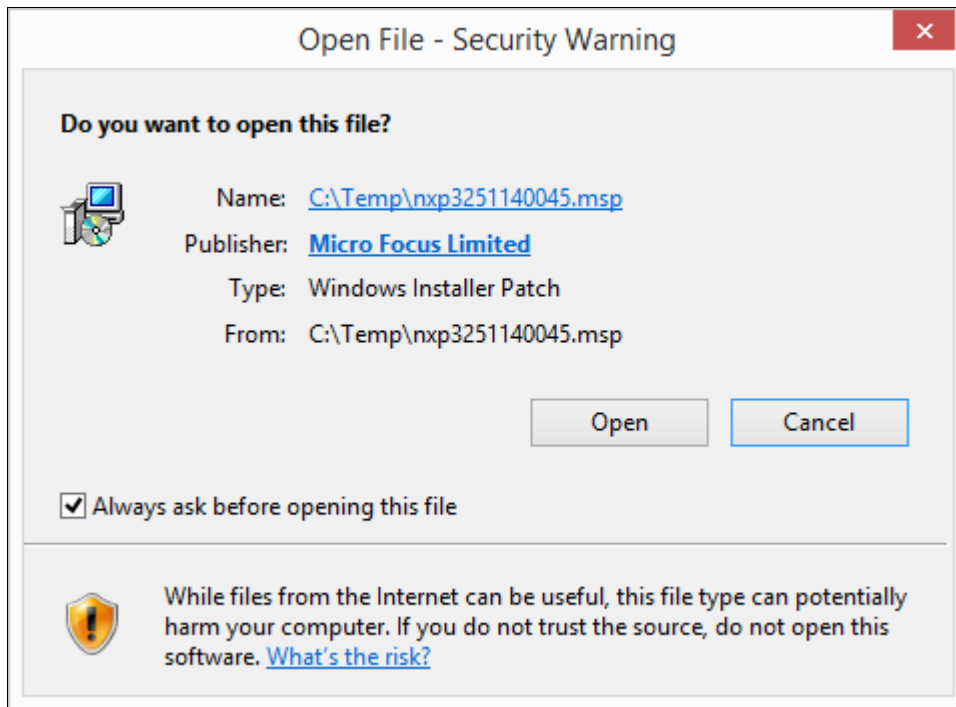
### Task 11A-2-3: Installing Micro Focus Net Express Wrap Pack 14

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.

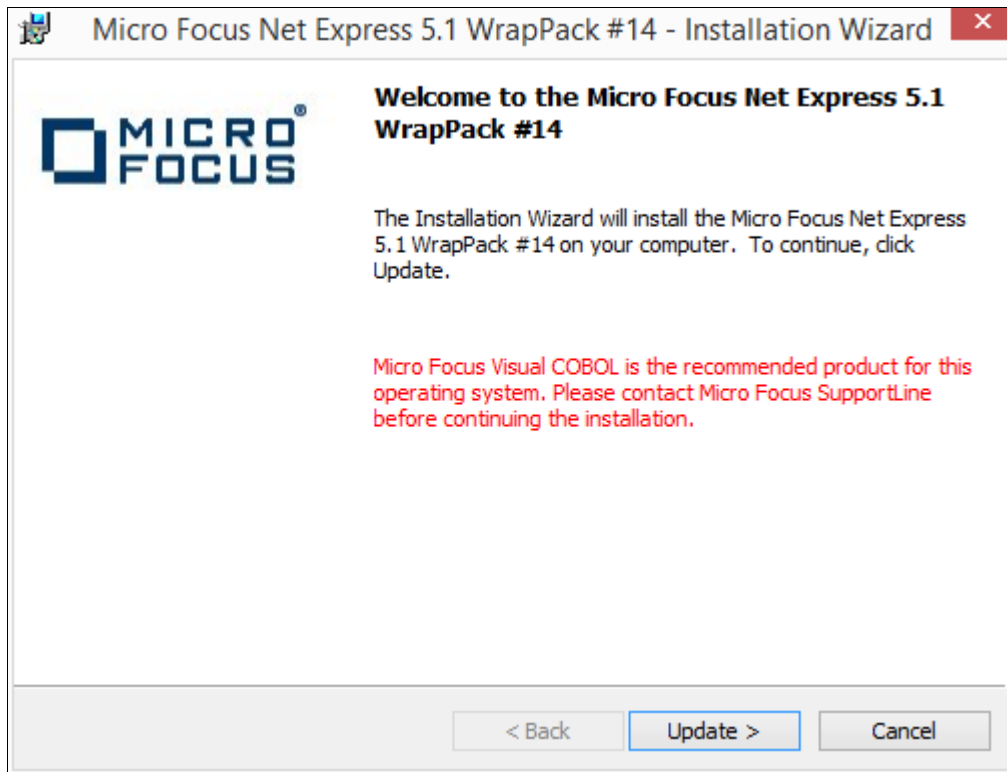


Open File - Security Warning dialog box

A Welcome window appears.

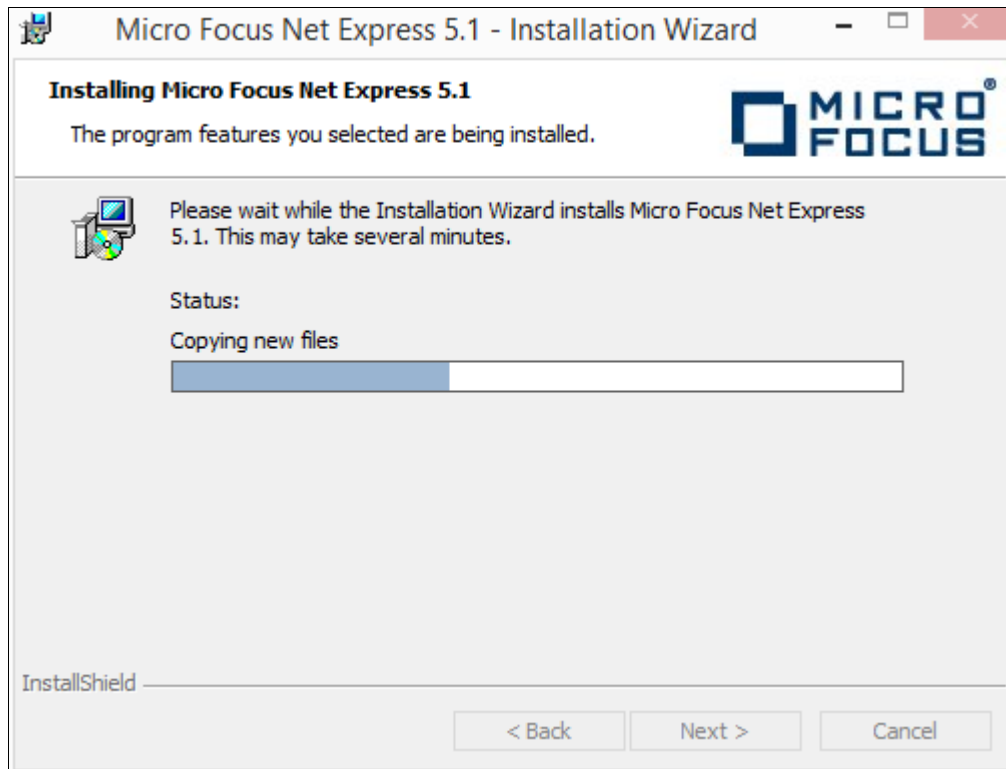


2. Click Update to continue, as in this example:



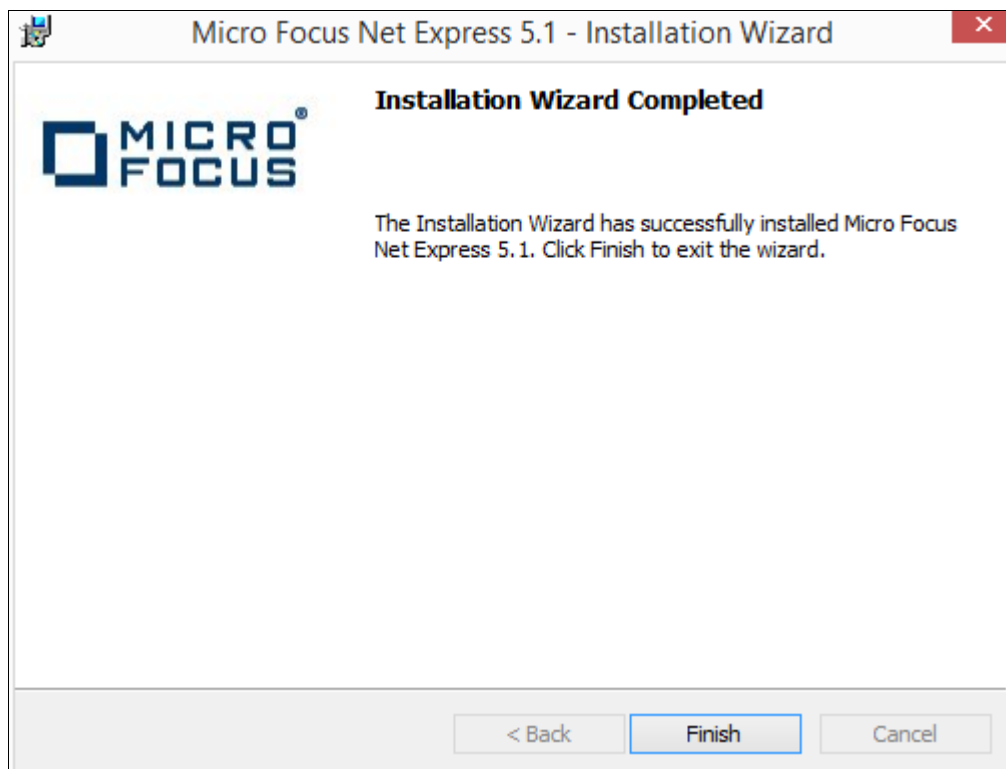
Welcome to the Micro Focus Net Express 5.1 WrapPack #14 window

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:



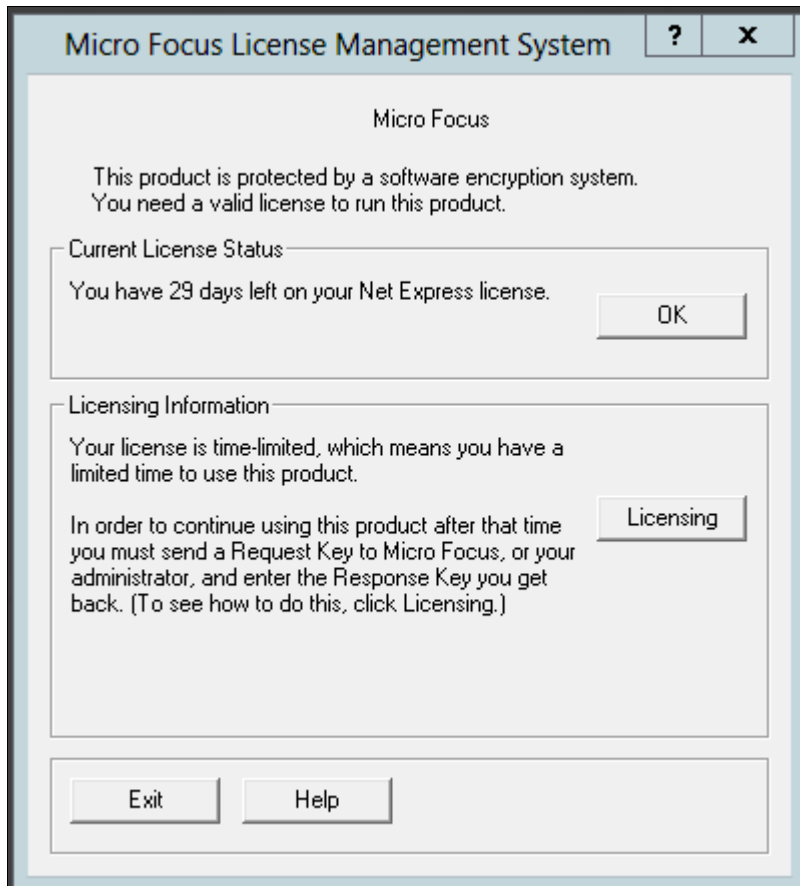
Installation Wizard Completed window

- 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.

- 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

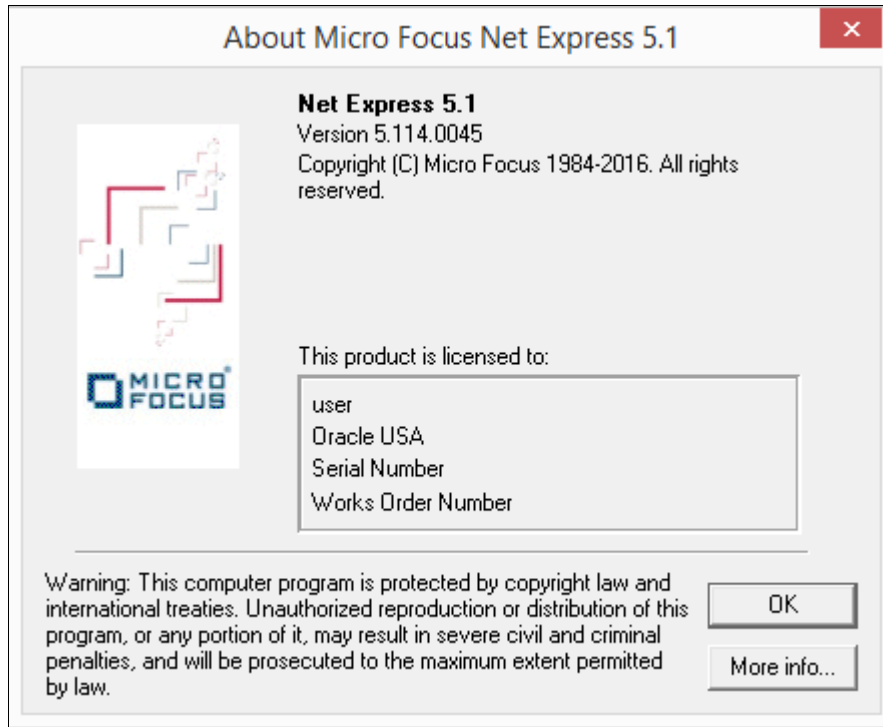
- Click Continue on the Welcome to Micro Focus Net Express window.

## 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 11A-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 11A-3-1: Configuring a Full License with the License Server

To configure a Full License for permanent use:

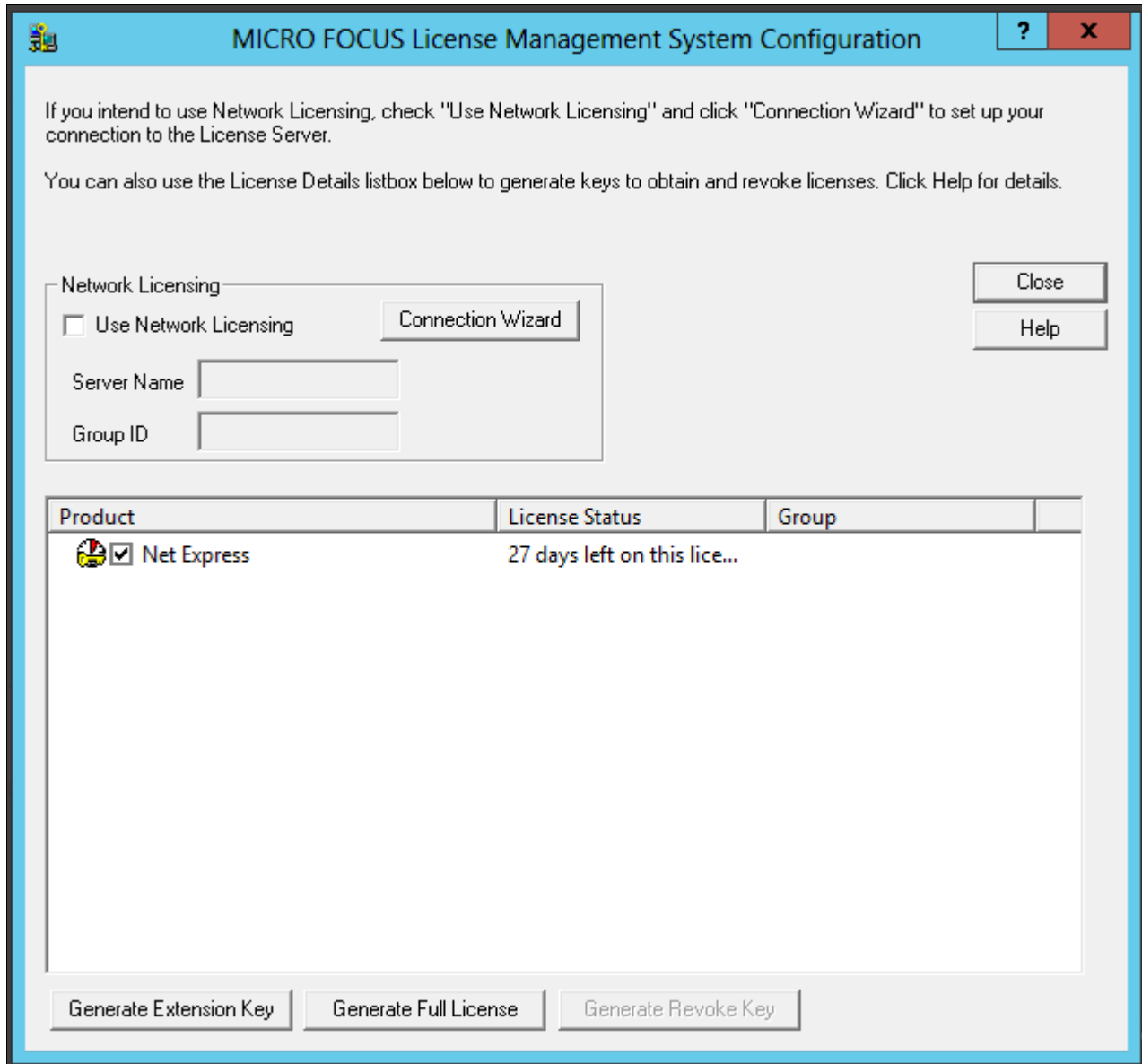
1. Select Start, All Programs, Micro Focus Net Express 5.1, Configuration, License Management System.

---

**Note.** Alternatively, run `NE_HOME\Bin\protcfg.exe`, where `NE_HOME` is the directory where you installed Micro Focus Net Express.

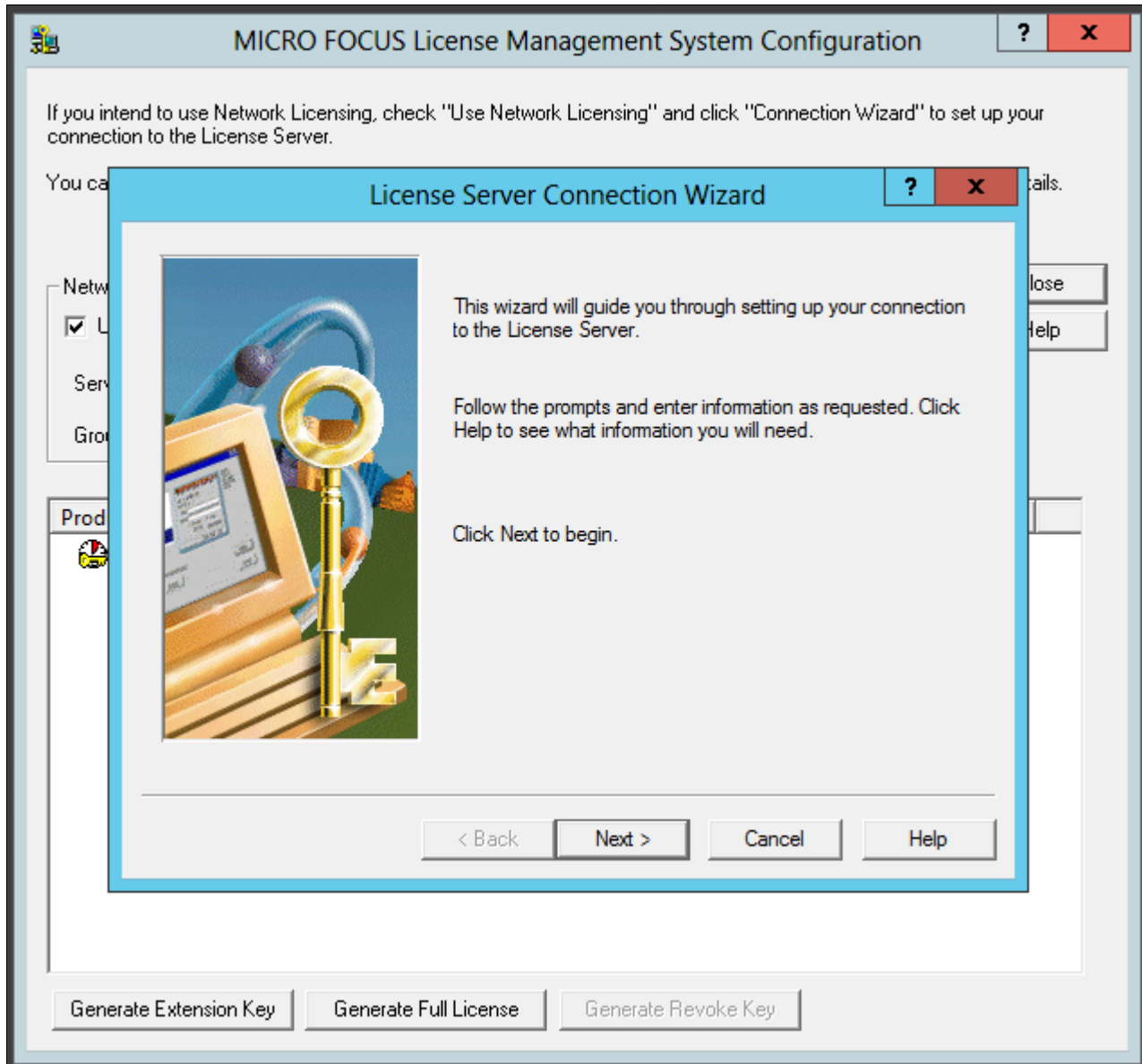
---

2. Select the option Use Network Licensing, and click Connection Wizard, as shown in this example:



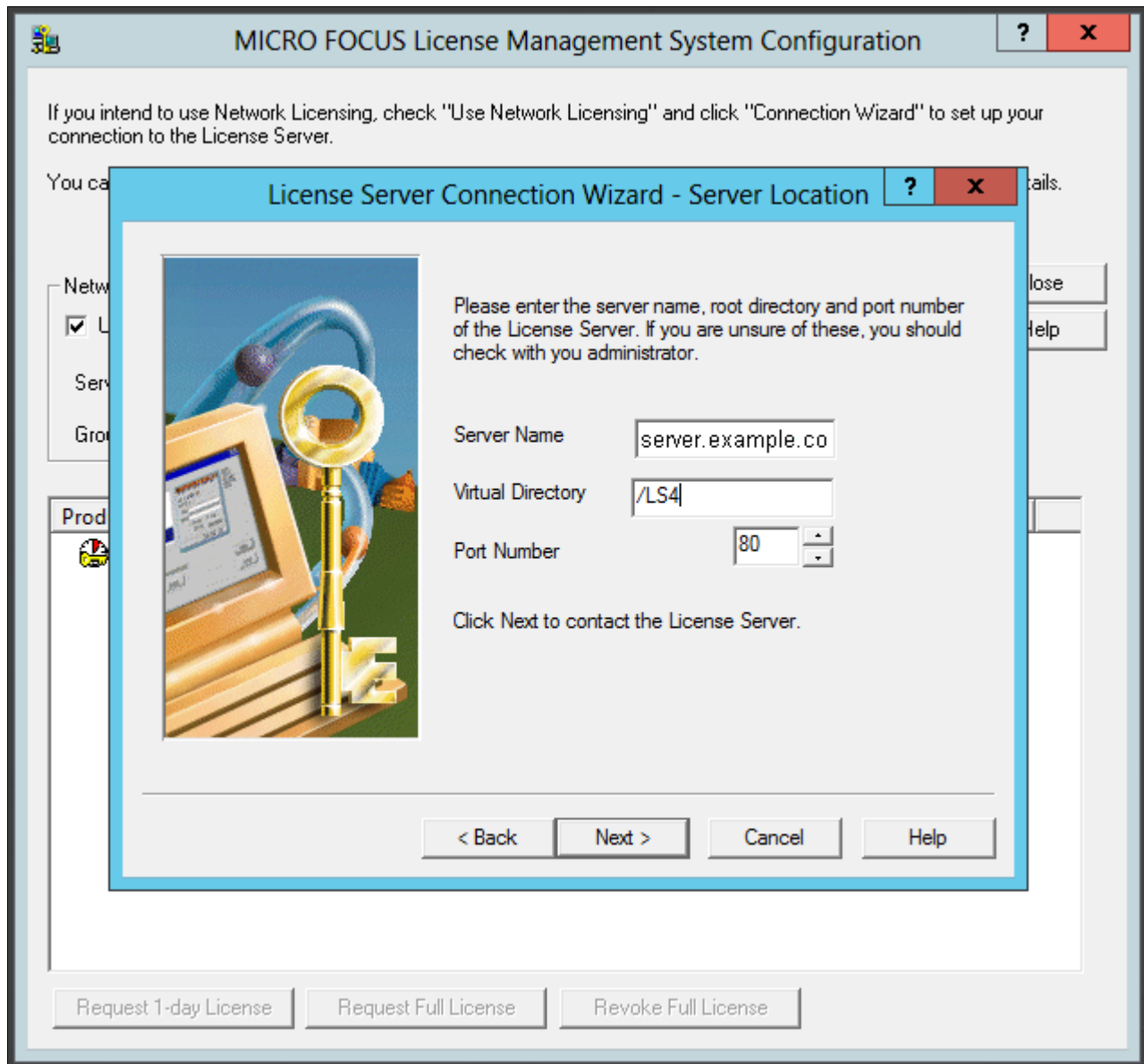
MICRO FOCUS License Management System Configuration window

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.

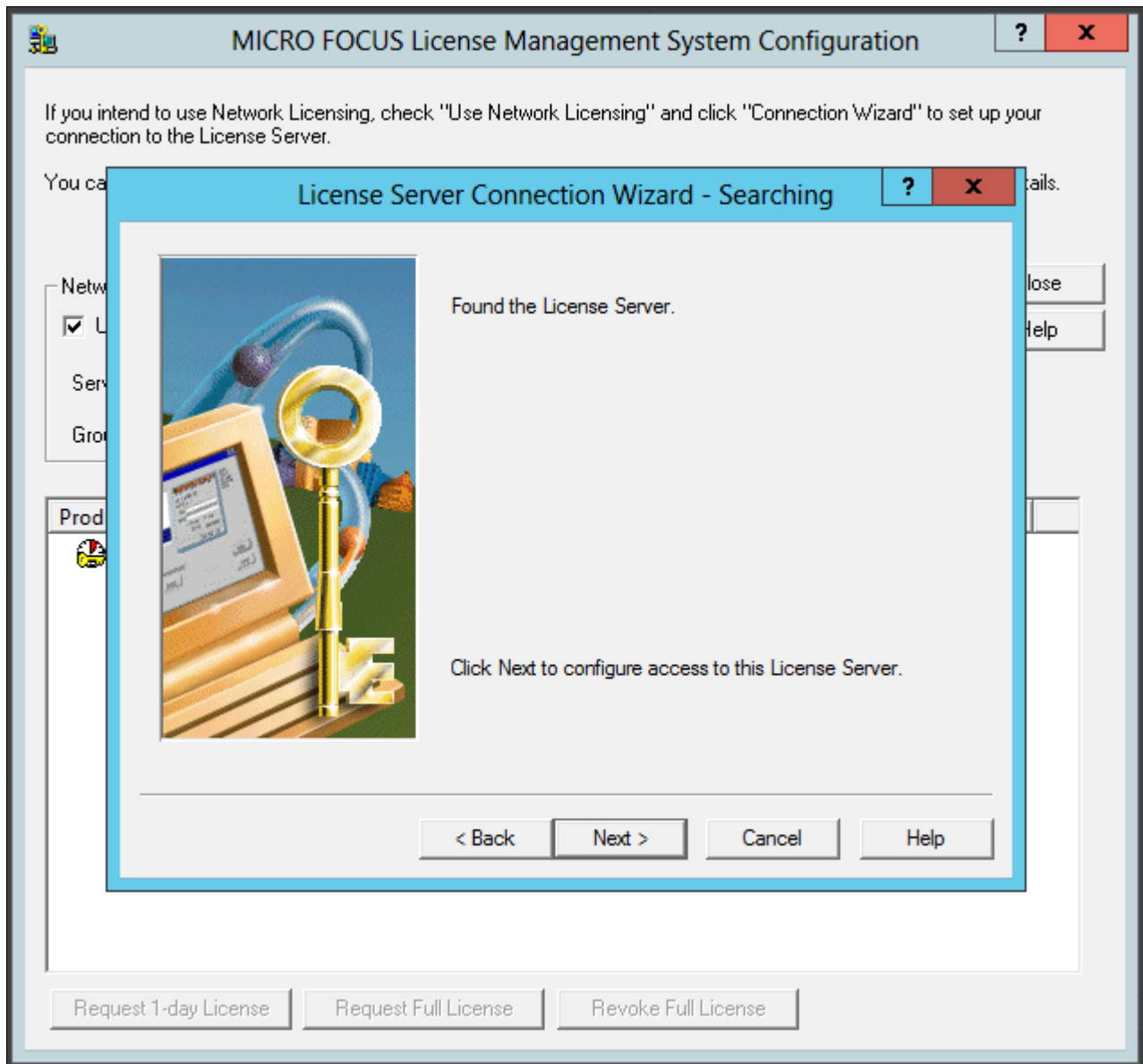


License Server Connection Wizard - Server Location window

- 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.

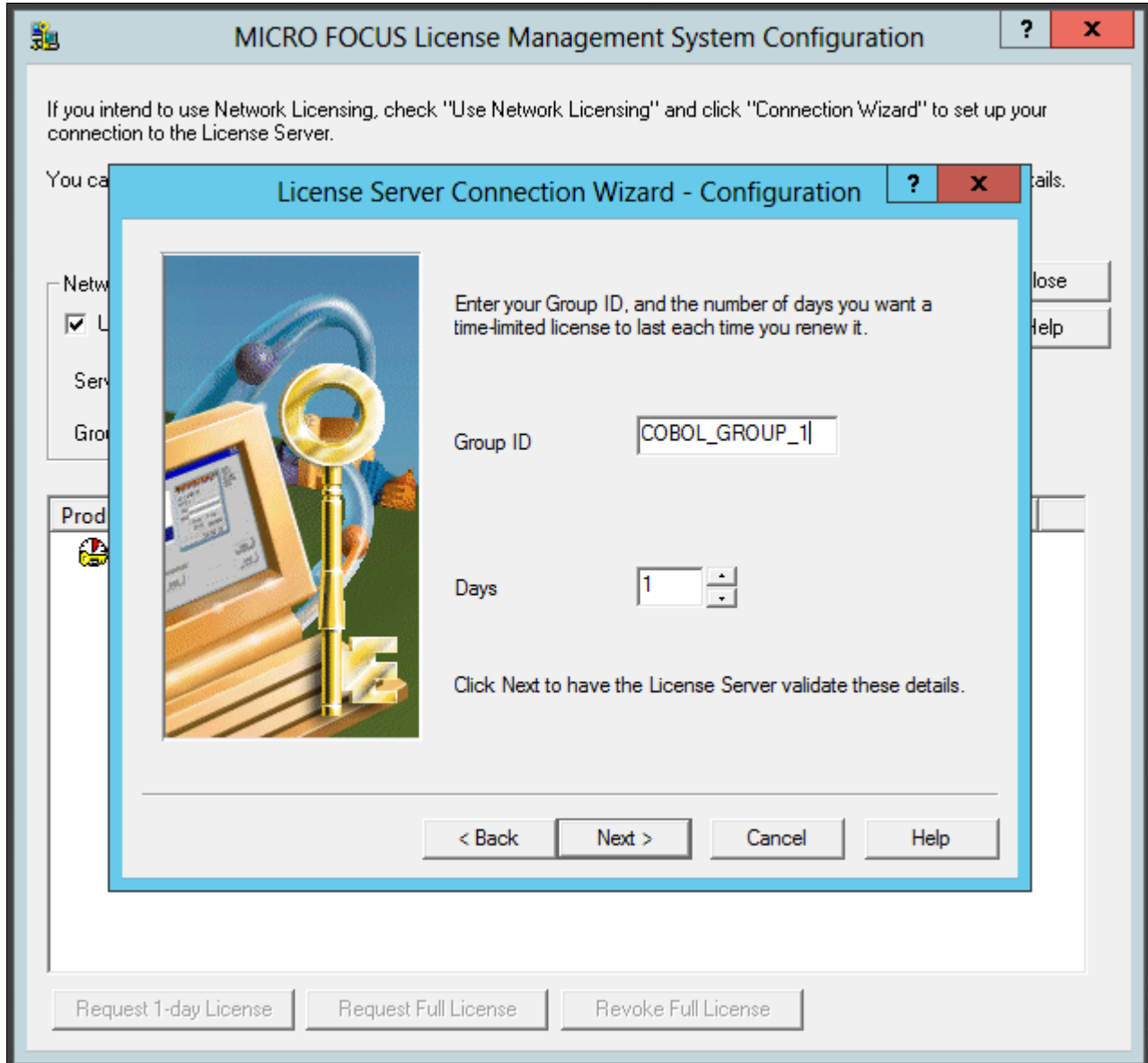


License Server Connection Wizard - Searching window

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.

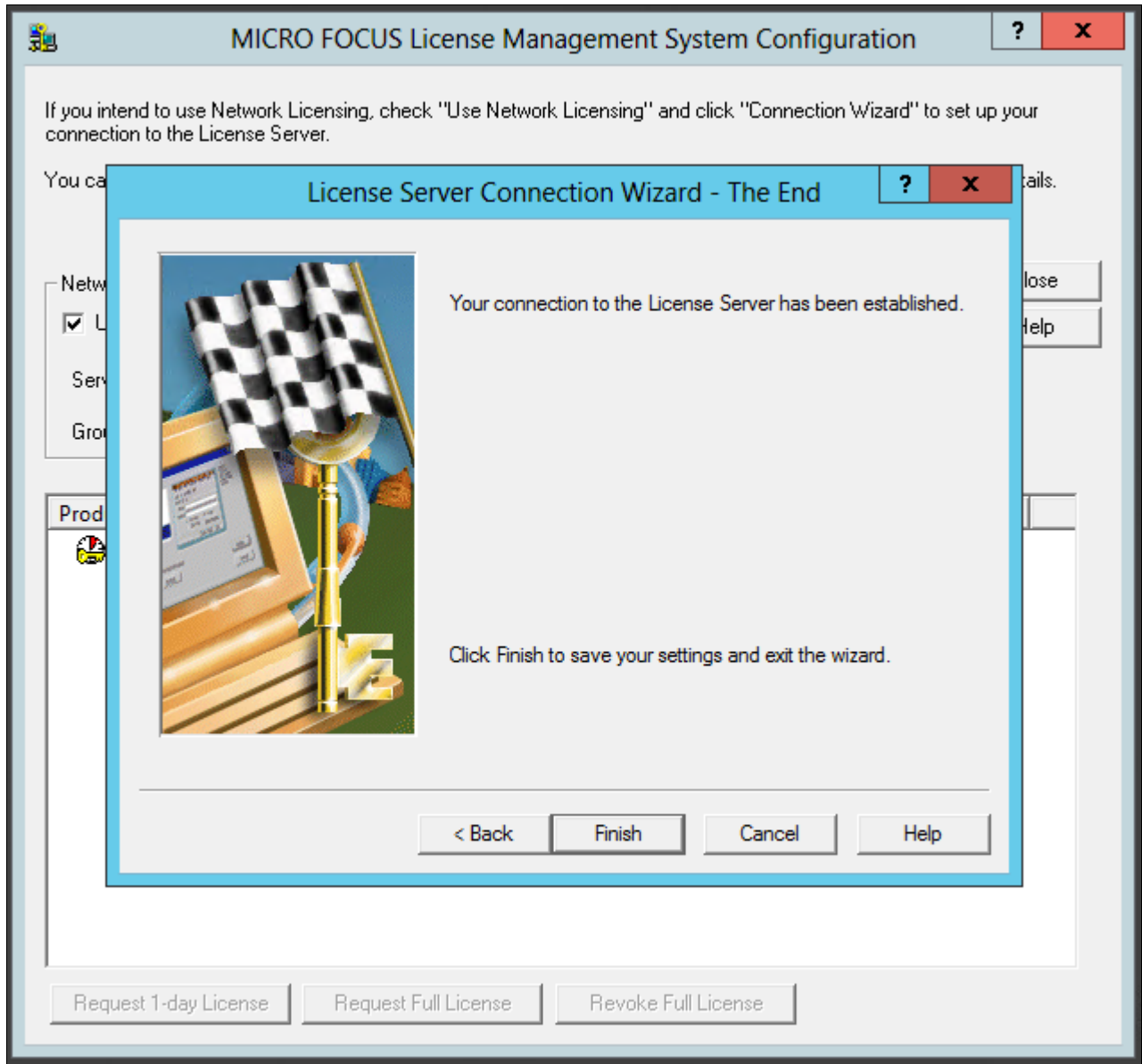
**Note.** Although you enter one day here, you complete a step later that requests permanent license status.

Click Next.



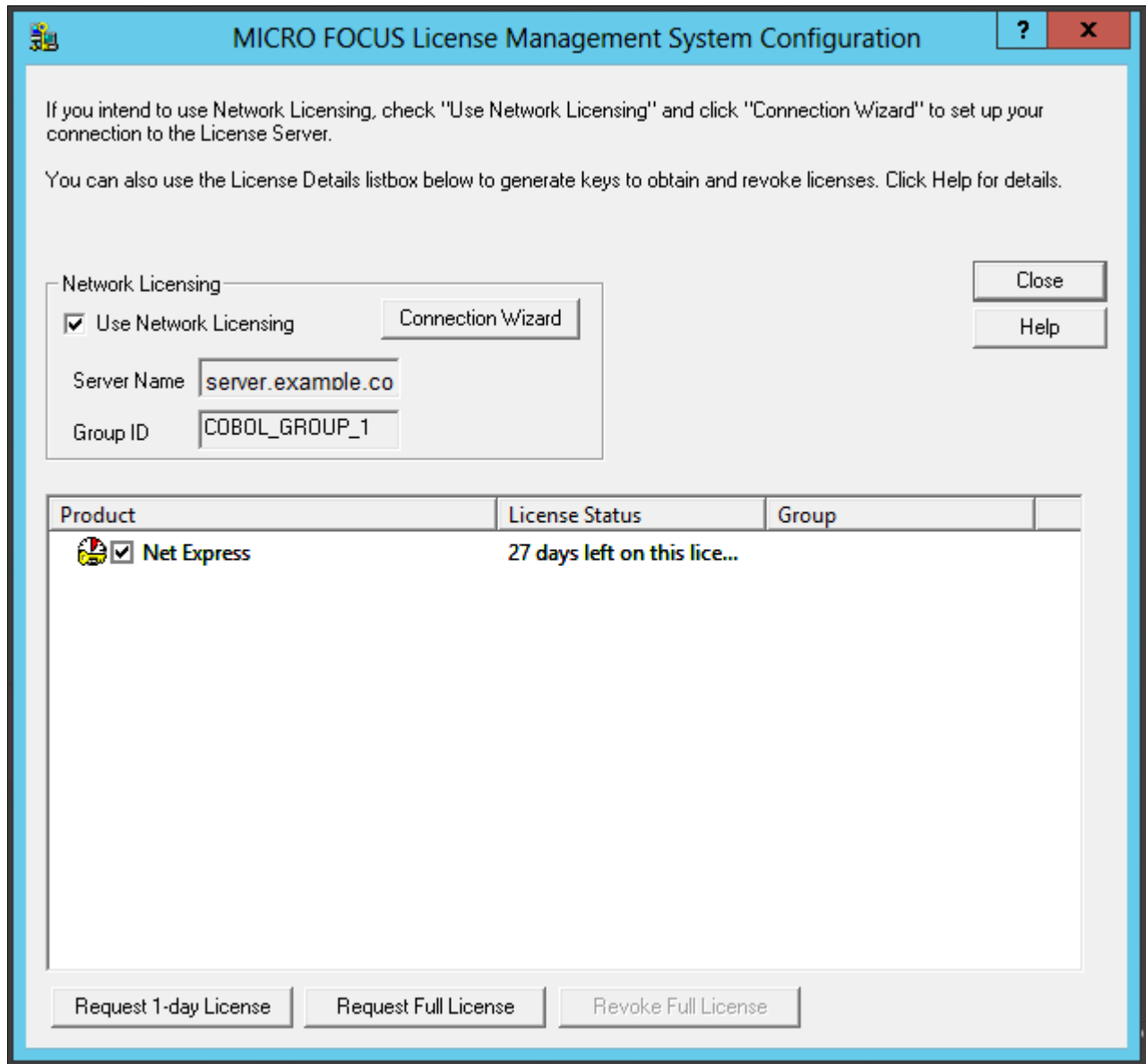
License Server Connection Wizard - Configuration window

7. Click Finish to exit the wizard, as shown in this example:



License Server Connection Wizard - The End window

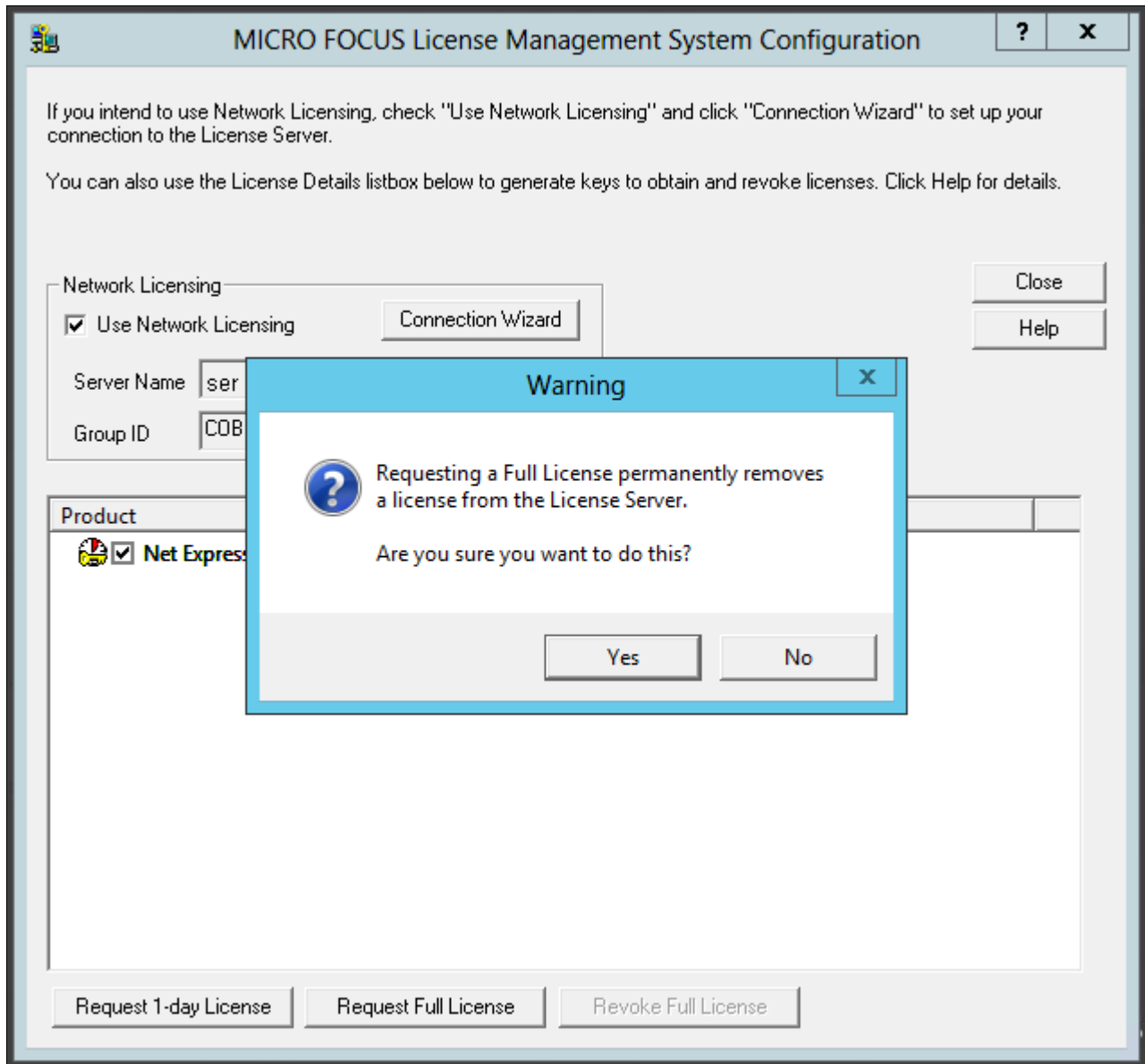
8. In the details list on the MICRO FOCUS License Management System Configuration dialog box, select the check box for Net Express, and then click Request Full License, as shown in this example:



MICRO FOCUS License Management System Configuration window

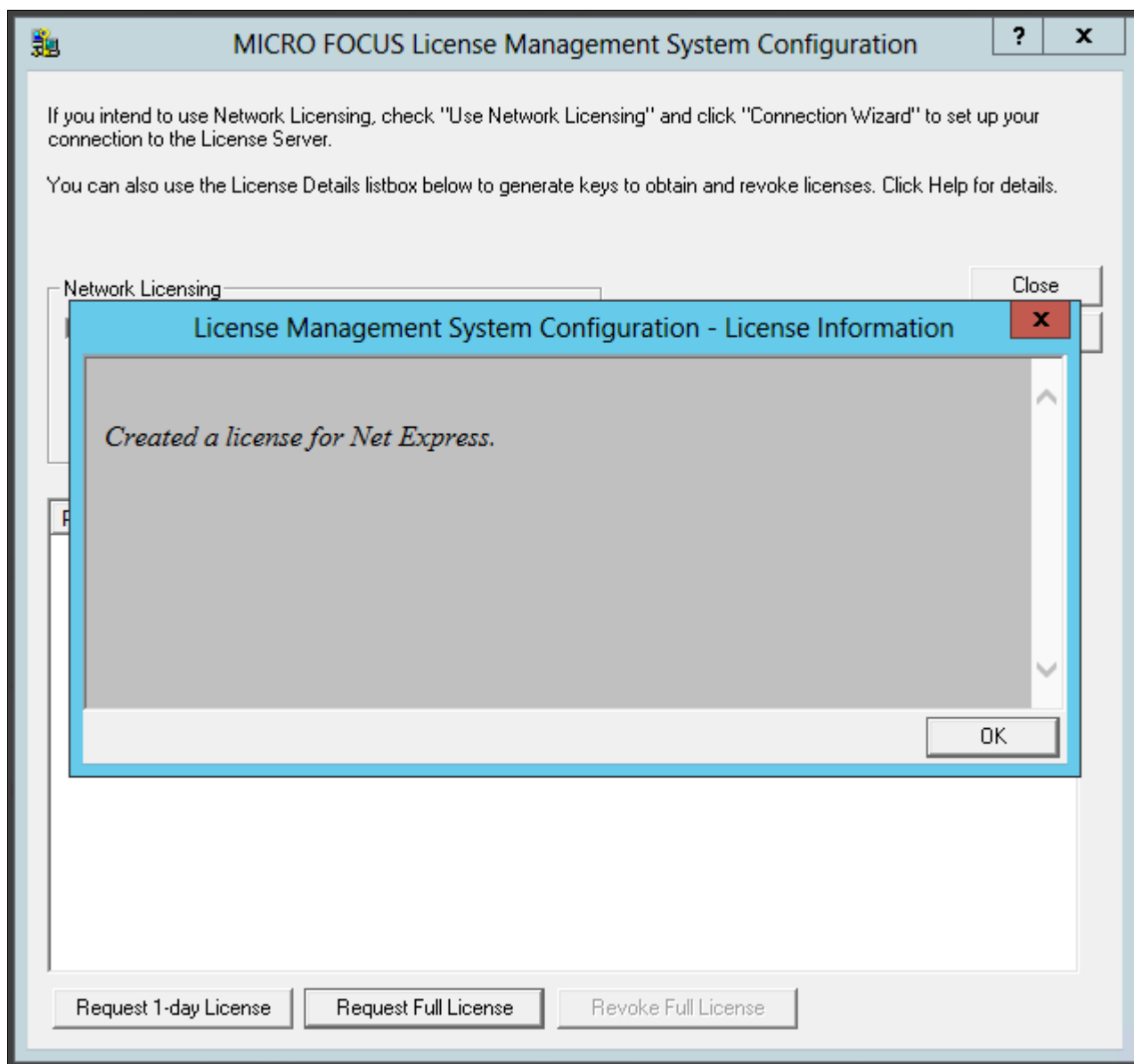
- 9. Click Yes to confirm that you want to request a full license, as shown in this example.

The warning message says that requesting a full license permanently removes a license from the license server.



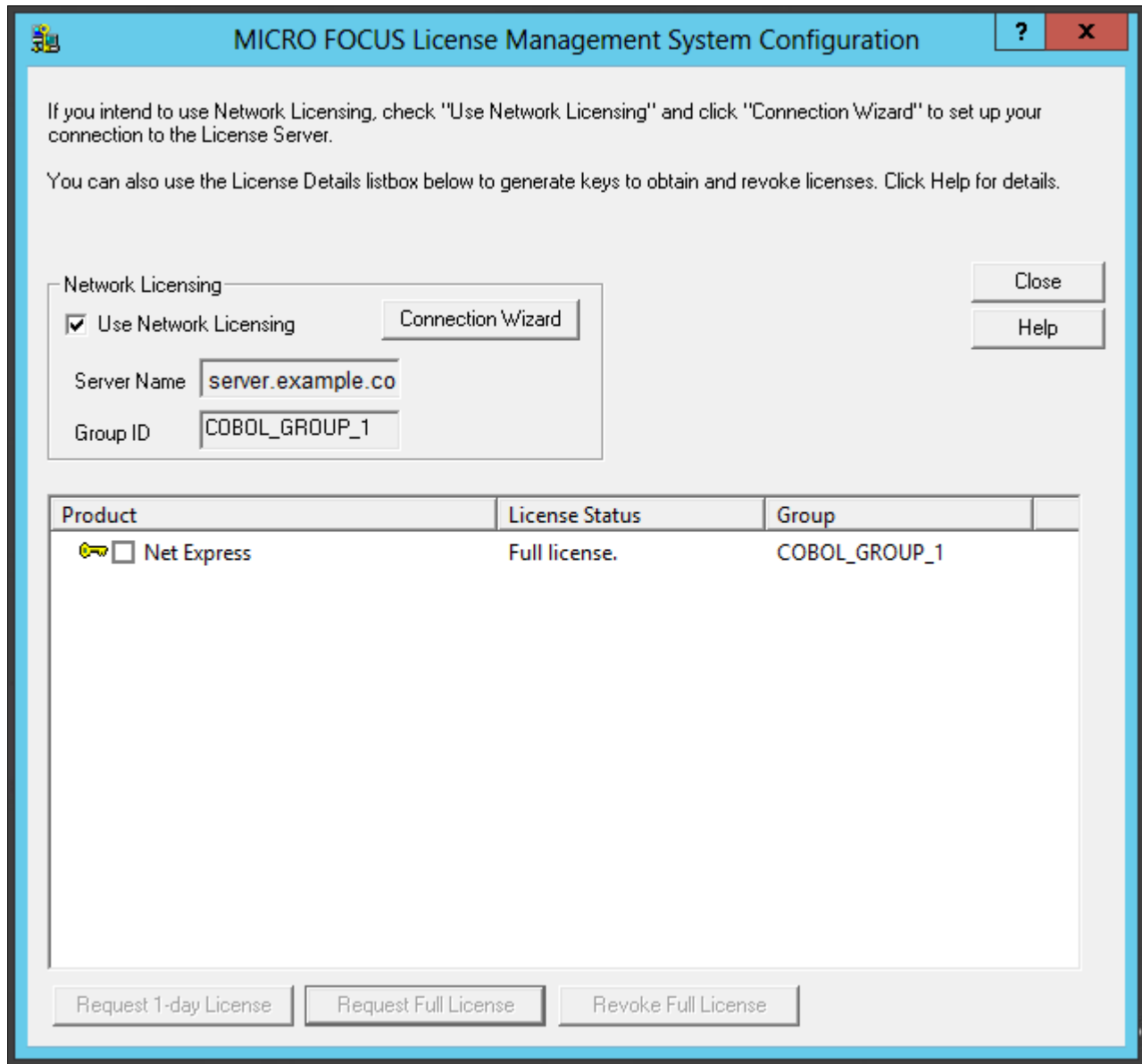
Warning message box when requesting a Full License

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 11A-3-2: Configuring a Timed License with the License Server

To configure a Timed License for temporary use:

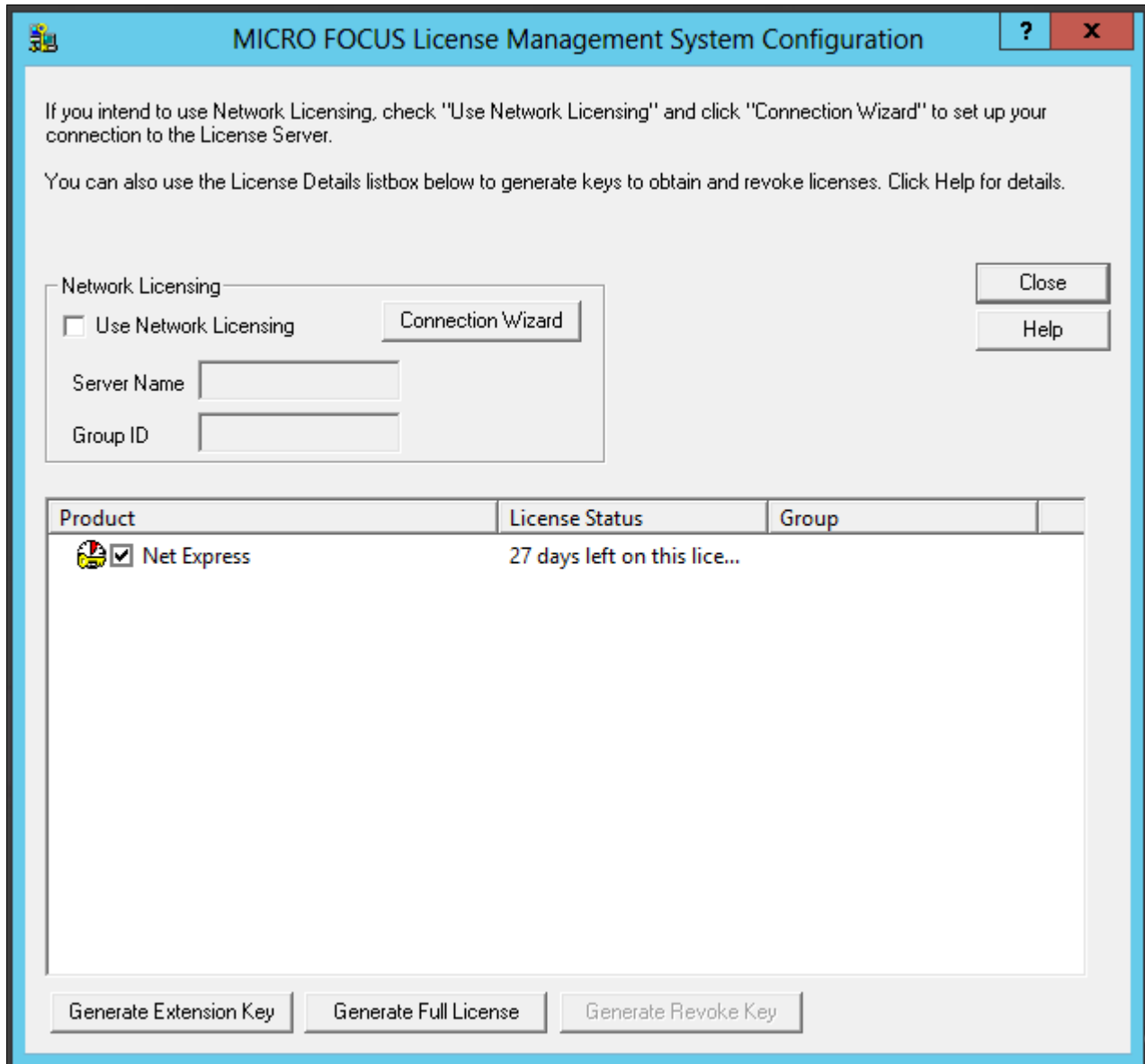
1. Select Start, All Programs, Micro Focus Net Express 5.1, Configuration, License Management System.

---

**Note.** Alternatively, run `NE_HOME\Bin\protcfg.exe`, where `NE_HOME` is the directory where you installed Micro Focus Net Express.

---

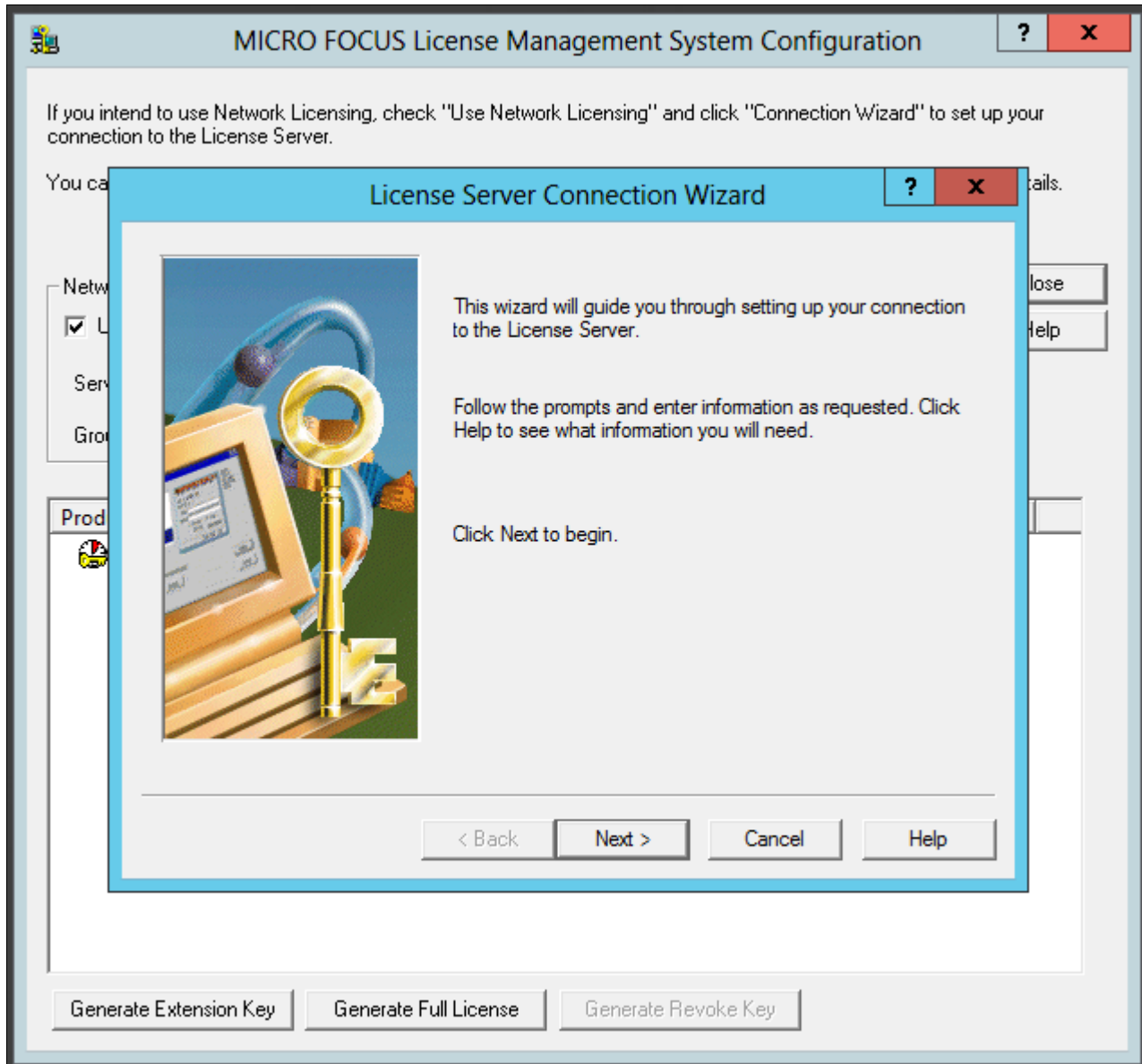
2. Select the option Use Network Licensing, and click Connection Wizard, as shown in this example:



MICRO FOCUS License Management System Configuration window

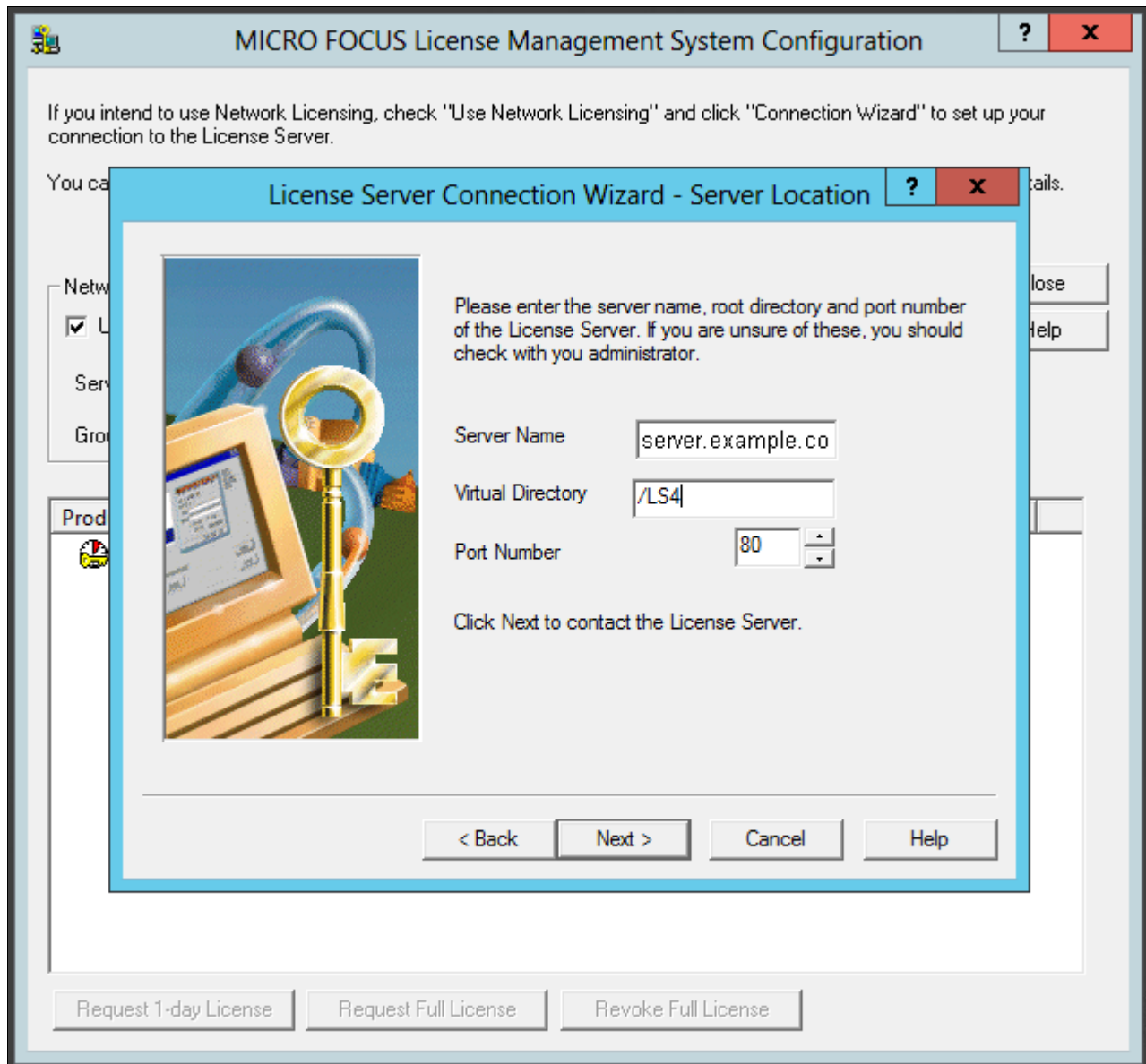


3. Click Next on the License Server Connection Wizard window, shown in this example:



License Server Connection Wizard window

4. Enter information for the server location, and then click Next.

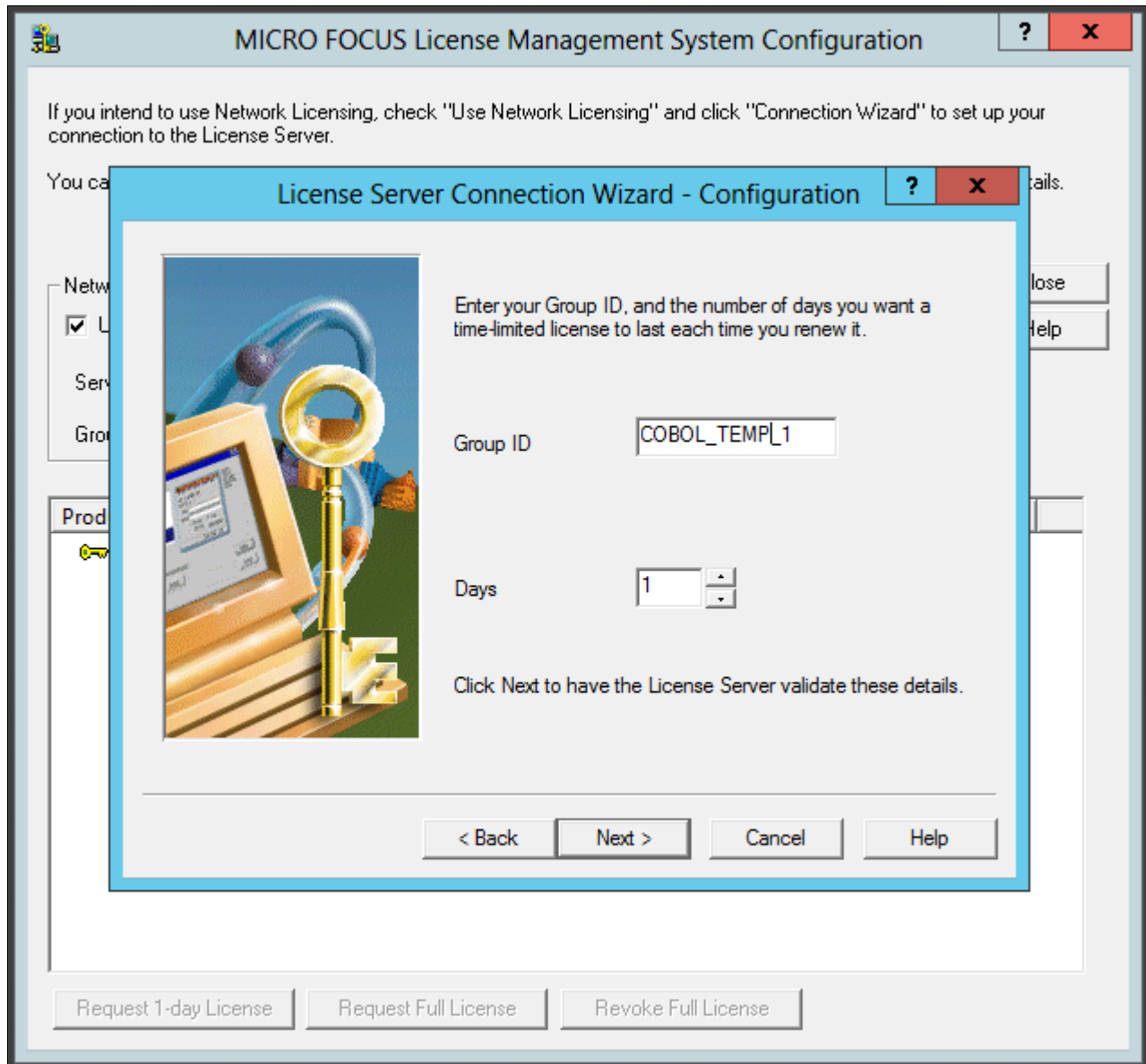


License Server Connection Wizard - Server Location

- 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.

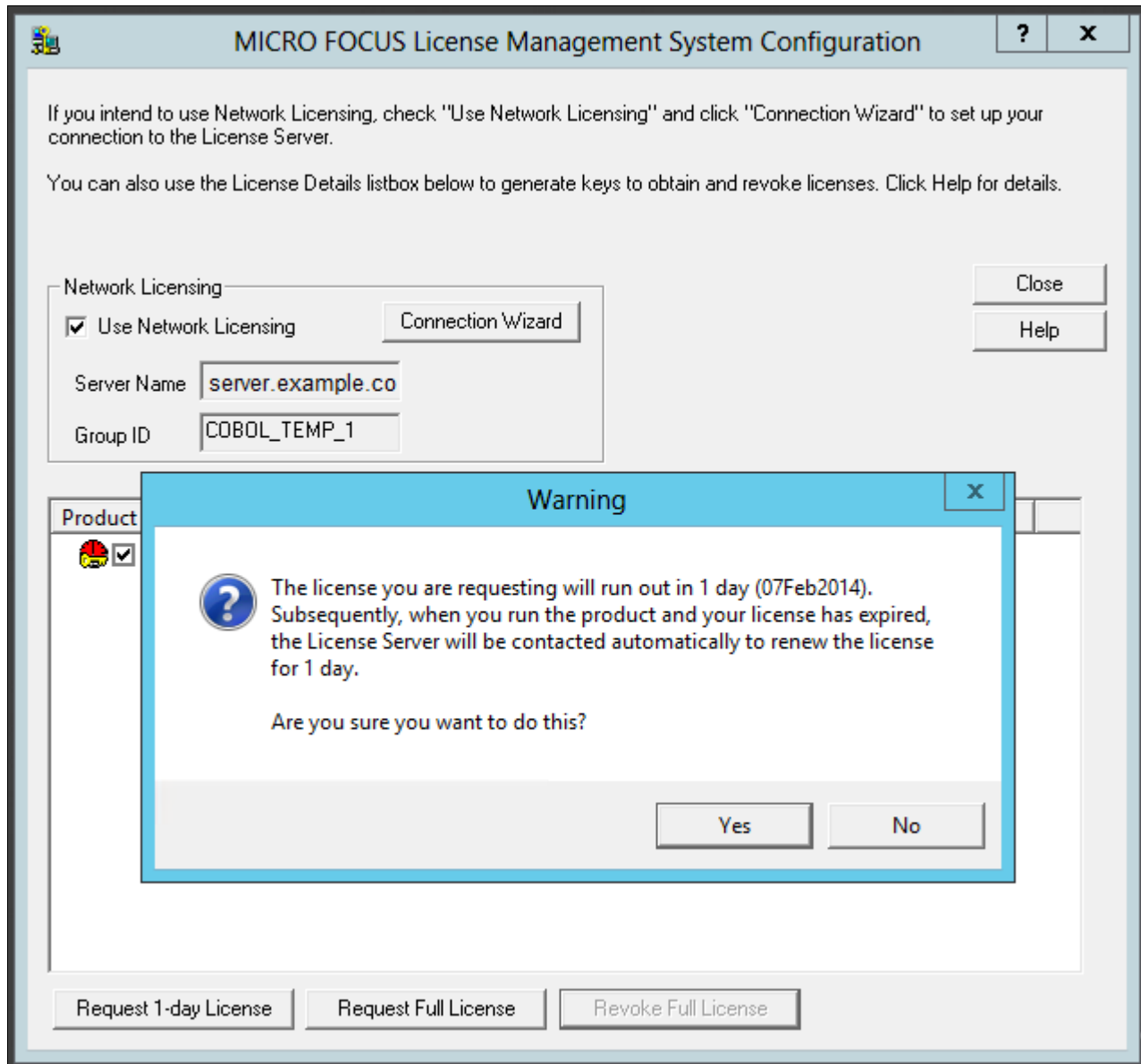


License Server Connection Wizard - Configuration window

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.

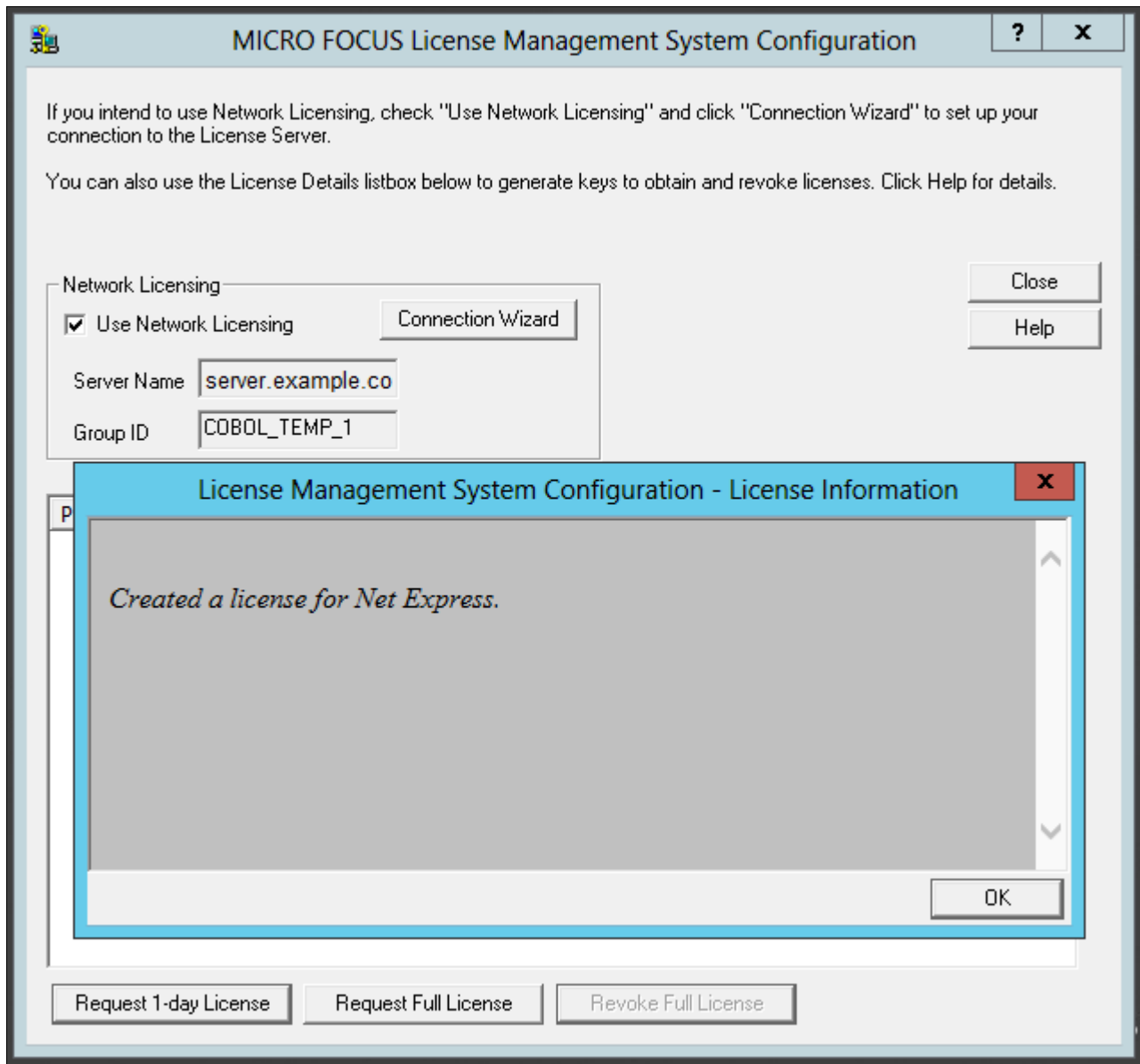
9. Click Yes to confirm that you want to request a timed (temporary) license, as shown in this example.

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.



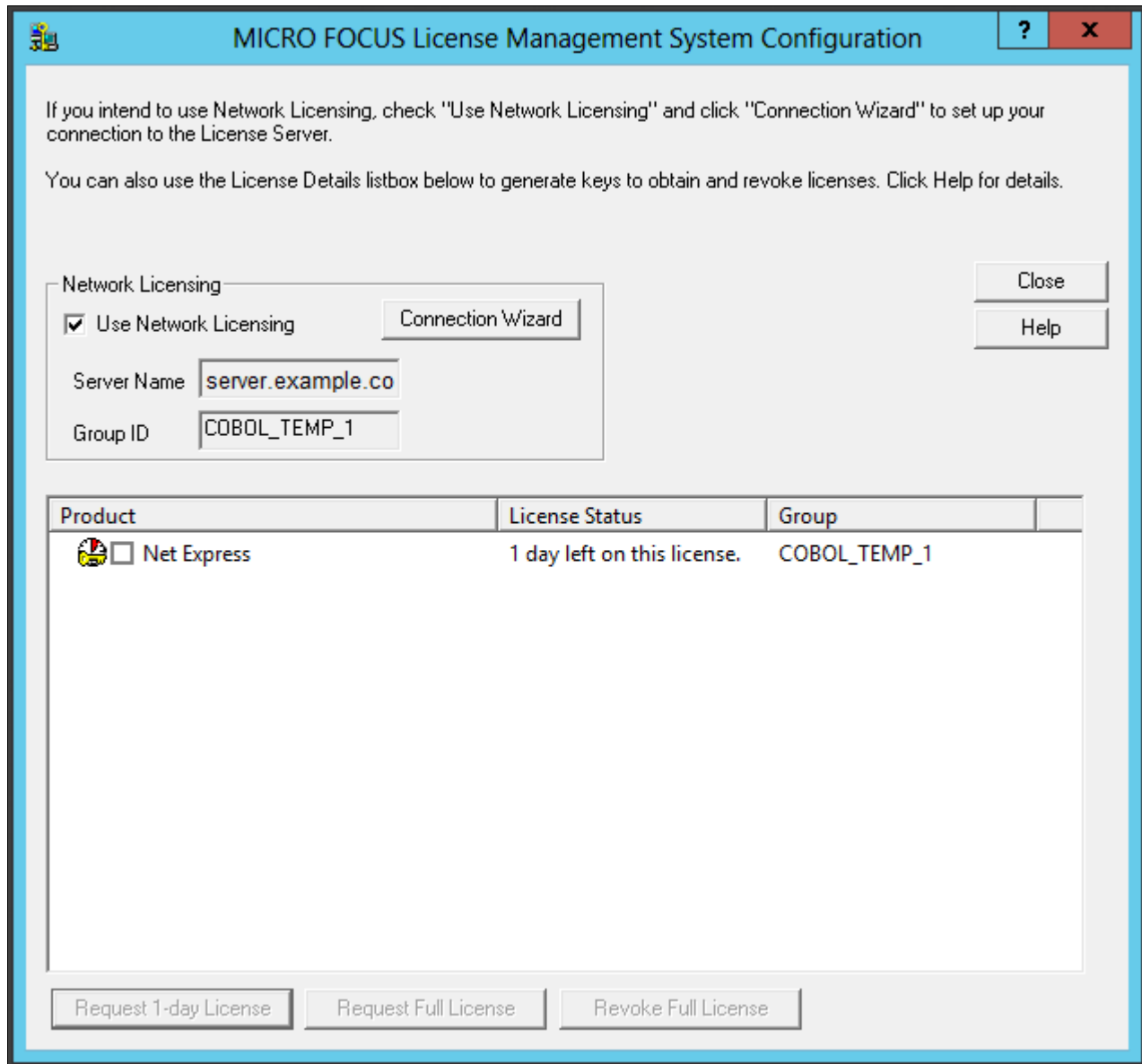
Warning message box when requesting a timed license

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 11A-3-3: Revoking the License Using the License Management System

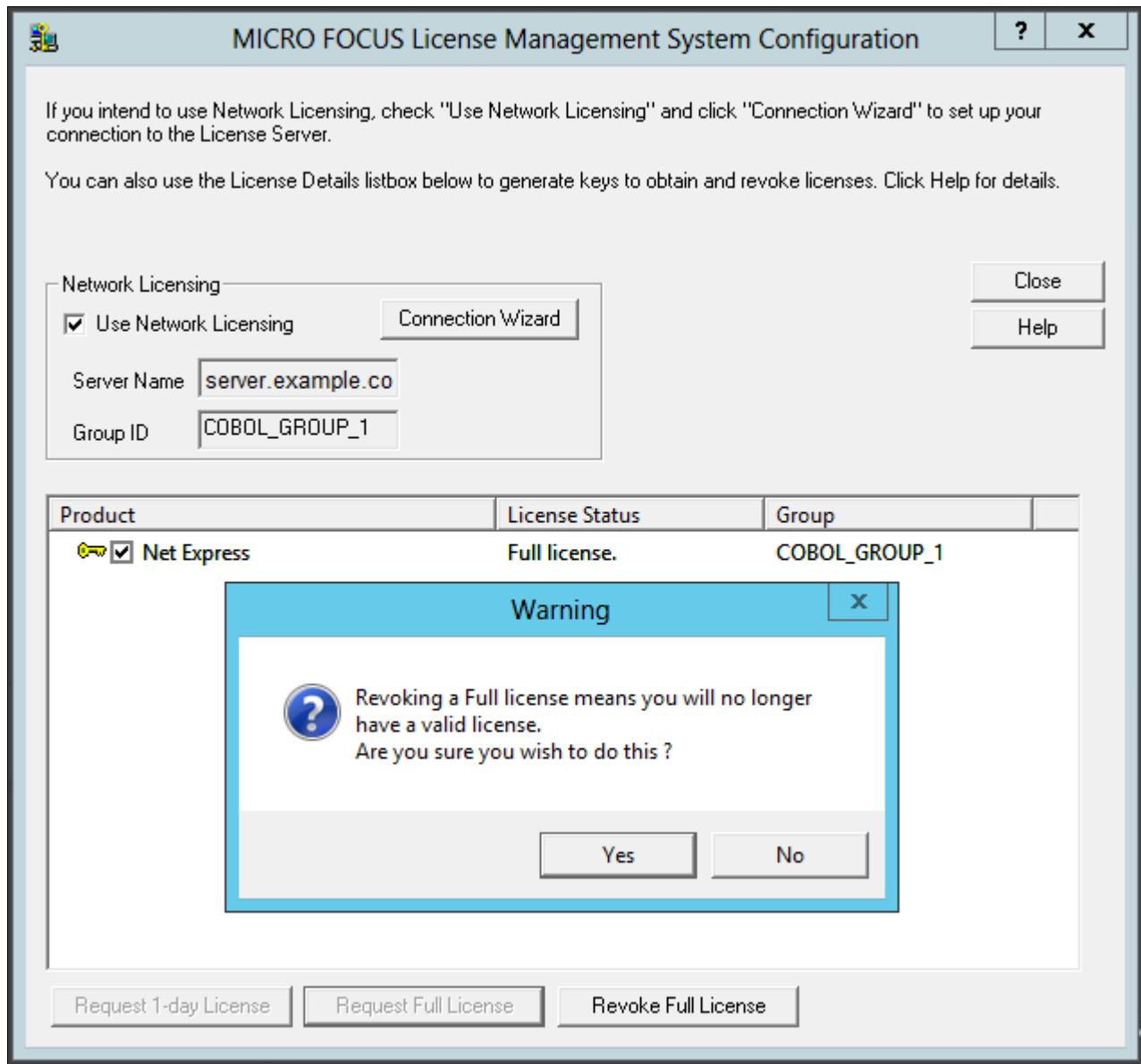
Revoking (deallocating) the compiler license returns it to the license pool, and makes it available for re-use, either by you or another user. This section describes how to use the Micro Focus License Management System to revoke a compiler license. For information on revoking the license by completely 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.

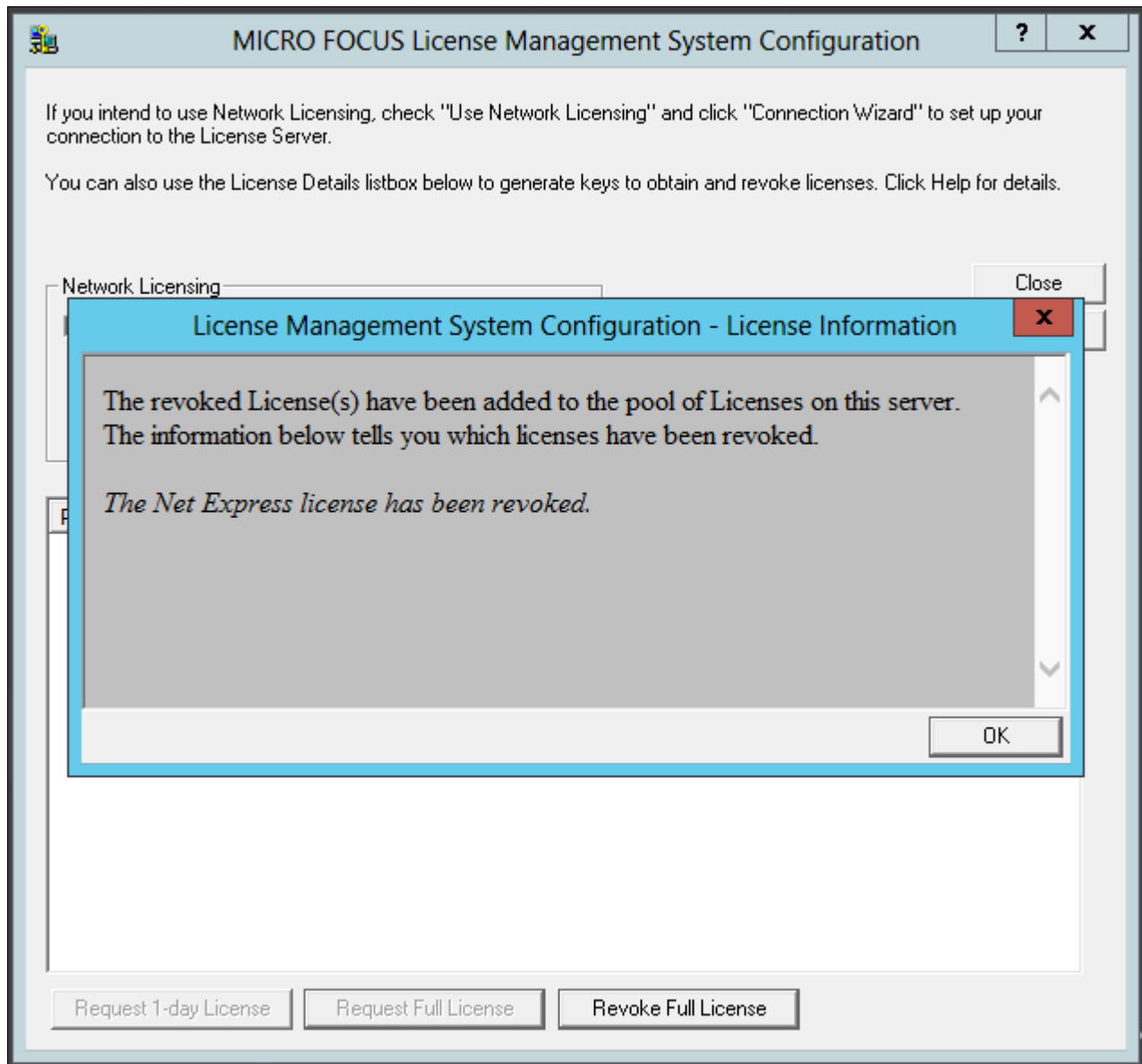
The warning message says that revoking a full license means that you will no longer have a valid license.



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 11A-3-4: Revoking the License by Removing the Installation

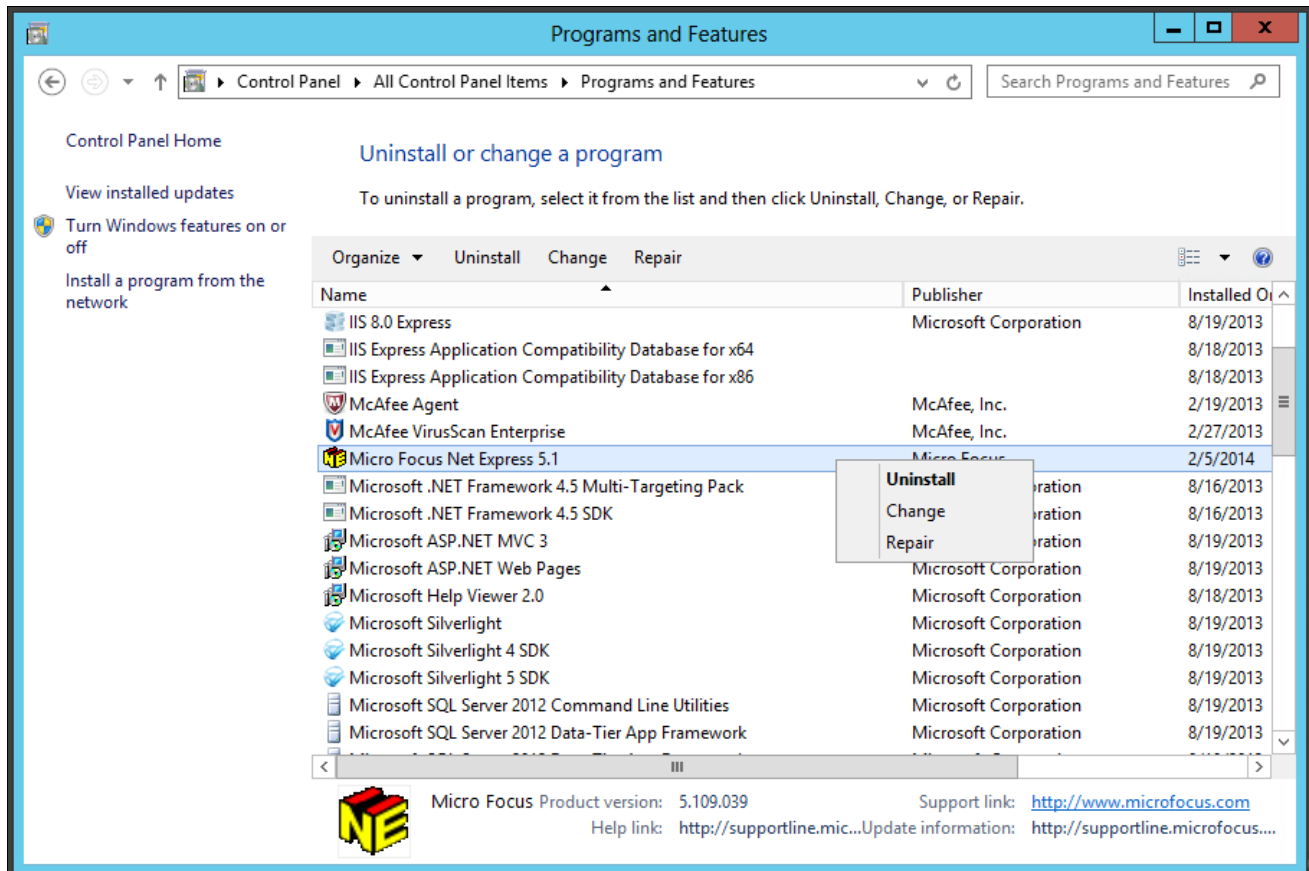
Revoking (deallocating) the compiler license returns it to the license pool, and makes it available for re-use, either by you or another user. This section describes how to revoke the license by completely removing the Micro Focus Net Express 5.1 installation. For information on using the Micro Focus 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:

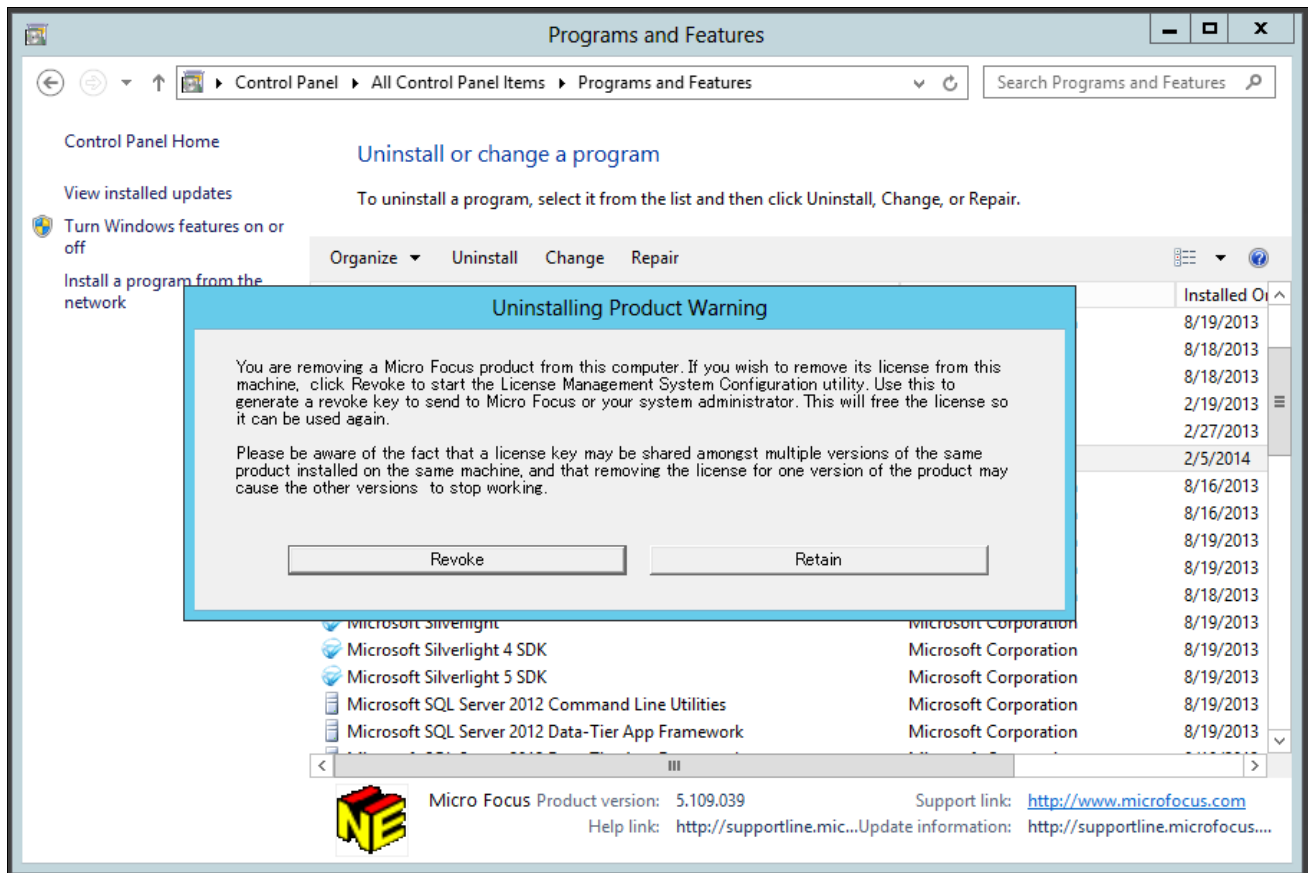


1. Select Start, All Programs, All Control Panel Items, Programs and Features.
2. Highlight Micro Focus Net Express 5.1 in the list of programs.
3. Right-click and select Uninstall, as shown in this example:



Microsoft Windows Control Panel Programs and Features

- 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.

- Follow the instructions in the previous section to revoke the license.  
See [Revoking the License Using the License Management System](#).
- 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 11A-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\_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 PeopleTools and PeopleSoft Application software to the *PS\_HOME* location, follow the instructions in these sections:

- Compiling COBOL on Microsoft Windows with a *PS\_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*; 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 11A-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> EBCDIC
```

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.

EBCDIC is a parameter for collating sequence comparisons on DB2 z/OS (by default it compiles with ASCII mode)

The CBLBLD.BAT file will create the compile directory for you if it does not already exist.

---

**Note.** If the database server is DB2 for z/OS, the EBCDIC parameter is required; it is not needed for other platforms.

---



---

**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, CBLBINU, or CBLBINE, depending on whether you are using ANSI, Unicode or EBCDIC). 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 UNICOD.CFG was created in the setup directory. UNICOD.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, CBLBINU, or CBLBINE) 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]] [EBCDIC] [LIST]
```

---

**Note.** The switches are well documented in the CBLMAKE.BAT file in the form of comments.

---

**Note.** If you are running DB2 z/OS, you must use the EBCDIC parameter.

---

**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 PTC SQLRT.CBL.

---

The following table describes the various options for CBLMAKE.BAT.

Option	Purpose
Cblmake	Compiles all source
Cblmake all	Compiles all source

Option	Purpose
Cblmake EBCDIC	Compiles all source files for DB2 for z/OS
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\CBLBINX* directory (CBLBINA, CBLBINU, or CBLBINE).

```
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 11A-4-2: 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 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, EBCDIC, 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\_CUST\_HOME.

---

**Note.** The values PS\_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\_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 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_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
```

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
- CBLBINE if you are using EBCDIC 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, 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).

- 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*.

---

- 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
```

- After *CBLMAKE.BAT* completes, copy the EXE, GNT, or INT files to the appropriate *<PS\_CUST\_HOME>\CBLBIN<X>* directory (*CBLBINA* for ANSI, *CBLBINU* for Unicode, or *CBLBINE* for EBCDIC).

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*.

---

- 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.

- Open a command prompt window.
- Verify that the *PS\_HOME* and *COBROOT* environment variables are set, as previously defined.  
See *Compiling with CBLBLD.BAT with a PS\_HOME Setup*.
- 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, CBLBINU for Unicode, or CBLBINE for EBCDIC).

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 11A-4-3: 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* or *Compiling COBOL on Microsoft Windows with a PS\_CUST\_HOME Setup*.

---

### Task 11A-4-4: 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%\CBLBINx directory.

CBLBINx is CBLBINA, or CBLBINU, based on the compilation mode of ASCII 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: Erno 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 11A-4-5: Defining the GNT and INT Files

By default, the compile generates a GNT file unless the exception file, CBLINT.XX already exists. CBLINT.XX contains the list of files that need to be compiled to the INT file.

---

**Note.** The INT exception file is sometimes needed to overcome Micro Focus execution error with GNT files.

---

For example, the exception file, CBLINT.PT, where *PT* represents PeopleTools, would contain the following information:

```
Call cblcrint <file name without file extension>
```

or:

```
Call cblcprint PTPDBTST
```

## Task 11A-4-6: 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* and *PS\_CUST\_HOME*.

- *PS\_HOME* Setup

Copy the contents of *<PS\_HOME>\CBLBIN<X>* (CBLBINA, CBLBINU, or CBLBINE) directory into *<PS\_HOME>\CBLBIN<X>* (CBLBINA, CBLBINU, or CBLBINE) 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, CBLBINU, or CBLBINE) directory into *<PS\_HOME>\CBLBIN<X>* (CBLBINA, CBLBINU, or CBLBINE) on your batch and application server machines.
2. Copy the contents of *<PS\_CUST\_HOME>\CBLBIN<X>* (CBLBINA, CBLBINU, or CBLBINE) directory into *<PS\_CUST\_HOME>\CBLBIN<X>* (CBLBINA, CBLBINU, or CBLBINE) on your batch and application server machines.





## Chapter 11B

# 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."

---

**Warning!** If your database server is DB2 for z/OS and your CCSID is not 37, you must read the CCSID discussion under Defining DB2 for z/OS Subsystem Configuration in the chapter "Preparing for Installation."

For information on %BINARYSORT, see the product documentation on sorting in *PeopleTools: Global Technology*.

For information on PeopleTools options and PSOPTIONS, see the product documentation on PeopleTools utilities in *PeopleTools: System and Server Administration*.

---

### 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"

*PeopleTools: Global Technology*, "Understanding Running COBOL in a z/OS 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 pspres.cfg file.

## Task 11B-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 11B-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 11B-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 11B-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/svrexpress-5.1_wp14-64bit
```
3. Change directory to the one you created in the previous step.

```
$ cd /products/mf/svrex-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/svrex-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/svrex-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/svrex-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-svrex-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 11B-3: Using the Micro Focus COBOL Compiler on UNIX**

---

This section discusses:

- Understanding COBOL Compilation
- Modifying the Liblist64 File (IBM AIX)
- Compiling COBOL on UNIX with a PS\_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 PeopleTools and PeopleSoft Application software to a *PS\_HOME* location, follow the instructions in the section *Compiling COBOL on UNIX with a PS\_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*, 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 11B-3-1: 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 11B-3-2: Compiling COBOL on UNIX with a PS\_HOME Setup

This section assumes that you installed the PeopleSoft PeopleTools and PeopleSoft Application software to a *PS\_HOME* directory. 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:

```
./psdbl.mak
```

The dynamic compile creates INT, LST, and GNT files, which are copied to these locations:

File	Location
INT	<i>PS_HOME</i> /src/cbl/int
LST	<i>PS_HOME</i> /src/cbl/lst
GNT	<i>PS_HOME</i> /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 11B-3-3: 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. Set the *PS\_CUST\_HOME* environment variable with this command:

```
PS_CUST_HOME=/home/<user>/CUSTcompile; export PS_CUST_HOME
```

3. To compile all the COBOL source under *PS\_CUST\_HOME* dynamically, issue the command:

```
./psdbl.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 11B-3-4: 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 11B-3-5: 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 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\_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 11B-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 11B-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

Fileset Name	Fileset Description	Installation Locations*	Required Fileset Level
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 11B-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
- 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 PeopleTools and PeopleSoft Application software to *PS\_HOME*, follow the instructions in the section Compiling COBOL on AIX with a *PS\_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*; 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 11B-5-1: Compiling COBOL on AIX with a *PS\_HOME* Setup

This section assumes that you have installed the PeopleSoft PeopleTools and PeopleSoft Application software to the *PS\_HOME* directory, and that you do not have customized COBOL source files in a *PS\_CUST\_HOME* directory. In addition, this procedure assumes that you have set the environment variables as described in the previous section.

This section is only required for those who need to compile the COBOL sources, not for those who only need to run the compiled COBOL.

To compile the COBOL source files:

1. Change the directory to *PS\_HOME/setup*; for example:

```
cd $PS_HOME/setup
```

2. Depending on the character encoding type that your installation uses, set the environment variable `PS_ENCODING`, as specified in this table:

Database Encoding	Command
ANSI	<code>export PS_ENCODING=ansi</code>
EBCDIC (DB2 z/OS only)	<code>export PS_ENCODING=ansi</code>
Unicode	<code>export PS_ENCODING=unicode</code>

Make sure that you are giving the correct value of this environment variable. You will receive errors if the wrong value of this environment variable is specified.

- If your setup includes the file `$PS_HOME/setup/unicode.cfg`, indicating that the character encoding for your installation is Unicode, but you set the value of `PS_ENCODING` to `ansi` with the commands above, you will get the following error

```
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)	<code>PS_HOME/sdk/cobol/pscblpt/src</code>
Human Capital Management	hcm	<code>PS_HOME/sdk/cobol/pscblhrms/src</code>
Financials/Supply Chain Management	fscm	<code>PS_HOME/sdk/cobol/pscblfscm/src</code>

The compiled COBOL programs will be placed under `<PS_HOME>/CBLBIN_IBM<X>`.

`<X>` is A for ANSI or U for Unicode.

---

**Note.** If you see the following output during the compilation, you can ignore it:

```
Preprocessing COBOL files ls: 0653-341 The file *.cfg does not exist.
Preprocessing the file PSPBASCH.cbl Can't open input file
```

---

## Task 11B-5-2: 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\_CUST\_HOME* is the same as *PS\_HOME*, or *PS\_CUST\_HOME* is undefined, all error and list files mentioned here are placed in directories under *PS\_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/psclpt/src/LISTOUT.lst
./pscblibm.mak : The compile listing of the COBOL programs can be seen at ⇒
/data1/home/easa/pt854/sdk/cobol/psclpt/lst
```

## Reviewing erroribm.lst

The erroribm.lst file is located in the *PS\_HOME*/setup directory, and contains a list of the programs that failed to compile. For example:

```
CEPCROLL fail to compile/link
ENPBTRNS fail to compile/link
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/pscl<APPS>/src* directory and contains compiler and linker informational, warning and error messages.

For example, the following error is related to program PTPDBTST:

```
exec: /usr/bin/ld -b64 -bpT:0x100000000 -bpD:0x110000000 -bhalt:5 /lib⇒
/crt0_64.o -lg -bexport:/usr/lib/libg.exp -o PTPCURND PTPCURND.o -brtl -bE⇒
symlist.
exp -lpthreads -ldl -lnsl -L/home/sphilli2/852-803-I1-AIX-ORAU-DEBUG/bin -⇒
lpscompat_ansi -lpssqlapi_ansi -lpsuser_ansi -lpspetssl -lpsora_ansi -⇒
lpscobnet_ansi -L/usr/lpp/cobol/lib -L/usr/lpp/SdU/vsam/lib -L/usr/lpp/Sd⇒
U/sfs/lib -lcob2s -lsmrtlite -lC128 -lc -lc
unlink: PTPCURND.o
exec: /usr/lpp/cobol/bin/IGYCCOB2 -qtest -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 11B-5-3: Setting Up the IBM COBOL Runtime

This section discusses:

- Installing the IBM COBOL for AIX Runtime Files
- Setting Environment Variables for a 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

Fileset Name	Fileset Description	Installation Locations	Fileset Level Required
cobol.msg.LANG	IBM COBOL for AIX runtime messages <i>LANG</i> = [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\_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\_CUST\_HOME* directory.

In this case it is a good idea to define *PS\_CUST\_HOME* in *PS\_HOME/psconfig.sh*. For example, edit *psconfig.sh* to add this lines:

```
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\_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 variable `PS_CUST_HOME`, as explained in the section Setting Environment Variables for a `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 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_CUST_HOME` environment variables, indicating that these variables have not been saved.

7. Specify *6* to save the environment variables.
8. 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...
```

9. Enter *q* for return to the previous menu.
10. On the Quick-configure menu, enter *15*, for Custom configuration.
11. 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.

12. Enter *IBM* as the COBOL platform and ignore the remaining options.

```
COBOL Platform [] : IBM
```

13. Answer *n* (no) when asked if you want to change any of the remaining sections.
14. Enter *1* to boot the domain.
15. 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 variable *PS\_CUST\_HOME*, as explained in the section Setting Environment Variables for a *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 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
```

7. Enter 6 to save the environment variables.
8. 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...
9. Enter *q* to return to the previous menu.
10. On the Quick-configure menu, enter 6, for Custom configuration.
11. 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.

12. Enter *IBM* as the COBOL Platform and ignore the remaining options.

```
COBOL Platform [] : IBM
```

13. Answer *n* (no) when asked if you want to change any of the remaining sections.

14. Enter *l* to boot the domain.

## Task 11B-5-4: 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 >>
```

```
SUCSESSES
```

```
-----
```

```
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
  deinstall                Nothing by this name to⇒
cobol.msg.ja_JP
  deinstall                Nothing by this name to⇒
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 12

# Installing PeopleSoft Change Assistant

This chapter discusses:

- Understanding PeopleSoft Change Assistant
- Removing or Upgrading PeopleSoft Change Assistant Installations
- Installing PeopleSoft Change Assistant in GUI Mode
- 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 12-1: Removing or Upgrading PeopleSoft Change Assistant Installations

---

This section discusses:

- Removing PeopleSoft Change Assistant Installations from Previous Releases
- Removing PeopleSoft Change Assistant Instances in the Current Release
- Upgrading PeopleSoft Change Assistant Instances

### Task 12-1-1: Removing PeopleSoft Change Assistant Installations from Previous Releases

If there is a PeopleSoft Change Assistant installation from PeopleSoft PeopleTools 8.54 or earlier release present when you begin the installation, the installer instructs you to remove it, and then exits. You must remove the previous installation and then run the installer for the current release again.

---

**Note.** When using silent mode installation, however, installations from PeopleSoft PeopleTools 8.54 or earlier are removed by the installer.

See the section *Installing PeopleSoft Change Assistant in Silent Mode*.

---

Use one of the following methods to remove PeopleSoft Change Assistant from a previous release:

- Use the Microsoft Windows function for adding or removing a program. For example:
  - Select Microsoft Windows Control Panel, Programs and Features, Uninstall or change a program.
  - Highlight Change Assistant in the list of programs and select Uninstall.
- Run the PeopleSoft Change Assistant installer from the previous release in *PS\_HOME/setup/PsCA*.

---

**Note.** The installer name for the current release is *installCA.exe*. If you have an older installation, the installer may be named *setup.exe*.

---

The setup utility detects the existing installation and allows you to remove it.

### Task 12-1-2: Removing PeopleSoft Change Assistant Instances in the Current Release

If there is a PeopleSoft Change Assistant installation from the current PeopleSoft PeopleTools release present when you begin the installation, the installer gives you the option to remove or upgrade it. To use the installer to remove the installation:

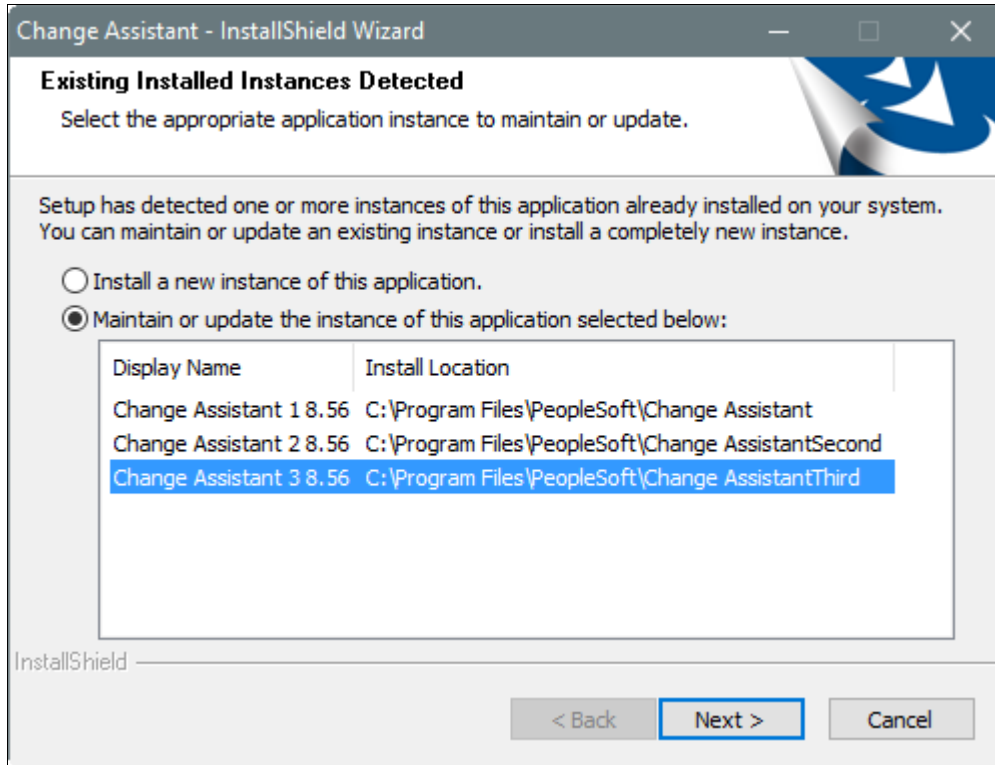
1. From the *PS\_HOME\setup\PsCA* directory, run *installCA.exe*.



If there is an existing installation of PeopleSoft Change Assistant, the Existing Installed Instances Detected window appears with a list of the instances present.

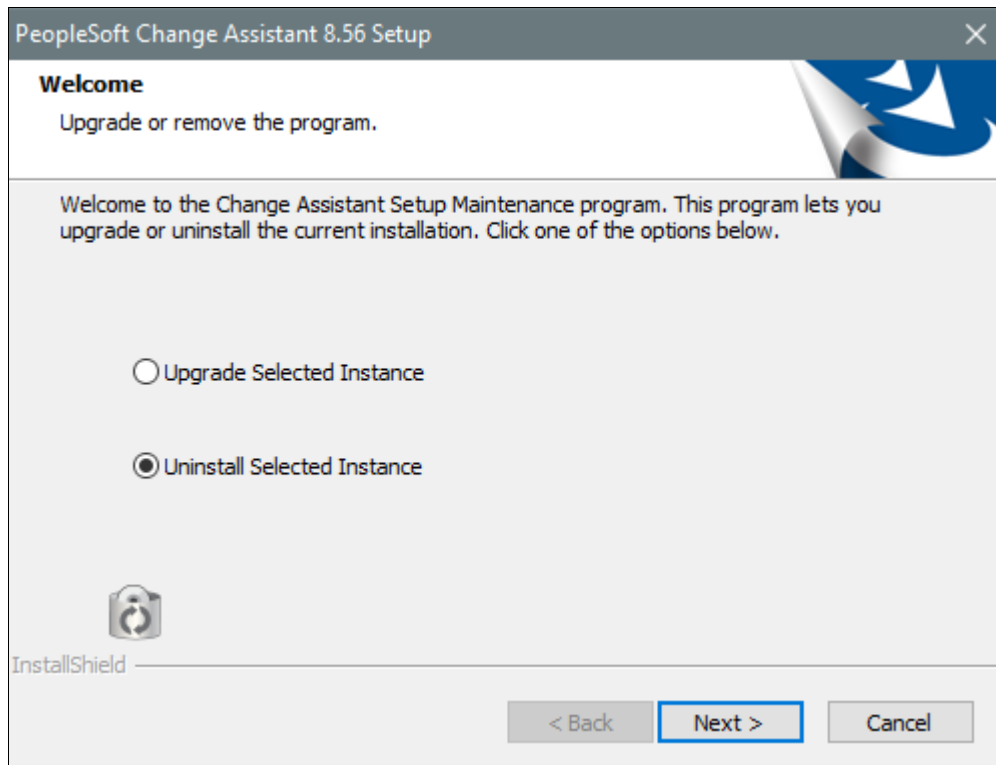
2. Select the option Maintain or update the instance of this application selected below.

Highlight the instance that you want to remove. In this example, Change Assistant 3 is highlighted. Click Next.



Existing Installed Instances Detected window

3. Select the option Uninstall Selected Instance, as shown in this example, and click Next.



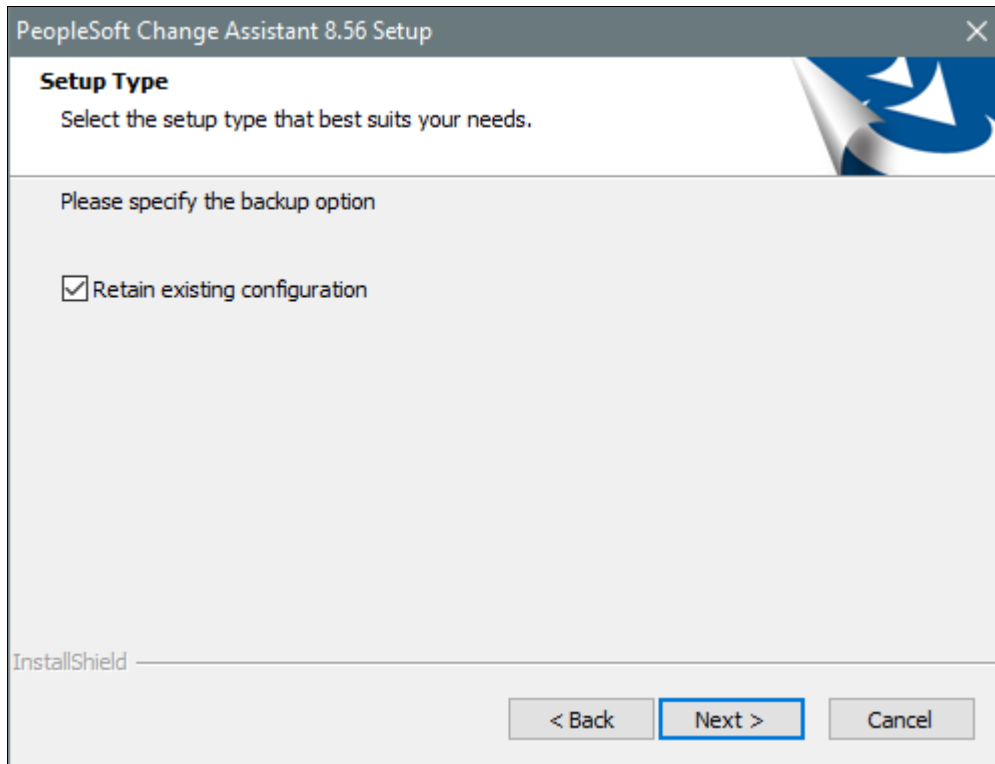
Upgrade or remove the program window

4. On the Setup Type window, select Retain existing configuration, as shown in this example, if you want to save a file with the existing Change Assistant configuration.

---

**Note.** If there is no configuration information available, you see an error message.

---



Setup Type window

5. Click Next.

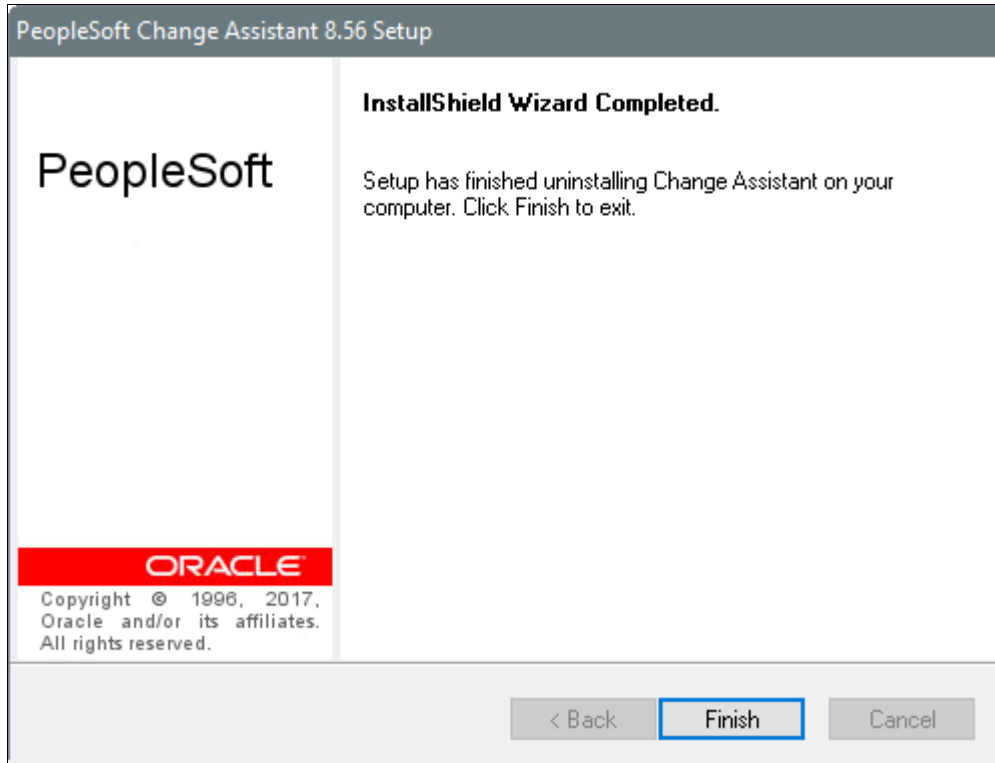
If you selected the option to retain the existing configuration, you see a message that gives the name of the backup log file, such as `backupLogUninstall.log`, and the installation location where you can find it, for example `C:\Program Files\PeopleSoft\Change AssistantThird`. The log file is a text file that includes the name and location of the configuration zip file.

The process also saves a zip file, `changeassistantcfgbak.zip`, in the same directory. The zip file includes several XML files with configuration information. Click OK to close the message box.

You see another message asking if you want to proceed with removing the instance and saving the existing configuration. Click OK to continue.

See *PeopleTools: Change Assistant and Update Manager*, "Exporting and Importing Change Assistant Settings."

- When the removal process is complete, click Finish on the window showing a completion message, as shown in this example.



InstallShield Wizard Completed window

- Install the current release.

See Installing PeopleSoft Change Assistant in GUI Mode.

See Installing PeopleSoft Change Assistant in Silent Mode.

You can also use one of the following methods to remove an installation from the current release:

- Go to the Microsoft Window Start menu, locate the PeopleSoft Change Assistant instance, such as PeopleSoft Change Assistant 8.56 1, and select Uninstall CA.
- Go to the installation location, for example `C:\Program Files\PeopleSoft\Change Assistant`, and run `uninstall.bat`.
- Select Microsoft Windows Control Panel, Programs and Features, Uninstall or change a program. Highlight Change Assistant in the list of programs and select Uninstall.

### Task 12-1-3: Upgrading PeopleSoft Change Assistant Instances

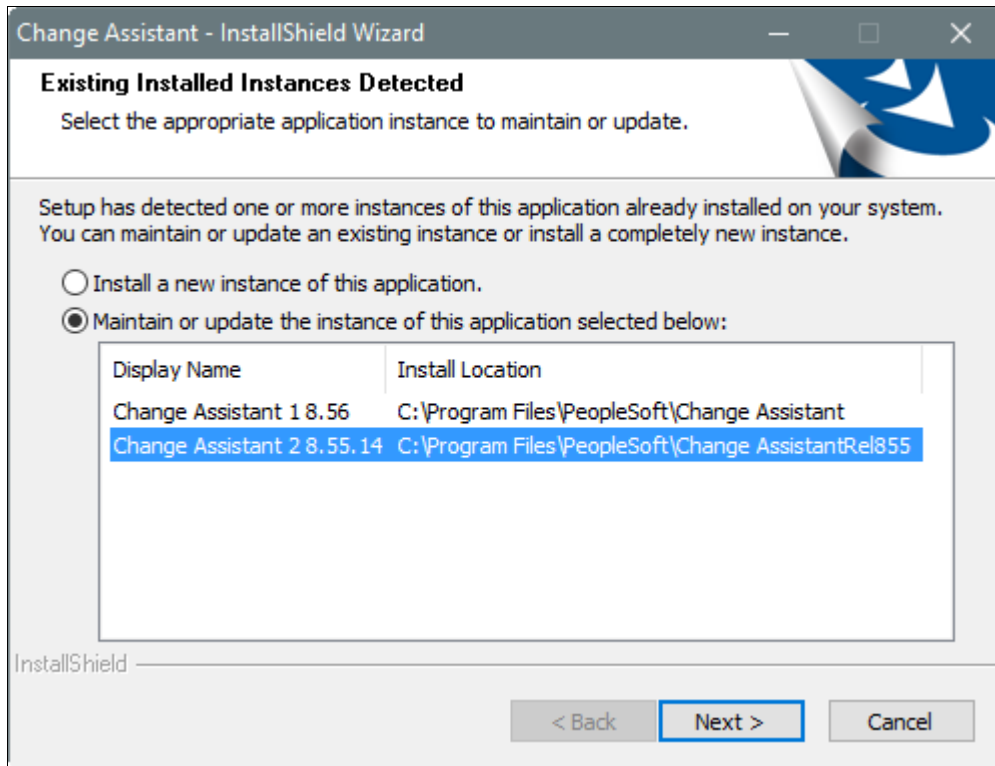
If there is a PeopleSoft Change Assistant installation from the current PeopleSoft PeopleTools release present when you begin the installation, the installer gives you the option to remove or upgrade it. To use the installer to upgrade the installation:

- From the `PS_HOME\setup\PSCA` directory, run `installCA.exe`.

If there is an existing installation of PeopleSoft Change Assistant, the Existing Installed Instances Detected window appears with a list of the instances present.

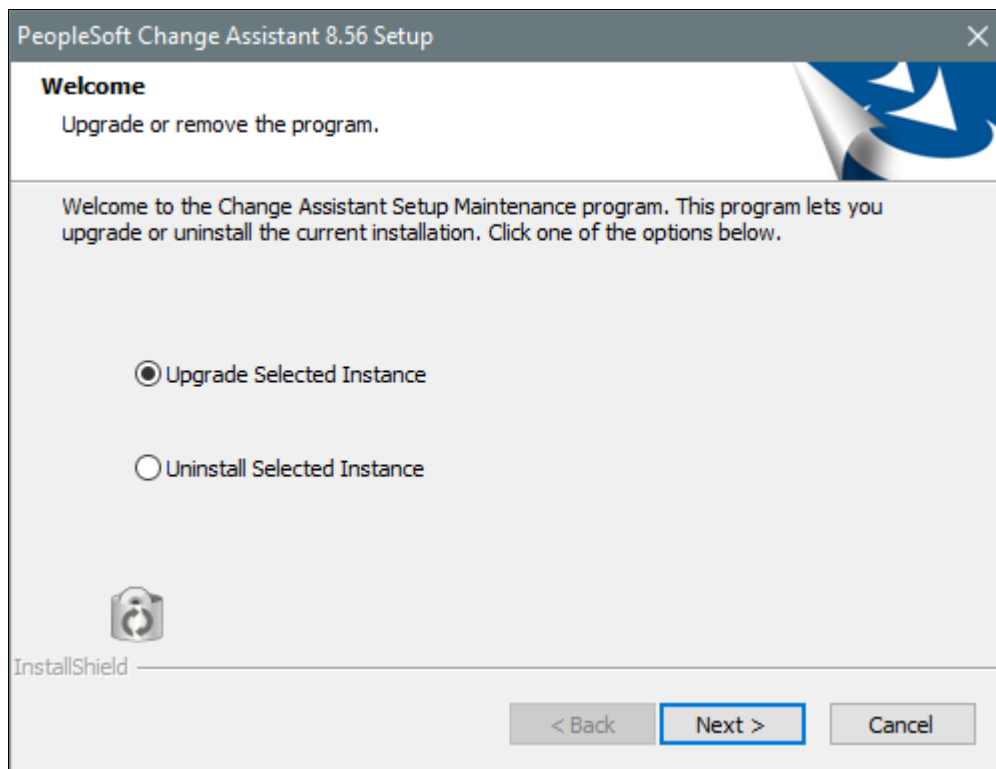
2. Select the option Maintain or update the instance of this application selected below.

Highlight the instance that you want to upgrade. In this example, Change Assistant 2 is highlighted. Click Next.



Existing Installed Instances Detected window

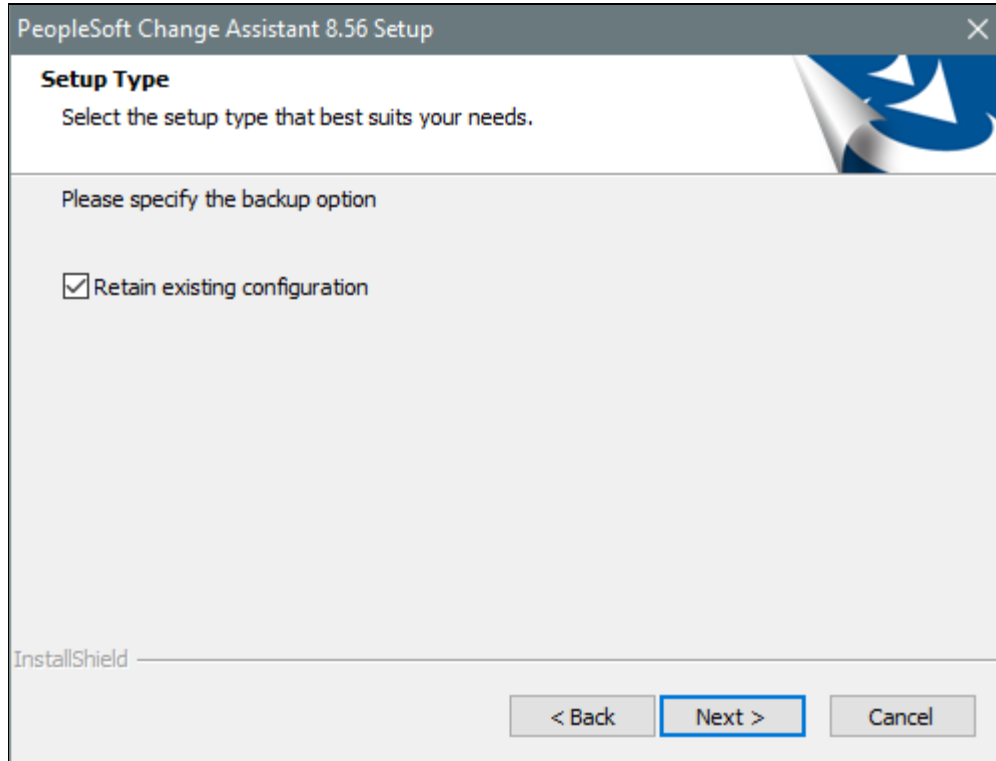
3. Select the option Upgrade Selected Instance, as shown in this example, and click Next.



Upgrade or remove the program window

4. On the Setup Type window, select Retain existing configuration, as shown in this example, if you want to save a file with the existing Change Assistant configuration.

When you select the option to retain the configuration for an instance that does not include a configuration zip file, the installer creates one. If you are upgrading an instance that does include a configuration file, the installer deletes the previous configuration zip file and creates a new one.



Setup Type window

5. Click Next.

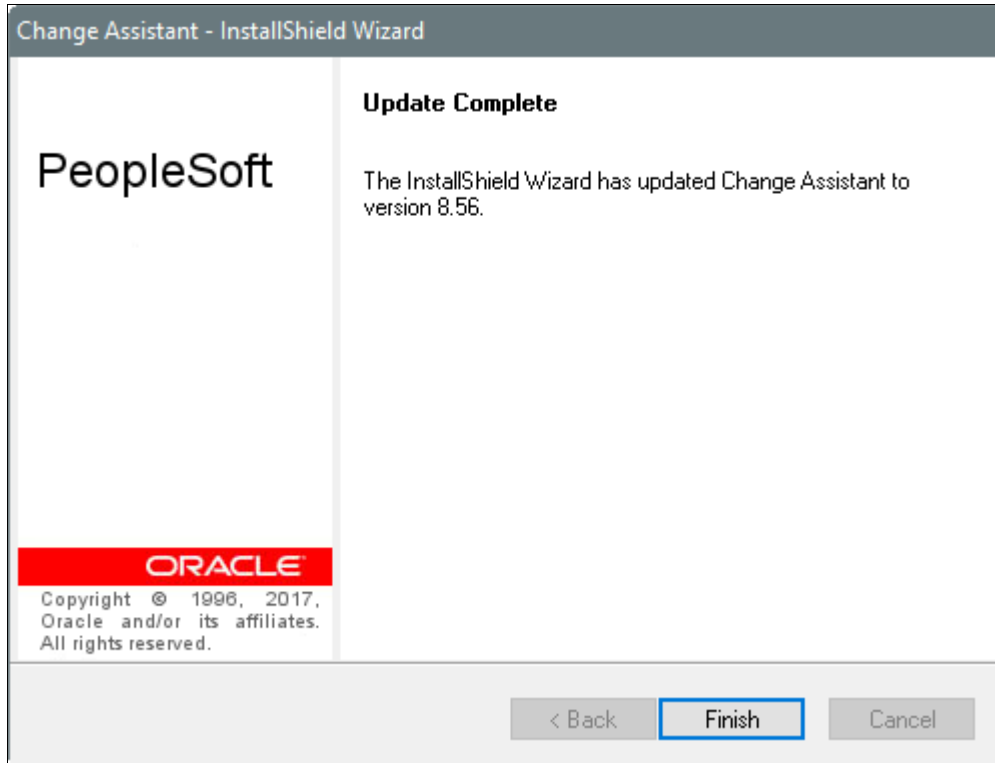
If you selected the option to retain the existing configuration, you see a message that gives the name of the backup log file, such as backupLogInstall.log, and the installation location where you can find it, for example C:\Program Files\PeopleSoft\Change Assistant3. The log file is a text file that includes the name and location of the configuration zip file.

The process also saves a zip file, changeassistantcfbak.zip, in the same directory. The zip file includes several XML files with configuration information. Click OK to close the message box.

You see another message asking if you want to proceed with upgrading and saving the existing configuration. Click OK to continue.

See *PeopleTools: Change Assistant and Update Manager*, "Exporting and Importing Change Assistant Settings."

- When the upgrade process is complete, select the option Launch Change Assistant if you want to start Change Assistant when you exit the installer, and then click Finish, as shown in this example.



Change Assistant Update Complete window

## **Task 12-2: Installing PeopleSoft Change Assistant in GUI Mode**

A Microsoft Windows-based operating system is required to use PeopleSoft Change Assistant. This section gives the instructions for the GUI installation. For the silent-mode installation, see *Installing PeopleSoft Change Assistant in Silent Mode*.

If you installed PeopleSoft PeopleTools on a UNIX or Linux computer, you can copy `installCA.exe` to a Microsoft Windows machine to install PeopleSoft Change Assistant.

To install PeopleSoft Change Assistant:

- From the `PS_HOME\setup\PSCA` directory, run `installCA.exe`.

If there is an existing installation from a previous release, you see a message saying you must remove it. Click OK to close the message box, use one of the methods previously discussed, and then re-start the installation.

See *Removing PeopleSoft Change Assistant Installations from Previous Releases*.

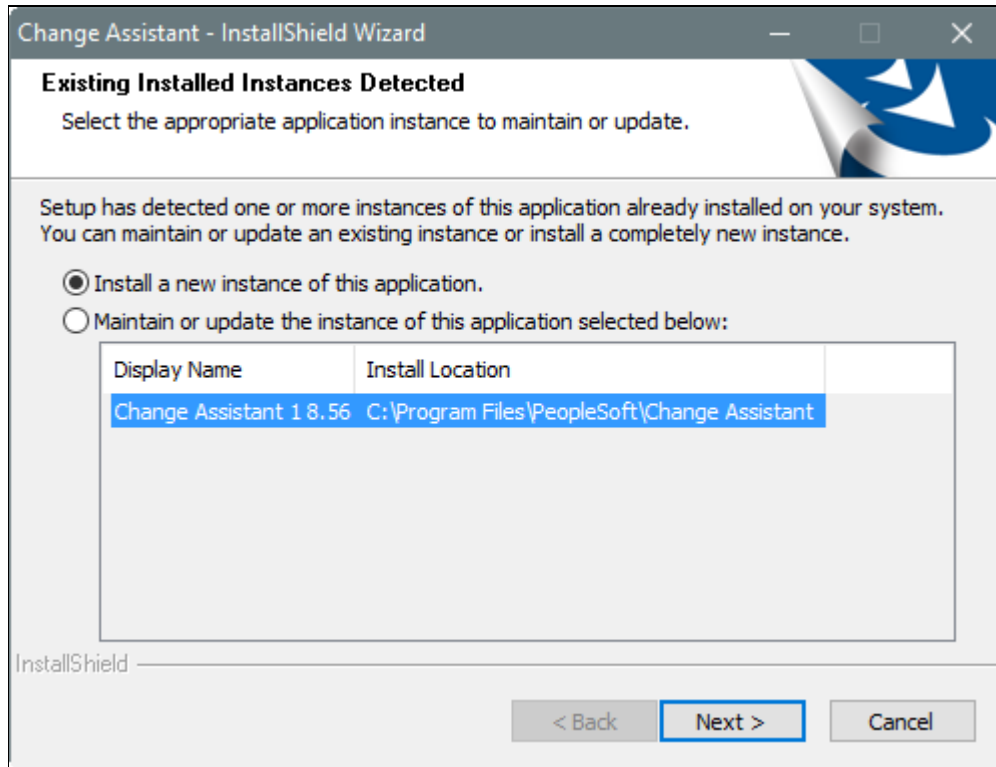


2. If there is an existing installation from the current release, the Existing Installed Instances Detected window appears with a list of the instances detected and their installation locations, as shown in the following example.

The instance display names are numbered sequentially — Change Assistant 1, Change Assistant 2, and so on. If there is no PeopleSoft Change Assistant installation present, this window does not appear.

**Note.** If you want to remove an installation from the current release using the option Maintain or update the instance of this application selected below, see the previous section.

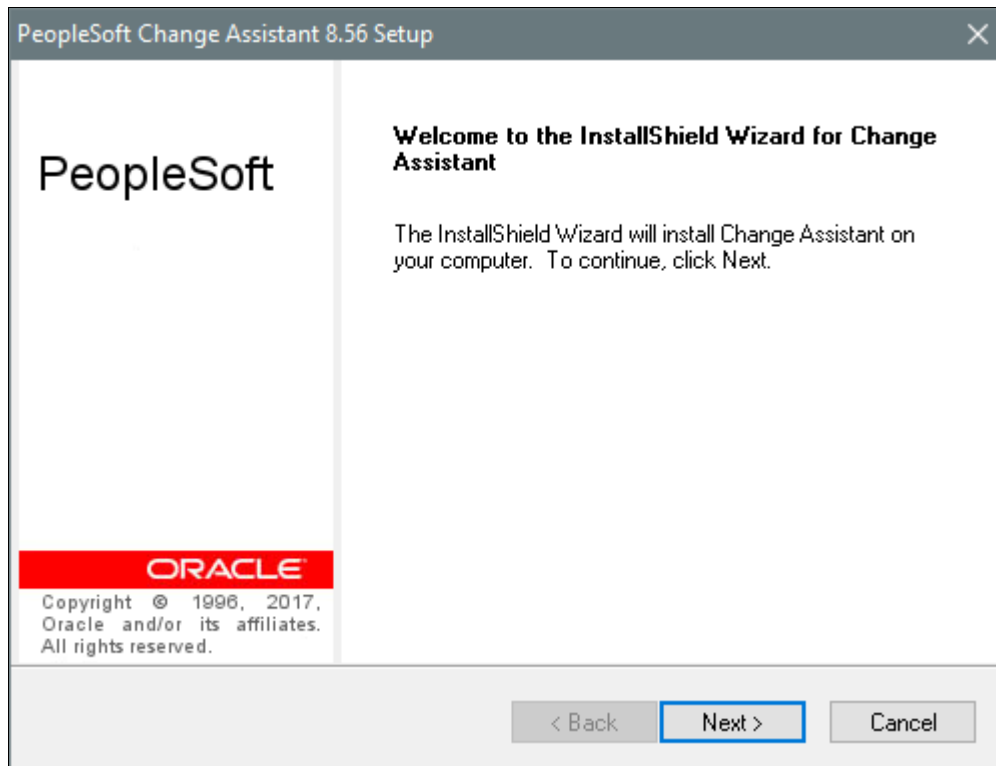
See Removing PeopleSoft Change Assistant Instances in the Current Release.



Existing Installed Instances Detected window

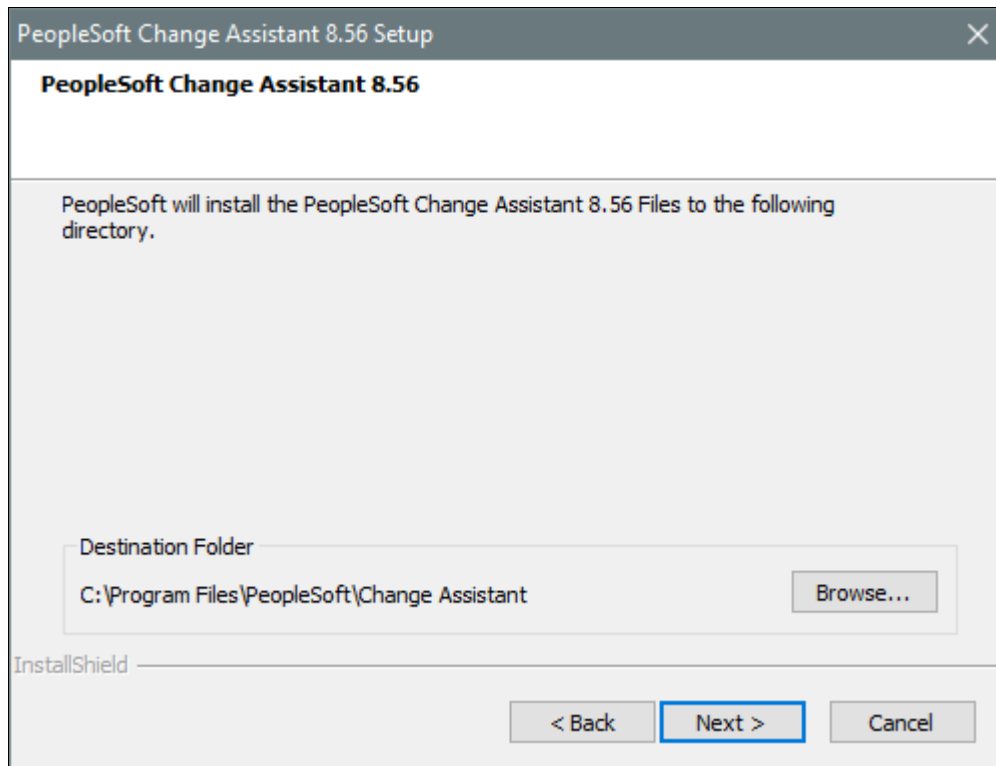
3. Select the option Install a new instance of this application and click Next.

The Welcome window appears, as in this example. Click Next.



PeopleSoft Change Assistant Setup Welcome window

4. Accept the default Destination Folder or click the Browse button to specify another Destination Folder. The default destination folder is C:\Program Files\PeopleSoft\Change Assistant, as shown in this example.



PeopleSoft Change Assistant Setup Destination Folder window

---

**Note.** If there are existing instances present, you must install each instance to a different directory. If you click Next without changing the default directory, you see a message telling you to change the directory or stop and re-run the setup in maintenance mode to upgrade the instance.

---

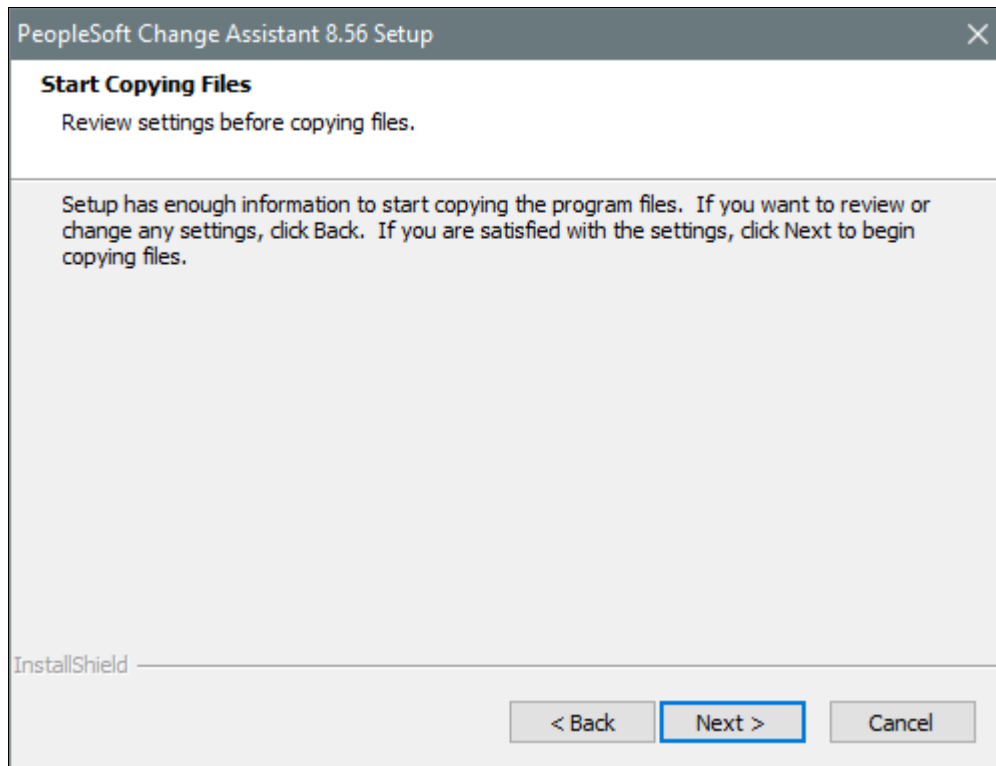
5. If the installer detects an existing installation in the destination folder that you specified, you see a message telling you to change the installation location, or re-run the installation in upgrade mode.

Click OK to exit the message, and select one of these methods:

- Click Back to return to the previous window and change the destination folder.
- Click Cancel to exit the installation. Run the installation again and select the option to upgrade.

## 6. Select Next.

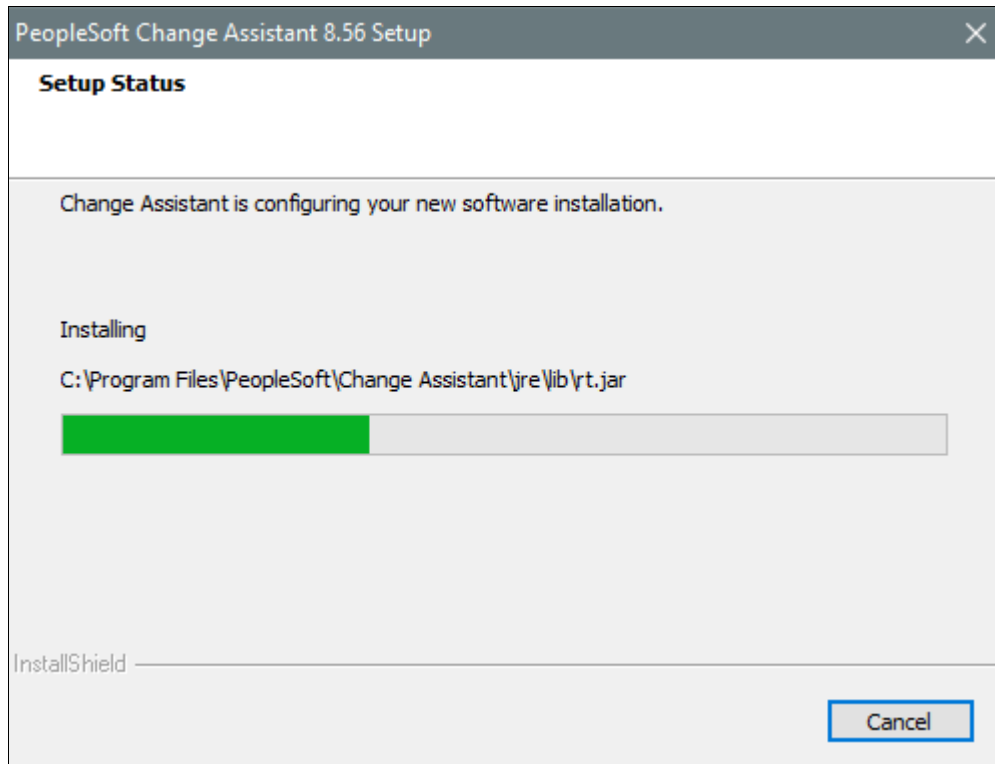
The Start Copying Files screen appears.



PeopleSoft Change Assistant Setup Start Copying Files window

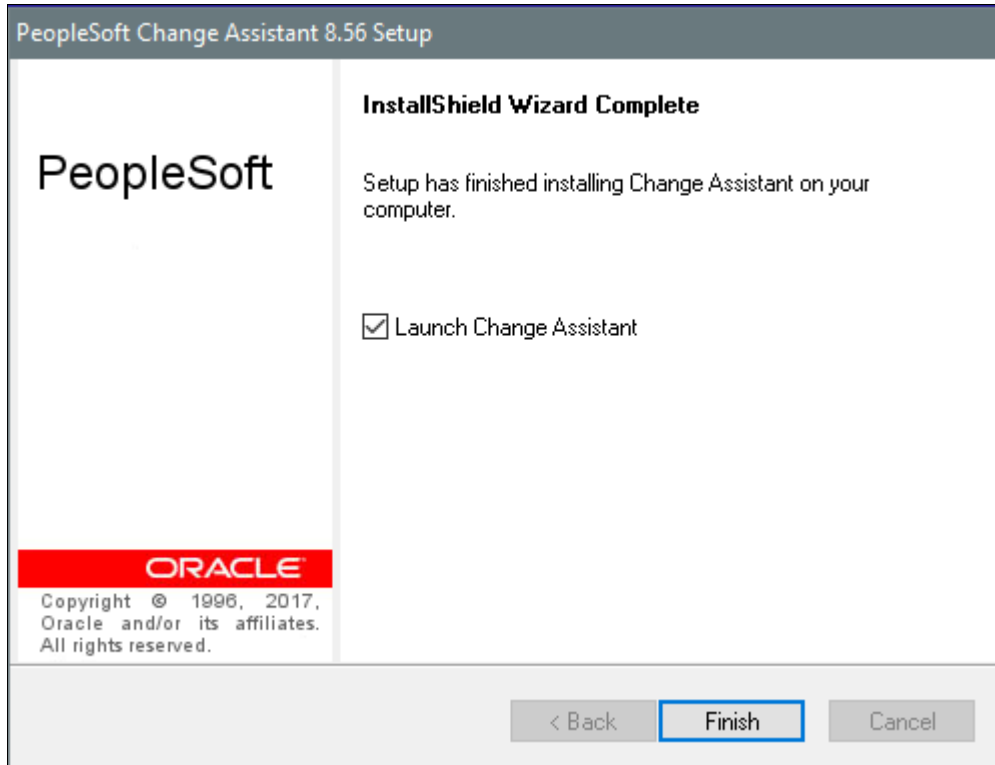
7. Click Back to review or change any settings.

If you are satisfied with your settings, click Next to begin copying files. PeopleSoft Change Assistant copies files to the designated directory.



PeopleSoft Change Assistant Setup progress indicator window

8. Click Finish to complete the installation process at the window with the text "Setup has finished installing Change Assistant on your computer."



InstallShield Wizard Complete window

9. Reboot your machine after the installation process is complete.
10. To start PeopleSoft Change Assistant, select Start, Programs, PeopleSoft Change Assistant 8.56, Change Assistant.

On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleSoft Change Assistant 8.56, Change Assistant.

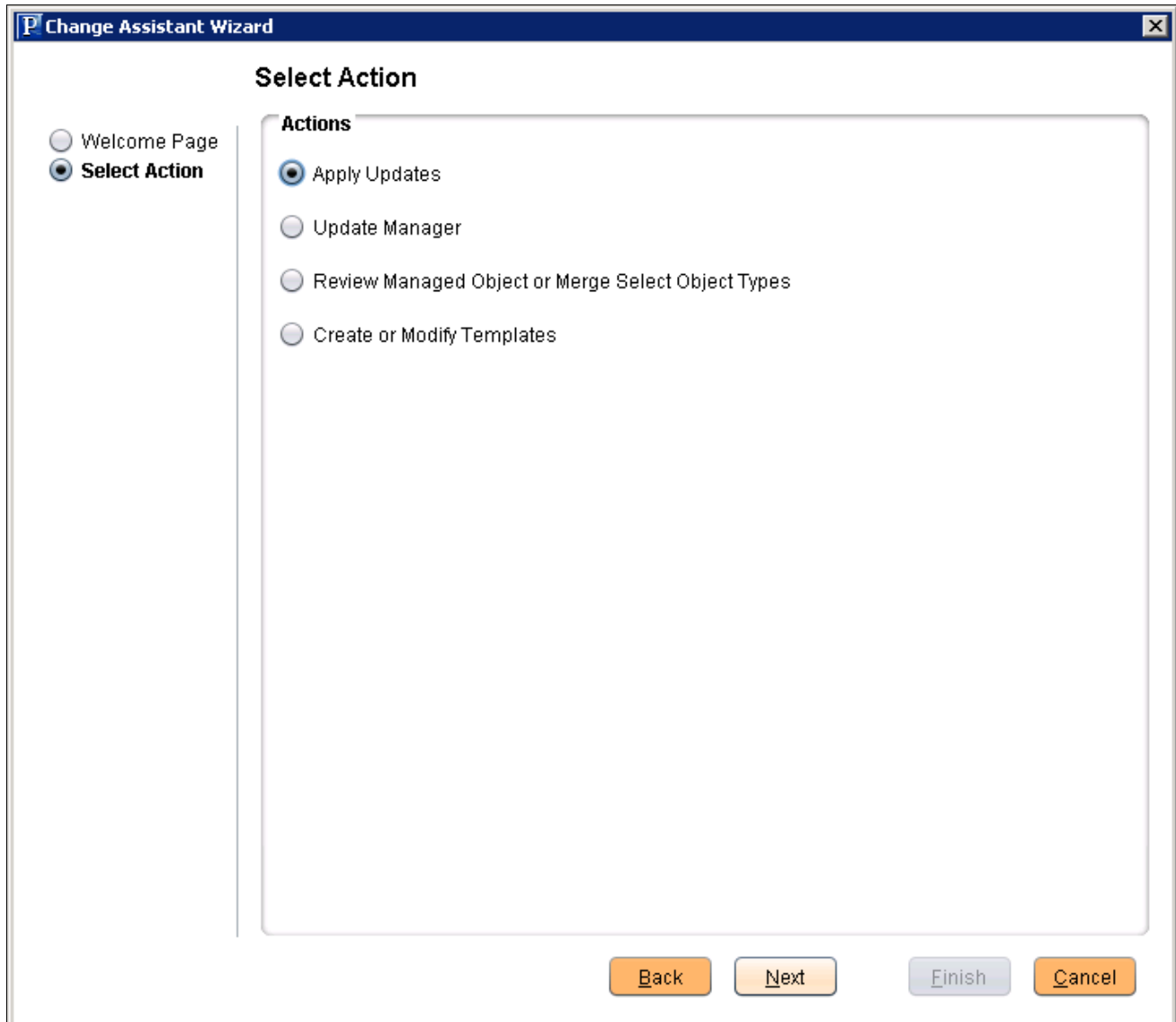
---

**Note.** If you are running on a Microsoft Windows operating system with User Account Control (UAC), such as Microsoft Windows 7, you must have administrative privileges to run Change Assistant. Right-click `changeassistant.exe` and select Run as administrator.

---

When you first start Change Assistant, you see a welcome window. After you click Next, you see the Select Action page.

11. Select one of the actions on the Select Action page, as shown on this example, and click Next.



Change Assistant Wizard Select Action window

See the information on opening Change Assistant for the first time in the *PeopleTools: Change Assistant and Update Manager* product documentation for descriptions of these selections:

- Apply Updates
- Update Manager
- Review Managed Object or Merge Select Object Types
- Create or Modify Templates

## **Task 12-3: 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 12-3-1: 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 12-4: 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 12-4-1: 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 12-4-2: 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 12-4-3: 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 12-4-4: 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 12-5: 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:

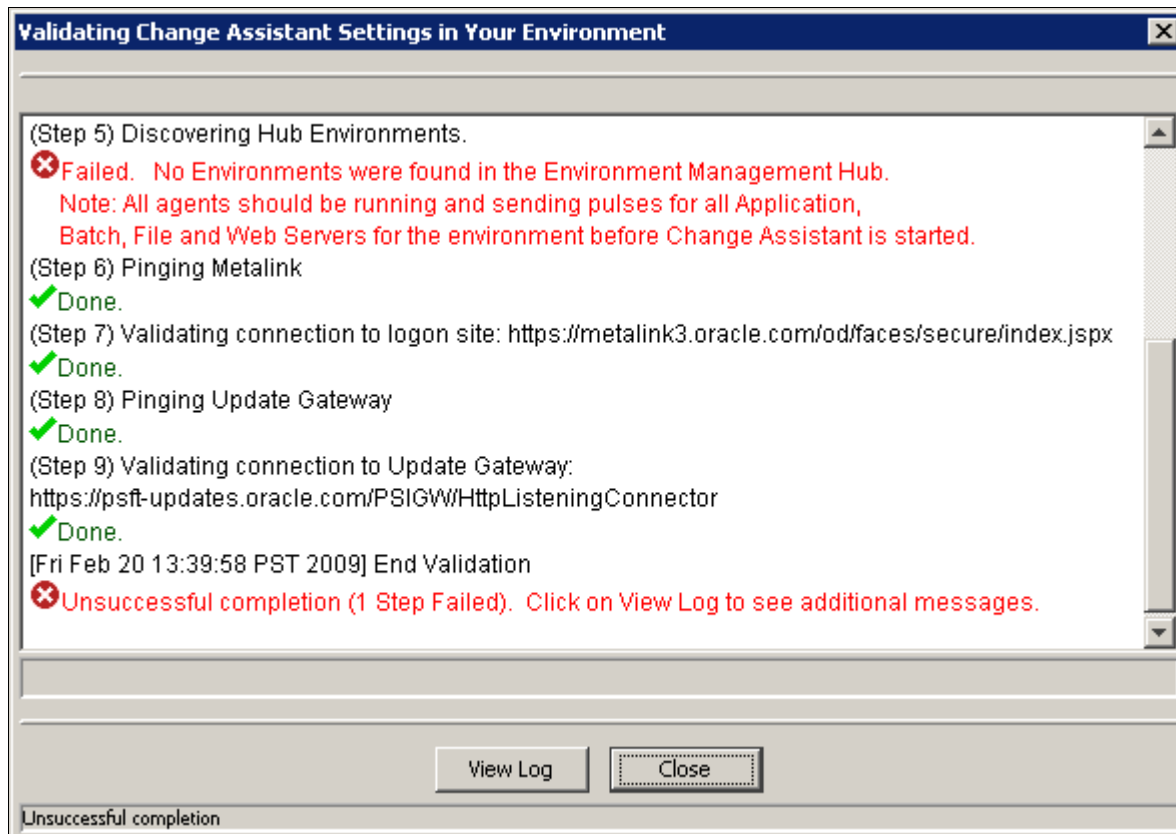
- Locating valid SQL query tools required to run SQL scripts.
- Testing the Environment Management hub and ensuring that PeopleSoft Change Assistant can communicate with it.
- Testing My Oracle Support and ensuring that PeopleSoft Change Assistant can communicate with it.

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"):



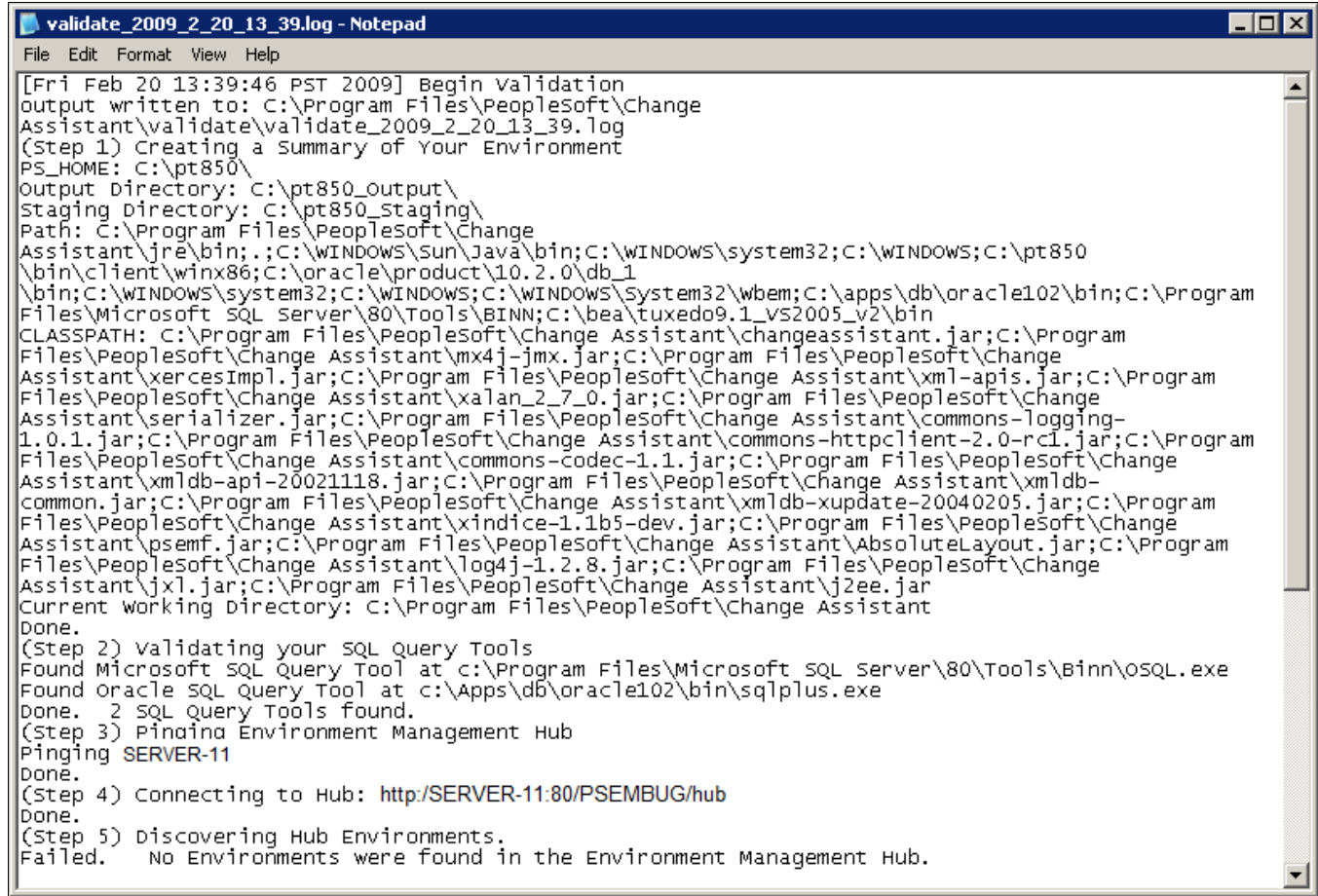
Validating Change Assistant Settings in Your Environment

---

**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:



```

[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\xml-db-api-20021118.jar;C:\Program Files\PeopleSoft\Change Assistant\xml-db-
common.jar;C:\Program Files\PeopleSoft\Change Assistant\xml-db-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) Pingina 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 13

# Installing PeopleSoft Change Impact Analyzer

This chapter discusses:

- Prerequisites
- Removing PeopleSoft Change Impact Analyzer Installations
- Installing PeopleSoft Change Impact Analyzer
- 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.
- You must install JDBC drivers for connectivity to your database platform. PeopleSoft Change Impact Analyzer uses Type 4 JDBC drivers by default.

You can normally obtain JDBC drivers from your RDBMS vendor. Search the vendor's web site or contact the vendor for information.

## See Also

*PeopleTools: Change Impact Analyzer*

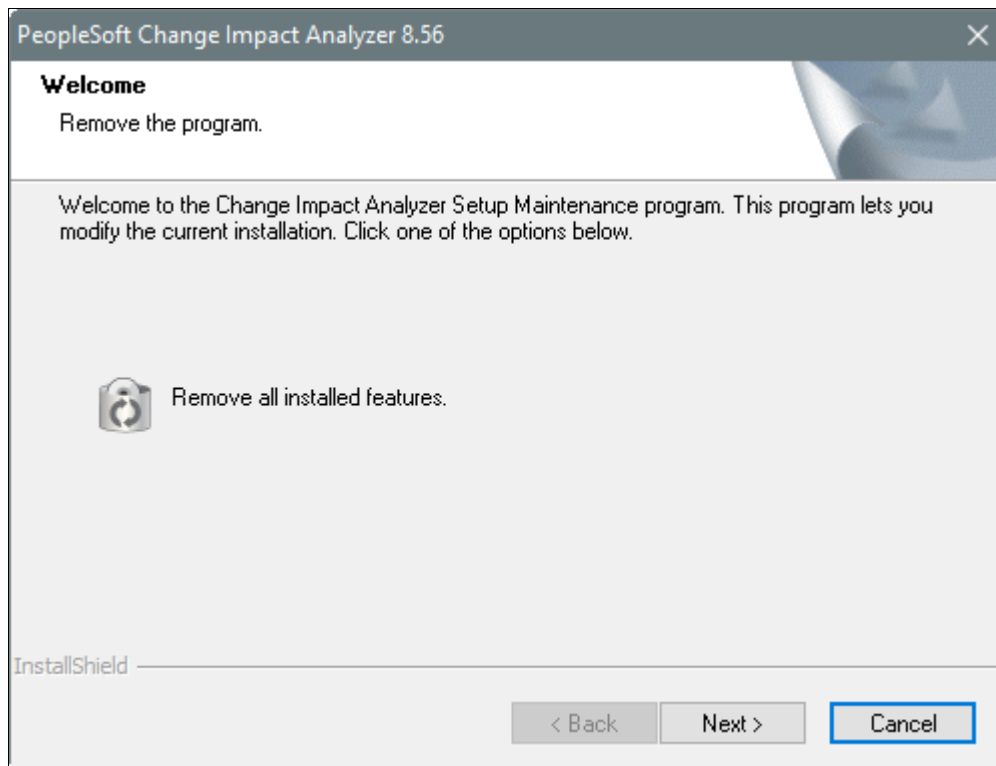
## Task 13-1: Removing PeopleSoft Change Impact Analyzer Installations

---

To uninstall an existing installation of PeopleSoft Change Impact Analyzer, use the setup utility for the current release, as follows:

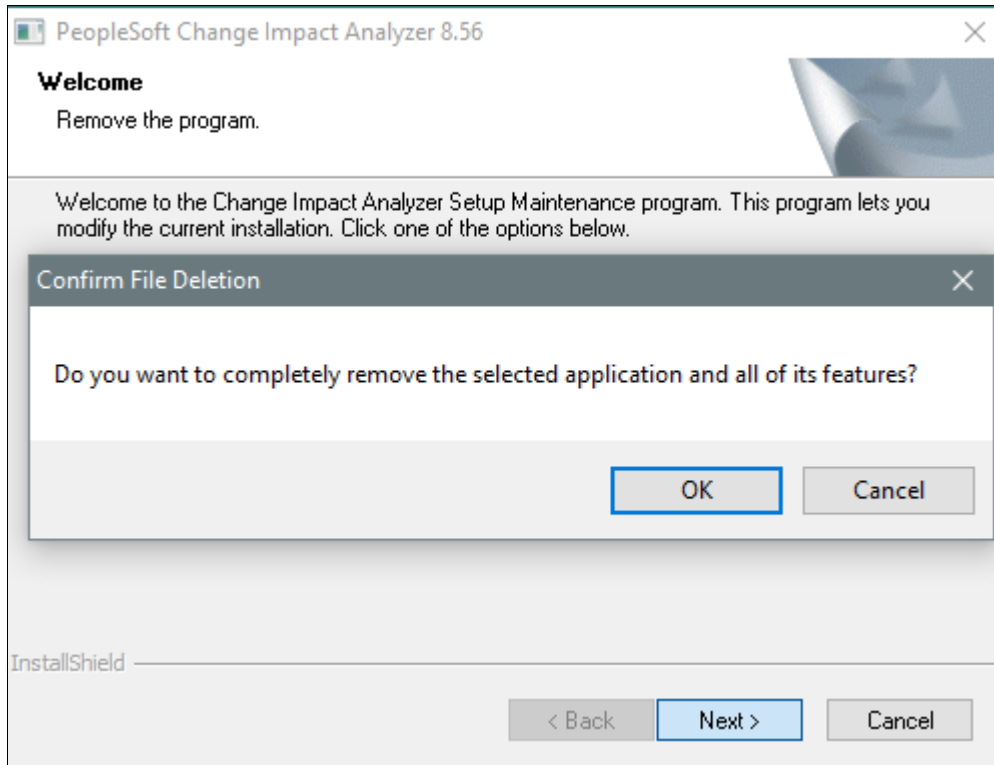
1. From the *PS\_HOME*\setup\PscIA directory, run *installCIA.exe*.
2. If there is an existing installation of PeopleSoft Change Impact Analyzer on your machine, the Remove the program window appears.

Click Next to remove all installed features.



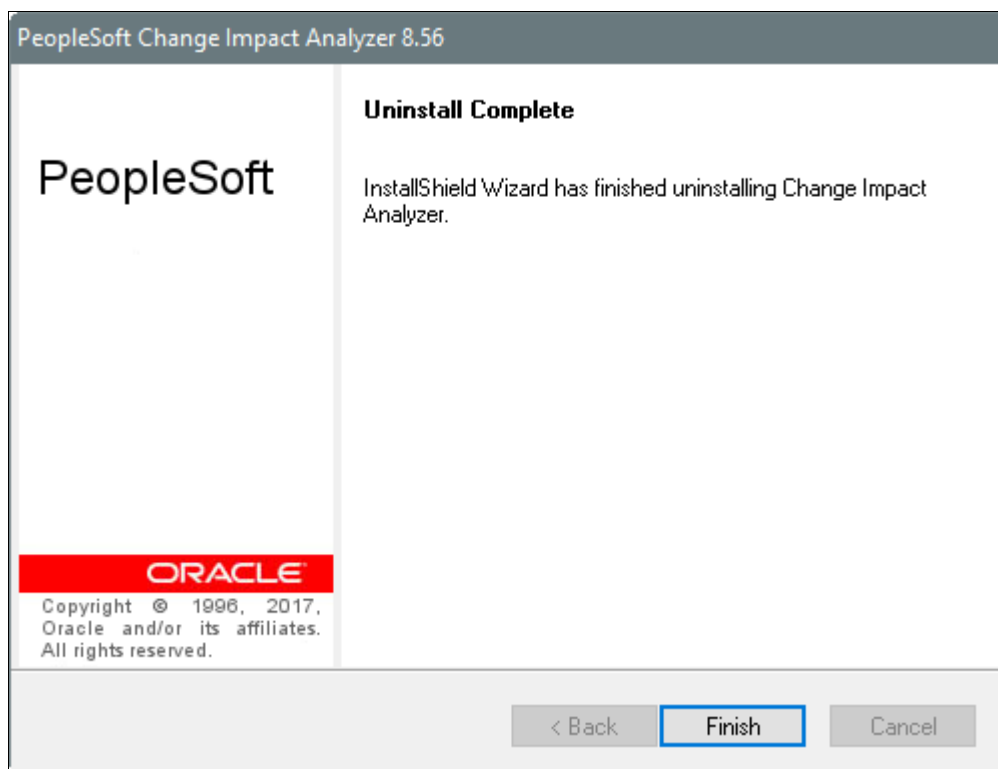
PeopleSoft Change Impact Analyzer Remove the program window

3. Click OK to confirm that you want to remove the previous PeopleSoft Change Impact Analyzer installation.



Confirm File Deletion message dialog box

- When the removal process is complete, click Finish on the Uninstall Complete window.



PeopleSoft Change Impact Analyzer Uninstall Complete window

- Use the instructions in the next section, Installing PeopleSoft Change Impact Analyzer, to install the current release.

## **Task 13-2: Installing PeopleSoft Change Impact Analyzer**

To install PeopleSoft Change Impact Analyzer and Rules Editor:



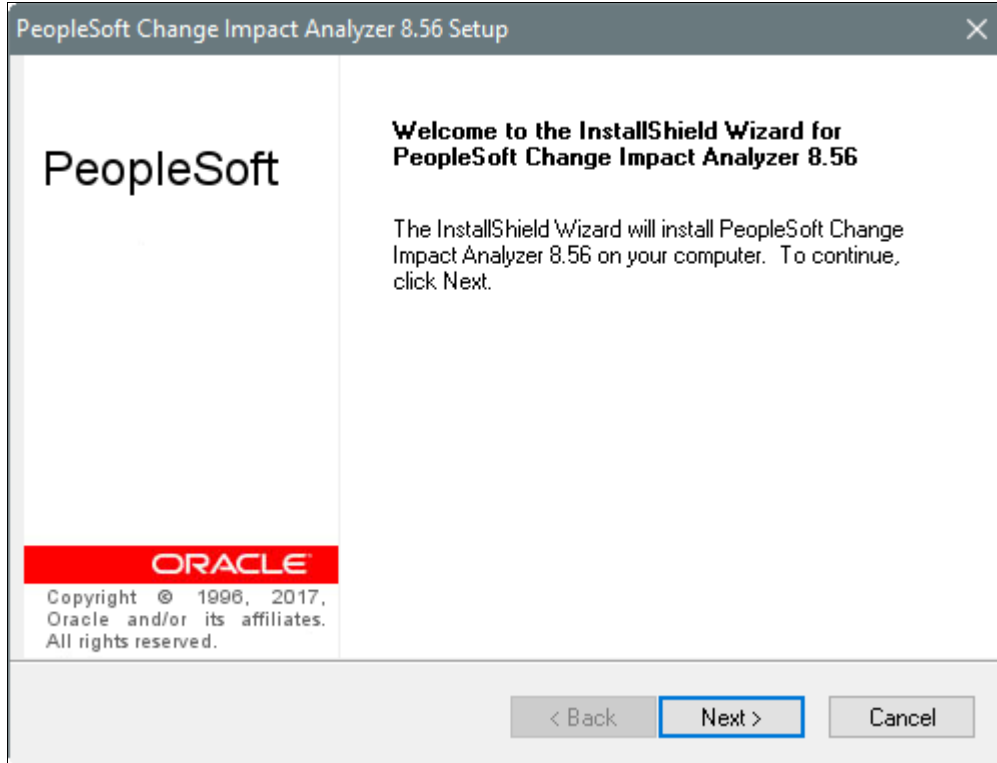
1. From the *PS\_HOME*\setup\PscIA directory, run *installCIA.exe*.

---

**Note.** If you installed PeopleSoft PeopleTools on a UNIX or Linux computer, you can copy *installCIA.exe* to a Microsoft Windows machine to install.

---

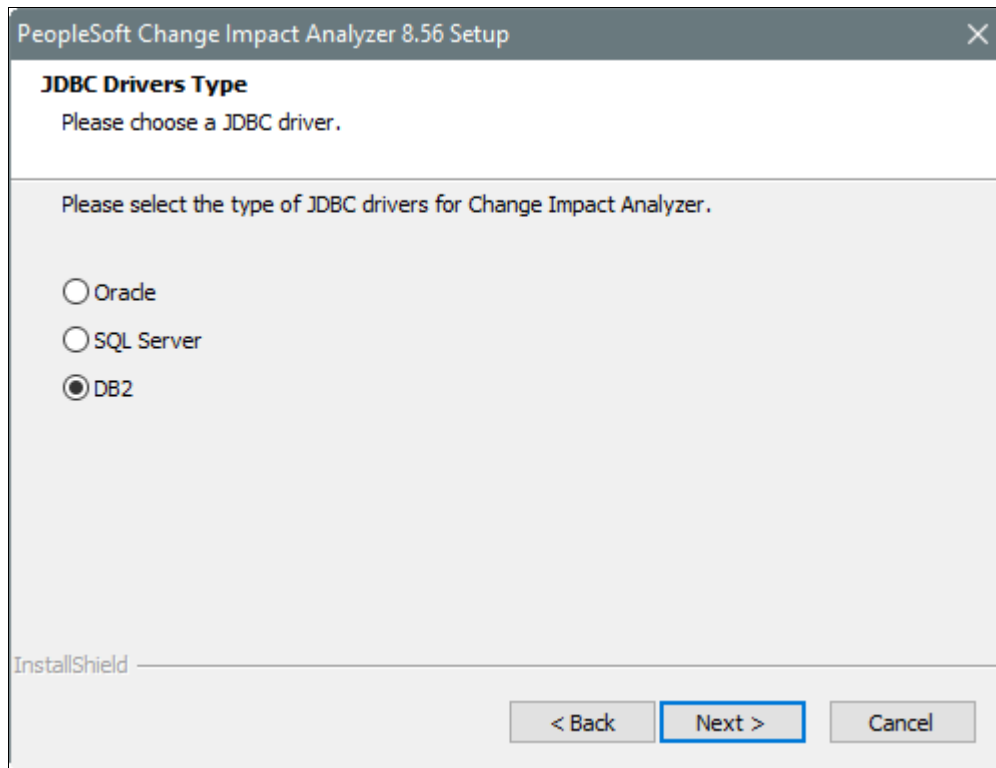
The Welcome window appears, as in this example. Click Next.



PeopleSoft Change Impact Analyzer Setup Welcome window

2. Select the type of JDBC drivers for your database platform.

In this example the option DB2, for DB2 z/OS or DB2/LUW, is selected.

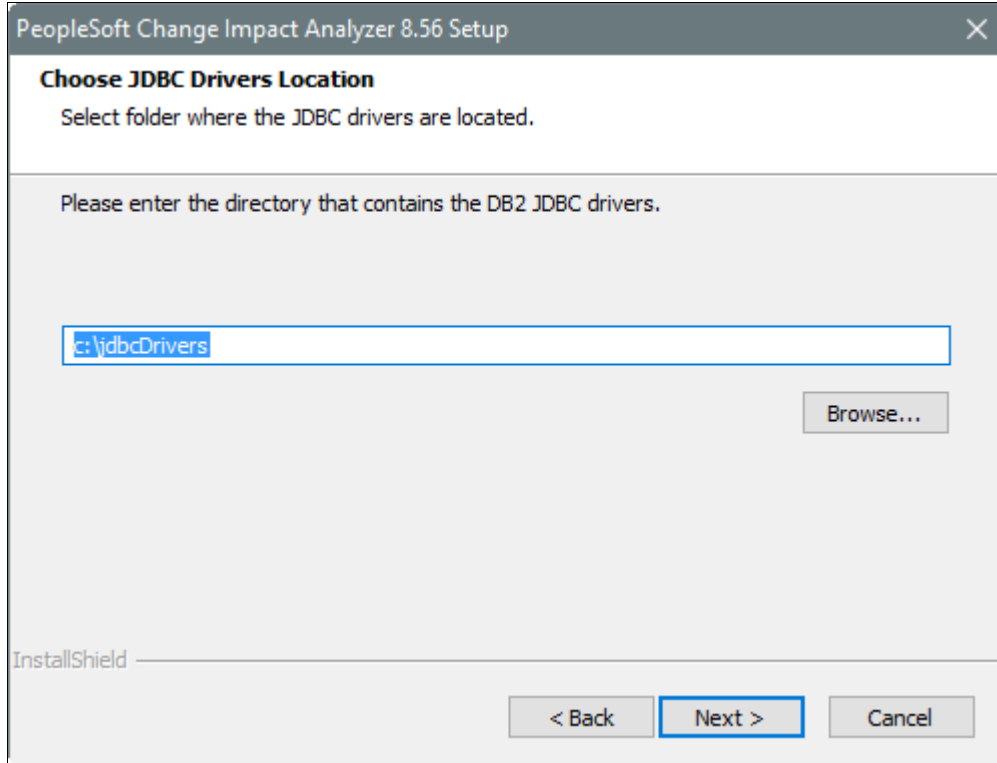


PeopleSoft Change Impact Analyzer Setup JDBC Drivers Type window

- 3. Browse to select the directory where the JDBC drivers are installed, or accept the default location.

**Note.** If the installation program cannot find the correct JDBC drivers, you will see a warning message after you click Next on the Choose JDBC Drivers Location window.

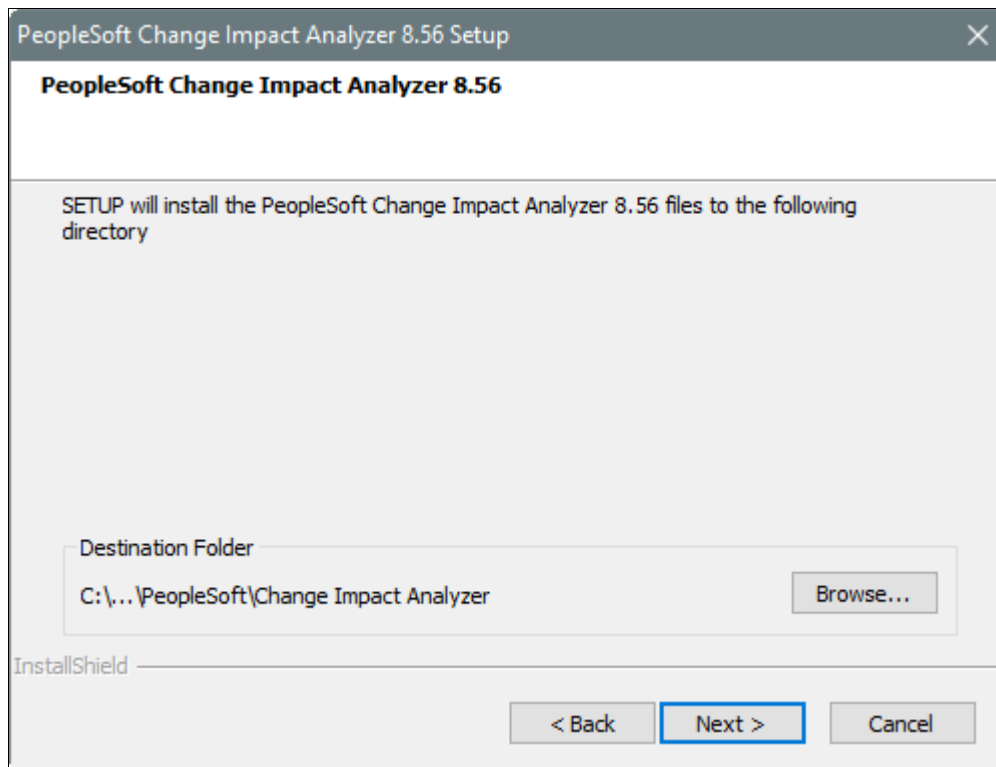
The following example shows the location where the JDBC drivers are installed by default, C:\jdbcDrivers.



PeopleSoft Change Impact Analyzer Setup Choose JDBC Drivers Location window

4. Browse to select the directory where PeopleSoft Change Impact Analyzer will be installed, or accept the default directory.

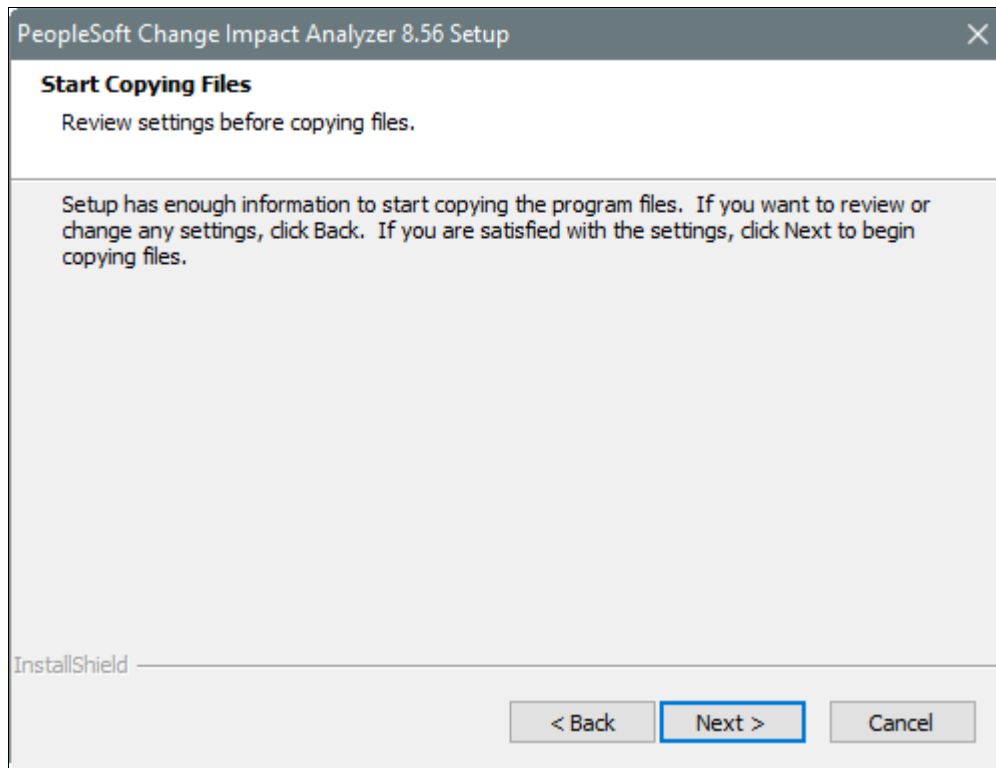
The default directory, which is truncated in this example, is C:\Program Files\PeopleSoft\Change Impact Analyzer.



PeopleSoft Change Impact Analyzer Setup window with default destination folder

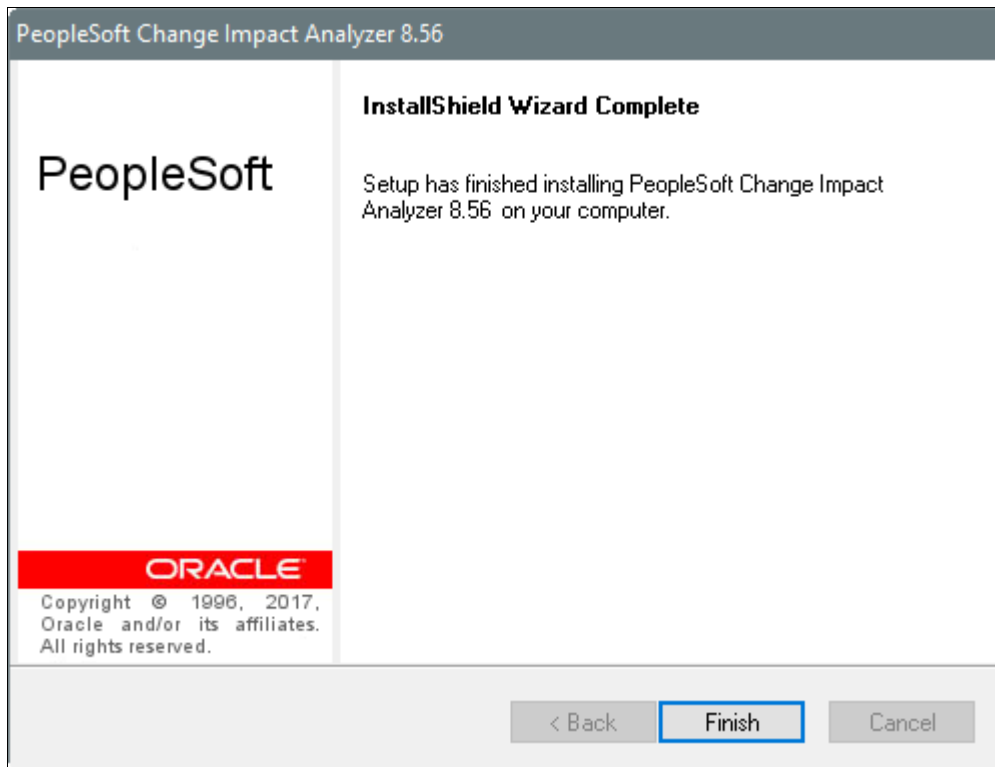
5. Click Back to review or change any settings.

If you are satisfied with your settings, click Next to begin copying files to the designated directory.



PeopleSoft Change Impact Analyzer Setup Start Copying Files window

- Click Finish to exit when the installation is complete, on the InstallShield Wizard Complete window.



PeopleSoft Change Impact Analyzer Setup InstallShield Wizard Complete window

- To start PeopleSoft Change Impact Analyzer, on Microsoft Windows 7, select Start, Programs, PeopleSoft 8.56, Change Impact Analyzer.

On Microsoft Windows 8 or 2012 R2, access the Apps screen and navigate to PeopleSoft 8.56, Change Impact Analyzer.

## Task 13-3: 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 13-3-1: 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

Enter the full path to the JDBC driver for szPath.

```
##### 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 13-3-2: 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 13-3-3: 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 14

# Adding New Product Modules

### **Task 14-1: Adding New Modules to PeopleSoft 8.4 Installations**

---

This task explains how to add new application modules to an existing PeopleSoft installation. Follow this procedure if, for example, you already installed HCM Benefits Administration and now you need to install Pension Administration.

When you add new application modules to an existing installation, you may overwrite files that were included as part of a patch or fixes, or customizations that you applied. For example, suppose you customize a report that is updated in a subsequent PeopleSoft release. If you install the update into your current working directory, your customized report will be overwritten with the newly installed, updated report.

The PeopleSoft system does not currently provide an automated way to notify you before overwriting customized modules or patch files. You can make preparations to protect important files from being overwritten. For your customized modules, you need to maintain a backup of any customizations. It is also a good idea to make a copy of your *PS\_HOME* directory before beginning this process, so that you can find and restore necessary patch files. Check My Oracle Support to identify any patches or fixes required for your installation.

See My Oracle Support, Patches & Updates.

To add new module(s) to PeopleSoft 8.4 installations:

1. Back up the database, file server, application server, Process Scheduler Server, and web server components of your current system.
2. Make sure you have the new license code that includes the new module(s). The new license code allows you to load the batch components for the new module(s).

See "Using the PeopleSoft Installer," Obtaining License Codes.

3. Install the PeopleSoft Application software on the file server.
4. When prompted, enter the new license code for your applications.  
Initially, all installation options will be selected. You must deselect those programs you do not wish to install.
5. Launch Data Mover in bootstrap mode by logging on with the access ID and password).  
Data Mover is located in *PS\_HOME*\bin\client\winx86\psdmt.exe.  
See Checking the Log Files and Troubleshooting, Running Data Mover, in the chapters on creating a database.
6. Select File, Database Setup and choose your database type in the resulting dialog.
7. Select Next and select add new product.
8. Select Finish and a Data Mover script that updates the license code will be generated in Data Mover.
9. Select File, Run script and your database updates are complete.
10. Install software to your batch server.

See the chapters on setting up Process Scheduler in this documentation.

11. Reapply all code customizations if needed.

---

**Note.** Remember to maintain backup copies of your customizations.

---

12. Compile and link COBOL.

See the chapters on installing and compiling COBOL in this documentation.

13. Verify that the appropriate Installation Records are selected.

If they are not checked, check them and save the page. To open the page, select Set Up <apptype>, Install, Installation Options, where <apptype> is CRM, Financials/Supply Chain Management, and so on. For example, Set Up CRM, Install, Installation Options. (For HCM the navigation is Set Up HCM, Install, Installation Table.)

14. Run the dddaudit and sysaudit SQR reports.

If you are swapping the base language, also run swpaudit.sqr.

See "Completing the Database Setup," Checking the Database.

15. Shut down all application servers.

16. Install software to your application server.

See the chapters on configuring the Application Server in this documentation.

17. Restart all required application servers.

18. Shut down all web servers.

19. Install software to your web server.

See the chapters on setting up the PeopleSoft Pure Internet Architecture in this documentation.

## Chapter 15

# Installing and Configuring DB2 Connect

This chapter discusses:

- Understanding DB2 Connect
- Verifying Supported Versions
- Defining DB2 Connect Architecture
- Setting Up DDF on the Mainframe
- Configuring TCP/IP on the Client
- Configuring the DB2 Connect Gateway on Windows
- Binding DB2 Connect Packages for an EBCDIC Installation
- Binding DB2 Connect Packages for a Unicode Installation
- Binding DB2 Connect Packages for DB2 Connect Version 10 or later
- Setting DB2CodePage for a Unicode Database
- Setting Up the DB2 Connect Gateway on UNIX
- Confirming DB2 Connect/ODBC Settings
- Setting CLI/ODBC Trace with the Client Configuration Assistant

## Understanding DB2 Connect

---

This chapter discusses installing and configuring DB2 Connect connectivity for z/OS. The points during the installation when you will need to perform these procedures are noted in the chapters where they apply. You will need to set up connectivity on the following locations:

- On the mainframe.
- On any application server (Microsoft Windows or UNIX).
- On any Microsoft Windows or UNIX Server acting as DB2 Connect gateway.
- On any dedicated Microsoft Windows or UNIX batch server.
- On any Microsoft Windows client that will be making a two-tier connection to the database; this is required for any clients that will be running COBOL or SQR batch processes locally, but not for clients that are connecting exclusively in three-tier and running all batch processes on the server.

This chapter describes specific environment variables and parameters that you will need to set for each DB2 Connect component so that it will work optimally with PeopleSoft software. For the complete instructions on installing DB2 Connect, refer to the DB2 Connect product documentation.

## Verifying Supported Versions

---

To use PeopleSoft PeopleTools with DB2 Connect, verify the following release information:

- Consult the supported platform information on My Oracle Support to verify that Oracle supports the version of DB2 Connect that you intend to use with your particular release of DB2 for z/OS.
- Consult My Oracle Support also to verify that Oracle supports the particular release of UNIX or Microsoft Windows on which you plan to install DB2 Connect.
- When configuring DB2 Connect on supported releases of either Microsoft Windows or UNIX, no additional TCP/IP software is required.
- TCP/IP for z/OS is required on the mainframe.
- See My Oracle Support for the minimum required z/OS version for the current PeopleSoft PeopleTools release.

### See Also

My Oracle Support, Certifications

## Defining DB2 Connect Architecture

---

This section discusses:

- Understanding DB2 Connect Architecture
- Using DB2 Connect Enterprise Edition
- Using DB2 Connect Personal Edition
- Defining PeopleSoft Three-Tier Configuration with DB2 Connect

### Understanding DB2 Connect Architecture

DB2 Connect connects your client PeopleSoft applications to DB2's Distributed Data Facility (DDF) components on the mainframe. DB2 Connect performs the following tasks when connecting to DB2 for z/OS with DDF:

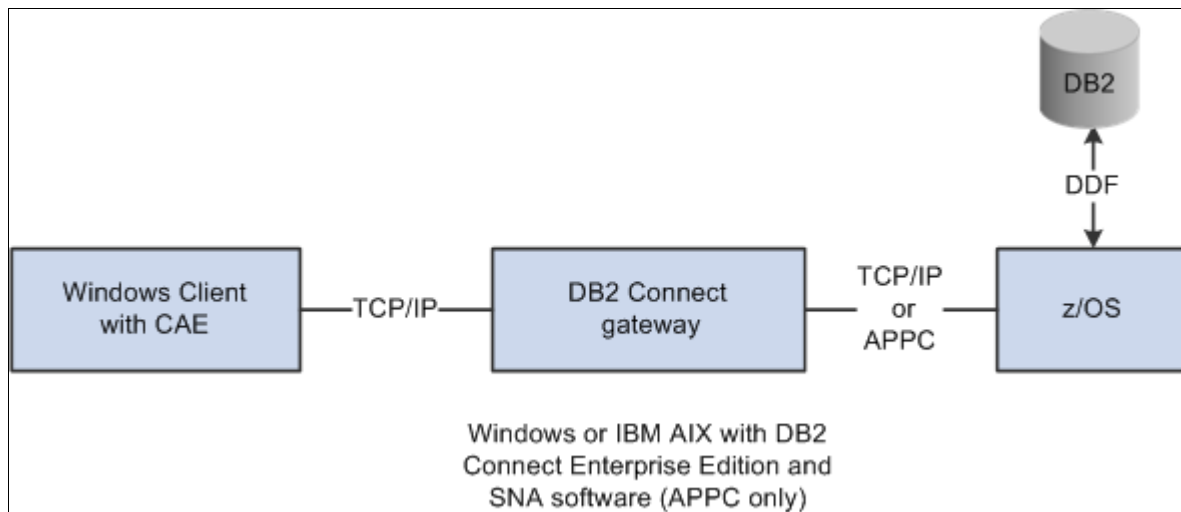
- Provides a control point for client connections.
- Performs the proper character conversions when receiving data from DB2.
- Responds to the connect requests from PeopleSoft client computers and creates corresponding TCP/IP conversations with DDF.
- Sends requests and replies between client computers and DDF.

IBM offers two different DB2 Connect products: DB2 Connect Enterprise Edition and DB2 Connect Personal Edition.

## Using DB2 Connect Enterprise Edition

DB2 Connect Enterprise Edition requires a gateway machine; individual clients connect to the gateway machine using DB2 Connect CAE. The DB2 Connect gateway manages the TCP/IP conversation with the DDF on the mainframe. DB2 Connect Enterprise Edition can be used with either the PeopleSoft two-tier or three-tier architecture.

The DB2 Connect CAE (Client Application Enabler) component of DB2 Connect Enterprise Edition comes with the base product and must reside on each Microsoft Windows client machine. It provides a logical connection between the PeopleSoft client and the DB2 Connect gateway machine. The router sends the PeopleSoft SQL requests by way of network protocol to the gateway, and then receives the result set in return. The following diagram shows the connections between the Microsoft Windows client machine, the DB2 Connect gateway, and the mainframe:

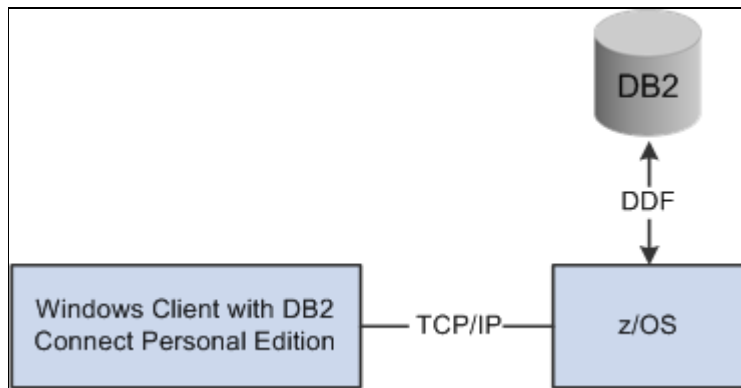


DB2 Connect Enterprise Edition architecture

The communication between the Microsoft Windows client machine and the DB2 Connect gateway is accomplished using the TCP/IP protocol. The physical connection between the DB2 Connect gateway and the mainframe can be made by a Token Ring attachment, a bridged Token Ring attachment, Ethernet, FDDI, Escon Channels, or a leased-line or dial-up SDLC connection. This connectivity is a critical piece for performance such that it should be configured with a high-bandwidth and located very close to the mainframe.

## Using DB2 Connect Personal Edition

DB2 Connect Personal Edition is installed on each client workstation and allows clients to connect directly to DB2 DDF. It does not require an intermediary DB2 Connect gateway to access your database. The following diagram illustrates the connection between DB2 Connect Personal Edition and the mainframe:



DB2 Connect Personal Edition architecture

DB2 Connect Personal Edition allows direct TCP/IP connection to the host with no gateway requirement.

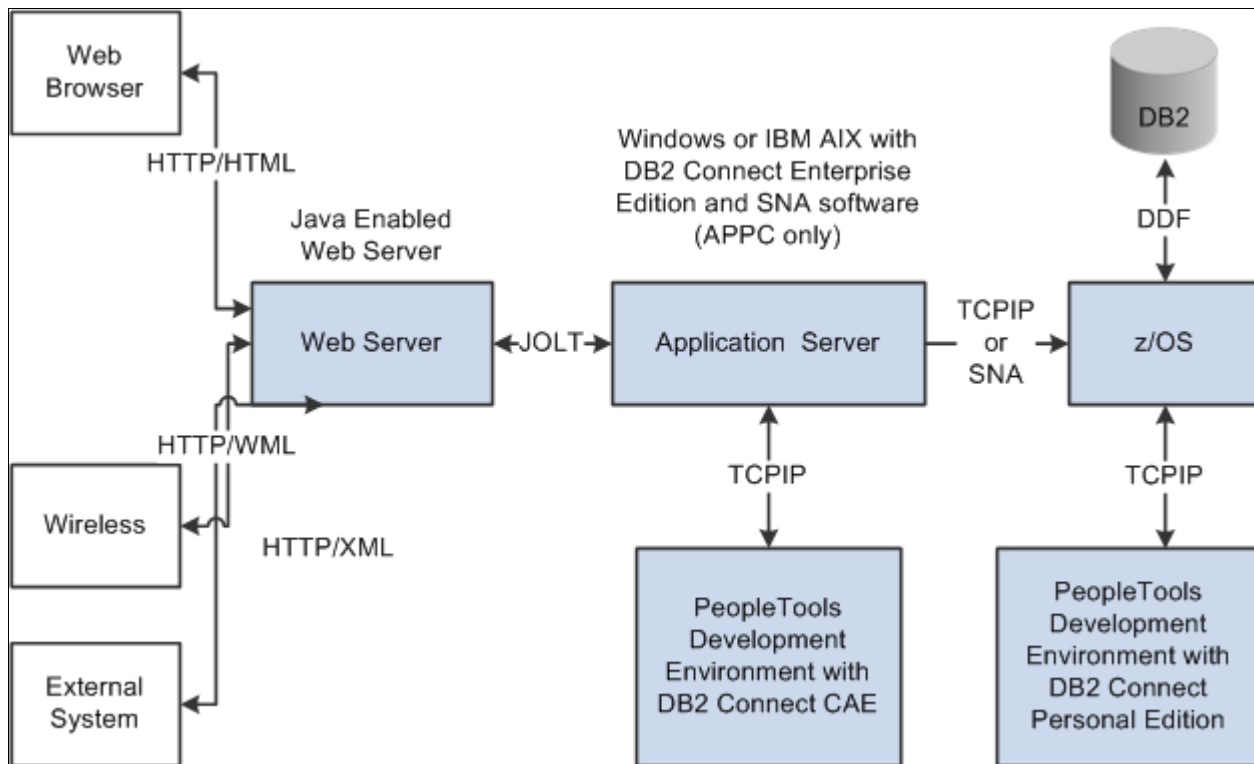
## Defining PeopleSoft Three-Tier Configuration with DB2 Connect

The PeopleSoft application server processes all transactions requested by Windows clients and Web servers and sends SQL to the database server using DB2 Connect. The Oracle Tuxedo middleware product manages all these transactions in the application server. In addition to Tuxedo, the server hosting the PeopleSoft application server must be configured with DB2 Connect Enterprise Edition to establish connectivity to the database server.

On DB2 for z/OS, the application server can be configured either on Microsoft Windows, IBM AIX, Oracle Solaris or HP-UX Itanium. Since all SQL is handled in the application server, it is paramount for performance reasons that the application server machine be connected to the mainframe via Fast Ethernet, Escon channel attached, FDDI, or some comparable network connection that allows maximum through-put.



When connecting with the PeopleSoft three-tier, the individual client workstations do not require DB2 Connect CAE. No connectivity is required on the client machines for PeopleSoft three-tier connectivity; communication between client workstation and application server is handled with Oracle Tuxedo. If clients have specific needs to connect via two-tier (for example, to run Data Mover, client COBOL, perform upgrade steps), they will need to either install DB2 Connect Personal Edition for a direct connection to DDF on the mainframe, or install DB2 Connect CAE and connect to DDF via the DB2 Connect EE gateway. In either case, they will still be connecting via the DB2 Connect option but will not be using the PeopleSoft application server. The following diagram illustrates the difference in the interaction between the various servers when using DB2 Connection Enterprise Edition and a gateway machine, or using DB2 Connect Personal Edition.



Connecting through a gateway machine using DB2 Connection Enterprise Edition and connecting directly using DB2 Connect Personal Edition

## Task 15-1: Setting Up DDF on the Mainframe

DDF is one of the DB2 address spaces which allows applications running in a remote application requestor environment that supports IBM's Distributed Relational Database Architecture (DRDA) to access data in a DB2 for OS/390 subsystem. DDF and DB2 Connect communicate with each other using the TCP/IP protocol. The services DDF provides include:

- Receiving client requests from DB2 Connect.
- Performing the proper character conversions when receiving data from DB2.
- Forwarding requests to and receiving responses from DB2 for z/OS.
- Building response messages and returning them to DB2 Connect, which in turn forwards the response messages to the client.
- Managing the communication protocol (TCP/IP) and DB2 for z/OS interaction. This includes maintaining the DB2 for z/OS SQLCA and SQLDA data structures.

- Managing and recovering from exception conditions.

See *IBM's DB2 Administration Guide*

To set up DDF on the mainframe:

1. Use the Change Log Inventory Utility to update the BSDS. The SYSIN DD card should specify the following values:

```
DDF LOCATION=<location name>
LUNAME=<vtam appl id>
PASSWORD=<password>
```

2. Start DDF (-STA DDF).
3. When DB2 is started you should see the LU Name and port number for the DB2 for z/OS Distributed Data Facility (DDF). Look at the DDF startup messages in the system log and you should see information similar to the following:

```
DSNL004I %Z DDF START COMPLETE
LOCATION DB2DSNZ
LU NETA.DB2APPLZ
GENERICLU -NONE
DOMAIN sysaoe.peoplesoft.com
TCPPORT 5070
RESPORT 5071
```

## Task 15-2: Configuring TCP/IP on the Client

---

Use the following procedure to configure TCP/IP on the client.

1. Obtain the host name or IP address of the z/OS server that you will be connecting to. You may need to contact your network administrator to obtain the IP address. You can test the IP address by attempting to ping it using the `ping hostname` command.

```
C:\ping mvspstown
PING mvspstown.peoplesoft.com: (207.135.44.20): 56 data bytes
64 bytes from 207.135.44.99: icmp_seq=0 ttl=56 time=10 ms
64 bytes from 207.135.44.99: icmp_seq=1 ttl=56 time=5 ms
64 bytes from 207.135.44.99: icmp_seq=2 ttl=56 time=9 ms
64 bytes from 207.135.44.99: icmp_seq=3 ttl=56 time=5 ms
```

You can also obtain the host's IP address by entering TSO NETSTAT HOME from the z/OS server.

2. Obtain the Port number to use to connect to target DB2 subsystem. The port number must be a unique value and can be obtained by looking in DB2MSTR at the DDF startup. The parameter TCPPORT identifies the port used for that DB2 subsystem. You may need to contact your database administrator for TCPPORT used by DDF at startup.
3. Catalog a TCP/IP Node.

---

**Note.** The TCPIP Node will automatically get cataloged when you create a Database Alias via the Client Configuration Assistant. In the previous release of the product, known as DDCS, the TCPIP Nodes had to be cataloged manually using the steps below. Manually cataloging the Nodes is no longer the only option. You may skip this step if using the Client Configuration Assistant. To see the Nodes that are currently cataloged, type the following line in Command Line Processor: `Db2 => list node directory`. You can also use the `uncatalog node` command to remove a node catalog.

---

You must add an entry to the client's node directory to describe the remote node. This entry specifies the node name, the hostname (or *ip\_address*), and the port number. To catalog a TCP/IP node, perform the following steps from the Command Line Processor:

```
Db2 => catalog tcpip node node_name remote [hostname|ip_address] server=>
      [svccname|port_number]
```

For example, to catalog a remote server with the IP Name MVSPTOWN on the node called *DB2DSNT*, using the port number *5070*, enter the following:

```
Db2 => catalog tcpip node DB2DSNT remote MVSPTOWN server 5070
```

#### 4. Catalog the Database.

---

**Note.** The Database will automatically get cataloged when you create a Database Alias via the Client Configuration Assistant. In the previous release of the product, known as DDCS, the Database had to be cataloged manually using the steps below. Manually cataloging the database is no longer the only option. You may also skip this step if using the Client Configuration Assistant. To see the Databases that are currently cataloged, enter the following line in Command Line Processor: `Db2 => list database directory`. You can also use the `uncatalog database` command to remove a database catalog.

---

#### 5. Before a client application can access a remote database, the database must be cataloged on the TCPIP Node.

```
DB2 => catalog database database_name as database_alias at node node_ =>
      name
```

For example, to catalog a remote database *PT800T8* so that it has the alias *PT800T8*, on the node *DB2DSNT*, enter the following commands:

```
DB2 => catalog database PT800T8 as PT800T8 at node DB2DSNT
```

#### 6. Test connection to database. You can test the connection to the database using the following command:

```
Db2 => connect to database_alias user userid using password
```

For example, to connect to *database\_alias* *PT800T8* using valid mainframe id *PEOPLE1* and password *PASSWRD1* then enter the following:

```
Db2 => connect to PT800T8 user PEOPLE1 using PASSWRD1
```

Authentication takes place on the DB2 server, so *userid* and *password* must be valid mainframe ids. If the connection is successful, you will get a message showing the name of the database to which you have connected. This step is synonymous to the TEST button in Client Configuration Assistant. You can now execute SQL statements against the database.

## **Task 15-3: Configuring the DB2 Connect Gateway on Windows**

---

This section discusses:

- Configuring Database Connectivity on Clients with DB2 Connect Version 9.x or Earlier
- Configuring Database Connectivity on Clients with DB2 Connect Version 10.x or Later
- Configuring an ODBC Data Source for Connectivity on Microsoft Windows (Optional)

## Task 15-3-1: Configuring Database Connectivity on Clients with DB2 Connect Version 9.x or Earlier

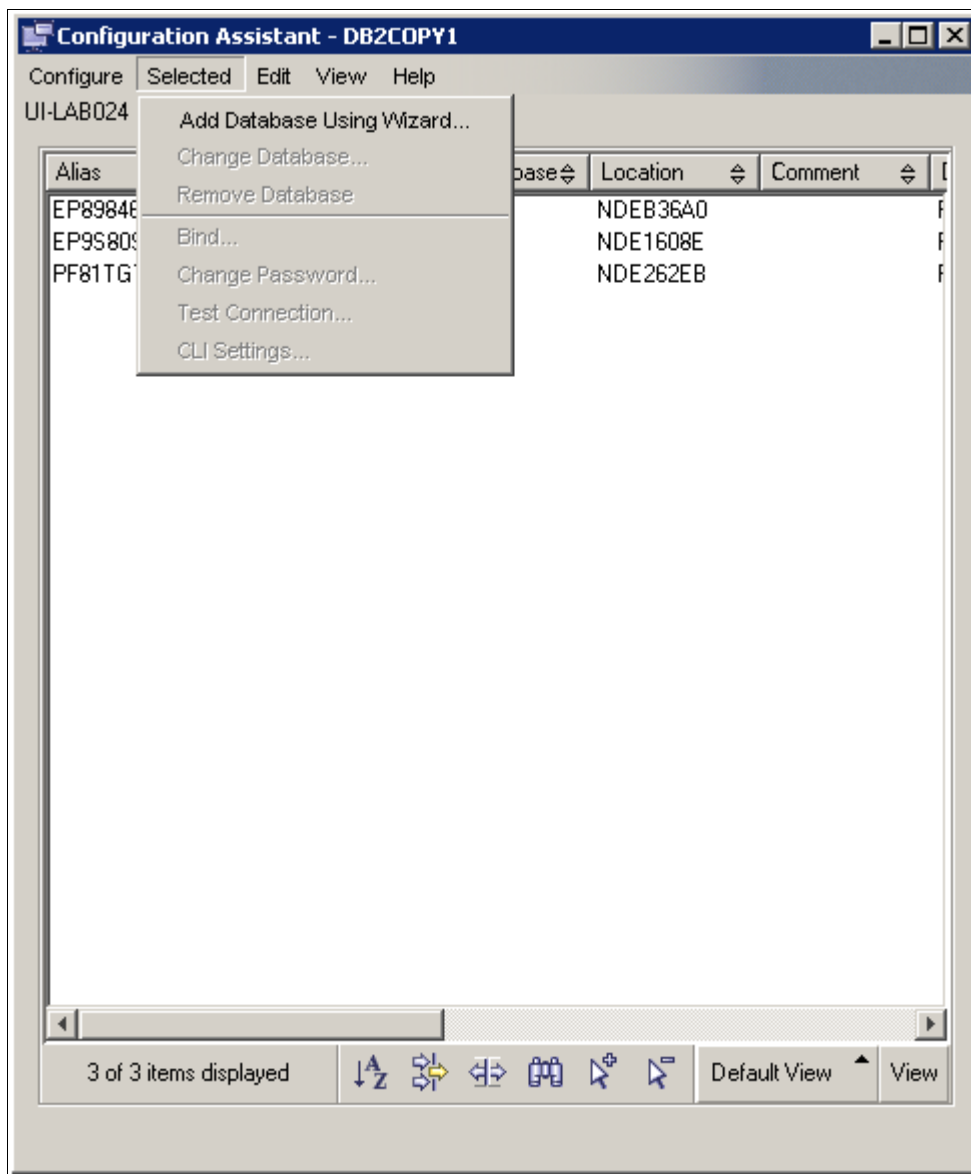
Use the information in this section if you are using DB2 Connect version 9.x or earlier, where x refers to the version number. To install the DB2 Connect Gateway to run properly with PeopleSoft applications, configure the DB2 Database in Client Configuration Assistant.

See *DB2 Connect Enterprise Edition Quick Beginnings manual*.

See My Oracle Support, Certifications, for information on supported versions.

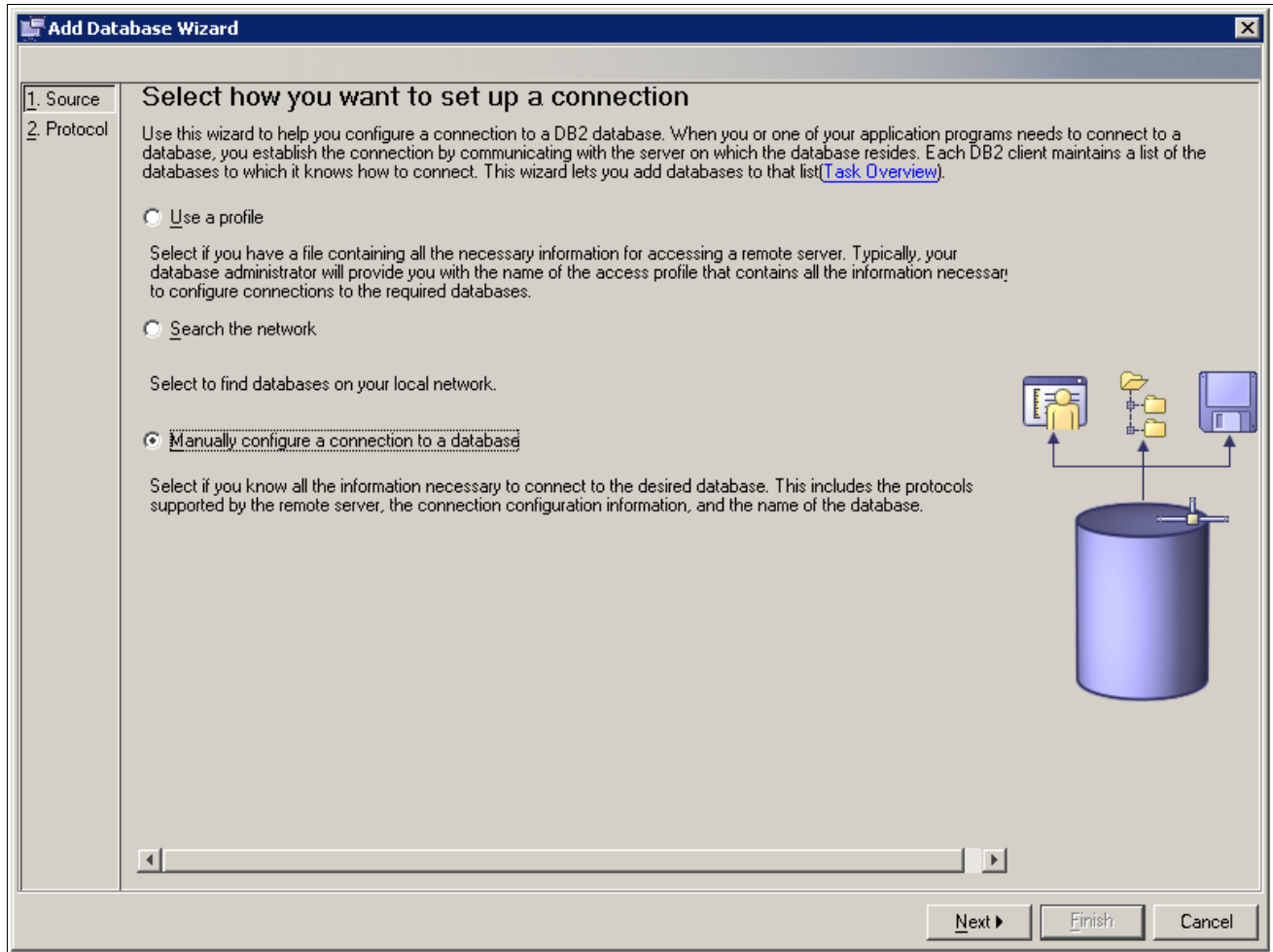
1. Open Configuration Assistant.

On the Selected menu, select Add Database Using Wizard. The Add Database Wizard window opens.



Using the Selected menu on the Configuration Assistant window

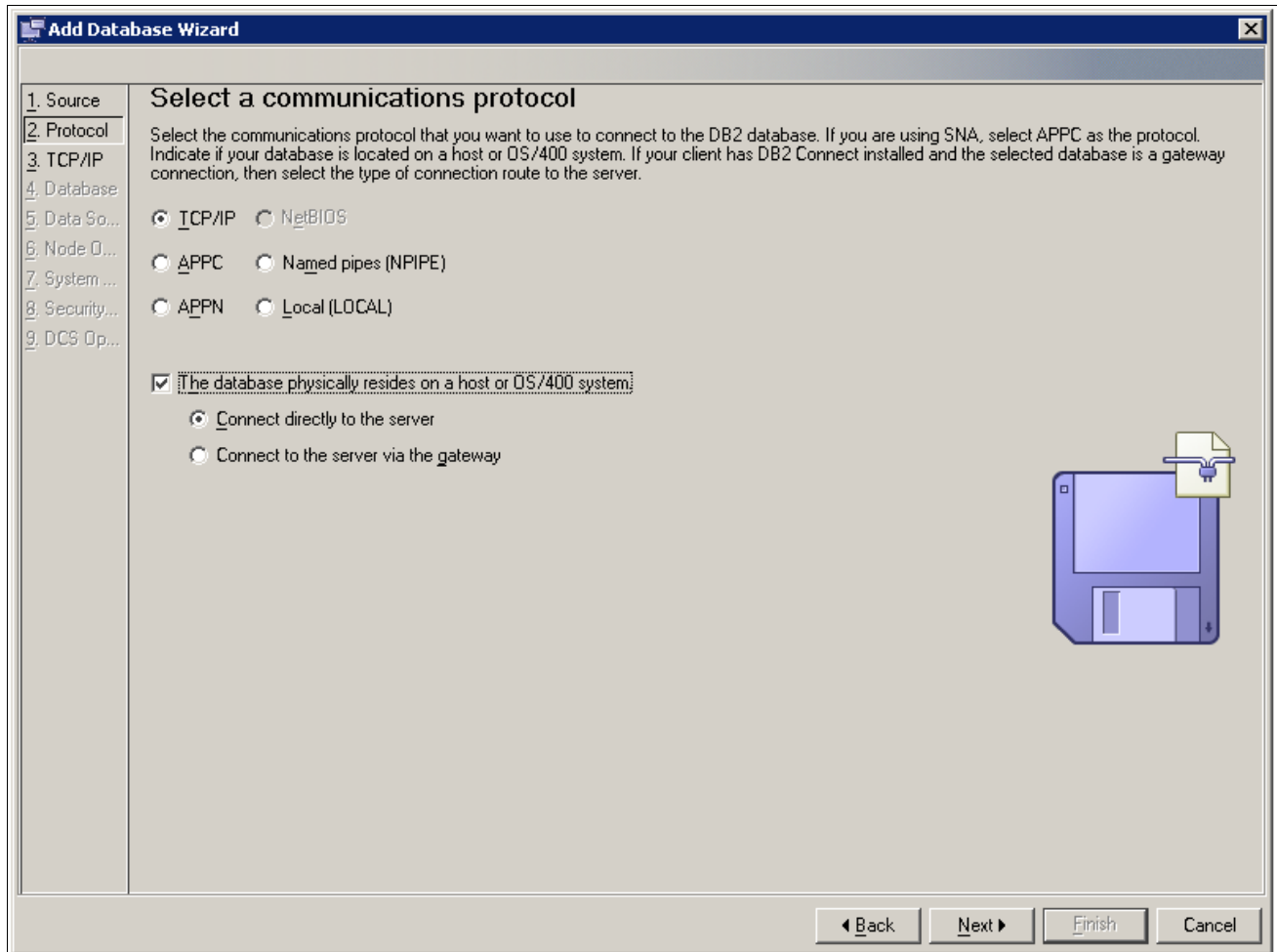
- 2. Select the radio button **Manually configure a connection to a database**, as shown in this example, and then click **Next** to continue.



Selecting a connection method on the Add Database Wizard window

3. Select the radio button TCP/IP and select the check box labelled The database physically resides on a host or OS/400 system, as shown in this example.

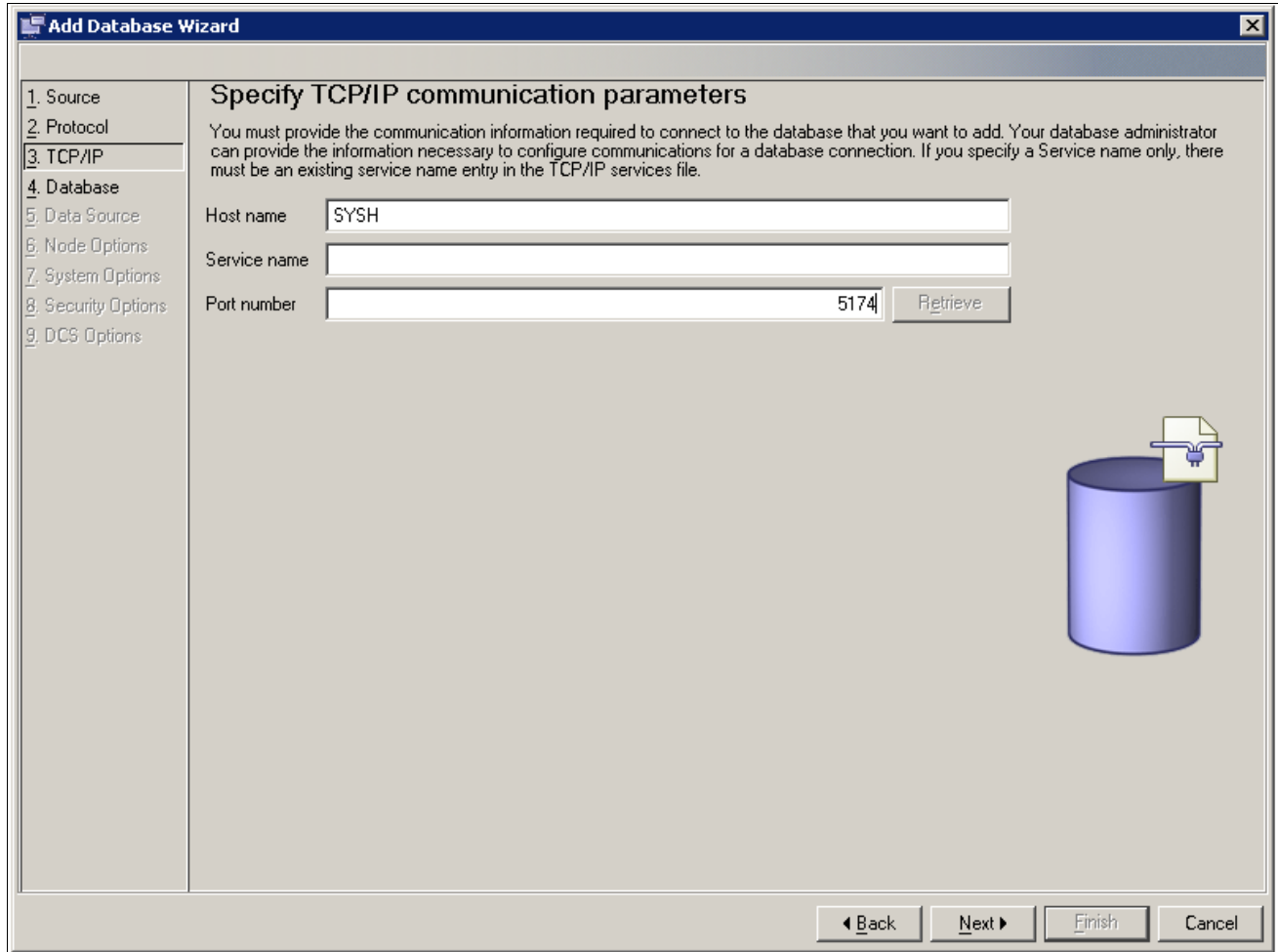
The Connect directly to the server option is selected by default. Leave this option selected and click the Next button.



Selecting a communications protocol on the Add Database Wizard window

- 4. Enter either the DNS or IP address of your mainframe in the Host name field.

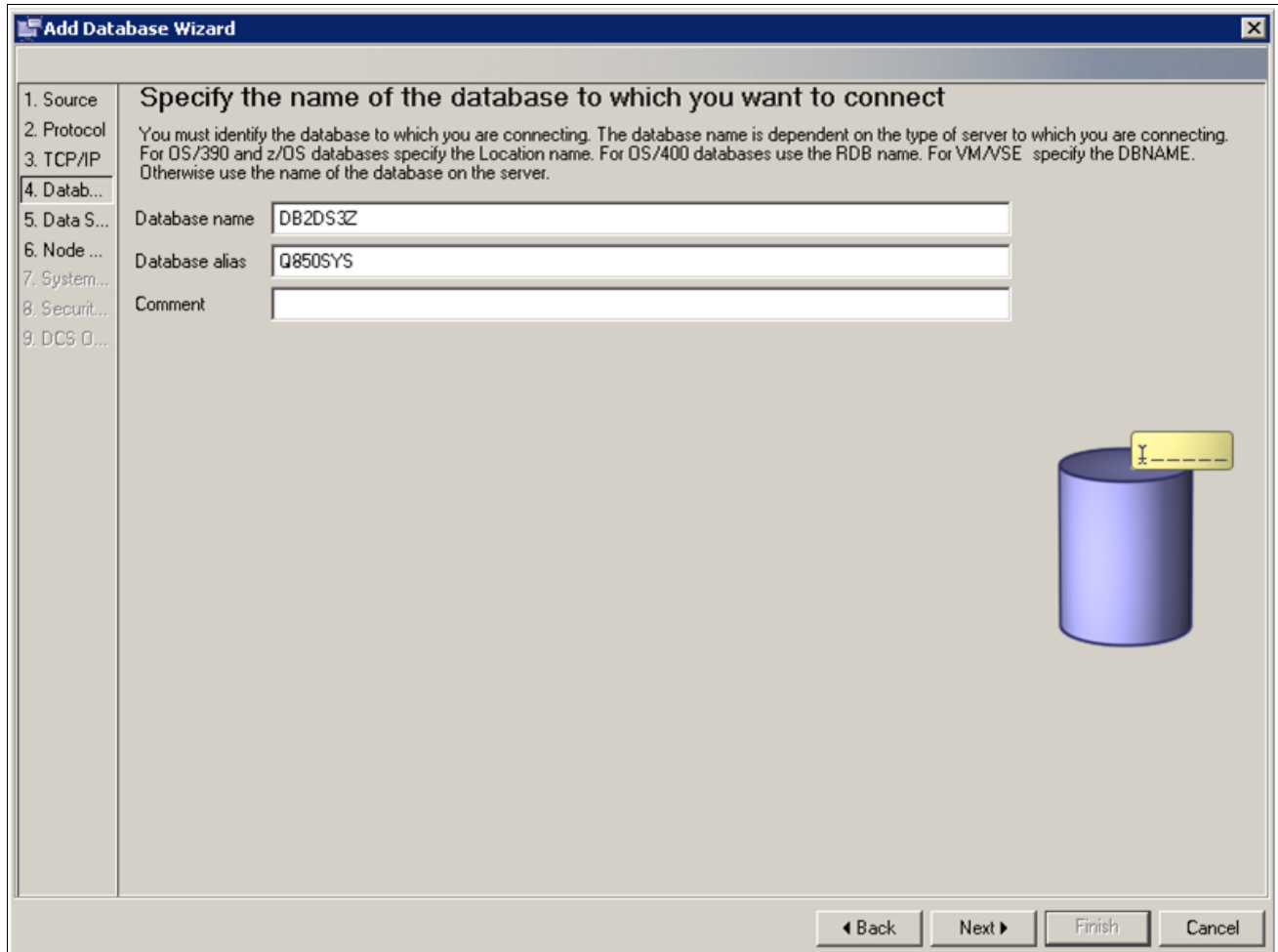
For the Port number, use the TCP/PORT used to start DDF for the DB2 subsystem that you want to connect to. You may need to consult your systems programmer for this value or you can look in the DB2MSTR log for the DB2 subsystem. In this example, the Host name is SYSH.



Specifying communication parameters on the Change Database Wizard window

5. Enter the database name defined in your LU in the Target database field in the entry box Database name, which is DB2DS3Z in this example.

For Database alias, enter the name of the database, Q850SYS in this example. Click Next.

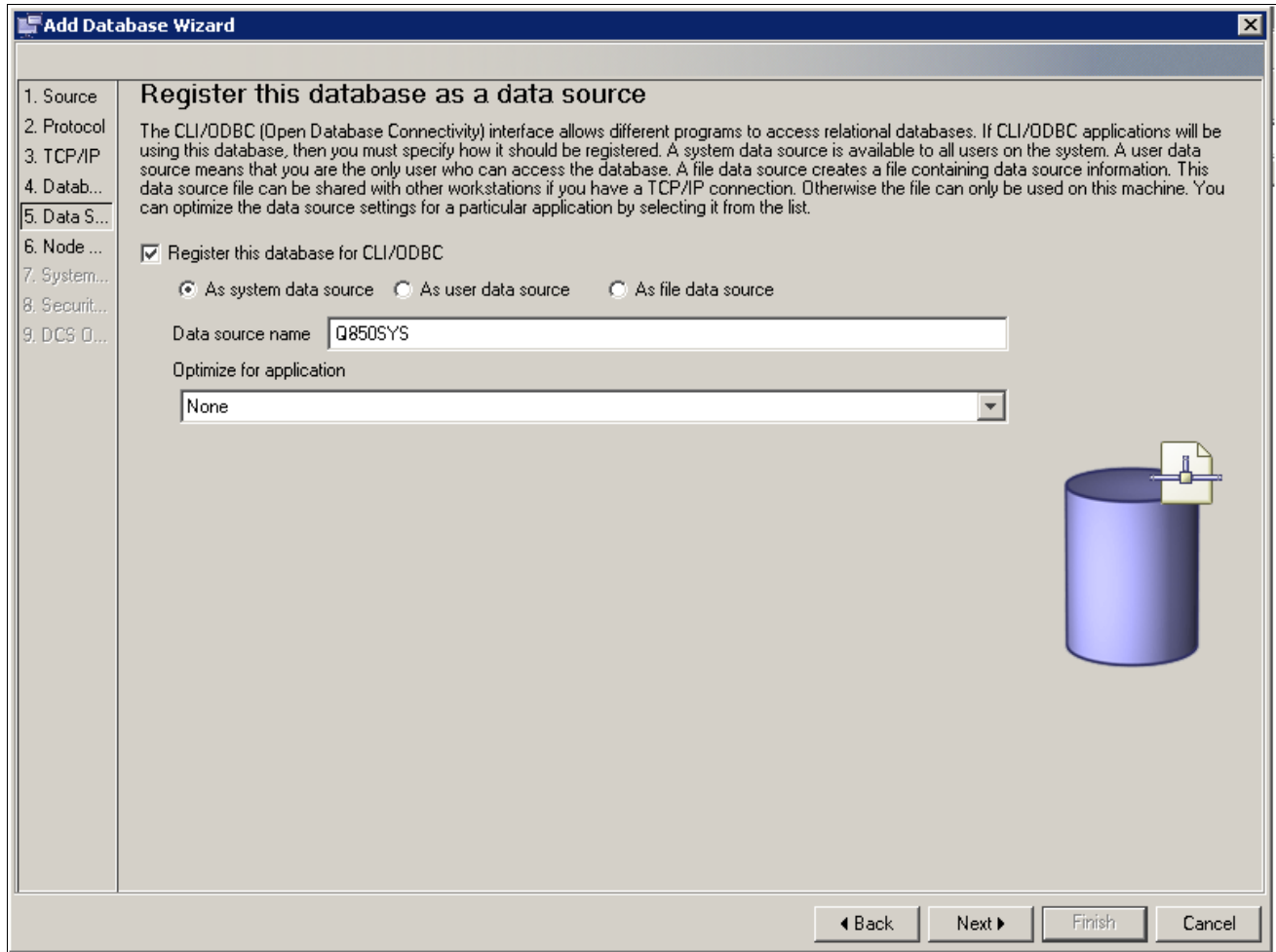


Specifying database parameters on the Change Database Wizard window



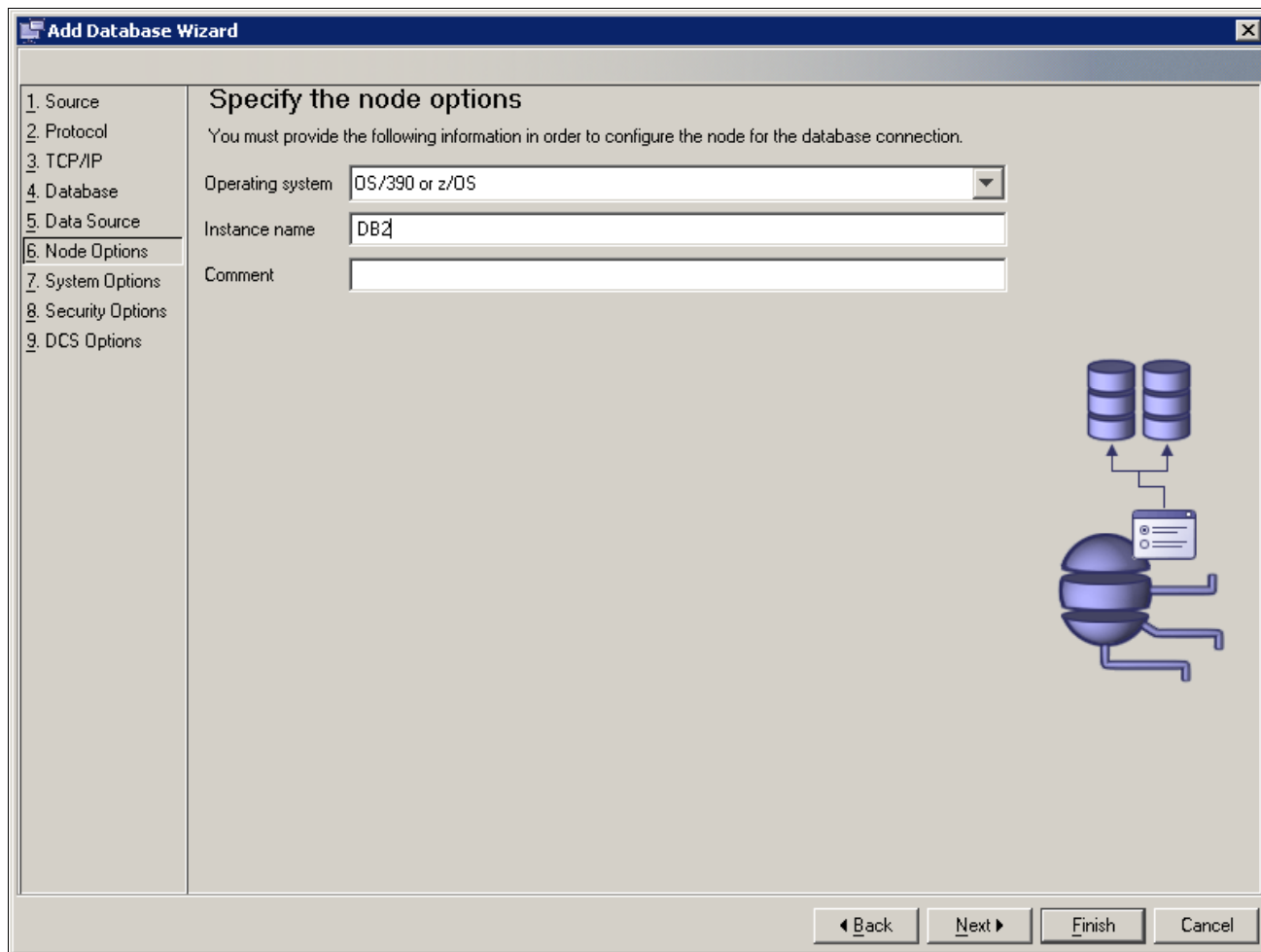
- 6. Verify that the check box Register this database for CLI/ODBC and the radio button As system data source are selected, as shown in this example.

Click Next.



Registering the database on the Change Database Wizard window

7. Select *OS/390 or z/OS* in the Operating system drop-down list box, and then click Next.



Specifying the node options on the Change Database Wizard window

- Verify that the information in the System name and Host name text boxes is correct, as shown in this example, and then click Next.

The screenshot shows the 'Add Database Wizard' window with the title bar 'Add Database Wizard'. The main area is titled 'Specify the system options' and contains the following fields and buttons:

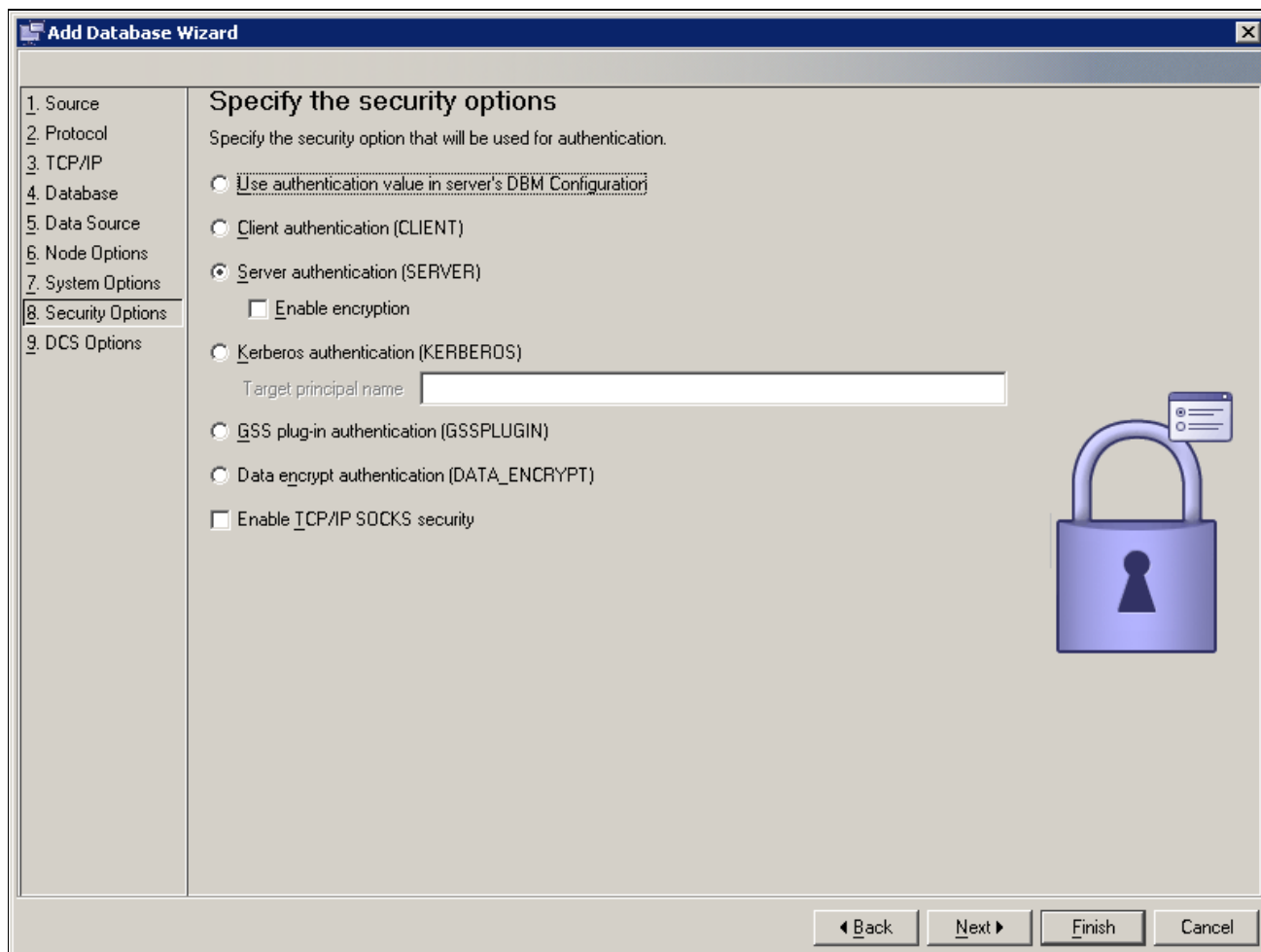
- System name: Text box containing 'SYSH' with a 'Discover' button to its right.
- Host name: Text box containing 'SYSH' with a 'View Details...' button to its right.
- Operating system: Dropdown menu showing 'OS/390 or z/OS'.
- Comment: Empty text box.

At the bottom of the window are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'. On the right side of the main area, there is a blue server rack icon with a small window icon above it. On the left side, there is a vertical list of steps: 1. Source, 2. Protocol, 3. TCP/IP, 4. Datab..., 5. Data S..., 6. Node ..., 7. System... (highlighted), 8. Securit..., 9. DCS O...

Verifying System name and Host name in the Change Database Wizard window

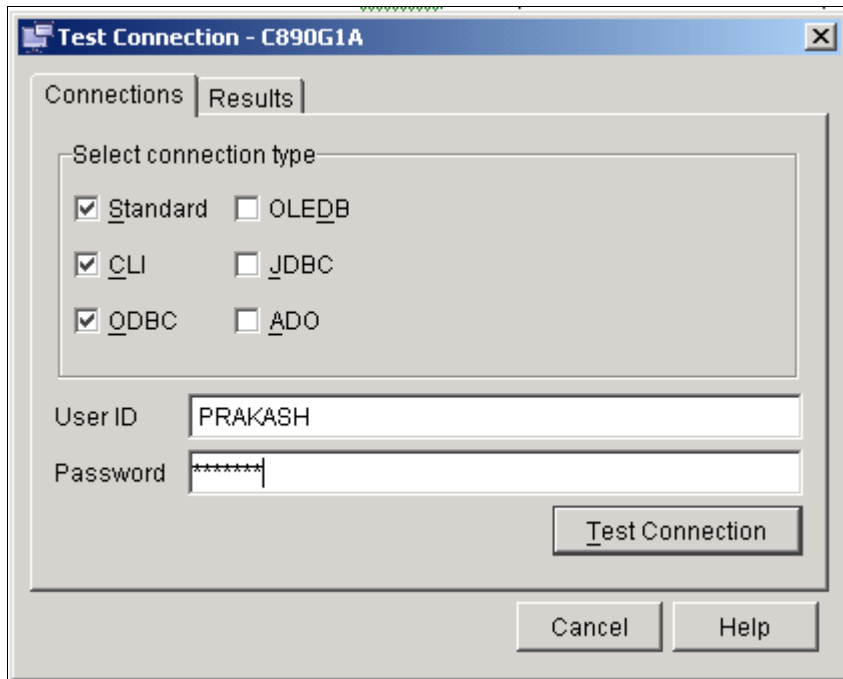
- 9. Make sure that the radio button Server authentication (SERVER) is selected and click Finish.

**Note.** No changes are required on the DCS Options page.



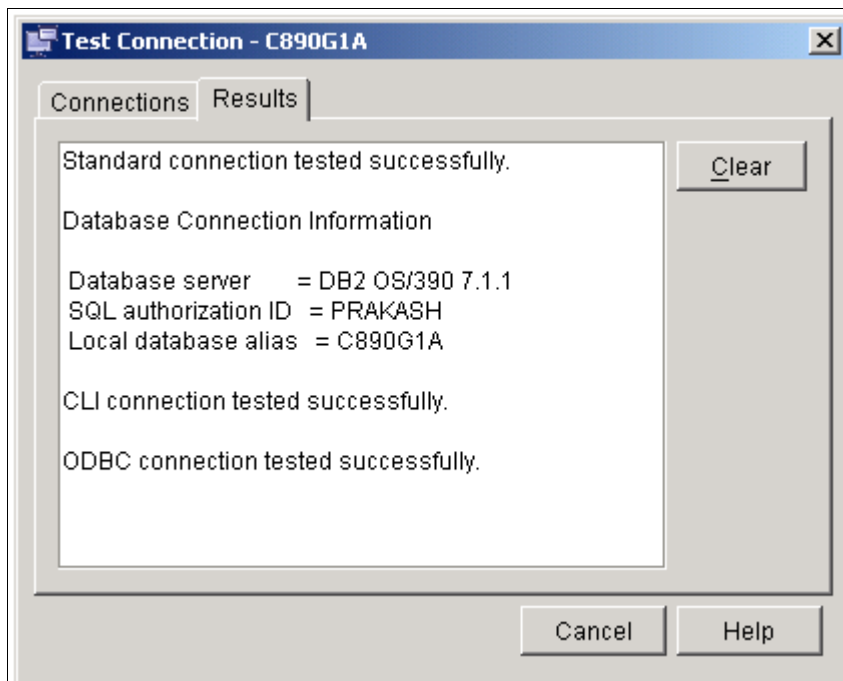
Specifying security options on the Change Database Wizard window

10. Enter User ID and Password and click Test Connection on the Test Connection dialog box, as shown in this example:



Test Connection dialog box: Connections tab

Confirm that the connection test was successful by selecting the Results tab, as shown in this example. You are now ready to use your entry to create or access a PeopleSoft database.



Test Connection dialog box: Results tab

It may be necessary to bind the packages for DB2 Connect to the DRDA server for the first connection.

See [Binding DB2 Connect Packages for an EBCDIC Installation](#) or [Binding DB2 Connect Packages for an Unicode Installation](#).

## Task 15-3-2: Configuring Database Connectivity on Clients with DB2 Connect Version 10.x or Later

This section discusses:

- Understanding Database Connectivity Configuration with DB2 Connect Version 10.x or Later
- Prerequisites
- Configuring the Database Connectivity with the DB2 Command

### Understanding Database Connectivity Configuration with DB2 Connect Version 10.x or Later

If you are using DB2 Connect version 10.x or later (where x refers to the version number), use these instructions to create and update the DB2 database client. Configuration Assistant has been deprecated from version 10.x DB2 Connect products. Therefore configuring the database client must be done manually using the `db2` command.

See [My Oracle Support, Certifications](#), for information on supported versions.

The configuration of the DB2 Connect Client Directory described in this section updates the following:

- TCPIP node directory
- Database directory
- DCS directory

### Prerequisites

Before beginning this configuration, be sure you have the following information:

- z/OS system host name
- DB2 subsystem name
- DB2 subsystem TCP/IP Port
- TCP/IP Node name

You must assign a TCP/IP Node name.

### Configuring the Database Connectivity with the DB2 Command

This section assumes your system has the following resource names:

- ZOS-HOSTNAME = SYSD3
- SUBSYSTEM-NAME = DB2DS5B
- DATABASE-NAME = E853903
- DB-ALIAS = E853903
- DB2-TCPIP-PORT = 5230
- TCPIP-NODE = DS5BNODE

To configure database connectivity:

1. Open a DB2 Command window.
2. Run the following command to update the TCPIP node directory:

```
db2 CATALOG TCPIP NODE <TCPIP-NODE> REMOTE <ZOS-HOSTNAME> SERVER <DB2->
TCPIP-PORT>
```

For example, using the resource names above:

```
db2 CATALOG TCPIP NODE DS5BNODE REMOTE SYSD3 SERVER 5230
```

3. Run the following command to update the database directory:

```
db2 CATALOG DATABASE <DATABASE-NAME> AS <DB-ALIAS> AT NODE <TCPIP-NODE>=>
AUTHENTICATION SERVER
```

For example, using the resource names above:

```
db2 CATALOG DATABASE E853903 AS E853903 AT NODE DS5BNODE AUTHENTICATION=>
SERVER
```

4. Run the following command to update the DCS directory:

```
db2 CATALOG DCS DATABASE <DATABASE-NAME> AS <DB-SUBSYSTEM-NAME>
```

For example, using the resource names above:

```
db2 CATALOG DCS DATABASE E853903 AS DB2DS5B
```

5. Run the following command to end the session:

```
db2 terminate
```

6. Run the following command:

```
db2 connect to E853903 user db2admin using db2admin
```

### Task 15-3-3: Configuring an ODBC Data Source for Connectivity on Microsoft Windows (Optional)

This task applies only to installations on Microsoft Windows operating systems. Use these instructions to configure and validate a 64-bit ODBC data source for connectivity to PeopleSoft PeopleTools components including PeopleSoft Application Server, Application Designer and Data Mover.

This section assumes that you have installed a supported version of DB2 Connect.

See My Oracle Support, Certifications

To configure and validate a 64-bit data source for the Application Server, Application Designer, and Data Mover:

1. Select Start, IBM DB2, *instance id*, Command Line Tools, Command Window.

For example, if you accepted the default, *instance id* would be DB2.

The Command Window opens.

2. Run the following command and confirm that the response specifies that the DB2 Connect installation is 64-bit:

```
db2level
```

3. Run the following commands, specifying your DB2 z/OS PeopleSoft database name:

```
db2 catalog system odbc data source <database-name>
db2 terminate
```

4. Run the following command and confirm that your data source for your database is now registered.

```
db2 list system odbc data sources
```

5. To validate the connectivity, start your PeopleSoft Application Server, Application Designer, or Data Mover. You should not get any connectivity errors.

If the 64-bit data source is not properly configured, you see an error. This is an example of an error when starting the PeopleSoft Application Server:

```
PSADMIN.3992 (0) [12/30/11 00:22:52](0) Begin boot attempt on domain=>
Q8533I1E
```

```
PSAPPSRV.3612 (0) [12/30/11 00:23:04](0) PeopleTools Release 8.53 =>
(Windows) starting. Tuxedo server is APPSRV(99)/2
```

```
PSAPPSRV.3612 (0) [12/30/11 00:23:04](0) Cache Directory being used: d=>
\pshome\appserv\Q8533I1E\CACHE\PSAPPSRV_2\
```

```
PSAPPSRV.3612 (0) [12/30/11 00:23:04](3) File: SQL Access ManagerSQL=>
error.
```

```
Stmt #: 2 Error Position: 0 Return: 8600 - [Microsoft][ODBC Driver=>
Manager]
```

```
The specified DSN contains an architecture mismatch between the Driver=>
and Application (SQLSTATE IM014) 0
```

```
PSAPPSRV.3612 (0) [12/30/11 00:23:04](1) GenMessageBox(200, 0, M): SQL=>
Access Manager: File: SQL Access ManagerSQL error. Stmt #: 2 Error=>
Position: 0 Return: 8600 - [Microsoft][ODBC Driver Manager] The=>
specified DSN contains an architecture mismatch between the Driver and=>
Application (SQLSTATE IM014) 0
```

```
PSAPPSRV.3612 (0) [12/30/11 00:23:04](1) GenMessageBox(0, 0, M):=>
Database Signon: Could not sign on to database Q8533I1E with user=>
QEDMO.
```

```
PSAPPSRV.3612 (0) [12/30/11 00:23:04](0) Server failed to start
```

```
PSADMIN.3992 (0) [12/30/11 00:23:11](0) End boot attempt on domain=>
Q8533I1E
```

## Task 15-4: Binding DB2 Connect Packages for an EBCDIC Installation

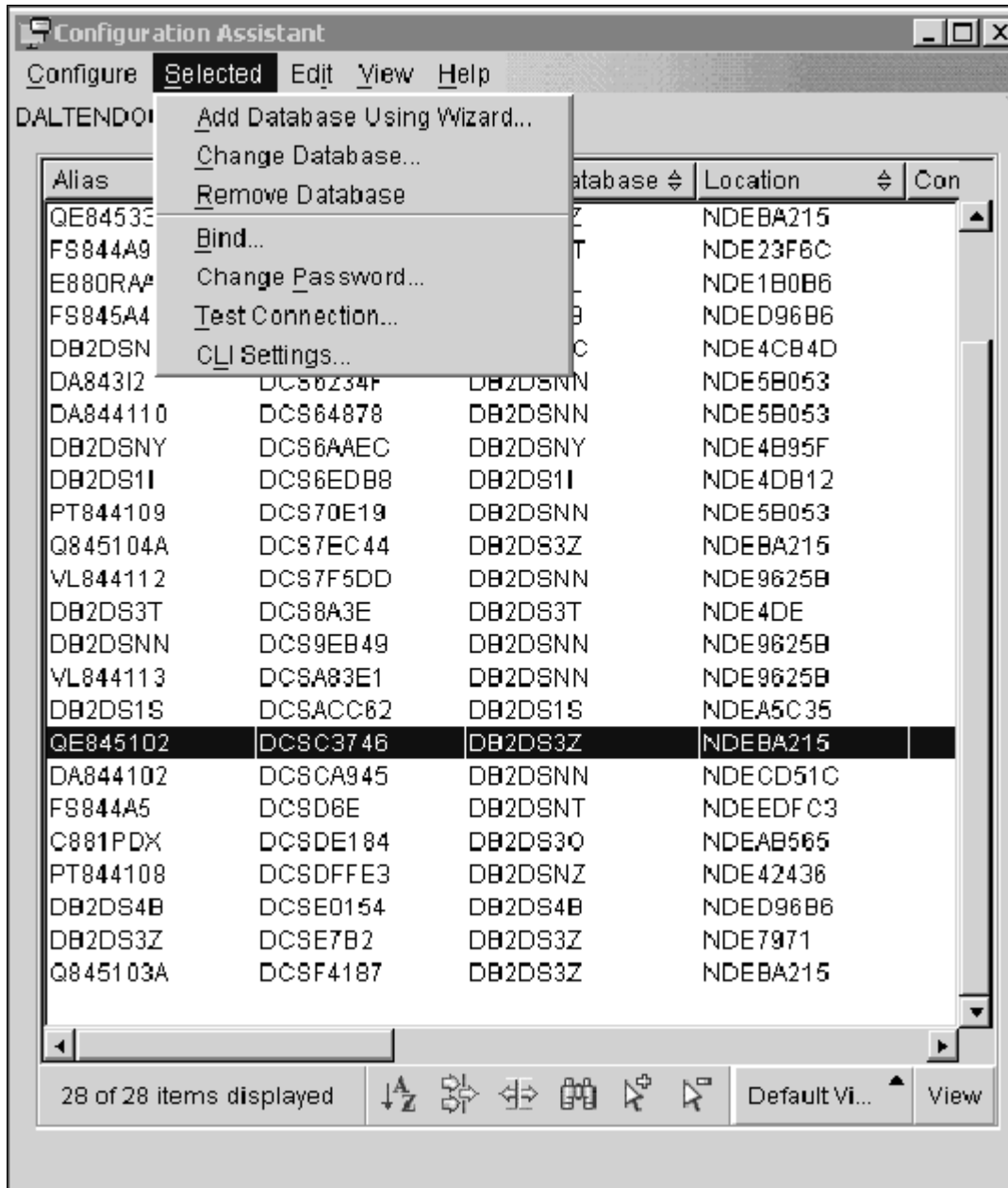
---

Use the instructions in this task if you have to bind the packages for DB2 Connect for a EBCDIC installation.



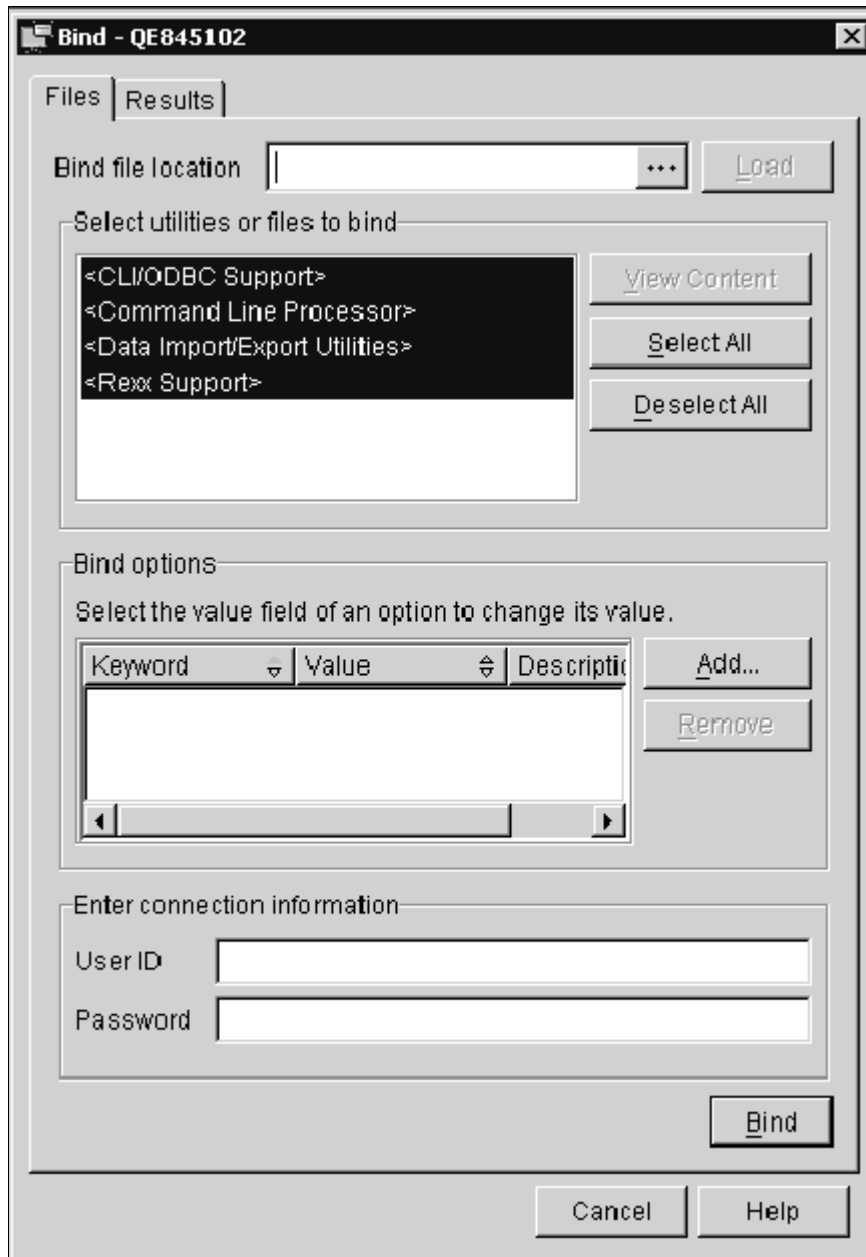
1. Open the Configuration Assistant.

Highlight your database name and select Bind from the Selected menu. The Bind window appears.



Selecting Bind on the Configuration Assistant window

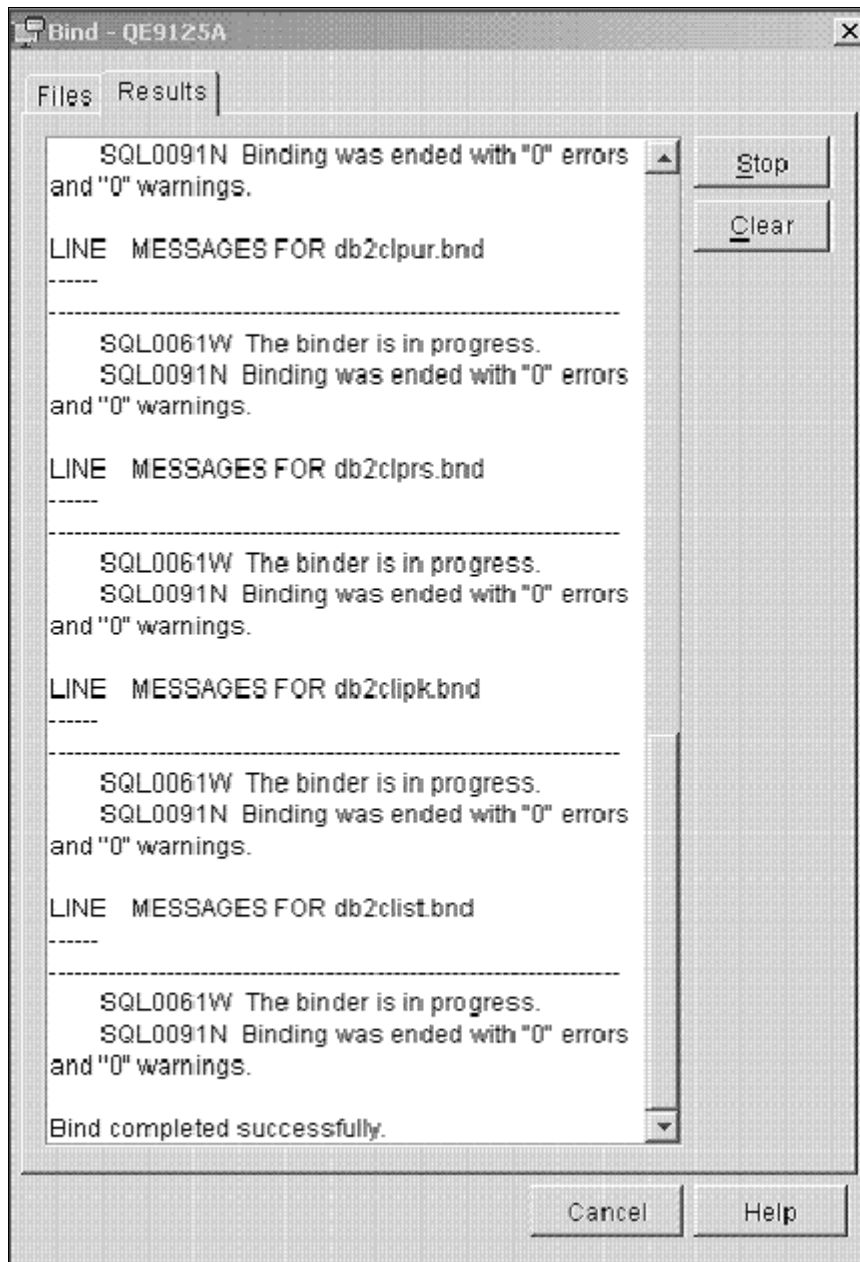
2. Click Select All in the Select utilities or files to bind area, and enter your User ID and password in the Enter connection information area, seen in this example:



Files tab on the Bind window

## 3. Scroll through the results.

You should see "Bind Completed Successfully" at the bottom, as shown in this example:



Results tab on the Bind window

---

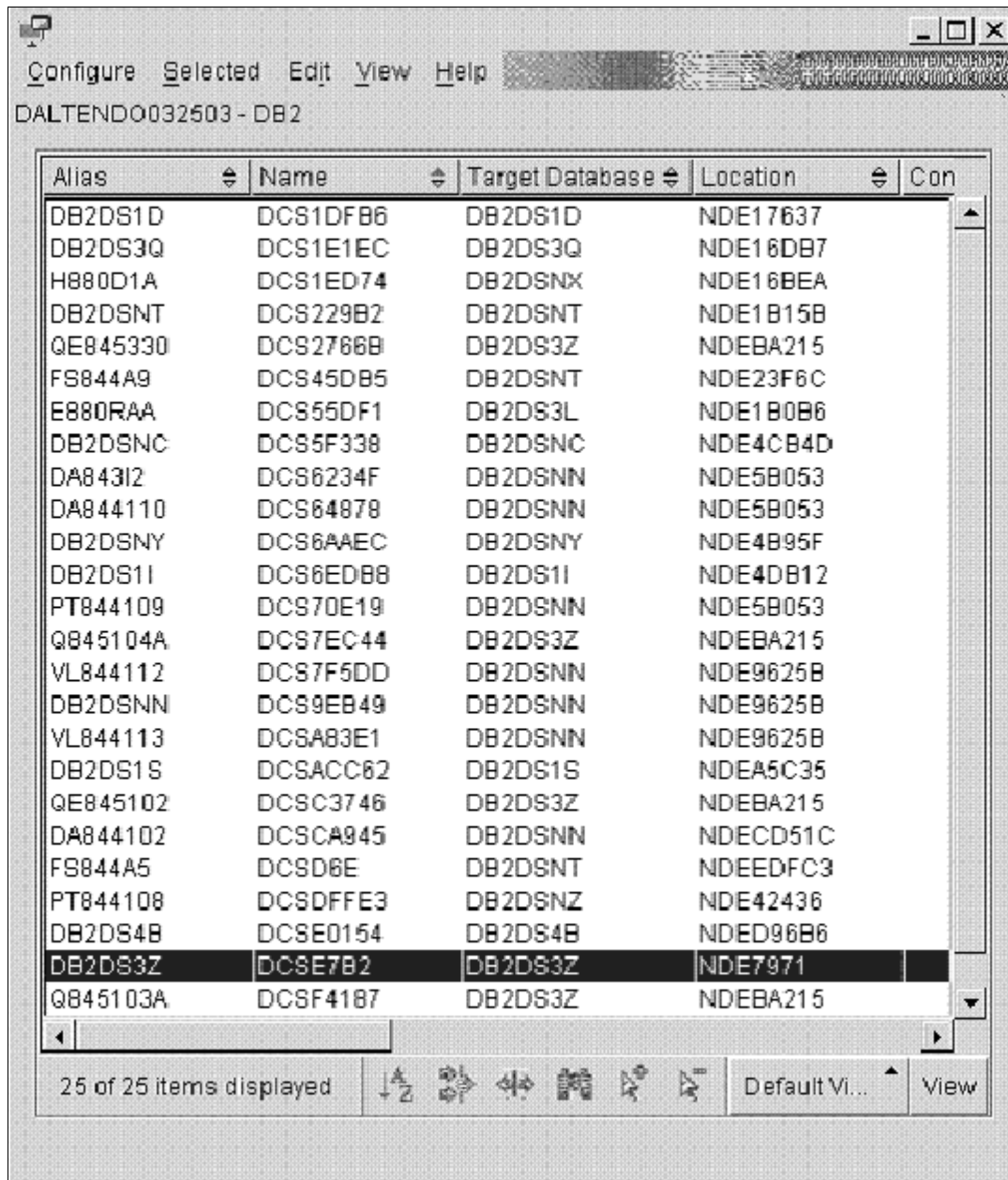
**Note.** You may see some warning messages in the list indicating that some bind options are not valid for all .bnd files. The Configuration Assistant may attempt to bind some Connect packages that are actually specific to the use of DB2 for Linux, UNIX, or Windows and not DB2 for z/OS. *You can ignore these warning messages.*

---

## Task 15-5: Binding DB2 Connect Packages for a Unicode Installation

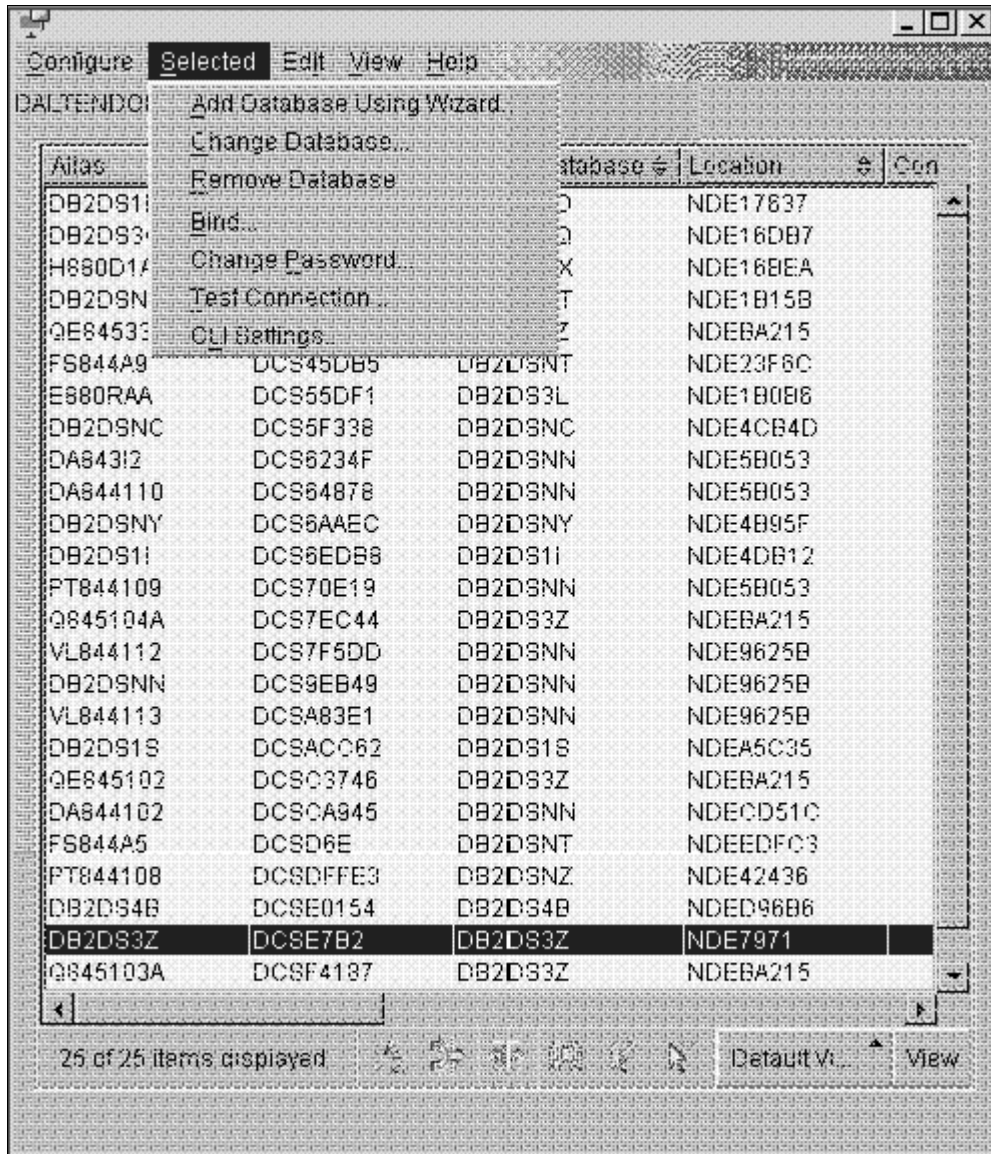
Use the instructions in this task if you have to bind the packages for DB2 Connect for a Unicode installation.

1. Open the Configuration Assistant.



Configuration Assistant window

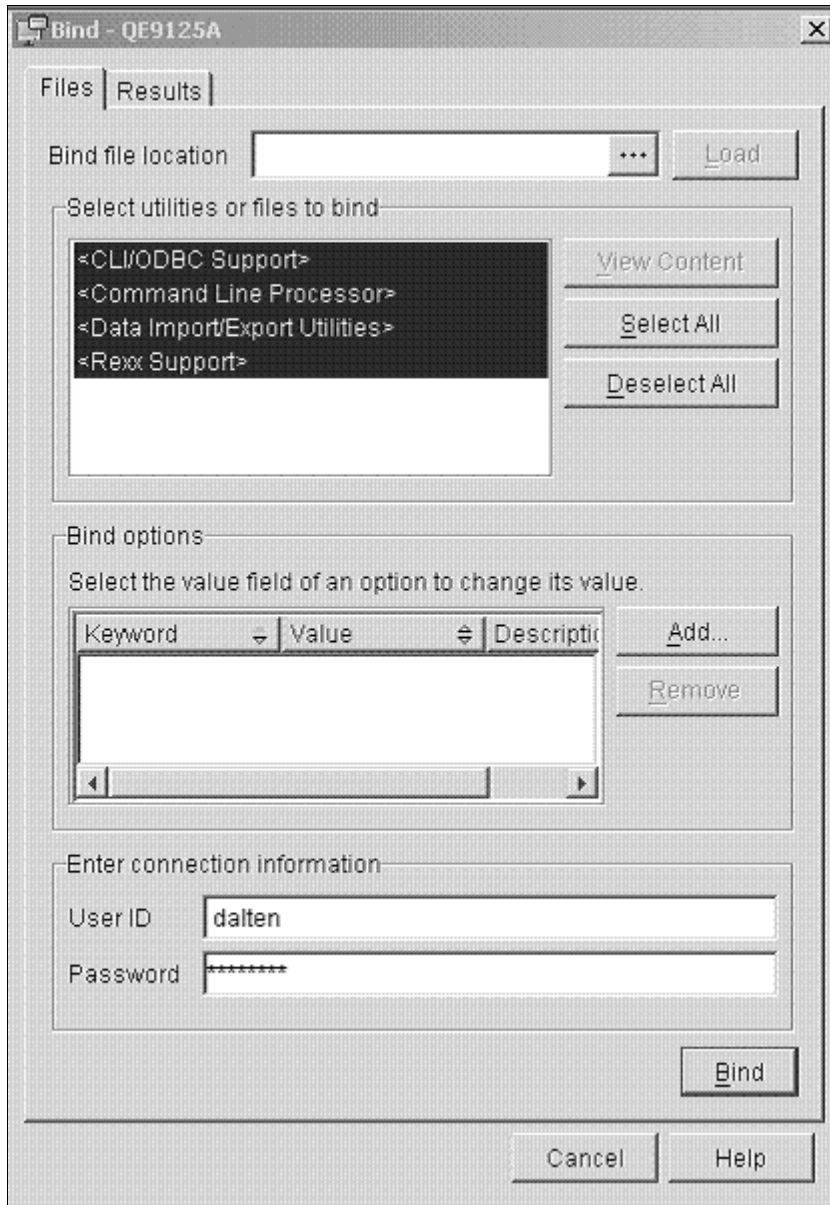
- Highlight the database and on the Selected menu, select Bind.



Selecting Bind on the Configuration Assistant

3. Enter a valid user ID and password.

In the Select utilities of files to bind area, click Select All and then click Add in the Bind options area.

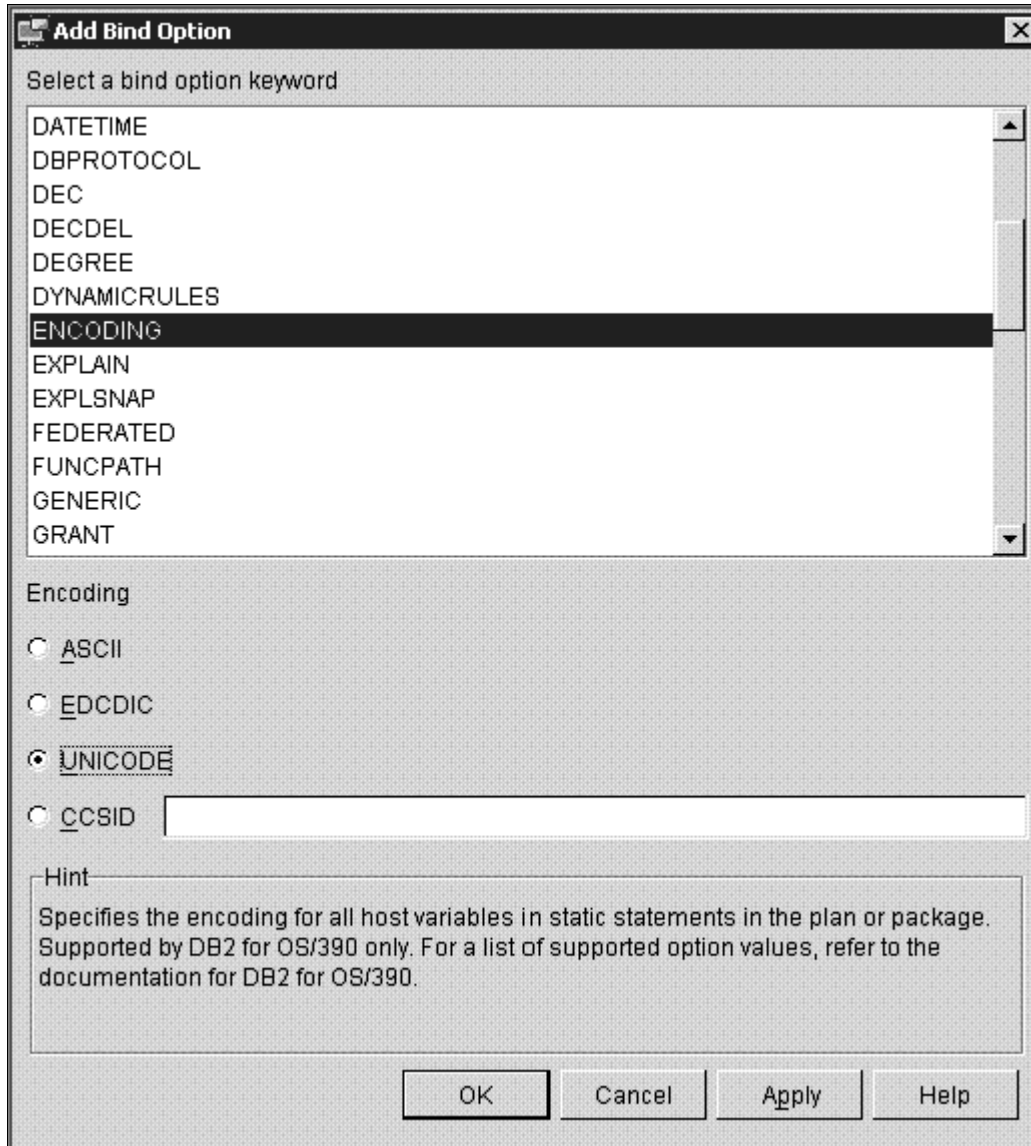


Files tab on the Bind window

The Add Bind Option window appears.

4. Highlight *ENCODING* in the list, and select the UNICODE radio button in the Encoding area, as shown in this example.

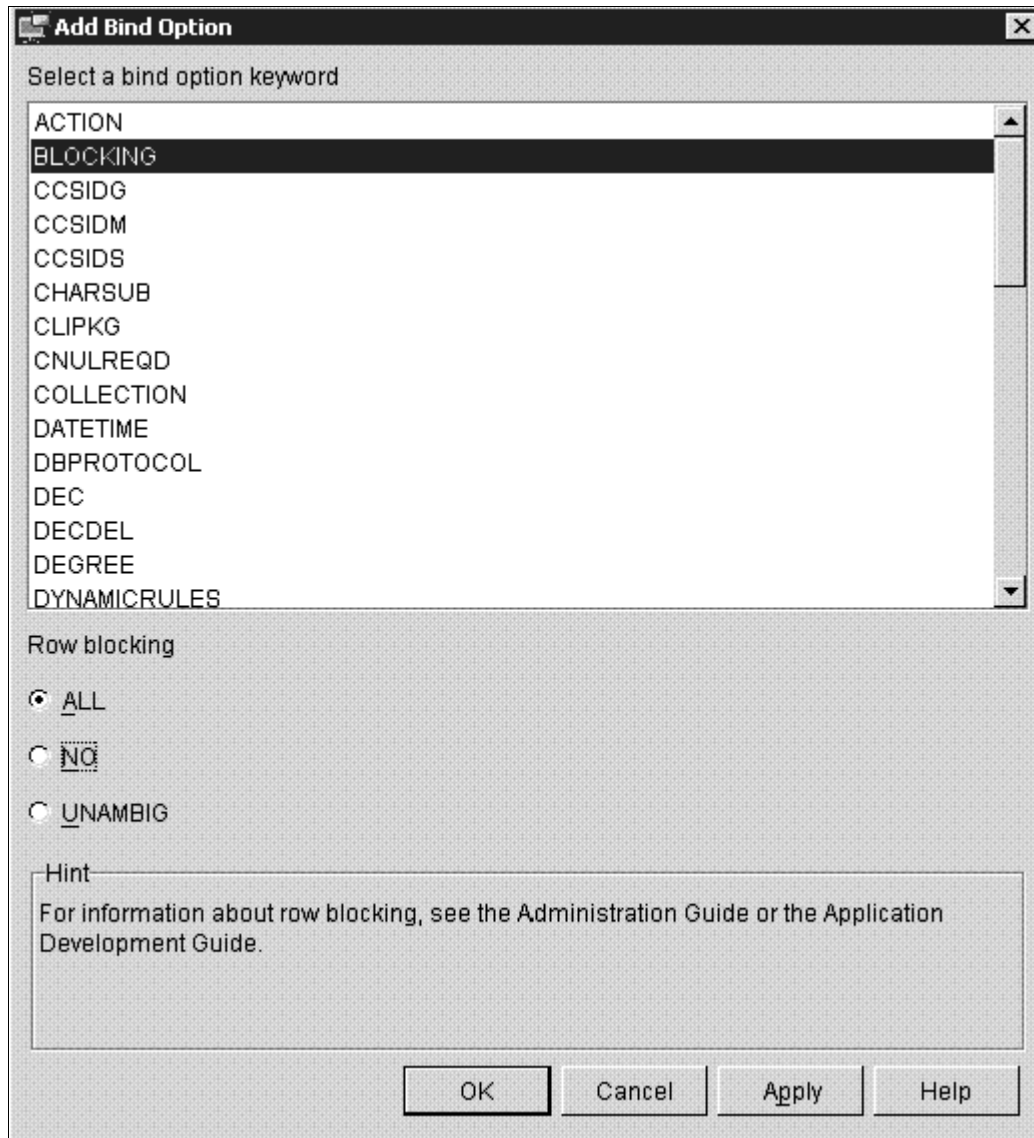
Click Apply.



Specifying encoding on the Add Bind Option window

5. Highlight *BLOCKING* in the list, and select the ALL radio button in the Row blocking area, as shown in this example.

Click Apply.

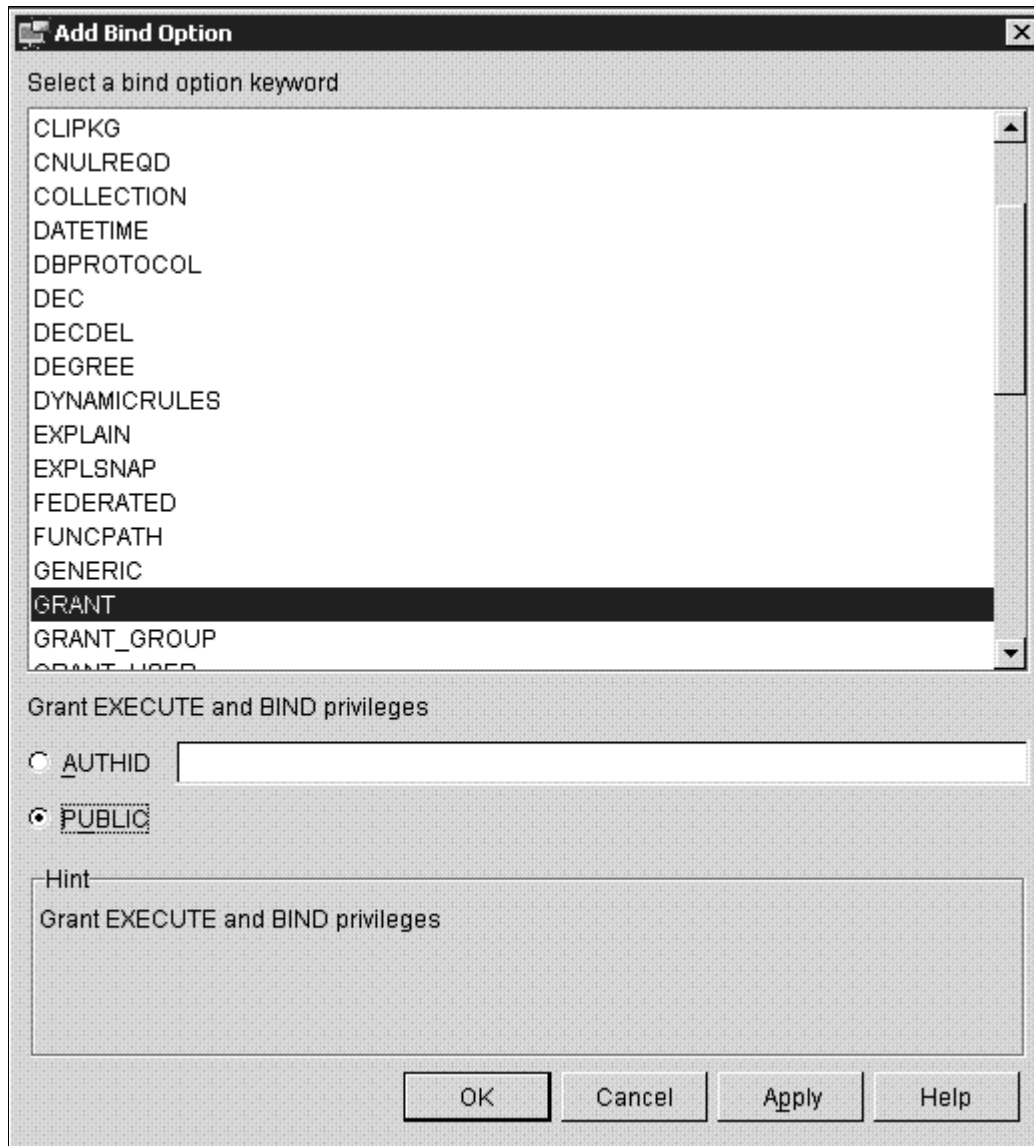


Specifying row blocking on the Add Bind Option window



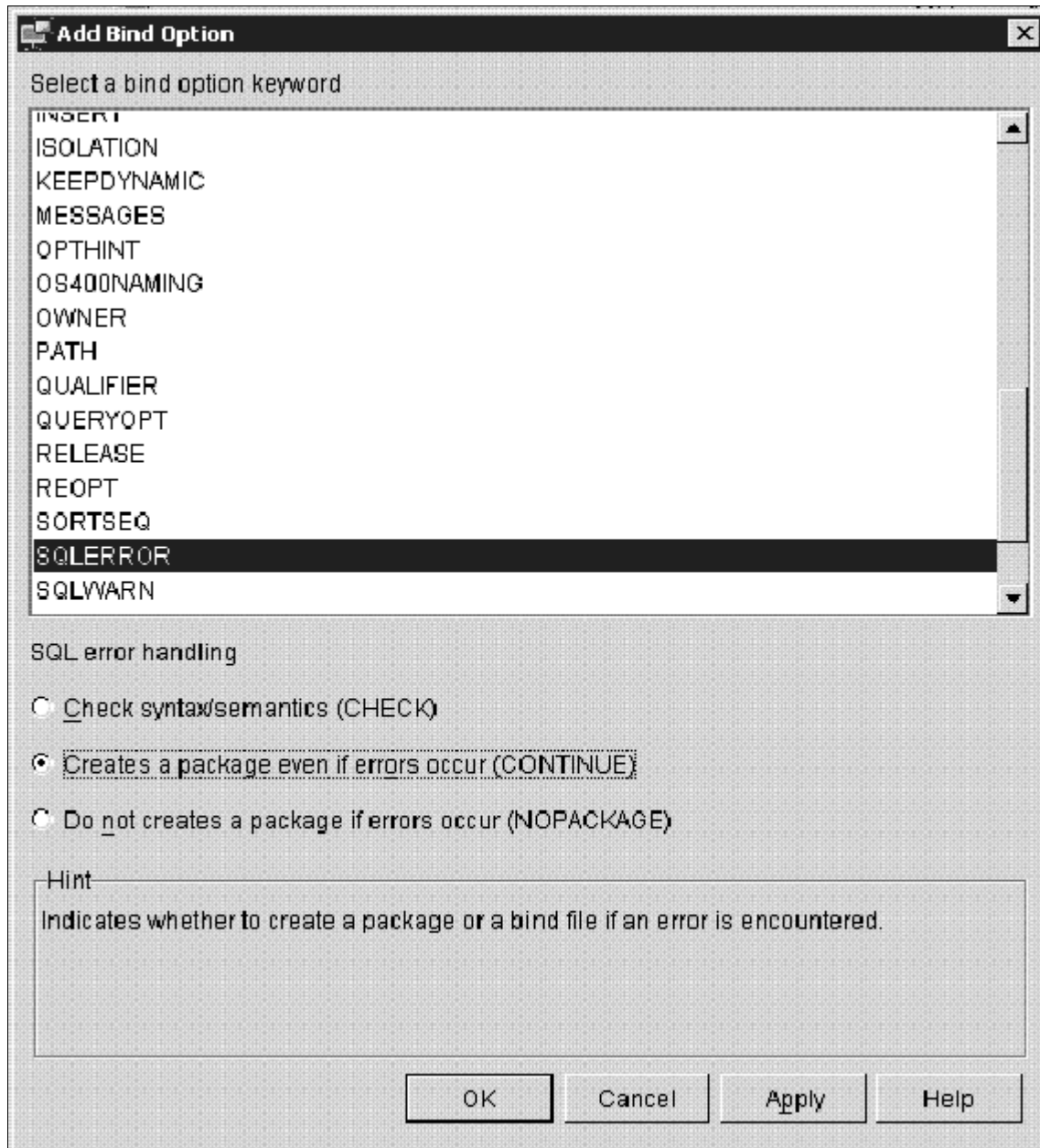
6. Highlight *GRANT* from the list, and select the **PUBLIC** radio button from the Grant EXECUTE and BIND privileges area, as shown in the example.

Click Apply.



Specifying granting privileges on the Add Bind Option window

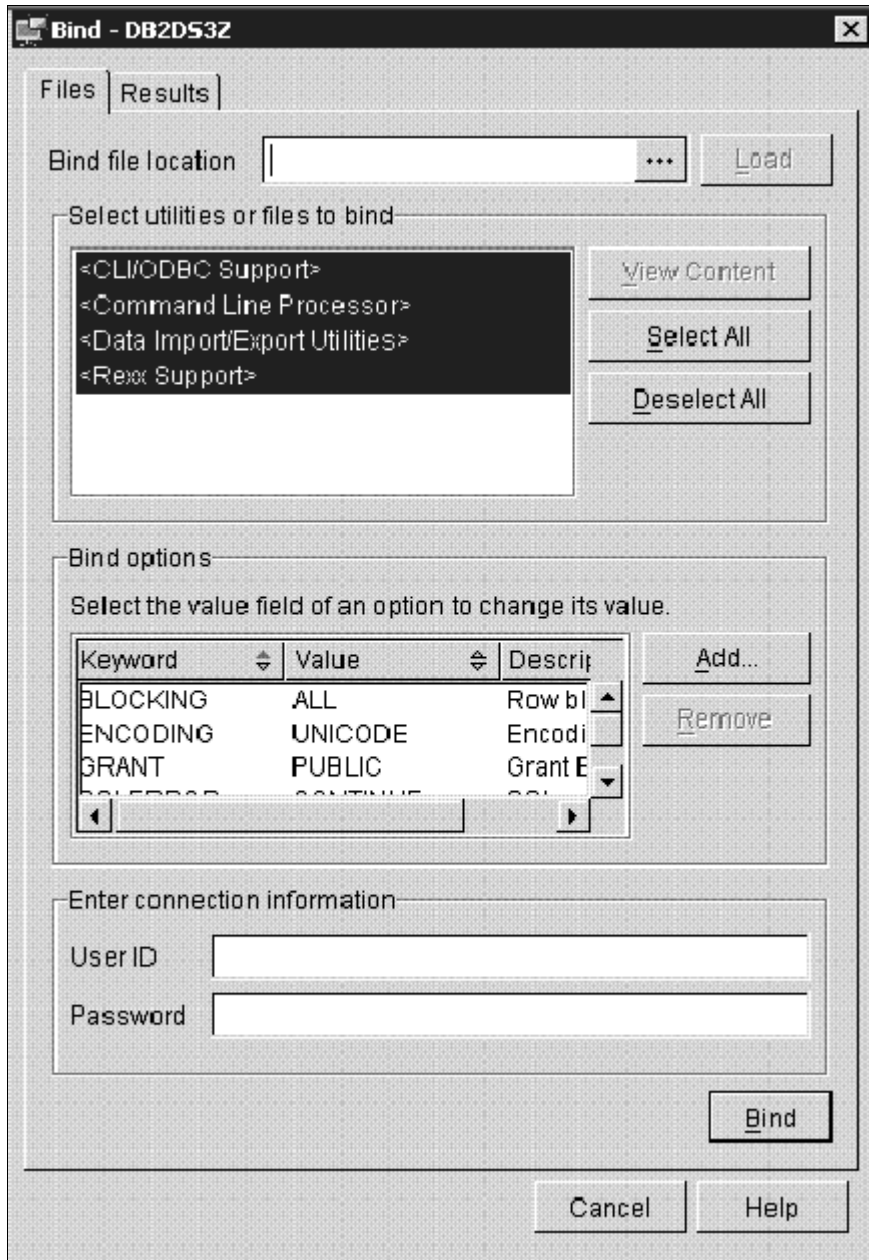
7. Highlight *SQLERROR* in the list, and select the Creates a package even if errors occur (CONTINUE) radio button, as shown in this example:



Specifying SQL error handling on the Add Bind Option window

Click Apply, and then click OK to return to the Bind window.

- Verify that the Bind options list includes the options you added in the previous steps.



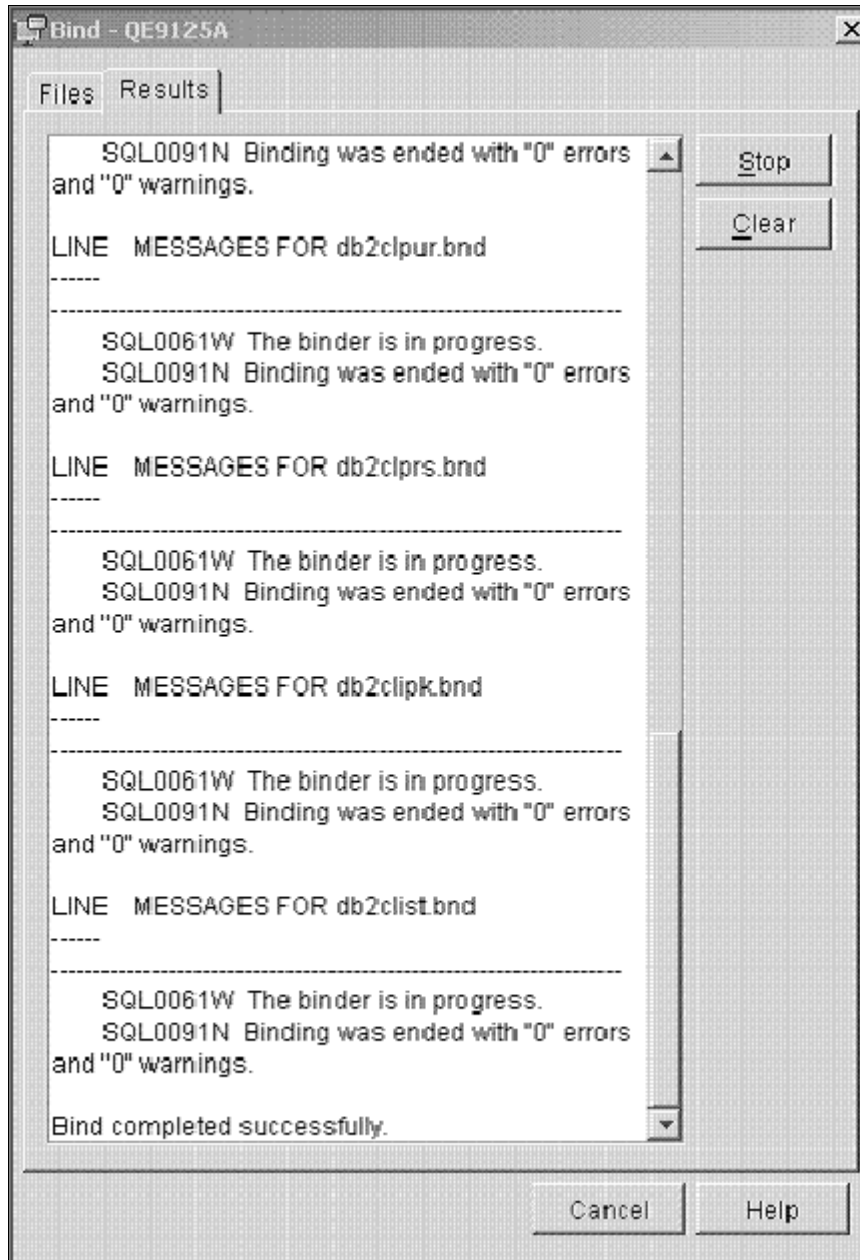
Verifying bind options on the Bind window

The Bind options area lists the following keywords and values:

Keyword	Value
ENCODING	UNICODE
BLOCKING	ALL
GRANT	PUBLIC

Keyword	Value
SQLERROR	CONTINUE

9. Add a user ID and password and click Bind to view the Results tab, as shown in this example:



Verifying results on the Bind window

---

**Note.** You may see some warning messages in the list indicating that some bind options are not valid for all .bnd files. The Configuration Assistant may attempt to bind some Connect packages that are actually specific to the use of DB2 for Linux, UNIX, and Windows and not DB2 for z/OS. *You can ignore these warning messages.*

---

## Task 15-6: Binding DB2 Connect Packages for DB2 Connect Version 10 or later

---

Use the instructions in this task if you have to bind the packages for DB2 Connect version 10.x or later. The DB2 Connect package `ddcsmvs.lst` must be bound using the `db2` command window. The Configuration Assistant is deprecated for DB2 Connect version 10.x.

1. Launch a DB2 Connect Command window.
2. Connect to the database that you want to bind to.

For example, for database E853903, use the following command:

```
db2 connect to E853903 user db2admin using db2admin
```

3. Determine the `db2` installation directory by running the `db2level` command.

In this example, the installation directory is `C:\Progra~1\IBM\SQLLIB~2`.

```
db2level
DB21085I This instance or install (instance name, where applicable: =>
  "DB2_02")
uses "64" bits and DB2 code release "SQL10050" with level identifier
"0601010E".
Informational tokens are "DB2 v10.5.0.420", "s130528", "NTX64105", and =>
  Fix Pack
  "0".
Product is installed at "C:\PROGRA~1\IBM\SQLLIB~2" with DB2 Copy Name
"DB2COPY3"
```

4. Change directory to the `bnd` directory within the `db2` installation directory; for example:

```
cd C:\PROGRA~1\IBM\SQLLIB~2\bnd
```

5. Run the following command to bind `ddcsmvs.lst`:

```
db2 bind @ddcsmvs.lst blocking all sqlerror continue messages =>
  ddcsmvs.msg grant public
```

6. Run the following command:

```
db2 connect reset
```

## Task 15-7: Setting DB2CodePage for a Unicode Database

---

Use these instructions to set `DB2CodePage` for a Unicode Database.

1. From a command prompt issue the `db2set` command as follows:

```
c:\apps\DB\DB2ODBC8\bin db2set DB2CODEPAGE=1208
```

2. Issue the following command to verify that it has been set:

```
C:\Apps\DB\db2odbc8>db2set -all
```

You should see:

```
[i] DB2CODEPAGE=1208
```

## Task 15-8: Setting Up the DB2 Connect Gateway on UNIX

---

Use this task to set up the DB2 Connect Gateway on UNIX, as required for a UNIX application server or Process Scheduler.

1. The Client Configuration Assistant (CCA) helps you manage your database connections to remote servers. This is the preferred method to set up any Windows client to communicate with a server. You can use the Command Line Processor to set up DB2 clients on any platform and this will be the method used to configure DB2 Connect on the UNIX operating system.

2. If you are using TCP/IP to connect to the z/OS server and to catalog Nodes and Databases for a TCP/IP connection, the procedure is the same.

See *Configuring TCP/IP on the Client*.

3. Test connection.

From the UNIX command line type the following command:

```
Db2 => connect to database_alias user userid using password
```

For example:

```
Db2 => connect to PT800T9 user PEOPLE1 using PASSWRD1
```

4. It may be necessary to bind the packages for DB2 Connect to the DRDA server for the first connection.

The following is a sample bind of the DB2 Connect packages:

```
Db2 => bind /usr/lpp/db2_05_00/bnd@ddcsmvs.lst action replace blocking=>
all grant public release commit sqlerror continue
```

## Task 15-9: Confirming DB2 Connect/ODBC Settings

---

DB2 Connect reads the DB2CLI.INI file in the \SQLLIB directory to obtain information at connection time. This file contains any overrides that are set via the Client Configuration Assistant when cataloging the database. In past versions of PeopleSoft software and DB2 Connect (formerly DDCS) there have been a number of DB2CLI.INI settings that have been recommended to improve performance.

**Note.** Use special care when you add settings to the DB2CLI.INI file. DB2 Connect will not inform you if a setting is misspelled; it just disregards the setting and uses the default.

We have made numerous changes to the PeopleSoft software to enable or disable DB2 Connect functionality at runtime that will result in improved performance. One example is the cursorhold setting. In PeopleSoft PeopleTools 8.50 and higher, we are completely controlling the cursorhold setting and we enable cursorhold for batch and disable it for PeopleSoft online activity. The following section lists the settings in the DB2CLI.INI file of special interest to PeopleSoft customers along with the Oracle recommendation:

- DEFERREDPREPARE — Defer Prepare chains together OPEN and PREPARE statements. This reduces network traffic which can have a significant impact in reducing response. DB2 Connect, by default, activates the Defer Prepare when creating new entries through Client Configuration Assistant.

For PeopleSoft software, use the default setting (DEFERREDPREPARE=1). *This is the default setting. It is not necessary to add the setting to your DB2CLI.INI file.*

- **CURSORHOLD** — Cursor Hold determines at what point of the transaction to release a SQL cursor. Deactivating Cursor Hold releases cursors after a transaction has been committed. Programs within the PeopleSoft system control at what point a cursor needs to be released. The DB2 Connect default is Cursor Hold enabled.

For PeopleSoft software, use default setting (`CURSORHOLD=1`). *This is the default setting. It is not necessary to add the setting to your `DB2CLI.INI` file.*

- **DISABLEKEYSETCURSOR** — Support for Keyset cursors was introduced in DB2 Connect 6.1. PeopleSoft PeopleTools testing has found a very high overhead in DB2 Connect when Keyset cursors are enabled. PeopleSoft PeopleTools uses forward cursors rather than Keyset cursors, so this extra overhead is not justified for PeopleSoft systems.

For PeopleSoft software, override the default setting by adding `DISABLEKEYSETCURSOR=1` in `DB2CLI.INI`.

---

**Note.** In a Keyset Cursor, the membership and order of rows in the result set are fixed at cursor-open time. Keyset cursors are controlled by a set of unique identifiers (keys) known as the Keyset. The keys are built from a set of columns that uniquely identify the rows in the result set. Changes to data values in non-Keyset columns (made by the cursor owner or committed by other users) are visible as the user scrolls through the cursor.

---

**Note.** If a change disqualifies a row for membership or affects the order of a row, the row does not disappear or move unless the cursor is closed and reopened. Inserts to the database made outside the cursor are also not visible in the cursor unless the cursor is closed and reopened.

---

- **DISABLEUNICODE** — This is an undocumented DB2 Connect parameter. DB2 Connect will attempt to communicate with a DB2 z/OS database server via Unicode. If an Unicode conversion service has not been enabled on your mainframe, you will be unable to connect to the database. If `ICONV` is used for the Unicode conversion, IBM has documented cases in which data corruption has occurred. For this reason, the PeopleSoft installation requires that the `DISABLEUNICODE=1` parameter be used to suppress DB2 Connect from communicating in Unicode, and use ANSI instead. The default is enabled. The PeopleSoft installation requires adding `DISABLEUNICODE=1` to the `DB2CLI.INI` file.

**Note.** For a Unicode installation, do not add `DISABLEUNICODE=1` to the `DB2CLI.INI` file.

---

**Note.** If you are using DB2 Connect with multiple DB2 platforms (z/OS, Linux, UNIX, or Microsoft Windows), add this statement to the stanzas pertaining to each individual DB2 z/OS database configured in the `DB2CLI.INI` file. Do not add this parameter to any non-z/OS database configurations, and do not add it to the `COMMON` stanza. If you are connecting to DB2 z/OS databases exclusively, then you may add this parameter once in the `DB2CLI.INI` file, in the `COMMON` stanza.

---

- **CLI/ODBC Trace settings** — If you want to enable DB2 Connect Trace, you need to add the parameters for turning the trace *On* in the `[Common]` section only. Adding the trace information in a database-specific section will be ignored. So if you turn trace on for any database, the trace gets activated for every database that is catalogued on the workstation.

These are the recommended settings for turning Trace on:

```
[COMMON]
TRACEFLUSH=1
TRACEPATHNAME=C:\TEMP\DB2TRACE\
TRACECOMM=1
TRACE=1      (trace=0 turns the trace OFF)
```

---

**Note.** The DB2CLI.INI file contains a section for each database you configure. For example, if you catalog database PT800T1 you will see a [PT800T1] section in the DB2CLI.INI. A convenient way to set an override for all databases is to add it to the [Common] section of the DB2CLI.INI. If you add the overrides to this section, you do not need to add the override for each database because the [Common] section applies to all databases. For example:

```
[Common]
```

```
DISABLEKEYSETCURSOR=1
```

---

## **Task 15-10: Setting CLI/ODBC Trace with the Client Configuration Assistant**

---

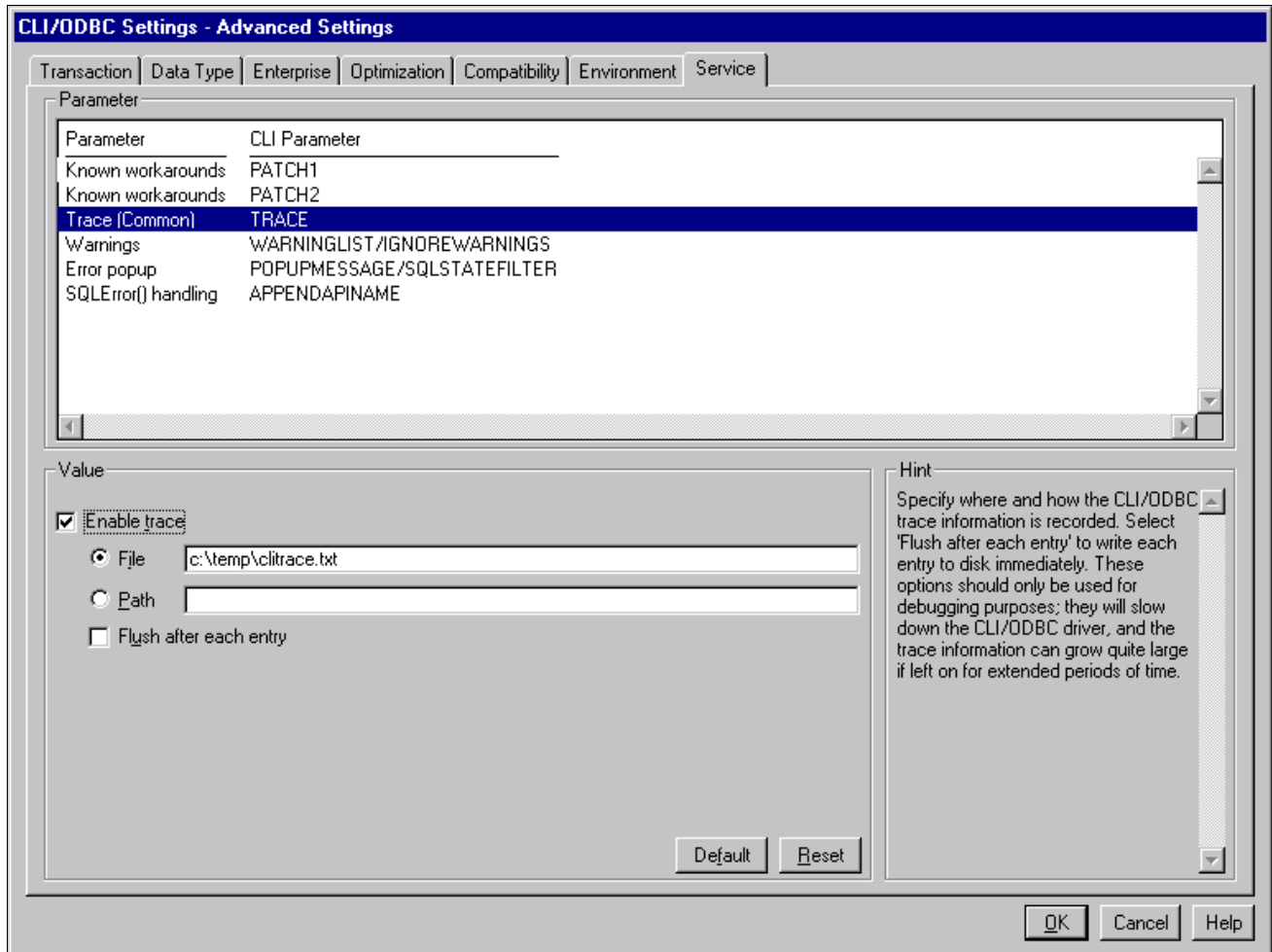
The DB2 CLI/ODBC trace is a valuable tool for debugging conversations between client workstations and the DB2 for z/OS database server. The trace can be set via the DB2CLI.INI file directly (see the previous section) or via the Client Configuration Assistant. You now need to alter the database settings specific for use with the PeopleSoft database.

To set CLI/ODBC Trace with the Client Configuration Assistant:

1. From the Client Configuration Assistant panel, highlight the database entry you just added and click on the Properties button. This brings up the Database Properties panel.
2. Click on the Settings button. This will give you the DB2 Message box requesting you to connect to the data source.
3. Choose No. This will take you to the CLI/ODBC Settings panel.



- Click on the Advanced button to open the Advanced Settings page.



CLI/ODBC Settings - Advanced Settings page: Service tab

- From the Advanced Settings page, verify that you are on the Transaction tab. Select the Service tab and enable the trace.

Select Trace in the Parameter list, select the Enable Trace option, and enter a path and filename in the "To" area to specify where the DB2 CLI/ODBC trace information is recorded, as shown in the example above.

- Click OK to save your changes.
- From here on, click OK until you return to the Client Configuration Assistant panel, and then close it.



## Chapter 16

# 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 16-1: 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](http://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 16-1-1: 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](http://docs.oracle.com/cd/E17566_01/epm91pbr0/eng/psbooks/EnablingtheHelpLinkfromApplicationPages.pdf).

The URLs have the following format, where UlinkID1, UlinkID2, ...UlinkID $n$  refer to universal linking product line codes:

[http://www.oracle.com/pls/topic/lookup?id=%CONTEXT\\_ID%&ctx=UlinkID1&ctx=UlinkID2....&ctx=UlinkID \$n\$](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](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**

My Homepage | New Window | Help | Personalize Page

General | Security | Authorized Site | Virtual Addressing | Cookie Rules | Caching | Debugging

Profile Name: PROD [Save As ...] [View History]

Description: Installation Defaults

Authentication Domain: .us.oracle.com ?

Help URL: oracle.com/pls/topic/lookup?id=%CONTEXT\_ID%&cbx=pt855pbr0&cbx=hom92pbr7 ?

Compress Responses ?

Compress Response References ?

Compress Mime Types: application/x-javascript,text/javascript,text/css,text/html ?

Compress Query ?

Save Confirmation Display Time: 3,000 Milliseconds ?

Enable Processing Message ?

Enable New Window ?

Enable Print ?

Enable PPM Agent ?

PPM Monitor Buffer Size: 51,200 KB ?

Single Thread Netscape ?

Single Thread Delay: 1,000 Milliseconds ?

Non-standard Base Path: ?

**Reports**

Enable Report Repository ?

Report Repository Path: ?

**Compress Report Output**

All Browsers ?

Exclude NetScape ?

Do Not Compress ?

[Save] [Return to Search] [Notify] [Previous tab] [Next tab] [Add] [Update/Display]

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 16-1-2: 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](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](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 16-2: 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 16-2-1: 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 16-2-2: 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 16-2-3: 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 17

# 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 17-1: 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 17-1-1: 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 17-2: 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 17-2-1: 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 17-3: 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 17-4: 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.

- In the URL field, enter the following value, where <machine\_name> is the Web server machine name, including the domain name, and <port> is the HTTP port number of the PeopleSoft web server:

`http://<machine_name>:<port>/PSIGW/PeopleSoftListeningConnector`

This example shows the Integration Broker Gateways page with the URL

`http://webs07.dom1.com:8000/PSIGW/PeopleSoftListeningConnector`, where webs07.dom1.com is the combined machine name and domain name, and 8000 is the HTTP port:

**Gateways**

Gateway ID: LOCAL [Inbound Gateways](#)

Local Gateway  Load Balancer

URL:  Ping Gateway

[Gateway Setup Properties](#)

Load Gateway Connectors

Connectors			Personalize   Find   First 1-9 of 9 Last			
	*Connector ID	Description	*Connector Class Name	Properties	+	-
1	AS2TARGET		AS2TargetConnector	Properties	+	-
2	FILEOUTPUT		SimpleFileTargetConnector	Properties	+	-
3	FTPTARGET		FTPTargetConnector	Properties	+	-
4	GETMAILTARGET		GetMailTargetConnector	Properties	+	-
5	HTTPTARGET		HttpTargetConnector	Properties	+	-
6	JMSTARGET		JMSTargetConnector	Properties	+	-
7	PSFT81TARGET		ApplicationMessagingTargetConnector	Properties	+	-
8	PSFTTARGET		PeopleSoftTargetConnector	Properties	+	-
9	SMTPTARGET		SMTPTargetConnector	Properties	+	-

Save Return to Search

Integration Broker Gateways page

- 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.

- 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.

- Select PeopleTools, Integration Broker, Service Operations Monitor, Administration, Domain Status.
- 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 to access integrationGateway.properties file.

The default user ID is 'administrator' and the default password is 'password'.

User ID administrator

Password ●●●●●●●●●●

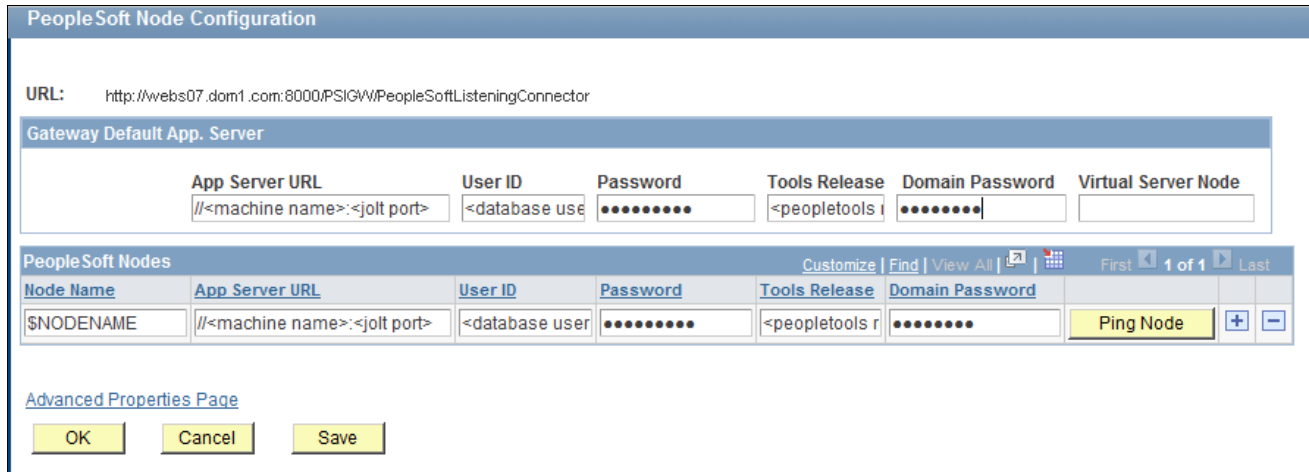
Change Password

OK Cancel

Gateway Properties sign on page



11. Add a new node in the PeopleSoft Node Configuration page.



PeopleSoft Node Configuration page

Node Name: Enter the name of the active default node.

This example uses \$NODENAME.

To find the active default node, navigate to Integration Broker, Integration Setup, 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 18

# Installing Web Application Deployment Tools

This chapter discusses:

- Prerequisites
- Installing the Web Application Deployment Tool on Oracle WebLogic in GUI Mode
- Installing the Web Application Deployment Tool on IBM WebSphere in GUI Mode
- Installing the Web Application Deployment Tool on Oracle WebLogic in Console Mode
- Installing the Web Application Deployment Tool on IBM WebSphere in Console Mode
- 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 18-1: Installing the Web Application Deployment Tool on Oracle WebLogic in GUI Mode

---

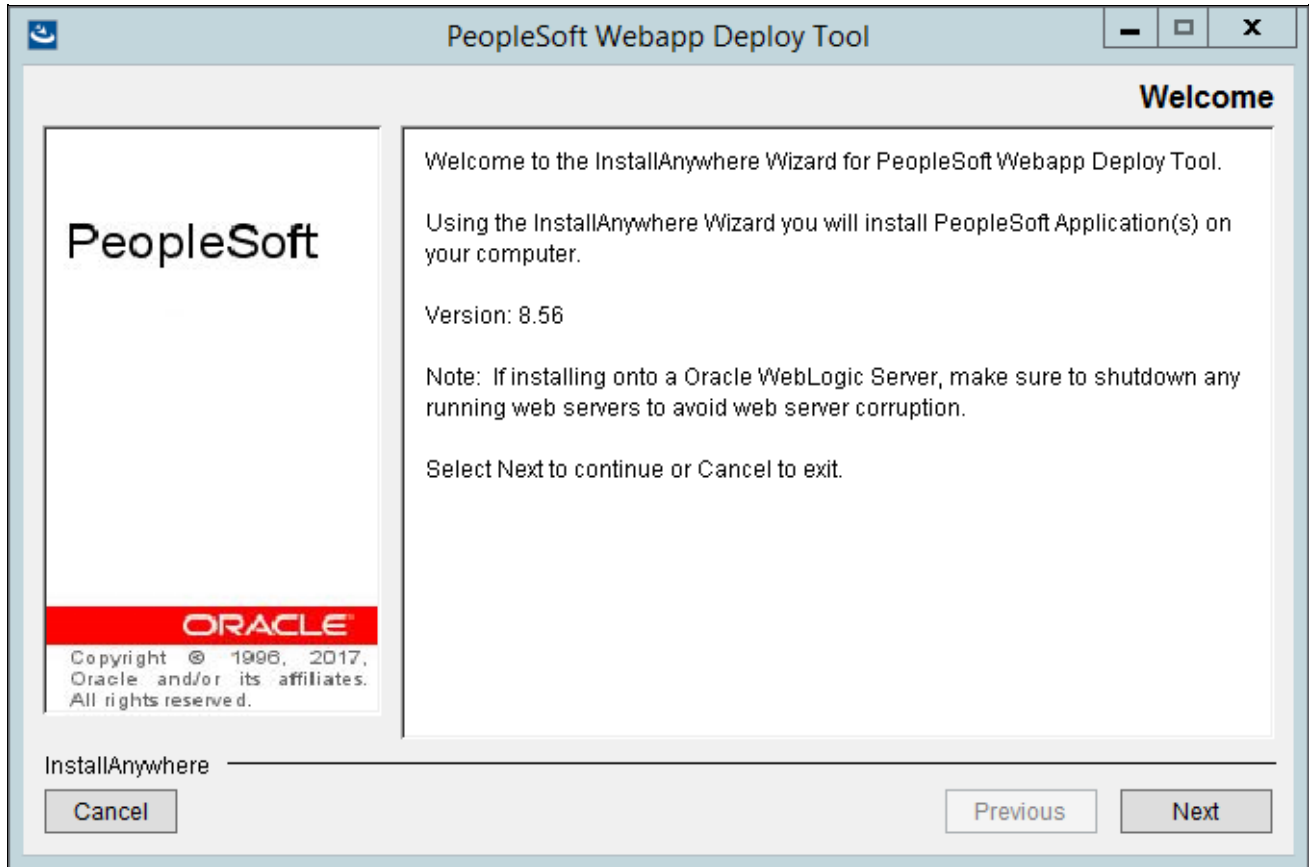
Use these instructions to install the Web Application Deployment tool on Oracle WebLogic in GUI mode.

1. Navigate to *PS\_HOME/setup/PsMpWebAppDeployInstall*.
2. Double-click on *setup.bat*.

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

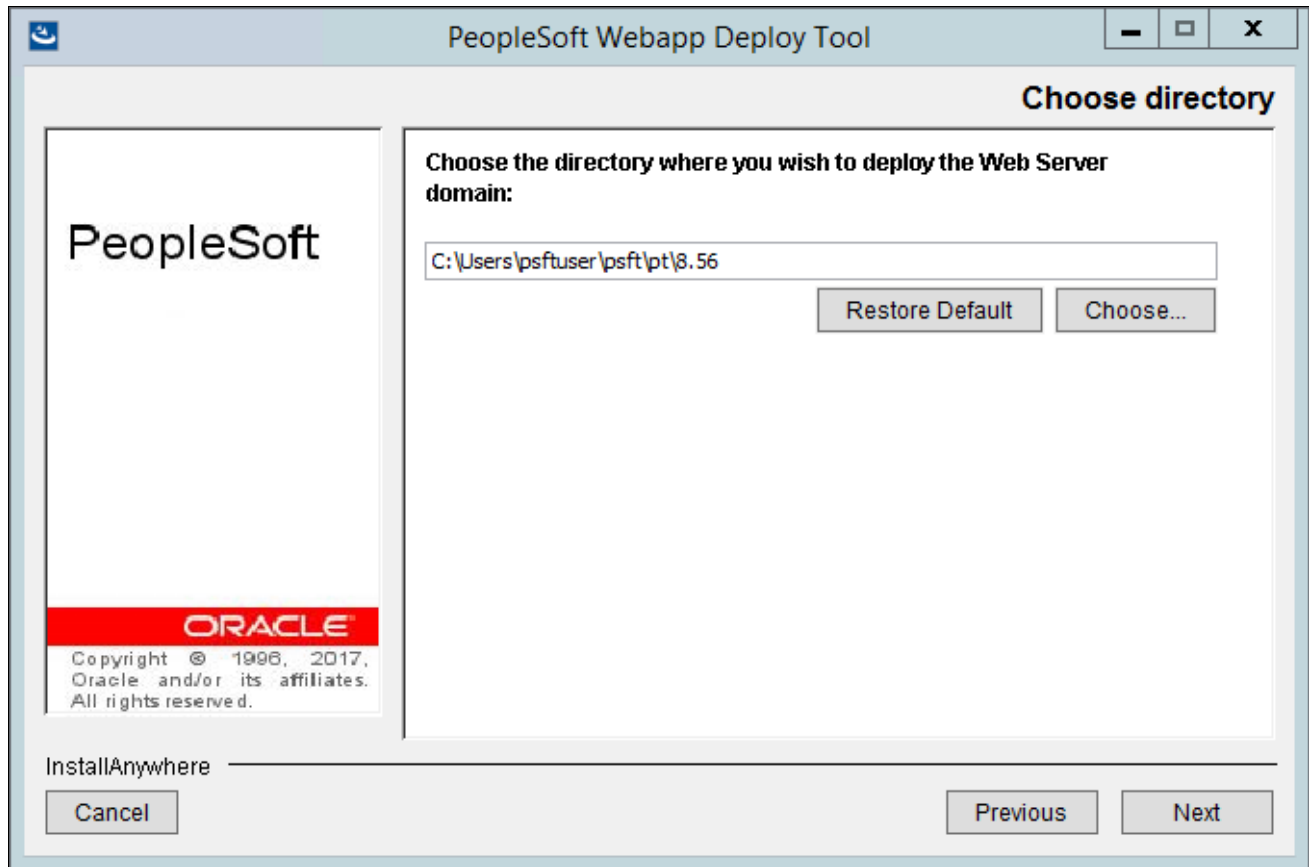
- 3. Click Next on the Welcome window.

The window displays the PeopleSoft PeopleTools version, which is 8.56 in this example, and includes the note: "If installing onto a Oracle WebLogic Server, make sure to shutdown any running web servers to avoid web server corruption."



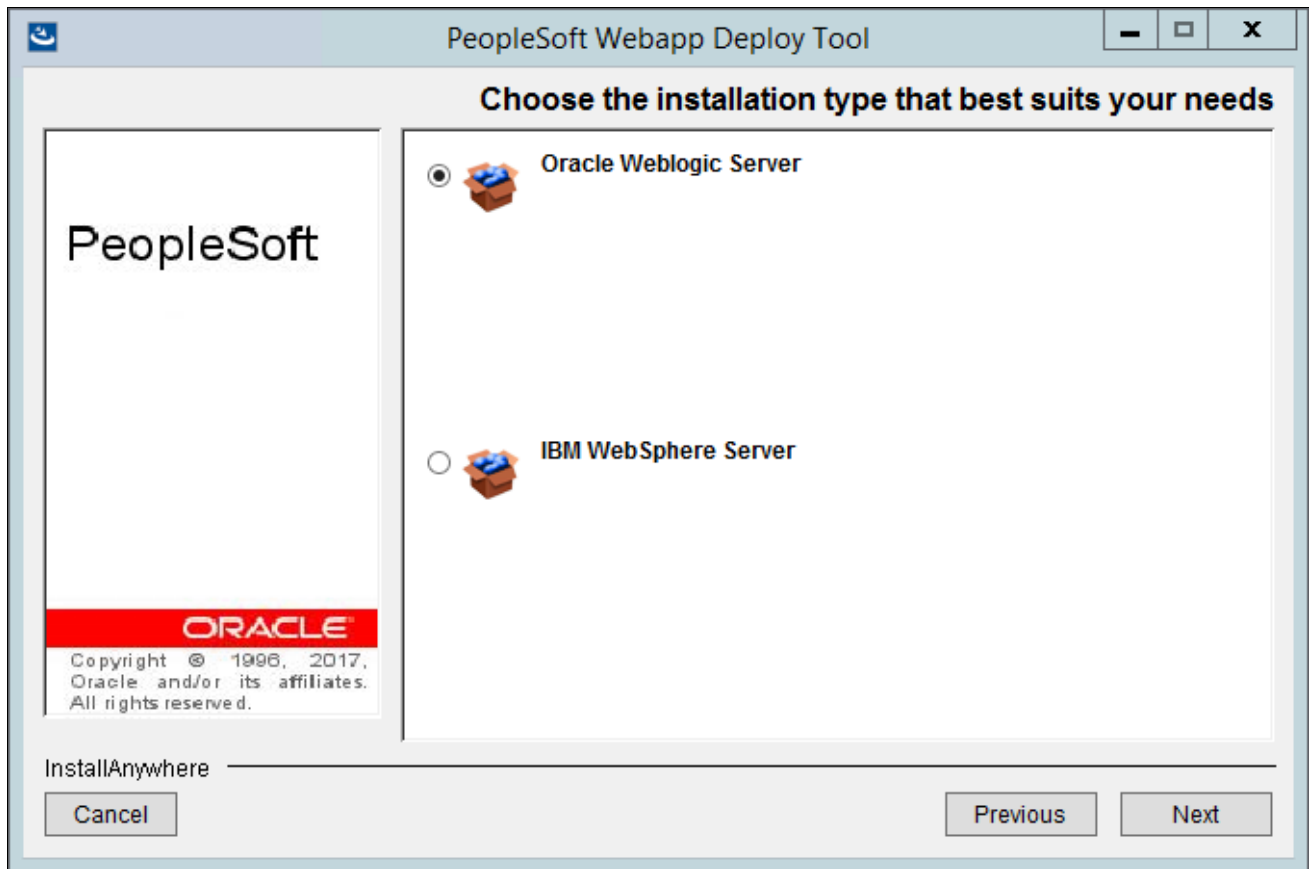
PeopleSoft Webapp Deploy Tool Welcome window

4. Enter the directory where you want to deploy the web server domain for the Web Application Deployment.  
The default directory is *PS\_CFG\_HOME*. In this example, the deployment directory is `C:\Users\psftuser\psft\pt\8.56`.



PeopleSoft Webapp Deploy Tool Choose directory window

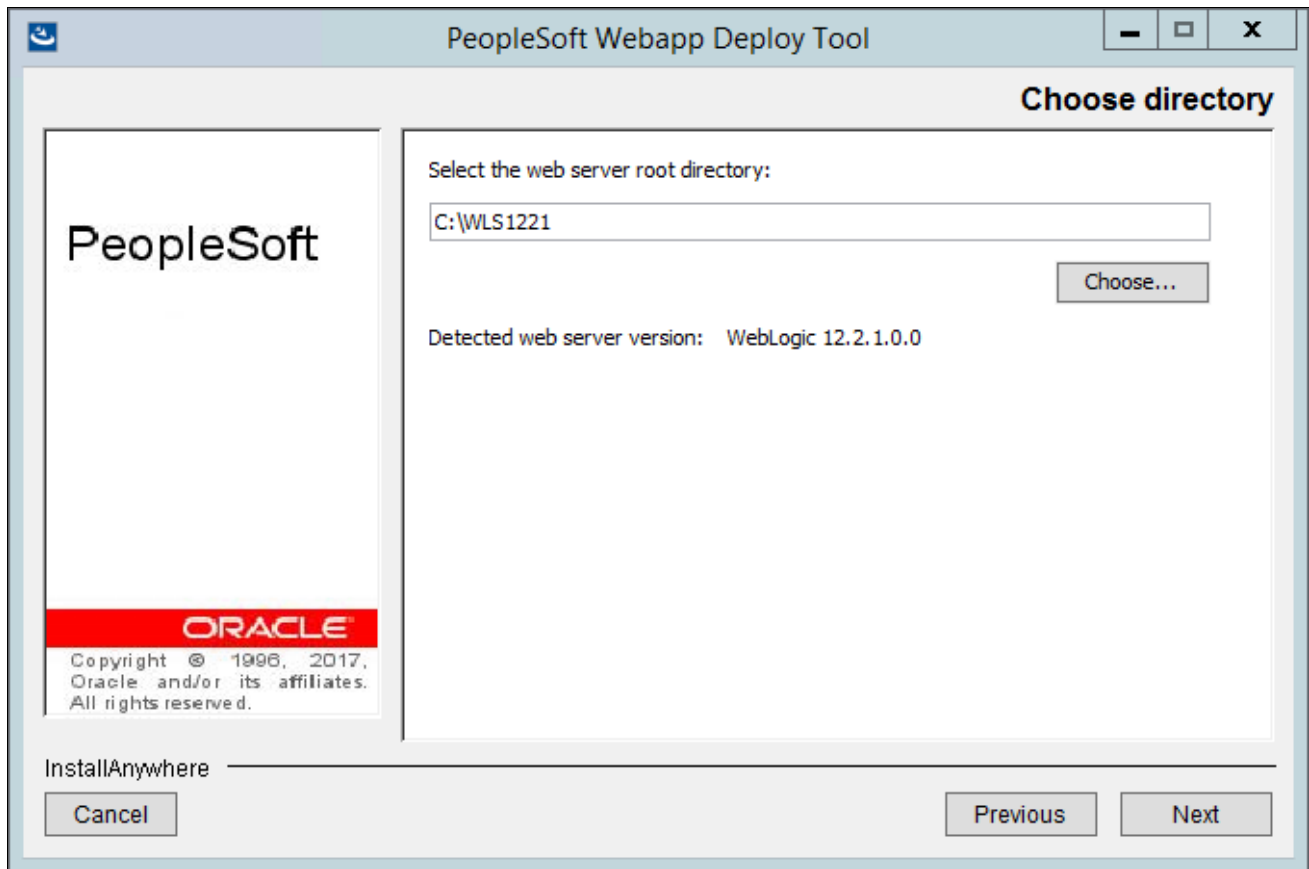
- 5. Select Oracle Weblogic Server as the installation type, as shown in this example, and click Next.



PeopleSoft Webapp Deploy Tool Choose the installation type that best suits your needs window

- Specify the root directory where you installed Oracle WebLogic, and click Next.

In this example, the web server root directory for Oracle WebLogic 12.2.1 is C:\WLS1221.



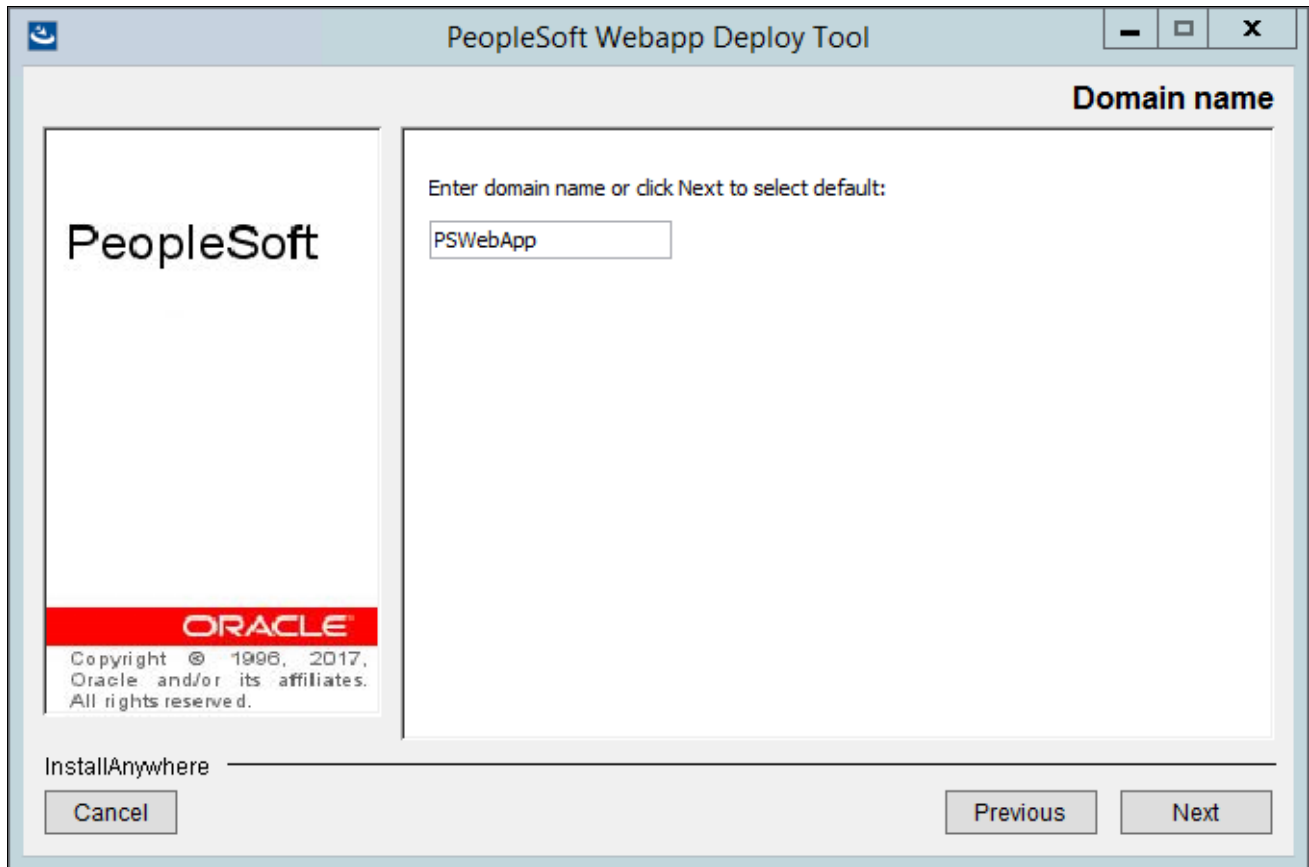
PeopleSoft Webapp Deploy Tool Choose directory window



- 7. Enter a name for the Web Application Deployment domain, or accept the default name, PSWebApp, as shown in this example.

Use a fully qualified domain name, and do not use an IP address. Click Next to continue.

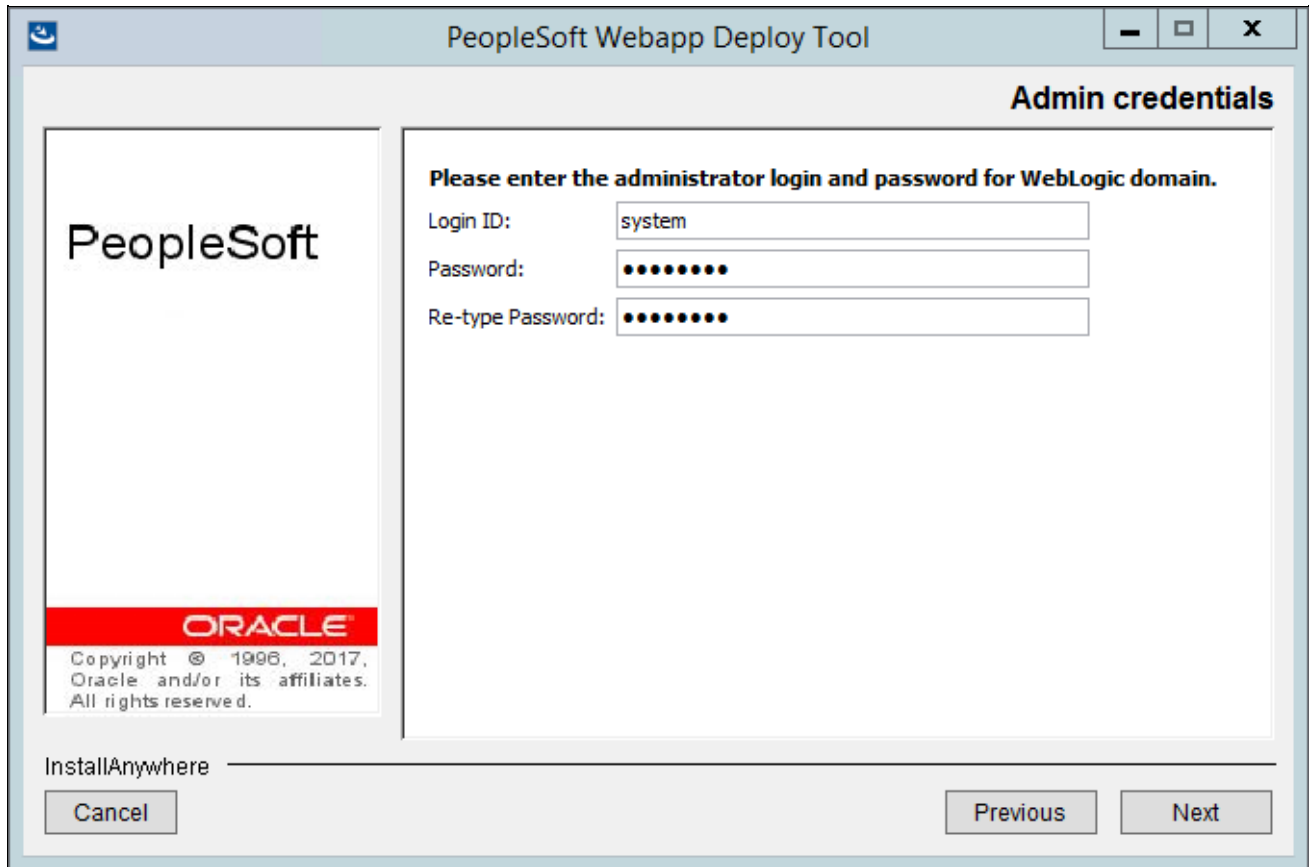
**Important!** The domain that you create for the Web Application Deployment cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.



PeopleSoft Webapp Deploy Tool Domain name window

- 8. Enter the login ID and enter the password twice for the new web server domain that you are creating, and then click Next to continue.

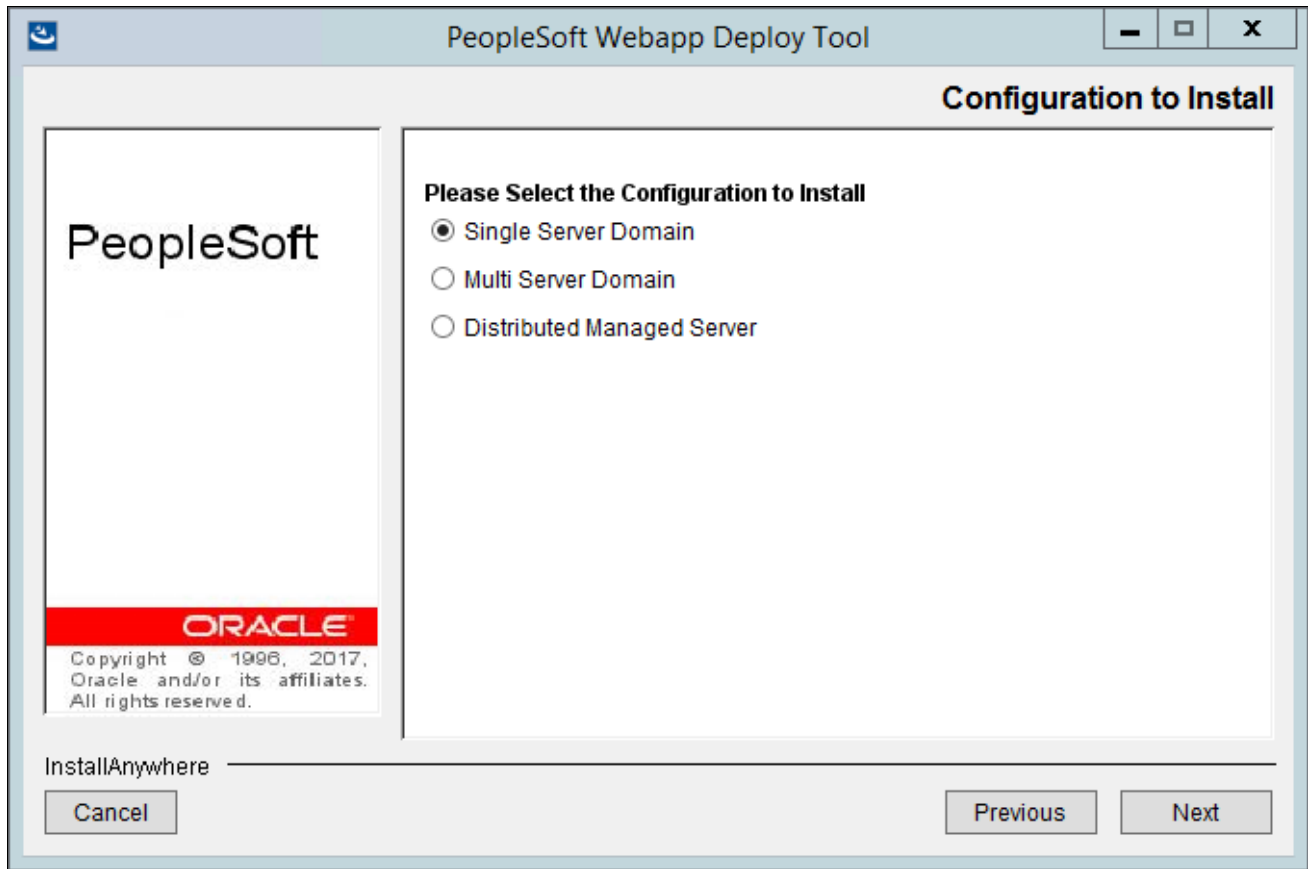
**Note.** The default login ID is system, as shown on this example. The password, which you specified during the PeopleSoft Pure Internet Architecture setup, must be at least 8 alphanumeric characters with at least one number or special character.



PeopleSoft Webapp Deploy Tool Admin credentials window

9. Select the configuration from the options Single Server Domain, Multi Server Domain, or Distributed Manager Server.

In this example the Single Server Domain option is selected.

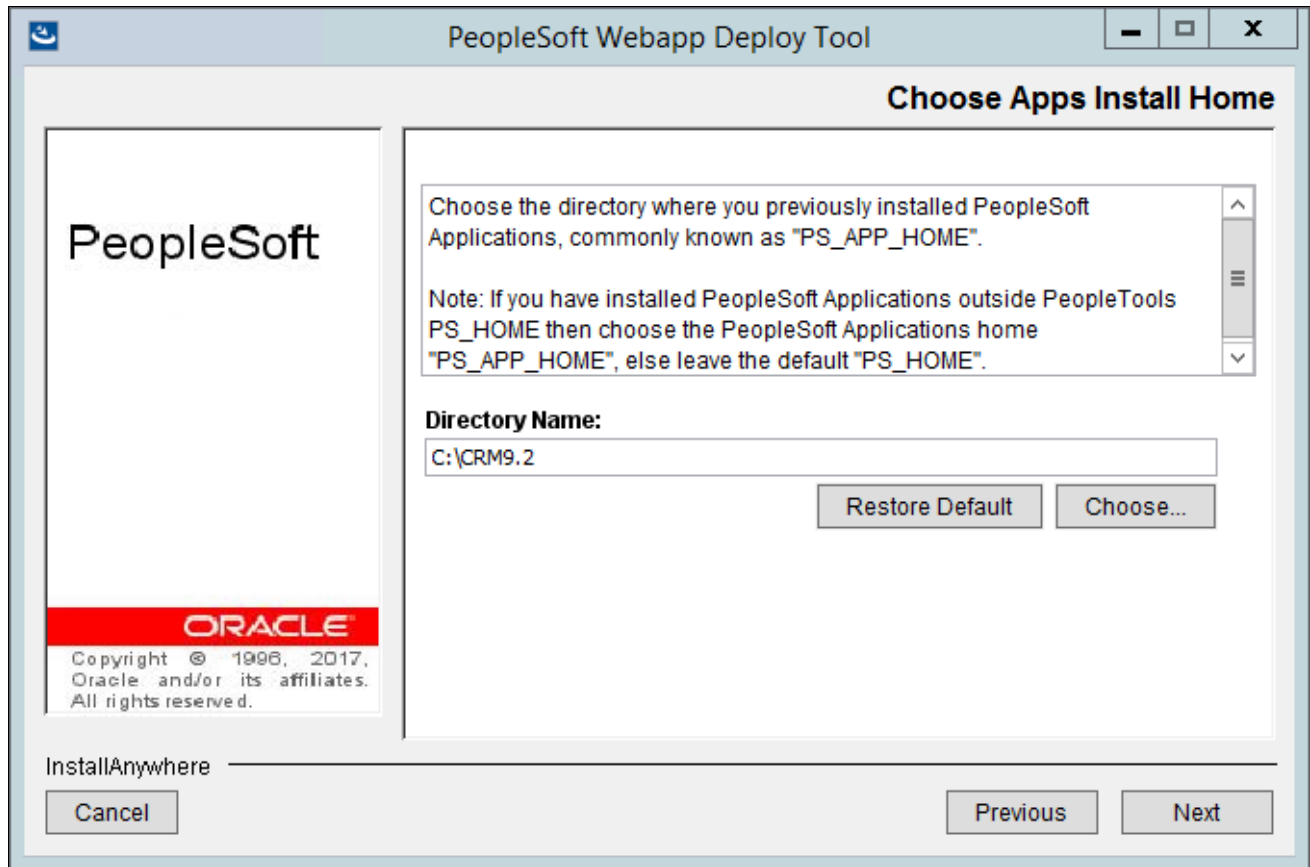


PeopleSoft Webapp Deploy Tool Configuration to Install window

- *Single Server Domain*  
This configuration is intended for single user or very small scale, non-production environments.
- *Multi-Server Domain*  
This configuration is intended for a production environment.
- *Distributed Managed Server*  
This option is an extension of the Multi-Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

10. Enter the *PS\_APP\_HOME* directory that you specified when you installed the PeopleSoft application software using the PeopleSoft PeopleTools installer.

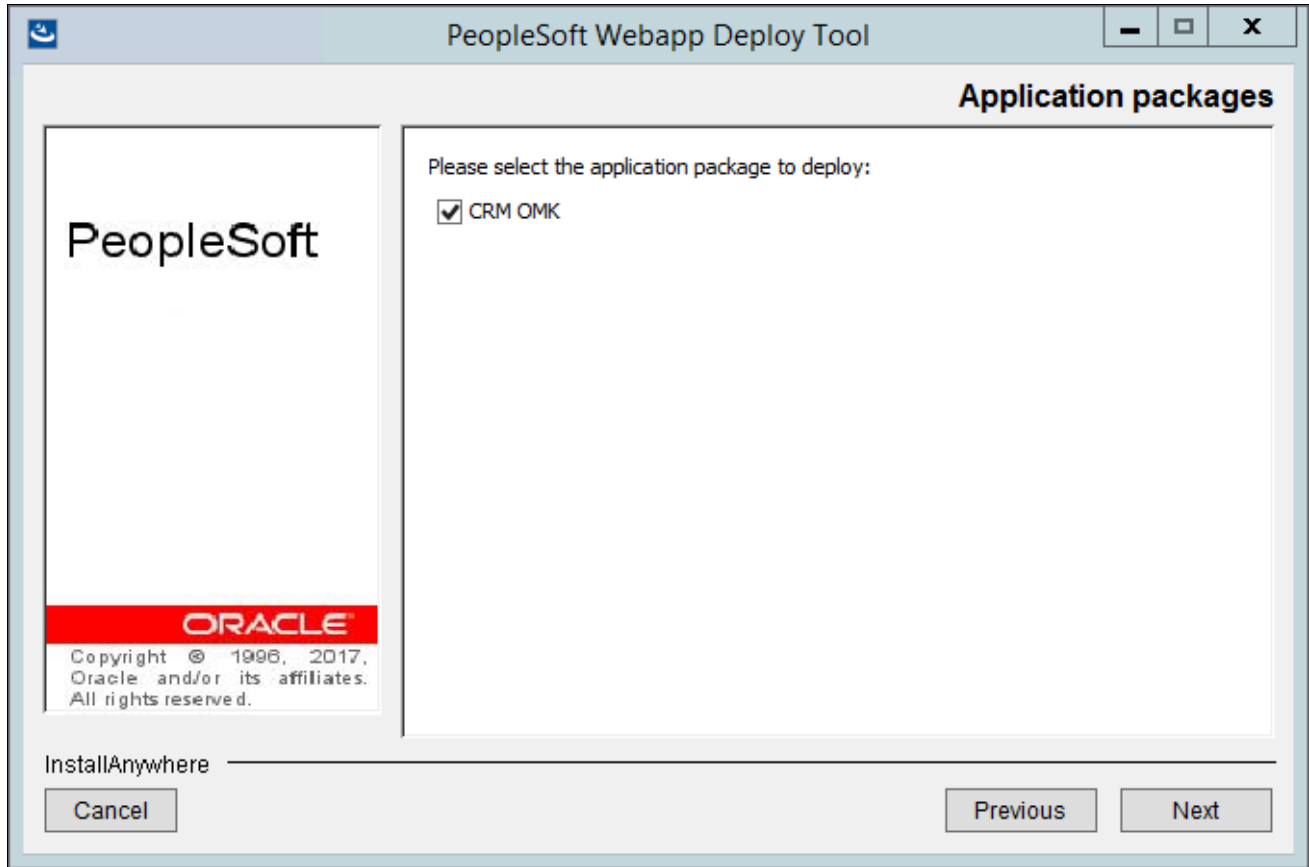
In this example, *PS\_APP\_HOME* is C:\CRM9.2.



PeopleSoft Webapp Deploy Tool Choose Apps Install Home window

11. The next window lists all of the available application packages (EAR files).

Select the packages you want to install. *You must select at least one application package from the list.* In this example the CRM OMK package is selected.



PeopleSoft Webapp Deploy Tool Application packages window

12. If the application(s) you selected requires additional information, a window appears with entry fields for the required information.

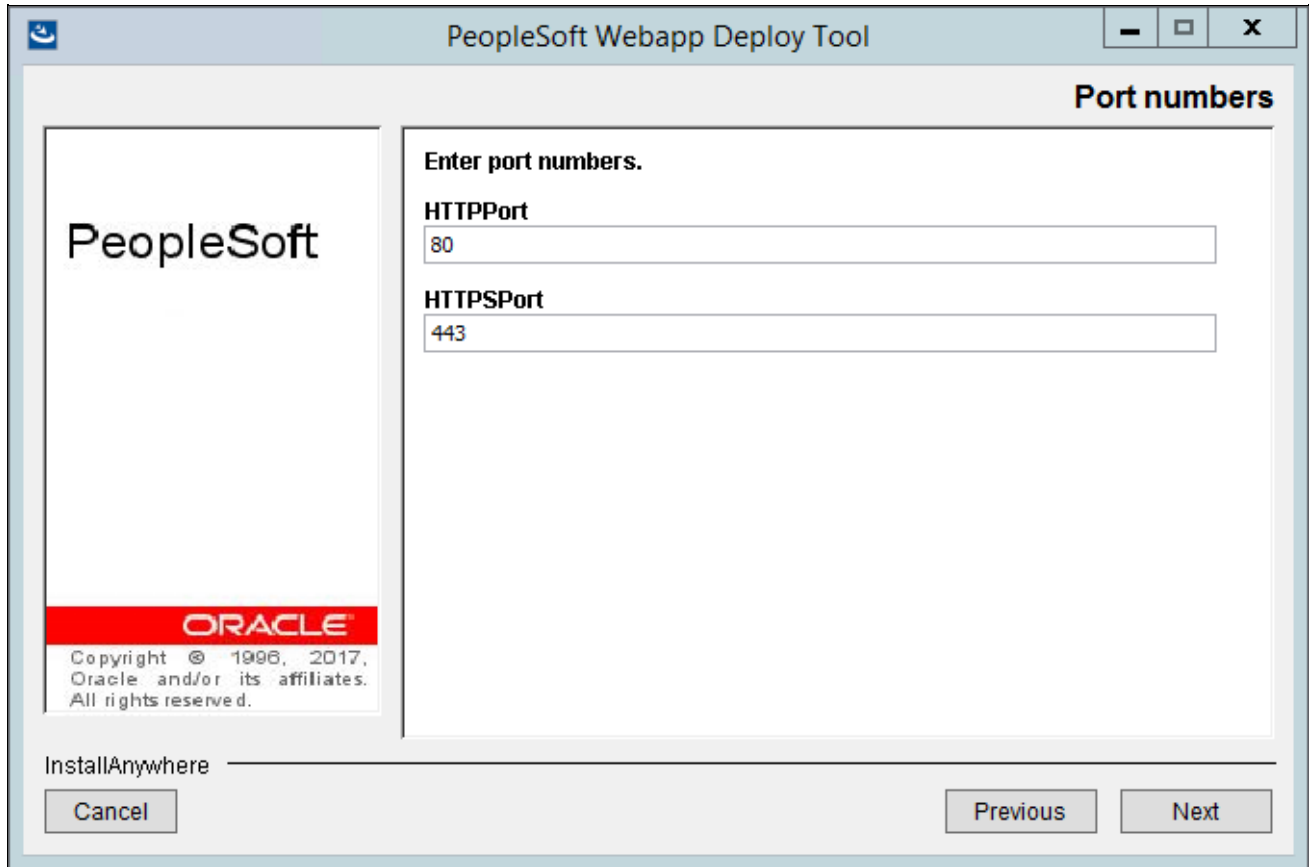
PeopleSoft Webapp Deploy Tool CRM DB Information window

The information required for the application in this example includes:

- Database Type  
Enter the RDBMS type, which is DB2ODBC (DB2 for z/OS) in the example.
- Database Server Name  
Enter the name of the machine that is hosting the database, which is SERVER1 in the example.
- Database Port Number  
Consult with your database administrator for the correct port number. The port number shown in the example is 1433.
- Database Instance Name  
Enter the database name, which is CRMDMO in the example.
- Database User Name  
Enter the user name for the database.
- Database User Password

13. Enter HTTP and HTTPS port numbers, and then click Next to continue.

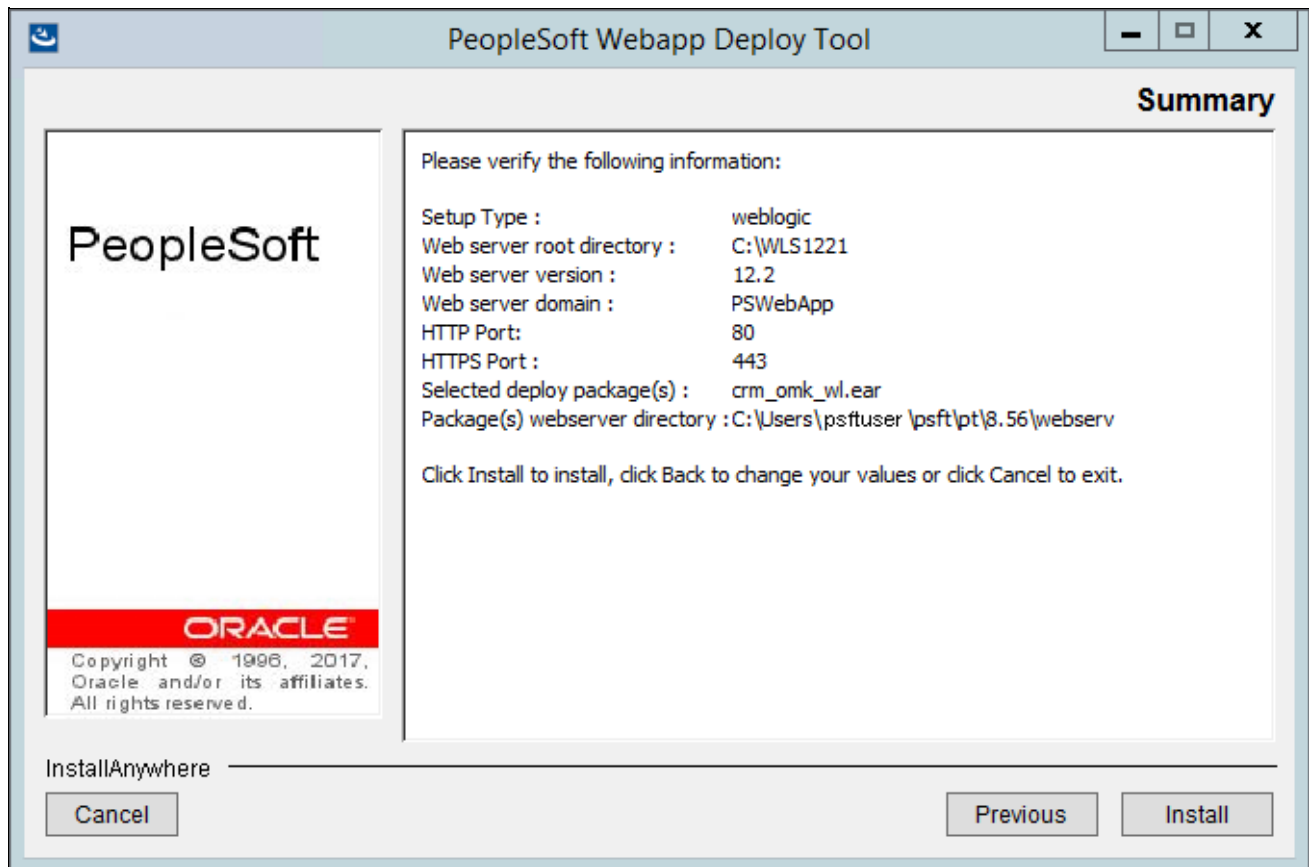
Do not use the same values that you used for the HTTP and HTTPS ports when setting up the PeopleSoft Pure Internet Architecture. This example shows the default numbers; 80 for the HTTPPort and 443 for the HTTPSPort.



PeopleSoft Webapp Deploy Tool Port numbers window

14. Verify your installation information, such as web server information, HTTP and HTTPS port, and application deployment package, on the summary screen that appears, as shown in this example.

Click Install to begin the installation, Previous to go back to make changes on an earlier window, or Cancel to exit the installation.



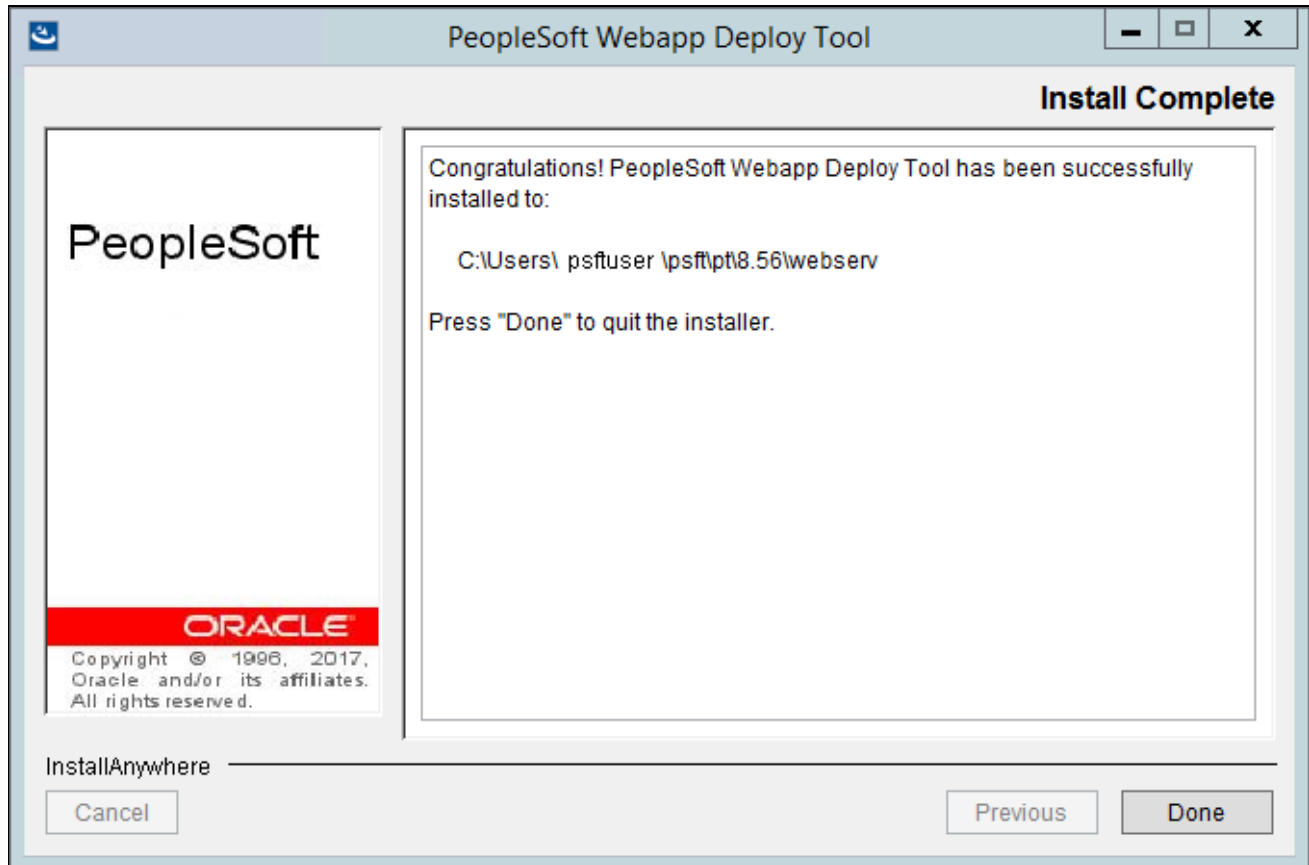
PeopleSoft Webapp Deploy Tool Summary window



15. A confirmation screen appears, which displays the installation location, `C:\Users\psftuser\psft\pt\8.56\webserv` in this example, when the installation completes.

The Web Application Deployment tool is deployed to the `webserv\<domain_name>` folder in the installation location. For example, for the default domain `PSWebApp`, this would be `C:\Users\psftuser\psft\pt\8.56\webserv\PSWebApp`.

Click Done to exit.



PeopleSoft Webapp Deploy Tool Install Complete window

## Task 18-2: Installing the Web Application Deployment Tool on IBM WebSphere in GUI Mode

Use these instructions to install the Web Application Deployment tool on IBM WebSphere in GUI mode.

1. Start WebSphere on the server on which you plan to deploy the Web Application Deployment tool.
  - a. On Microsoft Windows 2012 R2, access the Apps screen and locate the First steps utility in the IBM WebSphere category.

Use the `<profile_name>` that you created for the PeopleSoft Pure Internet Architecture installation.

See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode," Testing and Administering the PeopleSoft Pure Internet Architecture.

- b. Select the link Start the server.
2. Navigate to `PS_HOME\setup\PsmPWebAppDeployInstall`.

3. Double-click on `setup.bat`.

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

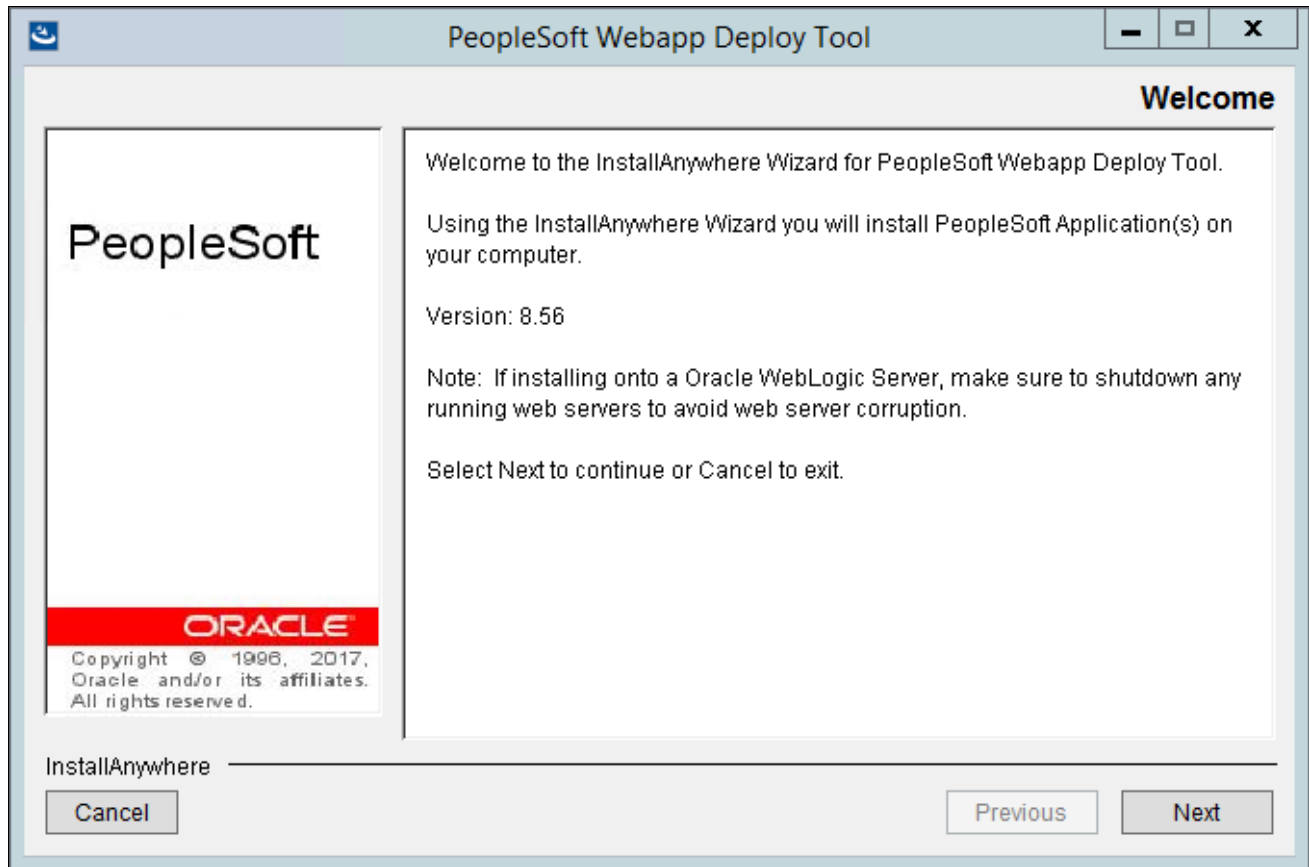
4. Click Next on the Welcome window.

The window includes the PeopleSoft PeopleTools version number, which is 8.56 in this example.

---

**Note.** The window also includes a message to shut down running Oracle WebLogic servers.

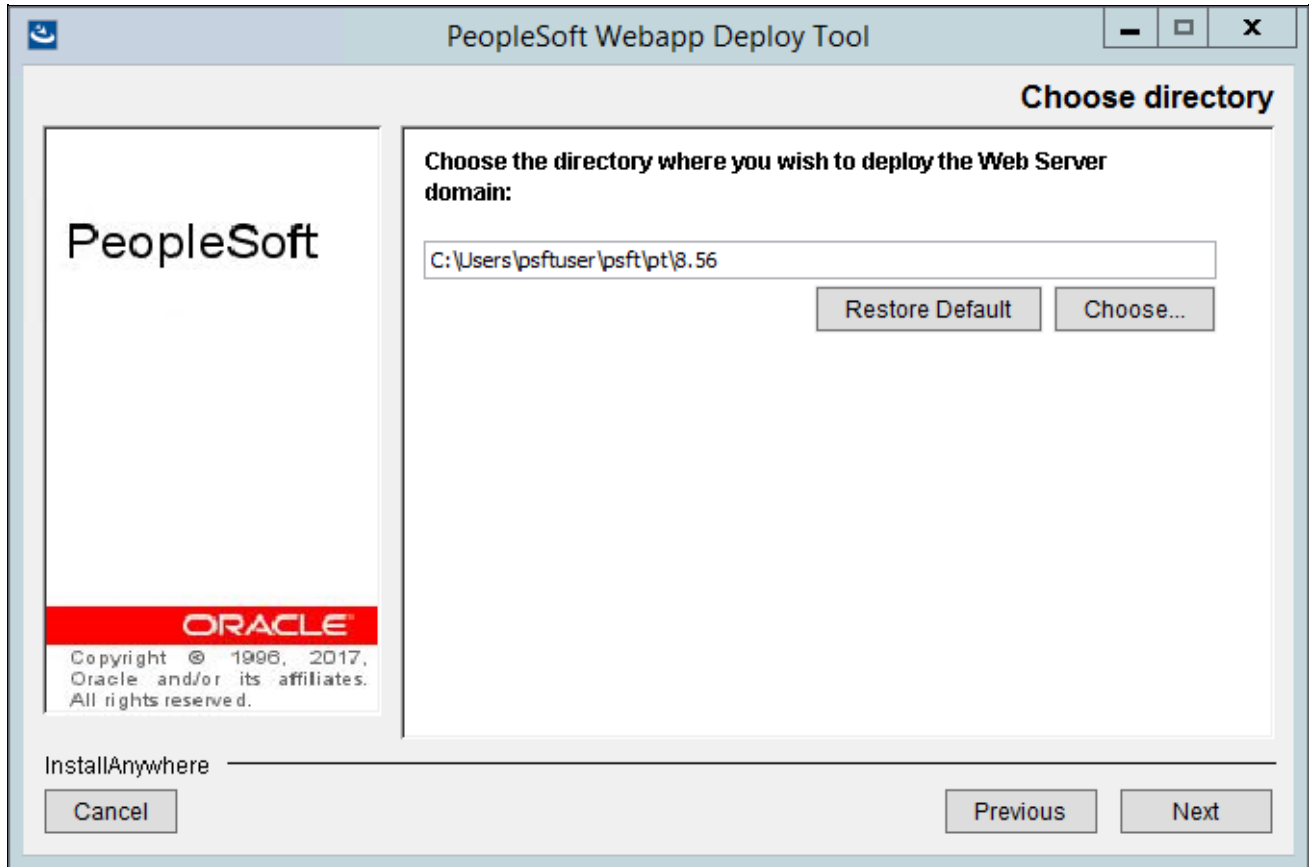
---



PeopleSoft Webapp Deploy Tool Welcome window

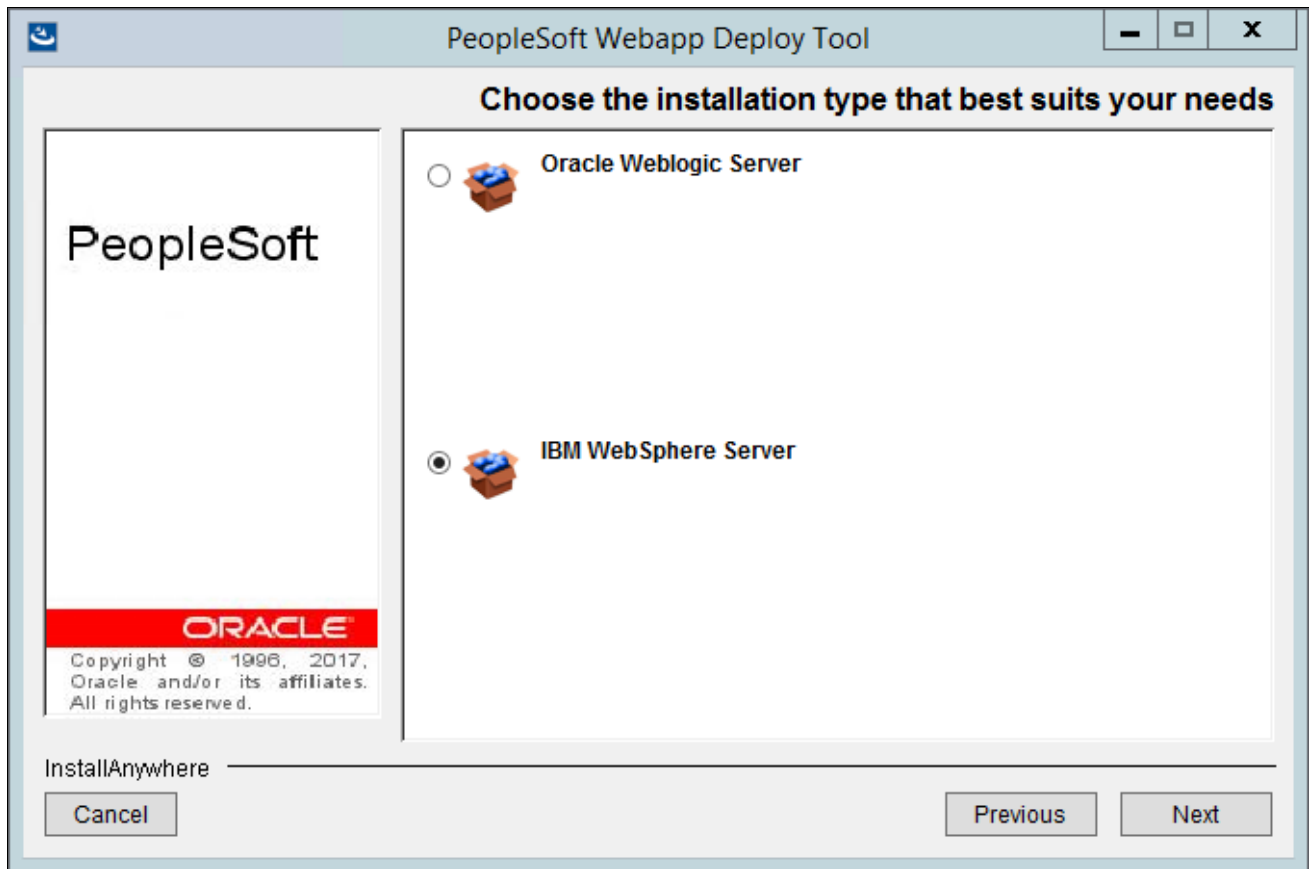
- 5. Enter the directory where you want to deploy the domain for the Web Application Deployment, and then click Next.

The default directory is *PS\_CFG\_HOME*. In this example, the deployment directory is `C:\Users\psftuser\psft\pt\8.56`.



PeopleSoft Webapp Deploy Tool Choose directory window

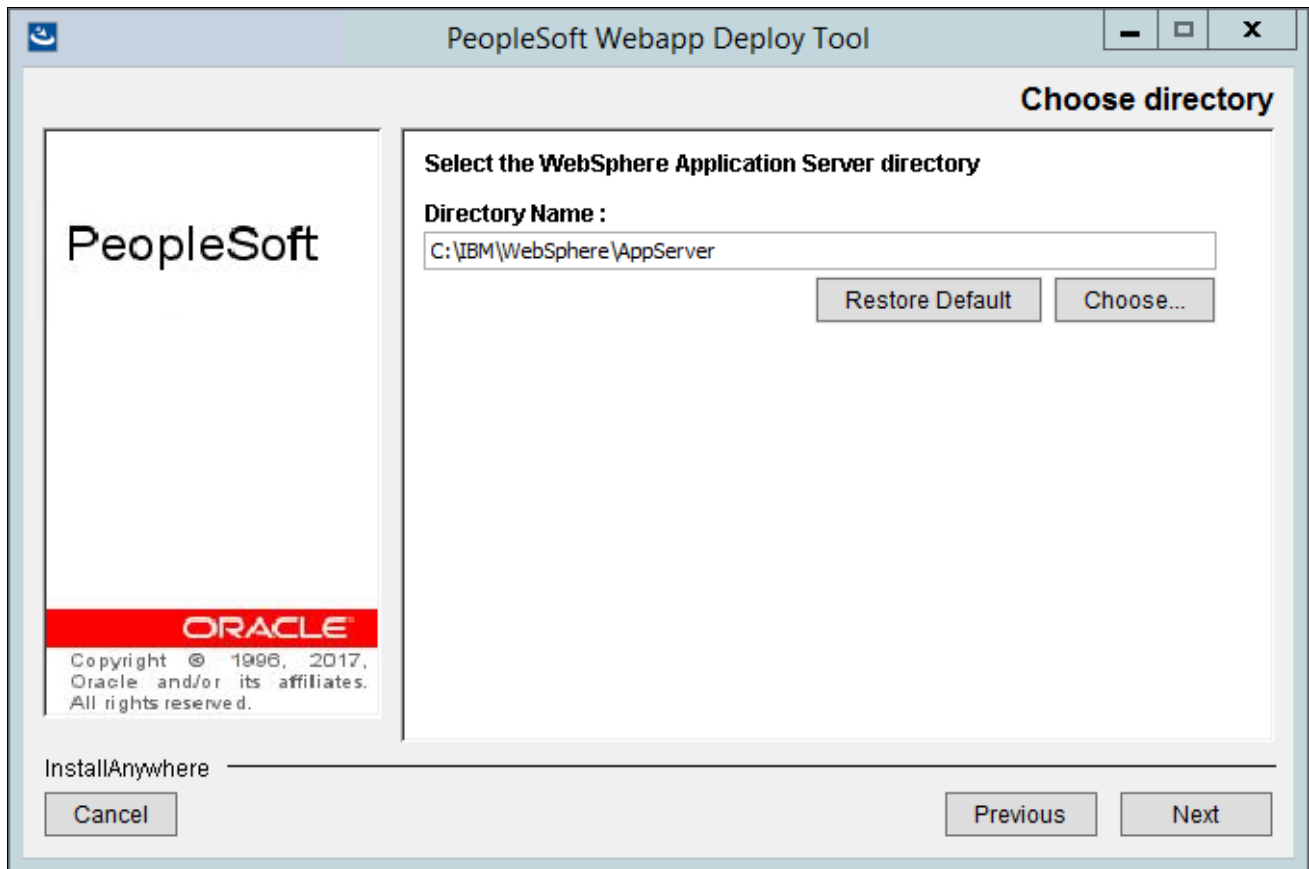
6. Select IBM WebSphere Server, as shown in this example, and click Next.



PeopleSoft Webapp Deploy Tool Choose the installation type that best suits your needs window

7. Specify the root directory where you installed the IBM WebSphere Application server.

In this example, the root directory is C:\IBM\WebSphere\AppServer.



PeopleSoft Webapp Deploy Tool Choose directory window

---

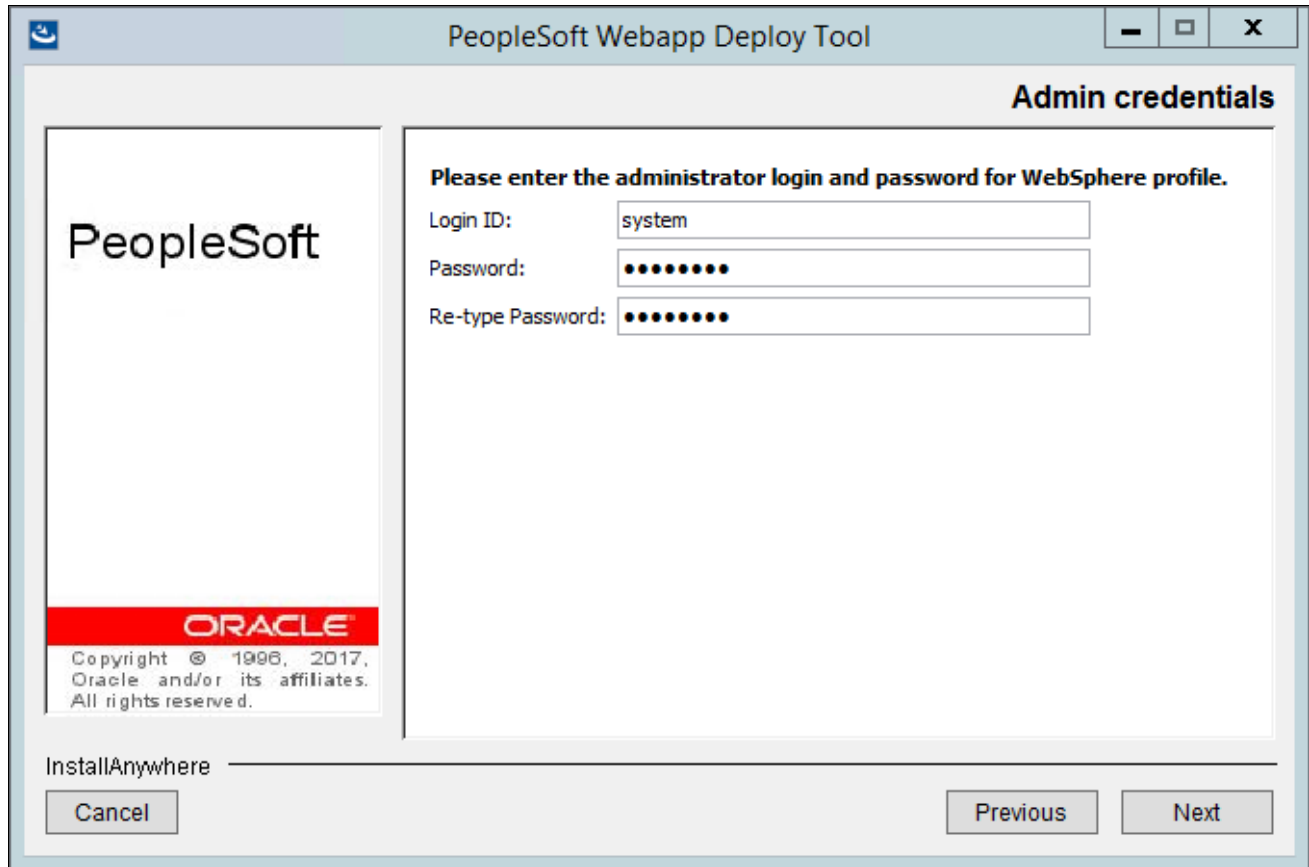
**Note.** If the web server on which you are installing the Web Application Deployment tool is not up and running, you receive an error message at this point instructing you to start your web server.

---

See "Setting Up the PeopleSoft Pure Internet Architecture in GUI Mode," Testing and Administering the PeopleSoft Pure Internet Architecture Installation.

8. Enter the login ID and enter the password twice for the new web server domain that you are creating, and then click Next to continue.

The default login ID, as shown in this example, is system. The password, which you specified during the PeopleSoft Pure Internet Architecture setup, must be at least 8 alphanumeric character with at least one number or special character.



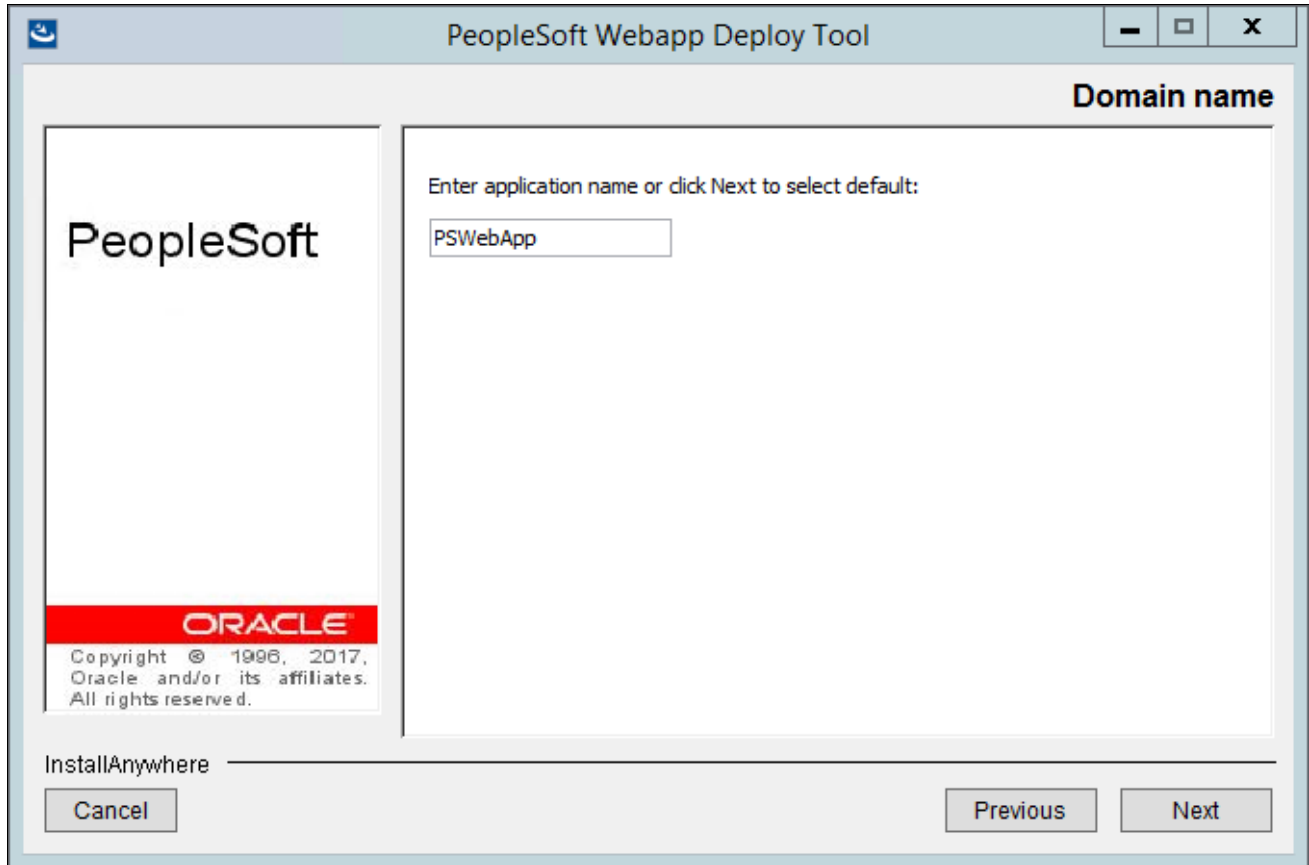
The screenshot shows a window titled "PeopleSoft Webapp Deploy Tool" with a subtitle "Admin credentials". On the left is the PeopleSoft logo and the Oracle logo with copyright information: "Copyright © 1996, 2017, Oracle and/or its affiliates. All rights reserved." The main area contains the instruction "Please enter the administrator login and password for WebSphere profile." and three input fields: "Login ID:" with the value "system", "Password:" with eight dots, and "Re-type Password:" with eight dots. At the bottom, there is an "InstallAnywhere" label, a "Cancel" button, and "Previous" and "Next" buttons.

PeopleSoft Webapp Deploy Tool Admin credentials window

- 9. Enter a name for the Web Application Deployment domain, or accept the default name, PSWebApp, as in this example.

Use a fully qualified domain name, and do not use an IP address. Click Next to continue.

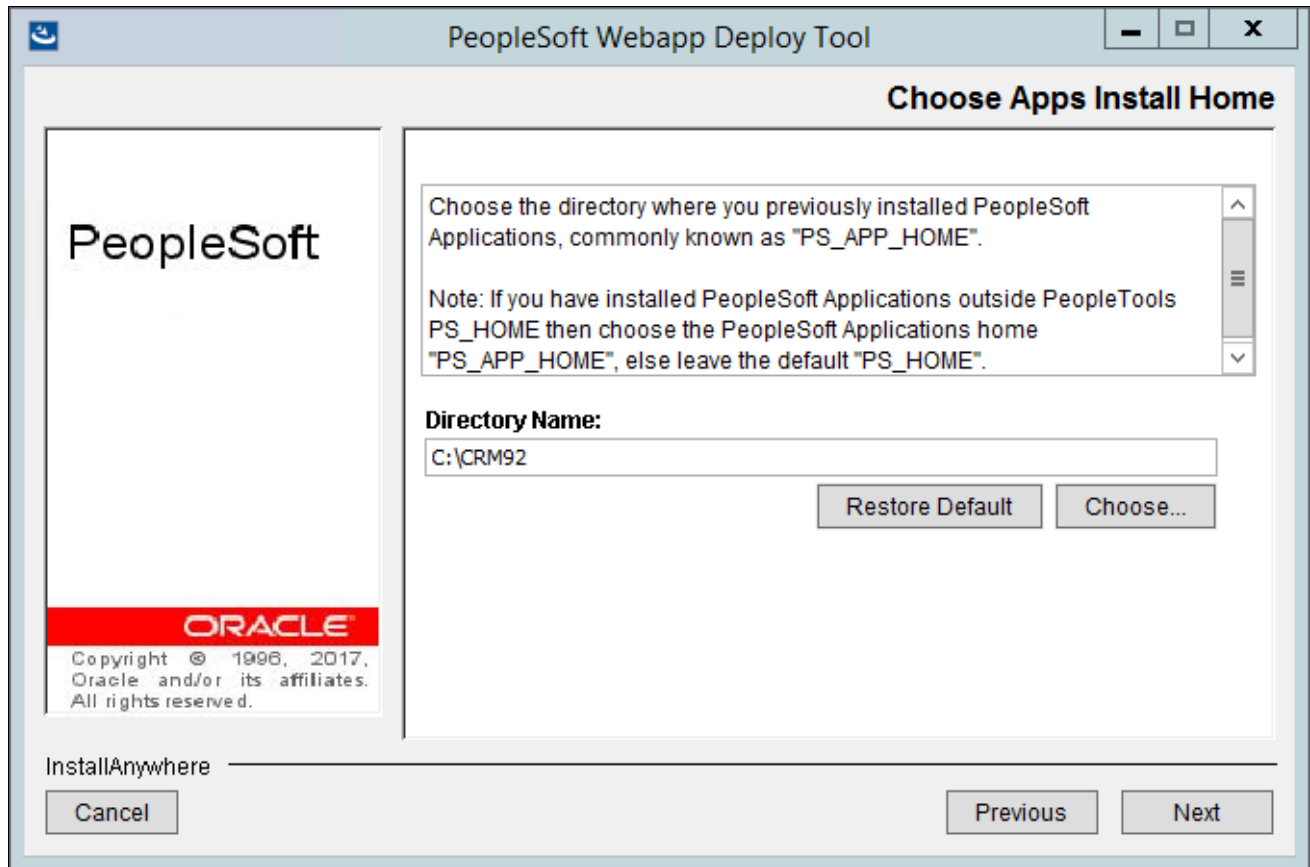
**Important!** The domain that you create for the Web Application Deployment cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.



PeopleSoft Webapp Deploy Tool Domain name window

10. Enter the *PS\_APP\_HOME* directory that you specified when you installed the PeopleSoft application software using the PeopleSoft PeopleTools installer.

In this example, *PS\_APP\_HOME* is C:\CRM92.

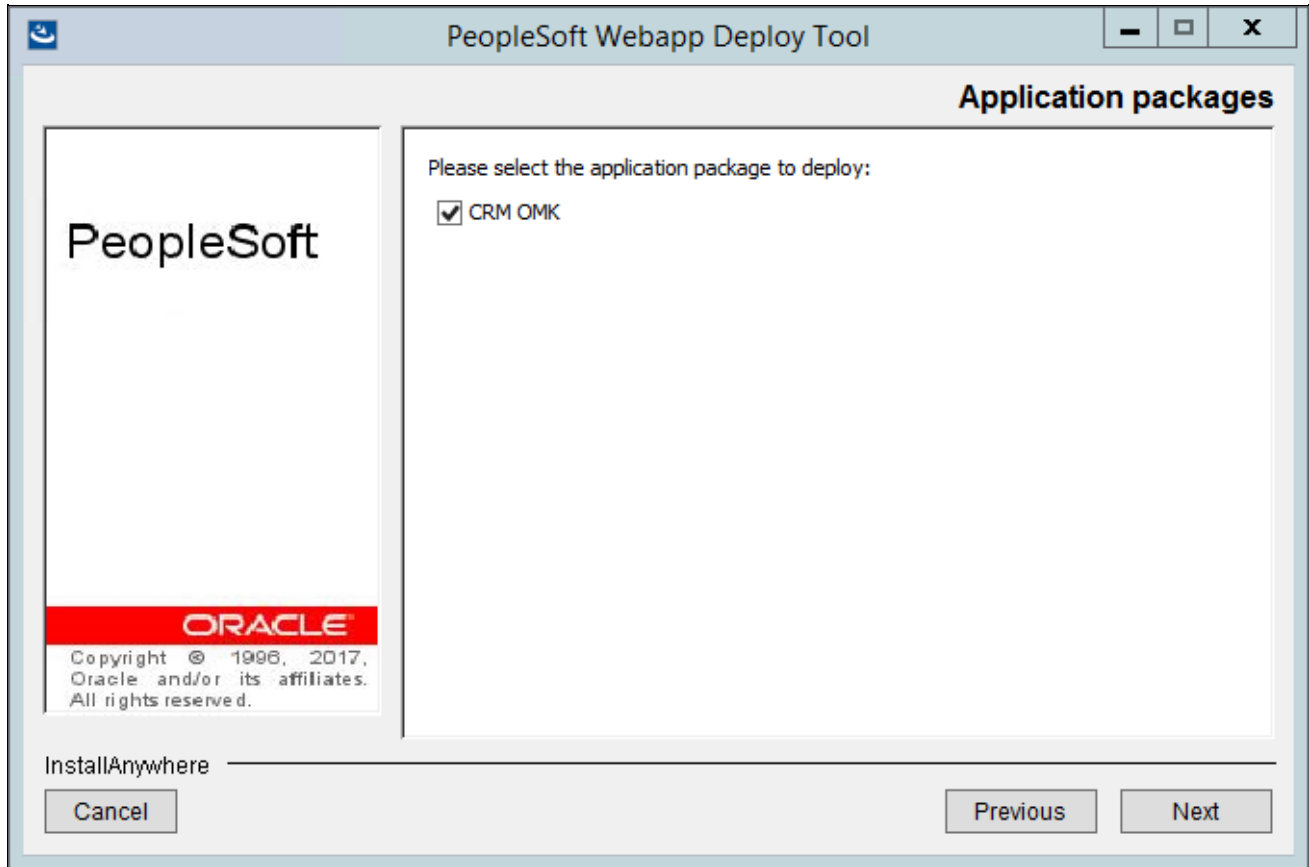


PeopleSoft Webapp Deploy Tool Choose Apps Install Home window



11. The next window lists all of the available application packages (EAR files). Select the packages you want to install.

*You must select at least one application package from this list. In this example, the application package CRM OMK is selected.*



PeopleSoft Webapp Deploy Tool Application packages window

12. If the application(s) you selected in the previous step requires additional information, a window appears with entry fields for the required information.

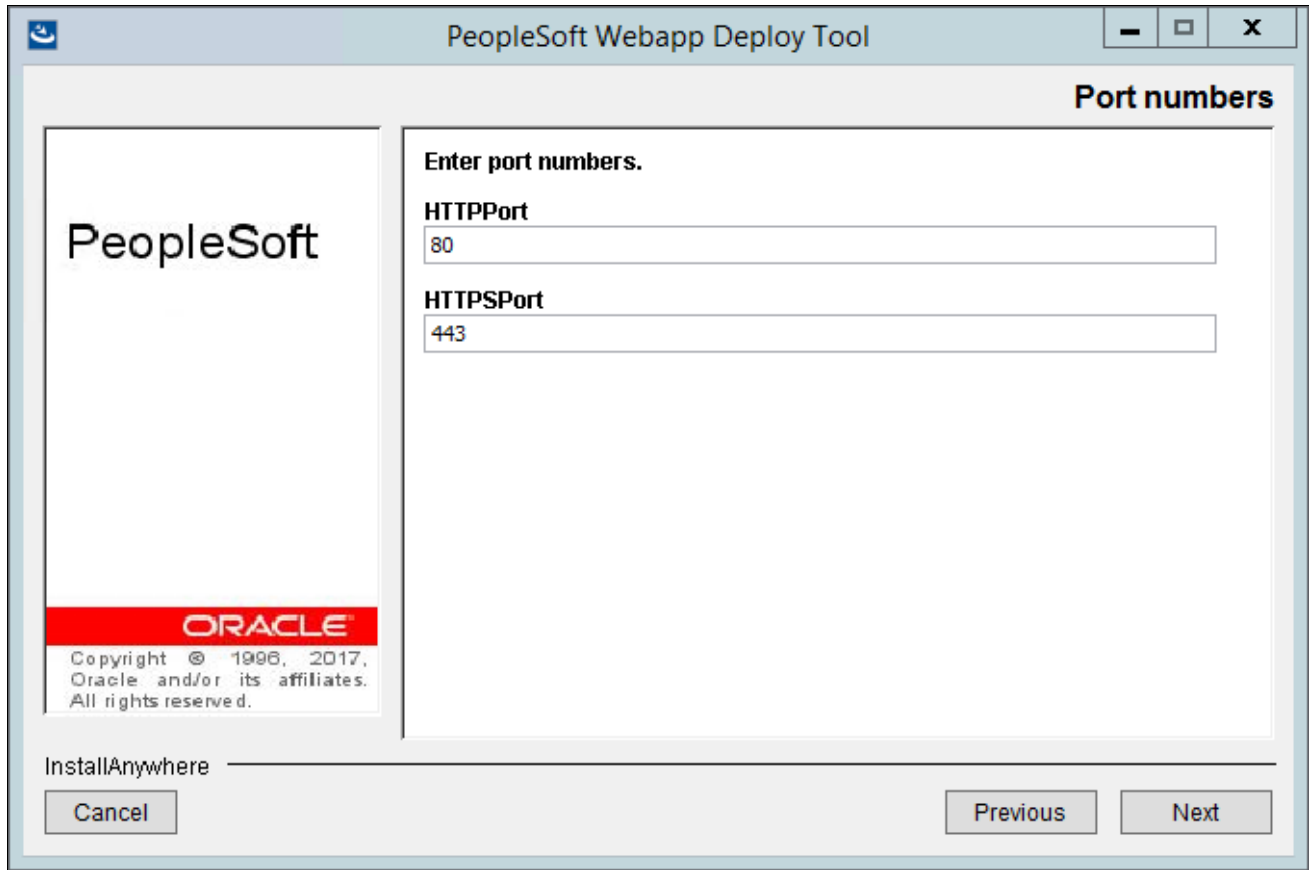
PeopleSoft Webapp Deploy Tool CRM DB information window

In this example, the required information includes:

- Database Type  
Enter the RDBMS type; the example uses DB2ODBC.
- Database Server Name  
Enter the name of the machine that is hosting the database, SERVER1 in the example.
- Database Port Number  
Consult with your database administrator for the correct port number. The port number shown in the example is 1433.
- Database Instance Name  
Enter the database name, which is CRDMO in the example.
- Database User Name  
Enter the user name for the database.
- Database User Password  
Enter the password for the database user.

13. Enter HTTP and HTTPS port numbers, and then click Next to continue.

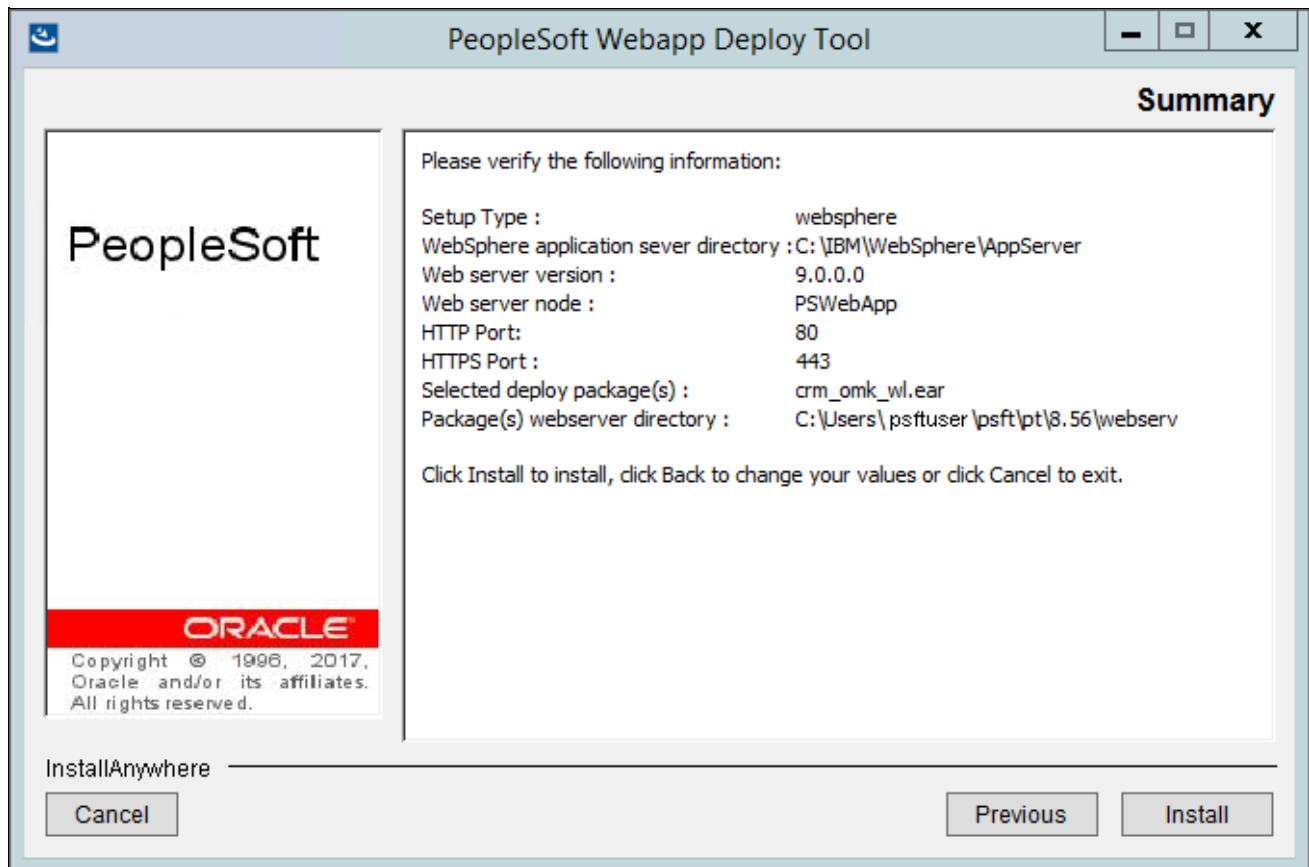
This example shows the default port numbers for HTTP = 80 and HTTPS = 443.



PeopleSoft Webapp Deploy Tool Port numbers window

14. Verify your installation information, such as the web server information, HTTP and HTTPS port numbers, and deployment packages, on the summary screen that appears, as in this example.

Click Install to begin the installation, Previous to go back to make changes on an earlier window, or Cancel to exit the installation.



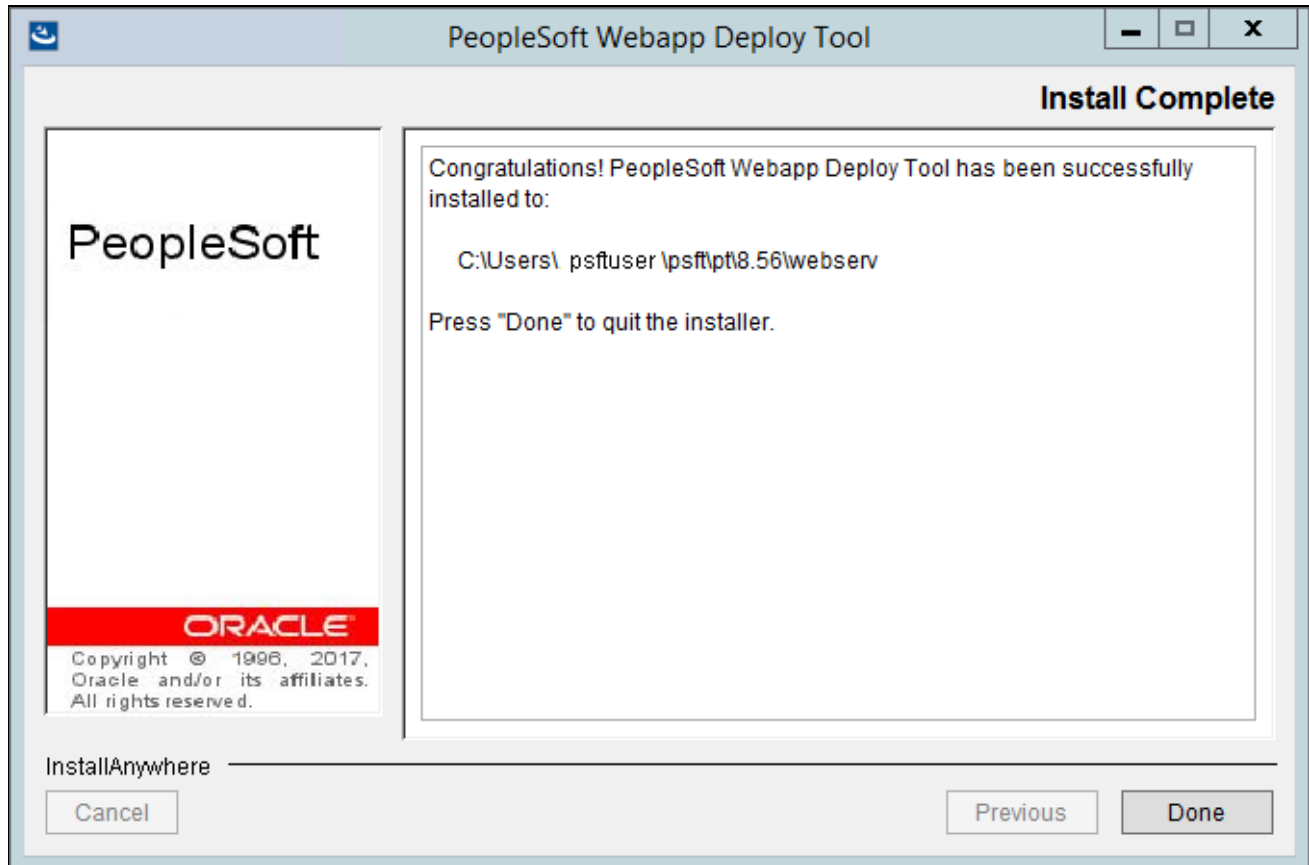
PeopleSoft Webapp Deploy Tool Summary window

A window appears with a progress indicator.

15. A confirmation screen appears when the installation completes, which includes the installation directory, `C:\Users\psftuser\psft\pt\8.56\webserv` in this example.

The Web Application Deployment tool is deployed to the `webserv\<domain_name>` folder in the installation location. For example, for the default domain `PSWebApp`, this would be `C:\Users\psftuser\psft\pt\8.56\webserv\PSWebApp`.

Click Done to exit.



PeopleSoft Webapp Deploy Tool Install Complete window

## Task 18-3: Installing the Web Application Deployment Tool on Oracle WebLogic in Console Mode

Use these instructions to install the Web Application Deployment tool on Oracle WebLogic in console mode.

**Note.** The console mode installation is typically used on UNIX platforms.

1. Set up the PeopleSoft environment by going to `PS_HOME` and running the following command:  

```
../psconfig.sh
```
2. To run the installer, go to `PS_HOME/setup/PsMpWebAppDeployInstall`, and run the following command:  

```
setup.sh -tempdir <temporary_directory> -javahome <absolute_java_path>
```

Use the optional flag `-javahome` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path. Specify the full absolute path to the JRE/JDK executable; for example:

```
setup.sh -tempdir /home/user/temp -javahome /prod/java8/bin/java
```

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

3. You see a welcome message. Enter *I* to continue.

```
Welcome to the InstallShield Wizard for PeopleSoft Webapp Deploy Tool.
```

```
Using the InstallShield Wizard you will deploy PeopleSoft Application⇒
(s) on⇒
your computer.
```

```
Note: If installing onto a Oracle WebLogic Server, make sure to⇒
shutdown any⇒
running web servers to avoid web server corruption.
```

```
Select Next to continue or Cancel to exit.
```

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

4. Enter the directory where you want to deploy the web server domain for the Web Application Deployment, and then enter *I* to continue.

The default directory is *PS\_CFG\_HOME*.

Choose the directory where you wish to deploy the Web Server domain:

```
Please specify a directory name or press Enter [/home/psftuser/psft/pt⇒
/8.56]
```

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

5. Enter *I* to select Oracle WebLogic Server, at the following prompt, and then enter *I* to continue.

Choose the installation type that best suits your needs.

```
->1- Oracle WebLogic Server
    2- IBM WebSphere Server
```

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

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

6. Enter the directory where you installed Oracle WebLogic, and press ENTER to continue at the following prompt.

Select the web server root directory:

```
Please specify a directory name or press ENTER [/opt/oracle]
```

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

---

**Note.** The installer displays the supported Oracle WebLogic version. You receive an error message if the correct Oracle WebLogic version is not found in the directory you enter.

---

7. Enter a name for the Web Application Deployment domain, or accept the default name, PSWebApp in this example.

Use a fully qualified domain name, and do not use an IP address.

Enter domain name or click Next to select default:

```
[PSWebApp]
```

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

---

**Important!** The domain that you create for the Web Application Deployment cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.

---

8. Enter the administrator login and password for your Oracle WebLogic domain, and press ENTER to continue.

**Note.** The default login ID is system. The password, which you specified during the PeopleSoft Pure Internet Architecture setup, must be at least 8 alphanumeric characters with at least one number or special character. The system does not display the password or any masking characters as you type.

---

```
Please enter the administrator login and password for WebLogic domain.
```

```
Login ID: [system]
```

```
Password: [password]
```

```
Re-type Password: [password]
```

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

9. Select the type of domain to create—single server, multi server, or distributed managed server.

See "Setting Up the PeopleSoft Pure Internet Architecture in Console Mode," Installing the PeopleSoft Pure Internet Architecture in Console Mode.

```
Please select the configuration to install.
```

```
->1- Single Server Domain
    2- Multi Server Domain
    3- Distributed Managed Server
```

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

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

- *Single Server Domain*

This configuration is intended for single user or very small scale, non-production environments.

- *Multi-Server Domain*

This configuration is intended for a production environment.

- *Distributed Managed Server*

This option is an extension of the Multi-Server Domain selection and installs the necessary files to boot a managed server. This option requires a Multi Server installation to be performed to some other location, which will contain the configuration for this managed server.

10. Enter the *PS\_APP\_HOME* directory that you specified when you installed the PeopleSoft Application software using the PeopleSoft PeopleTools installer.

```
Choose the directory where you previously installed PeopleSoft⇒
Applications, commonly know as "PS_APP_HOME".
```

```
Note: 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".

Please specify a directory name or press Enter [/opt/PS\_HOME]

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

11. The next prompt lists all of the available application packages (EAR files). Enter the numbers beside the packages you want to install. *You must select at least one application package from this list.*

Please select the application package to deploy:

->1- CRM OMK

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

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

12. If the application(s) you selected in step 12 requires additional information, supply the necessary information at the next prompt. For example:

CRM OMK :

Database Type: [ORACLE]

Database Server Name: [SERVER1]

Database Port Number: [1431]

Database Instance Name: [CRMDMO]

Database User Name: [SYSADM]

Database User Password: [\*]

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

13. Enter HTTP and HTTPS port numbers.

Enter port numbers.

HTTP Port : [80] 80

HTTPS Port : [443] 443

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

14. Verify your installation information on the next prompt and press ENTER to begin the installation. An indicator shows your installation progress.

Please verify the following information:

Setup Type : weblogic

Web server root directory : /opt/WLS1221



```

Web server version : 12.2

Web server domain : PSWebApp

HTTP Port : 80

HTTPS Port : 443

Selected deploy package(s) : crm_omk_wl.ear

Package(s) webserver directory : /home/psftuser/psft/pt/8.56/webserv

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

```

15. You see a message indicating the installation is complete; for example:

```

Installation Complete
-----

Congratulations! PeopleSoft Webapp Deploy Tool has been successfully=>
  installed
to:

/home/psftuser/psft/pt/8.56/webserv

PRESS <ENTER> TO EXIT THE INSTALLER:

```

16. After the installation is complete, you must deploy the Web Application Deployment tool.

- a. Go to the directory where the web server domain was installed:

```
cd <WebAppDeploy_DIR>/webserv/<domain_name>
```

The `<WebAppDeploy_DIR>` is the directory where the web server domain for the Web Application Deployment was installed. The `<domain_name>` is the web server domain name you provided. For example, if you accepted the defaults:

```
cd /home/user/psft/pt/8.56/webserv/PSWebApp
```

- b. Run this command:

```
startPSWEBAPPS.sh
```

- c. If you want to deploy at a later time, use the same command.

## Task 18-4: Installing the Web Application Deployment Tool on IBM WebSphere in Console Mode

---

Use these instructions to install the Web Application Deployment tool on IBM WebSphere in console mode.

**Note.** The console mode installation is typically used on UNIX platforms.

1. Set up the PeopleSoft environment by going to `PS_HOME` and using the following command:

```
../psconfig.sh
```

2. Start IBM WebSphere on the server on which you plan to deploy the Web Application Deployment tool.

See "Setting Up the PeopleSoft Pure Internet Architecture in Console Mode," Testing and Administering the PeopleSoft Pure Internet Architecture.

Change directory to the bin directory under the directory where you installed IBM WebSphere, *WAS\_HOME*. Use the following commands:

```
cd WAS_HOME/bin
startServer.sh server_name
```

3. To run the installer, go to *PS\_HOME/setup/PsMpWebAppDeployInstall* and run the following command:

```
setup.sh -javahome <absolute_java_path>
```

Use the optional flag `-javahome` if you installed the JRE/JDK files in a directory that is different than the vendor-defined JRE search path. Specify the full absolute path to the JRE/JDK executable; for example:

```
setup.sh -javahome /prod/java8/bin/java
```

See "Using the PeopleSoft Installer," Running the PeopleSoft Installer, for setup command options.

4. You see a Welcome message. Enter *1* to continue.

```
Welcome to the InstallShield Wizard for PeopleSoft Webapp Deploy Tool.
Using the InstallShield Wizard you will deploy PeopleSoft Application⇒
(s) on your⇒
computer.
```

Note: If installing onto a Oracle WebLogic Server, make sure to⇒  
shutdown any⇒  
running web servers to avoid web server corruption.

Select Next to continue or Cancel to exit.

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

5. Enter the directory where you want to deploy the domain for the Web Application Deployment tool, and then enter *1* to continue.

The default directory is *PS\_CFG\_HOME*.

Choose the directory where you wish to deploy the Web Server domain:

```
Please specify a directory name or press Enter [/home/user/psft/pt/8.56]
```

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

6. Enter *2*, to select the IBM WebSphere Server, at the following prompt:

Choose the setup type that best suits your needs.

```
1- Oracle WebLogic Server
->2- IBM WebSphere Server
```

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

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

7. Enter the root directory where you installed IBM WebSphere at the following prompt, and press ENTER to

continue:

Select the WebSphere Application Server directory:

Directory Name:

Please specify a directory name or press Enter [/opt/IBM/WebSphere/App⇒  
Server]:

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

**Note.** If the web server on which you are installing the Web Application Deployment tool is not up and running, you receive an error message at this point instructing you to start your web server.

8. Enter the administrator login, and then enter the password twice, for the IBM WebSphere profile. Enter *1* to continue.

Please enter the administrator login and password for WebSphere profile.

Login ID : [system]

Password : [password]

Re-type Password : [password]

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

9. Enter a name for the Web Application Deploy domain, or accept the default name, PSWebApp. Use a fully qualified domain name, and do not use an IP address. Press *1* to continue.

Enter domain name or click Next to select default:

[PSWebApp]

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

**Important!** The domain that you create for the Web Application Deployment tool cannot be the same as any existing PeopleSoft Pure Internet Architecture domains. Be sure you do not enter a name that you used for a PeopleSoft Pure Internet Architecture domain.

10. Enter the *PS\_APP\_HOME* directory that you specified when you installed the PeopleSoft application software using the PeopleSoft PeopleTools installer.

Choose the directory where you previously installed PeopleSoft⇒  
Applications, commonly known as "PS\_APP\_HOME".

Note: 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".

Please specify a directory or press Enter [opt/PS\_HOME]

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

11. The next prompt lists all of the available application packages (EAR files). Enter the number corresponding to the packages you want to install. *You must select at least one application package from this list.*

Please select the application package to deploy:

->1- CRM Package

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

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

12. If the application(s) you selected in the previous step requires additional information, supply the necessary information at the next prompt. For example:

CRM OMK :

Database Type : [DB2ODBC]

Database Server Name : [SERVER1]

Database Port Number : [1431]

Database Instance Name : [CRMDMO]

Database User Name : [Admin]

Database User Password : [\*]

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

In this example, the required information includes:

- *Database Type*  
Enter the RDBMS type; the example uses DB2ODBC.
- *Database Server Name*  
Enter the name of the machine that is hosting the database, SERVER1 in the example.
- *Database Port Number*  
Consult with your database administrator for the correct port number. The port number shown in the example is 1431.
- *Database Instance Name*  
Enter the database name, for example CRMDMO.
- *Database User Name*  
Enter the user name for the database, for example sysadm or admin.
- *Database User Password*  
Enter the password for the database user.

13. Enter HTTP and HTTPS port numbers at the following prompt. Press 1 to continue.

Enter port numbers.

HTTP Port: [80]: 80

HTTPS Port: [443]: 443

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

14. Verify your installation information at the next prompt and press ENTER to begin the installation.

An indicator shows your installation progress.

Please verify the following information:

Setup Type : websphere

WebSphere application server directory : /home/IBM/WebSphere/AppServer

Web server version : 8.5.5.0

Web server node : PSWebApp

HTTP Port : 80

HTTPS Port : 443

Selected deploy packages(s) : crm\_omn\_wl.ear

Packages(s) webserver directory : /home/user/psft/pt/8.56/webserv

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

15. A confirmation screen appears when the installation completes. Click Finish to exit the install shield wizard.

16. After the installation is complete, you must stop and start the IBM WebSphere server. Use the following commands, where *WAS\_HOME* refers to the IBM WebSphere installation location, and *server\_name* is the name of the IBM WebSphere server you used in step 2.

```
cd WAS_HOME/bin
../stopServer.sh server_name
../startServer.sh server_name
```

## Task 18-5: 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 18-5-1: 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 separator
#   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 separator
#   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 WebSphere 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 values for INSTALL_TYPE are singleserver, multiserver, distributedmanageserver
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 18-5-2: 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 18-6: 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.



## Chapter 19

# Setting Up a Unicode Database

This chapter discusses:

- Prerequisites
- Defining Conversion Pages for Unicode Conversion Services
- Fulfilling Connectivity Requirements

## Prerequisites

---

PeopleSoft PeopleTools Unicode support for the z/OS operating system requires the following:

- DB2 for z/OS in New Function Mode  
See My Oracle Support, Certifications, for supported versions.
- IBM z/OS  
See My Oracle Support, Certifications, for supported versions.
- Search on My Oracle Support for a list of mandatory APARs and PTFs.  
See "Important PTFs for PeopleSoft on DB2 for z/OS," My Oracle Support.
- Review the hardware and software requirements and recommendations for running Unicode on DB2 z/OS.  
See My Oracle Support, Certifications

## Task 19-1: Defining Conversion Pages for Unicode Conversion Services

---

The following conversion images must be defined to successfully operate a PeopleSoft Unicode database:

- CCSID 367 (7-bit ASCII) <-> ASCII & EBCDIC System CCSID(s)
- CCSID 1208 (UTF-8) <-> ASCII & EBCDIC System CCSID(s)
- CCSID 1200 (UTF-16) <-> ASCII & EBCDIC System CCSID(s)
- Client CCSID(s) <-> Unicode CCSIDs (367, 1208, 1200)
- CCSID 367 <-> CCSID 1047
- CCSID 1200 <-> CCSID 1047
- CCSID 1208 <-> CCSID 1047

## Task 19-2: Fulfilling Connectivity Requirements

---

Set DB2CodePage to 1208 for Unicode databases as follows:

1. From a command prompt issue the db2set command:

```
c:\apps\DB\DB2ODBC8\bin db2set DB2CODEPAGE=1208
```

2. Issue the following command to verify that it has been set:

```
C:\Apps\DB\db2odbc8>db2set -all
```

Sample output:

```
[e] DB2PATH=C:\Apps\DB\db2odbc8  
[i] DB2INSTPROF=c:\Apps\DB\db2odbc8  
[i] DB2CODEPAGE=1208
```

## Appendix A

# Extracting DDL for PTSYS Database

This appendix discusses:

- Understanding the PTGENDDL.DMS Script
- Using the PTGENDDL.DMS Script

## Understanding the PTGENDDL.DMS Script

You can customize and use the PTGENDDL.DMS sample script to extract the DDL (Data Definition Language) SQL statements to create a separate PTSYS database for the PeopleTools Performance Monitor. The script is found in the *PS\_HOME/scripts* directory.

First use the PTDDL.SQL (or PTDDL.U.SQL for Unicode) script to create the database and tablespaces for the PeopleTools Performance Monitor database. Then follow the directions in the following section to generate the PTSYS table and index DDL.

See Using the PTGENDDL.DMS Script.

When executed in bootstrap mode, the sample Data Mover script PTGENDDL.DMS will generate the DDL statements for both tables and indexes using default values (for ownerid and tablespaces) and store the DDL statements in the output file C:\TEMP\PTSYSDDL.SQL. The sample script is given in the following section, and includes information on prerequisites and instructions for using it for various scenarios.

### See Also

*PeopleTools: Performance Monitor*

Using the PTGENDDL.DMS Script

"Creating a Database," Creating Data Mover Import Scripts

## Task A-1: Using the PTGENDDL.DMS Script

Since most DB2 for z/OS customers edit scripts in order to change the delivered ownerid and tablespace names to local installation naming standards, several usage scenarios are included as comments within the PTGENDDL.DMS script.

The PTGENDDL.DMS sample script includes the following usage scenarios:

- *Usage\_#1*: Extract from PTENGS.DB all tables and index DDL definitions using imbedded defaults. This is delivered as the default enabled commands
- *Usage\_#2*: Extract from PTENGS.DB all tables and index DDL definitions and override default values with local installation names.

- *Usage\_#3*: Extract from PTENGS.DB all table DDL definitions and override default values with local installation names.
- *Usage\_#4*: Extract from PTENGS.DB all index DDL definitions and override defaults with local installation names.

*Sample PTGENDDL.DMS script*

```
-- *****=>
****
-- Confidentiality Information:
--
-- This module is the confidential and proprietary information of
-- PeopleSoft, Inc.; it is not to be copied, reproduced, or
-- transmitted in any form, by any means, in whole or in part,
-- nor is it to be used for any purpose other than that for which
-- it is expressly provided without the written permission of
-- PeopleSoft, Inc.
--
-- Copyright (c) 1988-2004 PeopleSoft, Inc. All Rights Reserved
-- *****=>
****
-- *
-- * Name:   PTGENDDL.DMS           Directory:   <$PS_HOME>/scripts/
-- * =====
-- *
-- * Description:
-- * -----
-- *
-- * o- DMS script for zOS customer to extract embedded DB2/zOS DDL
-- * statements/info from "PTENGS.DB". This DDL statements will be
-- * used to create a "PTSYS" database for PTools Performance Monitor.
-- *
-- * ** NOTE1: DB2/zOS DBA's typically edit/tailor "*DDL.SQL" files
-- * to adhere to "local installation names" convention.
-- * Read "USAGE_#" section below to generate this=>
-- automatically.
-- *
-- * ** NOTE2: Used for "Tools Performance Monitor" installation,
-- *
-- * Assumptions:
-- * -----
-- * a) Datamover execution environment is assumed to be
-- * "WINTEL" on a DB2/zOS database environment.
-- *
-- * b) These instructions are for installing PTSYS for
-- * PTools Performance Monitor
-- *
-- *****=>
****
-- *
-- * Required Input:
-- * -----
-- *
```

```

-- *          <$PS_HOME>\data\PTENGS.DB ==> PTSYS database name.
-- *
-- *          *** NOTE: $PS_HOME is the PTOOLS installation directory
-- *
-- * Output(s): ==> (using Usage_#1 script; as delivered)
-- * -----
-- *
-- *      C:\TEMP\PTGENDDL.LOG -> Datamover log output
-- *      C:\TEMP\PTSYSDDL.SQL -> DB2 DDL statements to create "PTSYS"
-- *
-- *
-- *****=>
-- ****
-- *
-- * INSTRUCTIONS:
-- * =====
-- *
-- *      A. BEFORE EXECUTING THIS FILE, PERFORM THE FOLLOWING STEPS.
-- *
-- *      1) Replace <$PS_HOME> with the valid directory value.
-- *
-- *      2) IF YOU ARE USING SECONDARY AUTHORIZATION, CHANGE
-- *          'OWNER#ID' TO THE DATABASE OWNERID, ELSE CHANGE
-- *          'OWNER#ID' TO YOUR PEOPLESOFT ACCESS ID.
-- *
-- *      3) CHANGE 'OBJ#OWNER' TO THE COMMON CREATOR ID (OBJECT OWNER).
-- *
-- *      4) CHANGE THE DATABASE NAMES TO THE SITE SPECIFIC VALUES.
-- *
-- *      5) IF NOT USING THE RECOMMENDED PEOPLESOFT TABLESPACE NAMES,
-- *          CHANGE THEM TO THE SITE SPECIFIC VALUES (see Usage_#2=>
-- *          example).
-- *
-- *      6) CHANGE 'SET UNICODE OFF' TO 'SET UNICODE ON', IF IT IS
-- *          AN UNICODE DATABASE.
-- *
-- *      B. AFTER EXECUTING THIS FILE, PERFORM THE FOLLOWING STEPS.
-- *
-- *      1) Check the LOG file for successful execution.
-- *
-- *      2) Validate the "local installation values" have been generated.
-- *
-- *      3) Submit the DDL (via SPUFI/DSNTEP2, etc) to create the DB2=>
-- *          objects.
-- *
-- *
-- *****=>
-- ****
-- *
-- *      Usage_#1: Extract all DDL statements <using PSFT default values>
-- *
-- *
-- *          *NOTE: As delivered, both tables and index DDLs will be

```

```

--                                     generated and stored in C:\TEMP\PTSYSDDL.SQL
--
-- *****=>
****

SET NO DATA;
SET NO SPACE;

SET LOG C:\TEMP\PTGENDDL.LOG;
SET INPUT <$PS_HOME>\data\PTENG.SDB;

SET DDL RECORD * INPUT OWNER AS OBJ#OWNER;
SET DDL INDEX * INPUT OWNER AS OBJ#OWNER;
SET DDL UNIQUE INDEX * INPUT OWNER AS OBJ#OWNER;

SET DDL INDEX * INPUT OWNER2 AS OBJ#OWNER;
SET DDL UNIQUE INDEX * INPUT OWNER2 AS OBJ#OWNER;

SET UNICODE OFF;
SET DBSPACE PSPTDMO.* AS PSPTSYS.*;
SET DBSPACE PSPTDMOT.* AS PSPTSYS.*;

SET OUTPUT C:\TEMP\PTSYSDDL.SQL1;
SET EXTRACT DDL;

IMPORT *;

-- *****=>
****
--
-- ADDITIONAL USAGE_#* examples for DB2/zOS DBA's to facilitate DDL=>
  editing
--
-- *****=>
****
--
-- Configurable values:
-- -----
--
-- set ddl table space * input STOGROUP as <TableSpace_Stogroup>;
-- set ddl index * input STOGROUP as <IndexSpace_Stogroup>;
-- set ddl unique index * input STOGROUP as <IndexSpace_Stogroup>;
--
-- set ddl record * input OWNER AS <OBJ#OWNER>;
-- set ddl index * input OWNER AS <OBJ#OWNER>;
-- set ddl unique index * input OWNER AS <OBJ#OWNER>;
--
-- *****=>
****
--

```

```

-- Usage_#2: Extract DDL statements <using customer configured values>
--
-- .....=>
....
--
-- SET NO DATA;
-- SET NO SPACE;
--
-- SET LOG C:\TEMP\PTGENDDL.LOG;
-- SET INPUT <$PS_HOME>\data\PTENGS.DB;
--
--
-- SET DDL RECORD * INPUT OWNER AS cus#OWNER;
-- SET DDL INDEX * INPUT OWNER AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER AS cus#OWNER;
--
--
-- SET DDL INDEX * INPUT OWNER2 AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER2 AS cus#OWNER;
--
-- SET UNICODE OFF;
-- SET DBSPACE PSPTDMO.* AS custSYS.*;
-- SET DBSPACE PSPTDMOT.* AS custSYST.*;
--
-- SET OUTPUT C:\TEMP\PTSYSDDL.SQL2;
-- SET EXTRACT DDL;
--
-- SET DDL TABLE SPACE * INPUT STOGROUP AS      cusTD1SG;
-- SET DDL INDEX * INPUT STOGROUP AS            cusTX1SG;
-- SET DDL UNIQUE INDEX * INPUT STOGROUP AS     cusTX1SG;
--
-- IMPORT *;
--
-- *****=>
****
--
-- Usage_#3: Extract DDL statements for TABLE-OBJECTS ONLY
--           using customer configured values (ie. cusXXX)
--
-- .....=>
....
--
-- SET NO DATA;
-- SET NO INDEX;
-- SET NO SPACE;
--
-- SET LOG C:\TEMP\PTGENDDL.LOG;
-- SET INPUT <$PS_HOME>\data\PTENGS.DB;
--
--
-- SET DDL RECORD * INPUT OWNER AS cus#OWNER;

```

```

-- SET DDL INDEX * INPUT OWNER AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER AS cus#OWNER;

-- SET DDL INDEX * INPUT OWNER2 AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER2 AS cus#OWNER;
--
-- SET UNICODE OFF;
-- SET DBSPACE PSPTDMO.* AS custSYS.*;
-- SET DBSPACE PSPTDMOT.* AS custSYST.*;
--
-- SET OUTPUT C:\TEMP\PTSYSDDL.SQL3;
-- SET EXTRACT DDL;
--
-- SET DDL TABLE SPACE * INPUT STOGROUP AS      custD1SG;
-- SET DDL INDEX * INPUT STOGROUP AS            custX1SG;
-- SET DDL UNIQUE INDEX * INPUT STOGROUP AS     custX1SG;
--
-- IMPORT *;
--
-- *****=>
****
--
-- Usage_#4: Extract DDL statements for INDEX-OBJECTS ONLY
--           using customer configured values.
--
-- .....=>
....
--
-- SET NO RECORD;
-- SET NO SPACE;
--
-- SET LOG C:\TEMP\PTGENDDL.LOG;
-- SET INPUT <$PS_HOME>\data\PTENGS.DB;
--
-- SET DDL TABLE SPACE * INPUT STOGROUP AS      custD1SG;
-- SET DDL INDEX * INPUT STOGROUP AS            custX1SG;
-- SET DDL UNIQUE INDEX * INPUT STOGROUP AS     custX1SG;
--
-- SET DDL RECORD * INPUT OWNER AS cus#OWNER;
-- SET DDL INDEX * INPUT OWNER AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER AS cus#OWNER;
--
-- SET DDL INDEX * INPUT OWNER2 AS cus#OWNER;
-- SET DDL UNIQUE INDEX * INPUT OWNER2 AS cus#OWNER;
--
-- SET UNICODE OFF;
-- SET DBSPACE PSPTDMO.* AS custSYS.*;
-- SET DBSPACE PSPTDMOT.* AS custSYST.*;
--

```



```
-- SET OUTPUT C:\TEMP\PTSYSDDL.SQL4;
-- SET EXTRACT DDL;
--
-- IMPORT *;
--
--
```

*PTGENDDL.DMS Sample Output*

```
CREATE TABLE OBJ#OWNER.PS_ACCESS_GRP_LANG (ACCESS_GROUP CHAR(20) NOT
NULL,
LANGUAGE_CD CHAR(3) NOT NULL,
DESCR CHAR(30) NOT NULL,
DESCRLONG LONG VARCHAR) IN PSPTSYS.PSIMAGE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_ACCESS_GRP_LANG ON
OBJ#OWNER.PS_ACCESS_GRP_LANG (ACCESS_GROUP,
LANGUAGE_CD) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_ACCESS_GRP_TBL (ACCESS_GROUP CHAR(20) NOT
NULL,
DESCR CHAR(30) NOT NULL,
DESCRLONG LONG VARCHAR) IN PSPTSYS.PTTBL
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_ACCESS_GRP_TBL ON
OBJ#OWNER.PS_ACCESS_GRP_TBL (ACCESS_GROUP) USING STOGROUP PSSGIXPT
PRIQTY 48 SECQTY 720 CLUSTER BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_APPL_TBL (AE_PRODUCT CHAR(2) NOT NULL,
AE_APPL_ID CHAR(8) NOT NULL,
AE_VERSION DECIMAL(5, 2) NOT NULL,
DESCR CHAR(30) NOT NULL,
AE_DATE_OVERRIDE CHAR(1) NOT NULL,
ASOF_DT DATE,
LAST_DTTM_UPDATE TIMESTAMP,
OPRID CHAR(30) NOT NULL,
AE_CACHE_RECNAME CHAR(15) NOT NULL,
AE_SYMBOLICS_PROG CHAR(8) NOT NULL,
AE_FILTER_PROG_1 CHAR(8) NOT NULL,
AE_FILTER_PROG_2 CHAR(8) NOT NULL,
AE_FILTER_PROG_3 CHAR(8) NOT NULL,
AE_USE_PLATFORM CHAR(1) NOT NULL,
AE_DEF_TRN_CTL CHAR(1) NOT NULL,
MESSAGE_SET_NBR INTEGER NOT NULL,
```

```

    AE_DEBUG_MODE CHAR(1) NOT NULL,
    AE_TRACE CHAR(1) NOT NULL,
    AE_FORCE_COMMIT CHAR(1) NOT NULL,
    AE_FORCE_ABEND CHAR(1) NOT NULL,
    AE_COMMIT_MSG CHAR(1) NOT NULL,
    AE_DISABLE_RESTART CHAR(1) NOT NULL,
    AE_CHUNK_FACTOR SMALLINT NOT NULL,
    AE_CHUNK_METHOD CHAR(1) NOT NULL,
    AE_ADJ_DTTM TIMESTAMP) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_APPL_TBL ON
  OBJ#OWNER.PS_AE_APPL_TBL (AE_PRODUCT,
    AE_APPL_ID) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
  BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_APPL_TMP (AE_PRODUCT CHAR(2) NOT NULL,
  AE_APPL_ID CHAR(8) NOT NULL,
  AE_VERSION DECIMAL(5, 2) NOT NULL,
  DESCR CHAR(30) NOT NULL,
  AE_DATE_OVERRIDE CHAR(1) NOT NULL,
  ASOF_DT DATE,
  LAST_DTTM_UPDATE TIMESTAMP,
  OPRID CHAR(30) NOT NULL,
  AE_CACHE_RECNAME CHAR(15) NOT NULL,
  AE_SYMBOLICS_PROG CHAR(8) NOT NULL,
  AE_FILTER_PROG_1 CHAR(8) NOT NULL,
  AE_FILTER_PROG_2 CHAR(8) NOT NULL,
  AE_FILTER_PROG_3 CHAR(8) NOT NULL,
  AE_USE_PLATFORM CHAR(1) NOT NULL,
  AE_DEF_TRN_CTL CHAR(1) NOT NULL,
  MESSAGE_SET_NBR INTEGER NOT NULL,
  AE_DEBUG_MODE CHAR(1) NOT NULL,
  AE_TRACE CHAR(1) NOT NULL,
  AE_FORCE_COMMIT CHAR(1) NOT NULL,
  AE_FORCE_ABEND CHAR(1) NOT NULL,
  AE_COMMIT_MSG CHAR(1) NOT NULL,
  AE_DISABLE_RESTART CHAR(1) NOT NULL,
  AE_CHUNK_FACTOR SMALLINT NOT NULL,
  AE_CHUNK_METHOD CHAR(1) NOT NULL) IN PSPTSYS.PTWORK
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_APPL_TMP ON
  OBJ#OWNER.PS_AE_APPL_TMP (AE_PRODUCT,
    AE_APPL_ID) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
  BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;

```

```

CREATE TABLE OBJ#OWNER.PS_AE_CV8_PAIR_TBL (FIELDNAME CHAR(18) NOT NULL
,
  FIELDNAME_TO CHAR(18) NOT NULL,
  AE_FROM_CHAR CHAR(1) NOT NULL,
  AE_TO_CHAR CHAR(1) NOT NULL) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_CV8_PAIR_TBL ON
  OBJ#OWNER.PS_AE_CV8_PAIR_TBL (FIELDNAME,
  FIELDNAME_TO,
  AE_FROM_CHAR) USING STOGROUP PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER
  BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_INTTEST_AET (PROCESS_INSTANCE DECIMAL(10)
  NOT NULL,
  AE_STEP CHAR(8) NOT NULL,
  AE_SECTION CHAR(8) NOT NULL,
  AE_INT_15 DECIMAL(15) NOT NULL,
  AE_INT_14 DECIMAL(14) NOT NULL,
  AE_INT_13 DECIMAL(13) NOT NULL,
  AE_INT_12 DECIMAL(12) NOT NULL,
  AE_INT_11 DECIMAL(11) NOT NULL,
  AE_INT_10 DECIMAL(10) NOT NULL,
  AE_INT_9 INTEGER NOT NULL,
  AE_INT_8 INTEGER NOT NULL,
  AE_INT_7 INTEGER NOT NULL,
  AE_INT_6 INTEGER NOT NULL,
  AE_INT_5 INTEGER NOT NULL,
  AE_INT_4 SMALLINT NOT NULL,
  AE_INT_3 SMALLINT NOT NULL,
  AE_INT_2 SMALLINT NOT NULL,
  AE_INT_1 SMALLINT NOT NULL) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_INTTEST_AET ON
  OBJ#OWNER.PS_AE_INTTEST_AET (PROCESS_INSTANCE) USING STOGROUP
  PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_OPTIONS (AE_CHUNK_SIZE INTEGER NOT NULL,
  AE_INS_SEL_LONGS CHAR(1) NOT NULL) IN PSPTSYS.PTAPPE
;
COMMIT
;
CREATE TABLE OBJ#OWNER.PS_AE_PTTSRPLC_AET (PROCESS_INSTANCE
  DECIMAL(10) NOT NULL,
  OPRID CHAR(30) NOT NULL,
  TS_SRCH_ID CHAR(30) NOT NULL,

```

```
TS_SRCH_STATUS CHAR(1) NOT NULL,
TS_RPLC_RDY CHAR(1) NOT NULL,
LANGUAGE_CD CHAR(3) NOT NULL,
BASE_LANGUAGE_CD CHAR(3) NOT NULL,
BASELINE CHAR(1) NOT NULL,
TS_RESULT_SEQ INTEGER NOT NULL,
RECNAME CHAR(15) NOT NULL,
RECNAME_TMP CHAR(15) NOT NULL,
SQLTABLENAME CHAR(18) NOT NULL,
TABLE_NAME CHAR(30) NOT NULL,
RELANGRECNAME CHAR(15) NOT NULL,
TS_COMBINED CHAR(1) NOT NULL,
FIELDNAME CHAR(18) NOT NULL,
TS_RPLC CHAR(1) NOT NULL,
TS_RPLC_TEXT CHAR(254) NOT NULL,
FIELDTYPE SMALLINT NOT NULL,
LENGTH SMALLINT NOT NULL,
FIELDNAME0 CHAR(18) NOT NULL,
TS_KEY_CHAR CHAR(50) NOT NULL,
TS_KEY_NUMBER DECIMAL(10) NOT NULL,
TS_KEY_DATE DATE,
FLDFIELDTYPE SMALLINT NOT NULL,
SQL_STMT_254 CHAR(254) NOT NULL,
REFRESH CHAR(1) NOT NULL) IN PSPTSYS.PTTBL
;
COMMIT
;
CREATE UNIQUE INDEX OBJ#OWNER.PS_AE_PTTSRPLC_AET ON
  OBJ#OWNER.PS_AE_PTTSRPLC_AET (PROCESS_INSTANCE) USING STOGROUP
  PSSGIXPT PRIQTY 48 SECQTY 720 CLUSTER BUFFERPOOL BP3 CLOSE NO
;
COMMIT
;
```

## Appendix B

# Using the PeopleSoft Tablespace DDL Automation Assistance Tool

This appendix discusses:

- Understanding the PeopleSoft Tablespace DDL Automation Assistance Tool
- Understanding PSTAAT Workstation Requirements
- Understanding the PSTAAT Graphical User Interface
- Understanding the Various PSTAAT Input and Output Files
- Using PSTAAT to Create TBDDL and IXDDL
- Using PSTAAT to Customize DDL
- Using PSTAAT to Reassign Temporary Tables to Additional Tablespaces
- Using PSTAAT to Isolate Other Tables to Individual Tablespaces
- Using PSTAAT to Convert EBCDIC DDL to Unicode DDL
- Using PSTAAT to Install PeopleSoft Databases

## Understanding the PeopleSoft Tablespace DDL Automation Assistance Tool

---

The PeopleSoft Tablespace DDL Automation Assistance tool (PSTAAT) is a DDL script parsing utility intended to assist you in customizing your PeopleSoft PeopleTools and Application DDL. The utility provides greater flexibility in allowing you to override the supported PeopleSoft PeopleTools DDL parameters for DB2 for z/OS so that they more closely fit your shop standards, and to better optimize the mapping of tables among tablespaces and databases.

---

**Note.** The use of PSTAAT to customize the installation DDL is optional. You may elect not to use PSTAAT and complete the installation of your database as documented in the chapter, "Creating a Database." The next several sections describe the basic functions of this utility. Be sure to review the final section, Using PSTAAT to Install PeopleSoft Databases, before attempting to use PSTAAT for the first time.

---

PSTAAT serves the following functions:

- Generates the TBDDL and IXDDL scripts for the *traditional* installation.  
PSTAAT is capable of dynamically creating the default TBDDL and IXDDL scripts. Note that the TBDDL and IXDDL scripts created by PSTAAT will be identical to those found with your installation files. You are free to optimize either set of scripts with PSTAAT.  
See "Creating a Database."
- Optimizes DDL for installation.

PSTAAT may be used to parse and rewrite the default *XXDDL*, *TBDDL*, and *IXDDL* scripts to more optimally distribute the PeopleSoft PeopleTools and Applications objects among additional tablespaces and databases. It provides basic override capability of certain tablespace DDL parameters, and allows you to control the number of tables created per tablespace, and the number of tablespaces created per database.

- PSTAAT can be used to isolate Application Engine temporary tables intended to be used with the %UpdateStats metaSQL function to individual tablespaces.
- Converts EBCDIC DDL data types to Unicode DDL data types.

PSTAAT may be used to "convert" EBCDIC DDL data types to those data types required to create a PeopleSoft Unicode database. Note that this is simply one step in a multi-step process when converting an EBCDIC PeopleSoft environment to Unicode. Complete instructions for converting an EBCDIC PeopleSoft environment to Unicode are beyond the scope of this manual. For more details, consult the white paper titled *Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS*.

See *Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS*, My Oracle Support, (search for the article title).

## **Understanding PSTAAT Workstation Requirements**

---

PSTAAT is a C++ Microsoft Windows application. It automatically invokes both Data Mover and Application Designer in command line mode depending on the particular functionality that is being used.

- PSTAAT must run from a PeopleSoft PeopleTools install workstation, or traditional Microsoft Windows-based development client. For more details regarding the requirements of such a workstation, consult the Certifications information on My Oracle Support.
- Both Data Mover and Application Designer require DB2 Connect, and thus it must also be installed on the client workstation from which you intend to run PSTAAT. See "Installing and Configuring DB2 Connect" for more details regarding the installation and configuration of DB2 Connect.
- The PeopleSoft PeopleTools Installer will place the PSTAAT executable file in the *PS\_HOME\bin\client\winx86* directory of the PeopleSoft PeopleTools install workstation, file server, or Microsoft Windows-based two-tier development client.

## **Understanding the PSTAAT Graphical User Interface**

---

This section describes the tabs found on the PSTAAT graphical user interface (GUI) and the input expected for each text box.

Generate DDL tab:

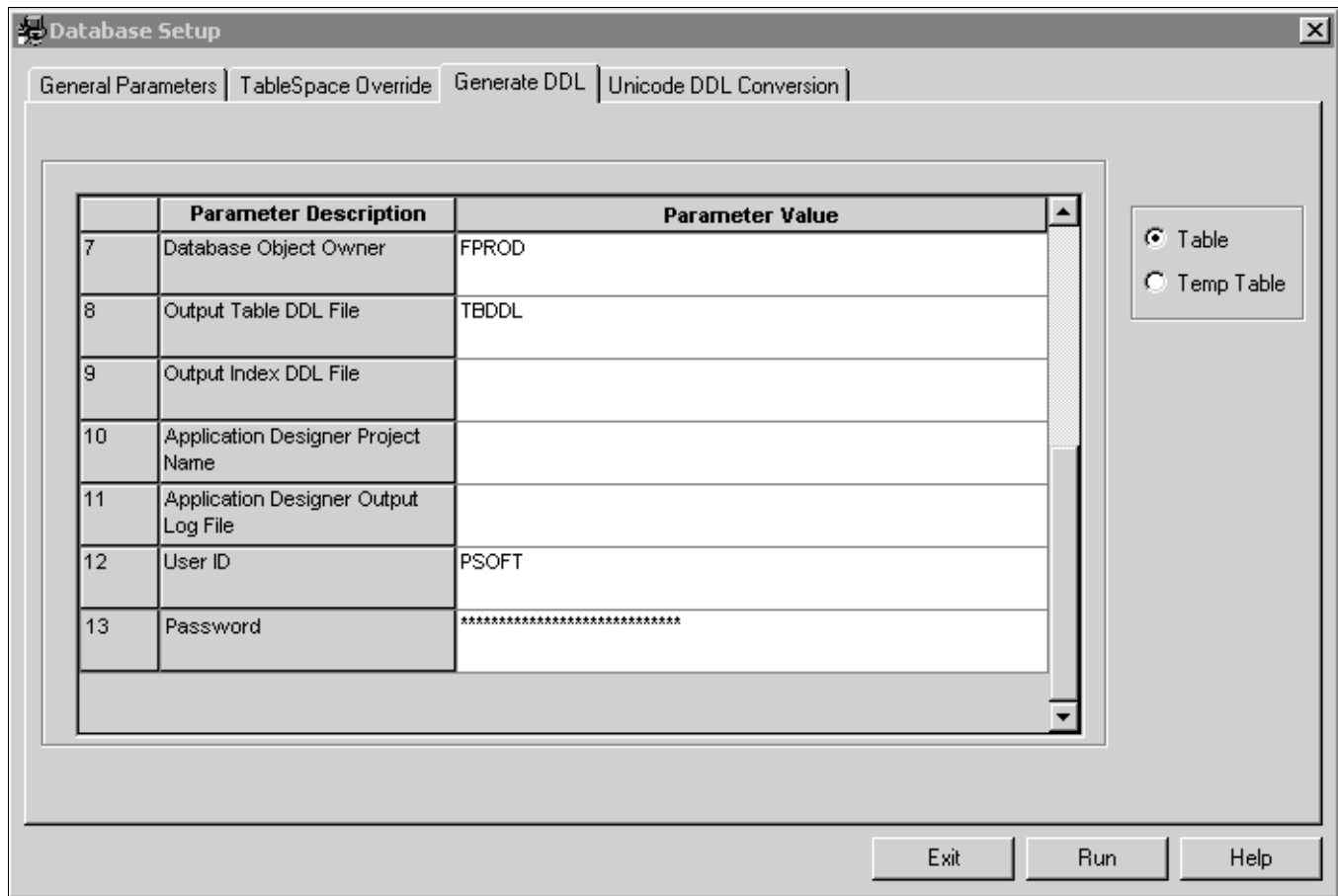
The screenshot shows the 'Database Setup' dialog box with the 'Generate DDL' tab selected. The dialog contains a table with 8 rows of parameters and their values. To the right of the table are two radio buttons: 'Table' (selected) and 'Temp Table'. At the bottom of the dialog are three buttons: 'Exit', 'Run', and 'Help'.

	Parameter Description	Parameter Value
1	PeopleSoft Database Name	FSCM89
2	Unicode?	NO
3	Database Input File	C:\PT848106R2\DATA\epends.db
4	Output Directory for Generated DDL Scripts	C:\PT848106R2\SCRIPTS\PSTAAT
5	Tablespace Storage Group	PSRTD1SG
6	Index Storage Group	PSRTX1SG
7	Database Object Owner	FPROD
8	Output Table DDL File	TBDDL

Table  
 Temp Table

Exit Run Help

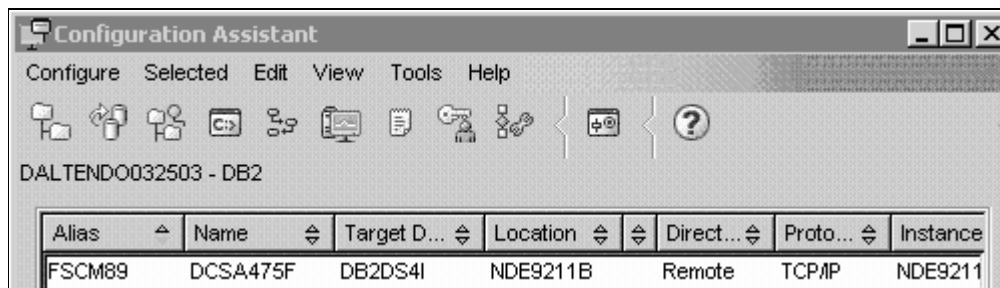
Database Setup page: Generate DDL tab (1 of 2)



Database Setup page: Generate DDL tab (2 of 2)

**Table and Temp Table radio buttons** Enable the Temp Table radio button to generate a DDL script for the creation of Application Engine temporary tables and indexes. Enable the Table radio button to generate a DDL script for the creation of all other table and index types.

**(1) PeopleSoft Database Name** This is the logical database name of the PeopleSoft database to be created. It *must* match the alias cataloged in DB2 Connect as shown in the Configuration Assistant (see figure below).



Configuration Assistant page



<b>(2) Unicode?</b>	Indicates whether PSTAAT should create DDL with EBCDIC or Unicode data types.
<b>(3) Database Input File</b>	Name of the database input file located in <i>PS_HOME\data</i> .
<b>(4) Output Directory for Generated DDL Scripts</b>	Specify a folder on the workstation where PSTAAT will store the generated DDL scripts. <hr/> <b>Note.</b> The path must already exist—PSTAAT will not create it for you. <hr/>
<b>(5) Tablespace Storage Group</b>	Storage group to be used for tablespace data sets
<b>(6) Index Storage Group</b>	Storage group to be used for Index data sets.
<b>(7) Database Object Owner</b>	The name of the table owner ID as previously determined from the "Preparing for Installation" chapter. This value qualifies all tables as belonging to the logical PeopleSoft database. This value will be stored in the Creator field of SYSIBM.SYSTABLES.
<b>(8) Output Table DDL File</b>	Name of the output file that contains DDL to create all tables. (TBDDL.SQL)
<b>(9) Output Index DDL File</b>	Name of the output file that contains DDL to create all indexes. (IXDDL.SQL)
<b>(10) Application Designer Project Name</b>	Name of PeopleSoft PeopleTools project that contains the temporary table record definitions. This is only used when creating temporary table DDL.  See Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces.
<b>(11) Application Designer Output Log File</b>	Application Designer log file. This is only used when creating Application Engine temporary table DDL.  See Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces.
<b>(12) User ID</b>	The userid specified must either be a valid mainframe ID such as the database Access ID, or a PeopleSoft user ID depending on which of the Table/Temp Table radio buttons has been enabled.  Recall from the section titled Understanding PSTAAT Workstation Requirements, that PSTAAT invokes Data Mover and Application Designer, which in turn make connections to the DB2 z/OS database server through DB2 Connect.  When creating the TBDDL.SQL and IXDDL.SQL, the Table radio button must be enabled. PSTAAT will invoke Data Mover in bootstrap mode to extract the default table and index DDL, thus this ID must be a valid mainframe ID such as the Access ID because it will be validated by your security software package (RACF, Top Secret, and so on).  When creating temporary table DDL with the Generate DDL tab, the Temp Table radio button must be enabled. In this case, PSTAAT will invoke Application Designer through a command line, thus the ID passed will be validated by PeopleSoft security. This id must be a valid PeopleSoft user id such as VP1 or PS.
<b>(13) Password</b>	This is the password that matches the ID supplied for input parameter 12 (above).

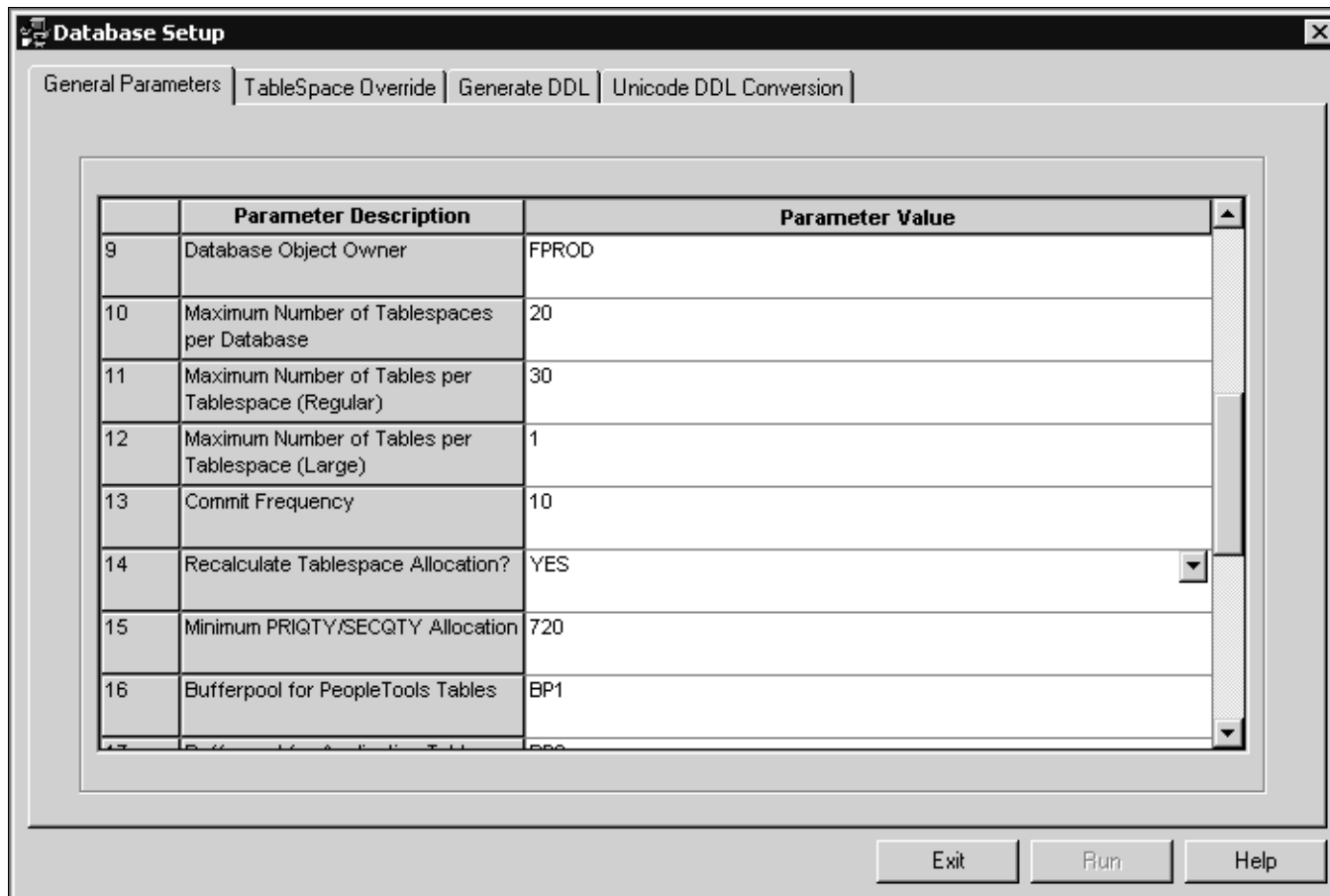
*General Parameters Tab:*

PSTAAT is a text parsing and DDL generation utility. It requires input files such as the default TBDDL.SQL and IXDDL.SQL scripts to operate. PSTAAT parses the text of the original files to create new versions of each script using the input supplied for the parameters below to override default values.

	Parameter Description	Parameter Value
1	Input Directory for DDL Scripts	C:\PT848106R2\SCRIPTS\PSTAAT
2	Input Database/Tablespace DDL File	EPDDL.SQL
3	Input Table DDL File	TBDDL.SQL
4	Input Index DDL File	IXDDL.SQL
5	Input Temp Table DDL File	
6	Input Individual Table File	
7	Output Directory for Generated DDL Scripts	C:\PT848106R2\SCRIPTS\PSTAAT
8	Primary Database Prefix	FSCM

Exit Run Help

Database Setup page: General Parameters tab (1 of 3)



Database Setup page: General Parameters tab (2 of 3)

	Parameter Description	Parameter Value
17	Bufferpool for Application Tables	BP3
18	Bufferpool for 32K Tables	BP32K1
19	Bufferpool for Indexes	BP5
20	Bufferpool for Temp Tables	BP7
21	Tablespace Storage Group	PSRTD1SG
22	Index Storage Group	PSRTX1SG
23	Segment Size	4
24	Close Data Set?	NO

Exit Run Help

Database Setup page: General Parameters tab (3 of 3)

- (1) **Input Directory for DDL Scripts** Enter the path that contains the mandatory DDL input files. (See input parameters 2-6 below.) Note that a value for this Input text box is also required to use the Unicode DDL Conversion Tab.
- (2) **Input Database/Tablespace DDL File** The name of the default database, tablespace, and stogroup DDL file for the traditional installation path. (The XXDDL.SQL script.)
- (3) **Input Table DDL File** A TBDDL.SQL DDL script such as one that was created by the Generate DDL tab or delivered with the installation.
- (4) **Input Index DDL File** An IXDDL.SQL DDL script such as one that was created by the Generate DDL tab or delivered with the installation.
- (5) **Input Temp Table DDL File** Temporary table DDL script as generated by Application Designer.
- (6) **Input Individual Table File** Input file of non-temporary PeopleSoft PeopleTools and Application tables for which the %UpdateStats metaSQL function is called.
- (7) **Output Directory for Generated DDL Scripts** Enter the path where you would like PSTAAT to write the newly generated output DDL scripts. Note that a value for this Input text box is also required to use the Unicode DDL Conversion Tab.

- (8) Primary Database Prefix** Prefix to be used as the constant portion of the naming convention for the individual databases (DBDs) that comprise the "logical" PeopleSoft database. PSTAAT will use the prefix entered here as the first part of the database naming convention. It will generate an ascending sequence for the remainder of the eight characters to be used for the DB2 z/OS database name. We recommend a primary database prefix of five characters or less.
- (9) Database Object Owner** Enter the 'owner' id that will qualify each of the objects in the logical PeopleSoft database. This is the name previously determined from the "Preparing for Installation" chapter. It will be the value stored in the Creator field of SYSIBM.SYSTABLES.
- (10) Maximum Number of Tablespaces per Database** Enter the maximum number of tablespaces that you want PSTAAT to allocate per database.
- (11) Maximum Number of Tables per Tablespace (Regular)** Enter the maximum number of tables that you want PSTAAT to allocate per tablespace.
- (12) Maximum Number of Tables per Tablespace (Large)** Enter the desired maximum number of tables per tablespace for those tables assigned to the XX LARGE tablespaces by default. These have been identified as high growth tables. An input value of one (1) would segregate each of the tables delivered in these tablespaces to its own tablespace.
- (13) Commit Frequency** An explicit commit is issued after each table and index is created in the default DDL scripts. It is possible to vary the commit frequency between tables and indexes with this input parameter. A commit frequency of 10, for example, will indicate that PSTAAT should force an explicit commit after approximately every ten DDL statements.
- (14) Recalculate Tablespace Allocation** Indicates whether you want PSTAAT to recalculate the Primary and Secondary space allocations for tablespaces, or use the defaults as indicated in the XXDDL script. For more details regarding the algorithm used to recalculate PRI and SEC space allocation, see the section titled Using PSTAAT to Customize DDL; Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation.
- (15) Minimum PRIQTY/SECQTY Allocation** Allows you to specify a minimum Primary and Secondary space allocation for tablespaces when allowing PSTAAT to recalculate the Primary and Secondary allocations. See the section titled Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation for more details regarding the manner in which PSTAAT uses this input parameter.
- (16) Bufferpool for PeopleTools Tables** PSTAAT will allocate PeopleSoft PeopleTools tables to this bufferpool.
- (17) Bufferpool for Application Tables** PSTAAT will allocate Application tables to this bufferpool.
- (18) Bufferpool for 32K Tables** Indicate the particular 32K bufferpool to be used for tables automatically allocated to 32K bufferpools.
- (19) Bufferpool for Indexes** PSTAAT will allocate index data sets to this bufferpool.
- (20) Bufferpool for Temp Tables** PSTAAT will allocate Temporary Tables to this bufferpool.
- (21) Tablespace Storage Group** Stogroup to be used for tablespaces.
- 
- Note.** All tablespaces will be created using this stogroup. PSTAAT is not capable of assigning multiple tablespace stogroups.
-

<b>(22) Index Storage Group</b>	Stogroup to be used for indexes. <hr/> <b>Note.</b> All indexes will be created using this stogroup. PSTAAT is not capable of assigning multiple index stogroups. <hr/>
<b>(23) Segment Size</b>	Select a default segment size to be used for all tablespaces.
<b>(24) Close Data Set?</b>	Default close rule for VSAM data sets. <hr/> <b>Note.</b> All tablespaces will use this close rule. <hr/>

---

**Note.** LOCKSIZE does not appear as an override parameter on the GUI. LOCKSIZE is controlled automatically by PSTAAT. Those tables originally delivered in tablespaces set to a LOCKSIZE of ROW will be remapped to tablespaces also set to a LOCKSIZE of ROW automatically. All other tablespace DDL will be generated with a LOCKSIZE of ANY.

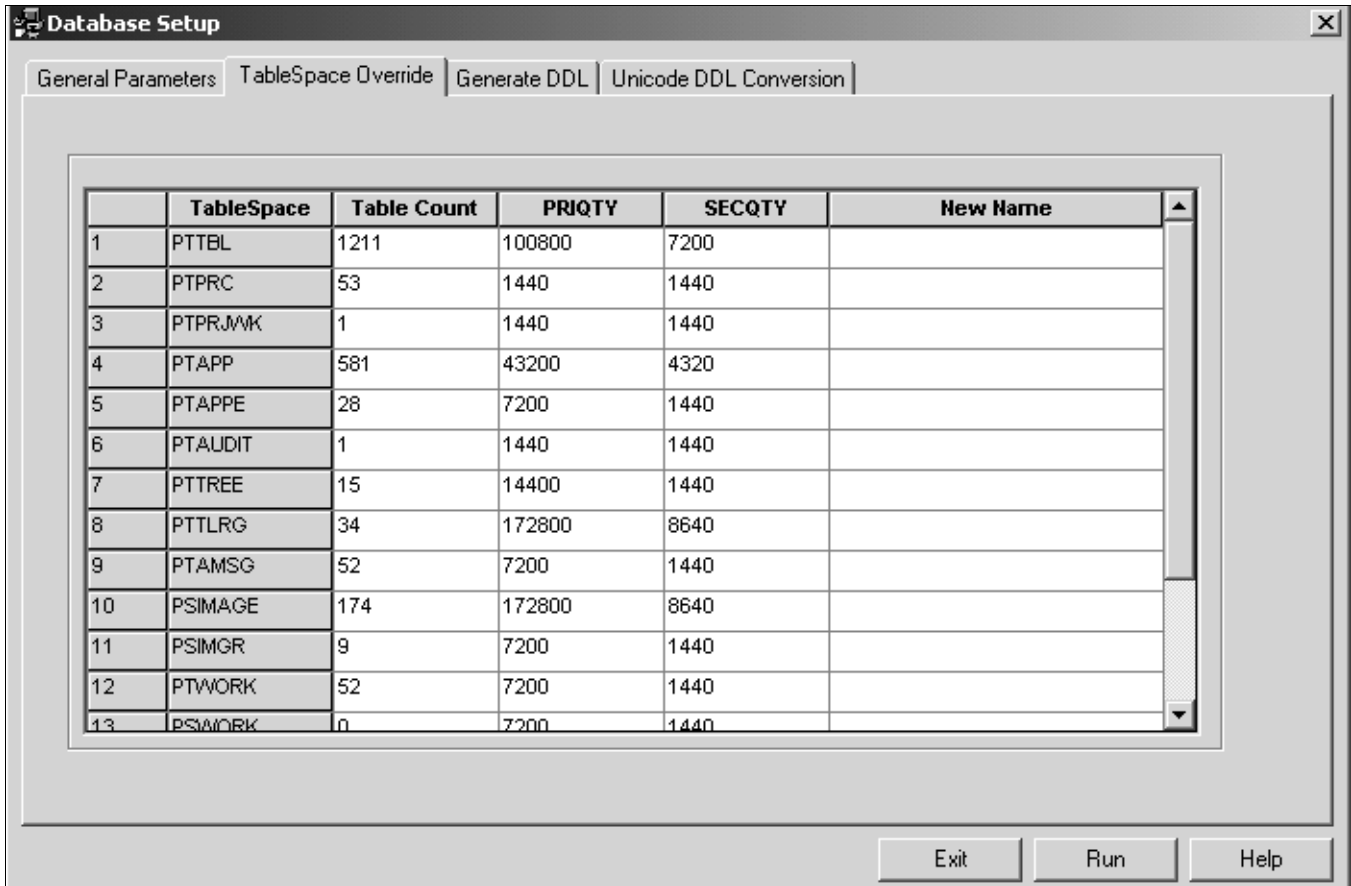
---

*TableSpace Override Tab:*

The Tablespace Override tab works in conjunction with the General Parameters tab. After completing the General Parameters tab, click the TableSpace Override tab to determine the exact object mapping as delivered by the default (traditional) installation.

PSTAAT determines the values in the TableSpace Override grid by parsing the following input from the General Parameters tab:

- Input Database/Tablespace DDL File, also known as the XXDDL script (General Parameters tab, parameter 2).
- Input Table DDL File, or TBDDL.SQL script (General Parameters tab, parameter 3).



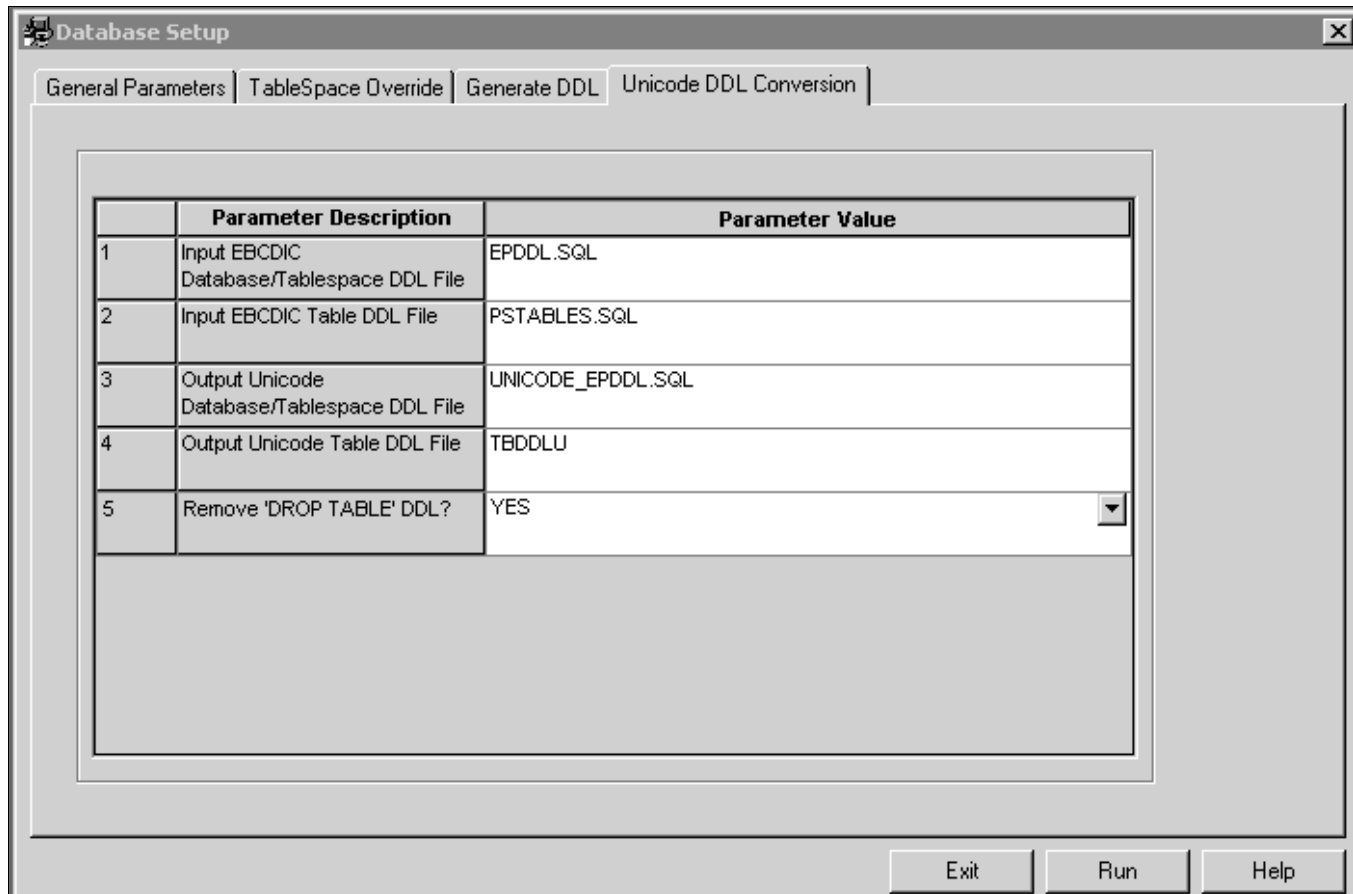
Database Setup page: TableSpace Override tab

- Tablespace**                      There is one row in the grid for each tablespace found in the XXDDL script. The name of each tablespace is listed in this column.
- Table Count**                      This is the number of tables that will be assigned to the tablespace by the default installation.
- PRIQTY**                              Default Primary space allocation for the tablespace.
- SECQTY**                              Default Secondary space allocation for the tablespace.
- New Name**                            Allows you to override the default tablespace name with a custom tablespace name. Although it is possible to completely override the name of any tablespace, for documentation purposes, we recommend that you use the default PSTAAT behavior of using part of the default tablespace name as a prefix in generating new tablespace names for you. Use of the New Name input parameter is required in a specific circumstance that is documented later in this appendix. See Understanding How PSTAAT Assigns An Object Naming Convention later in this appendix for a more detailed explanation of how PSTAAT determines the tablespace naming convention.
- Run Button**                            Click the Run button to optimize the DDL. PSTAAT will recreate the table-tablespace-database mapping based on the input parameters supplied in the General Parameters tab.

*Unicode DDL Conversion tab:*

The Unicode DDL Conversion Tab is used to 'convert' EBCDIC DDL data types to those data types required to create a PeopleSoft Unicode database. Note that this is simply one step in a multi-step process when converting an EBCDIC PeopleSoft environment to Unicode. Complete instructions for converting an EBCDIC PeopleSoft environment to Unicode are beyond the scope of this guide.

See [Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS, My Oracle Support](#) (search for the article title).



	Parameter Description	Parameter Value
1	Input EBCDIC Database/Tablespace DDL File	EPDDL.SQL
2	Input EBCDIC Table DDL File	PSTABLES.SQL
3	Output Unicode Database/Tablespace DDL File	UNICODE_EPDDL.SQL
4	Output Unicode Table DDL File	TBDDLU
5	Remove 'DROP TABLE' DDL?	YES

Exit Run Help

Database Setup page: Unicode DDL Conversion tab



- (1) Input EBCDIC/Tablespace DDL File** Enter the name of the EBCDIC Database/Tablespace DDL script (that is, *XXDDL.SQL*) for conversion. Note that the path where this file is located must be entered in input box 1 (Input Directory for DDL scripts) of the General Parameters tab.
- (2) Input EBCDIC Table DDL File** Enter the name of the EBCDIC table DDL script to be converted to Unicode data types. This can be a DDL script created from an Application Designer project that contains PeopleSoft PeopleTools record definitions; or, a default *TBDDL.SQL* script. Note that this file must also be located in the folder specified by input parameter 1 (Input Directory for DDL scripts) on the General Parameters tab.
- See [Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS](#), My Oracle Support, (search for the article title).
- (3) Output Unicode Database/Tablespace DDL File** Enter the name of the newly generated DDL script for creating databases, tablespaces, and stogroups using the Unicode encoding scheme. This output file will be written to the folder identified by input parameter 7, Output Directory for Generated DDL scripts on the General Parameters tab.
- (4) Output Unicode Table DDL File** Enter the name of the newly created DDL script to create tables for storing data using the Unicode encoding scheme. This output file will also be written to the folder specified by input parameter 7, Output Directory for Generated DDL scripts on the General Parameters tab.
- (5) Remove 'Drop Table' DDL** DDL created by Application Designer (when building a PeopleSoft PeopleTools project) may contain Drop Table statements for tables that Application Designer has determined already exist. When *YES* is selected from the drop down, PSTAAT will comment the Drop Table statements in the newly generated DDL. When *NO* is selected, the Drop Table statements are left uncommented in the new DDL script.

## Understanding the Various PSTAAT Input and Output Files

PSTAAT is completely file driven. Although PSTAAT invokes Data Mover and Application Designer, each of which require a connection to the database server, PSTAAT itself does not communicate directly with DB2 z/OS and thus it is not capable of querying DB2. PSTAAT operates entirely by parsing various types of files (primarily DDL scripts), and then rewriting those files based on the input parameters specified in the General Parameters tab.

The following table describes the various input files, organized by location:

GUI Tab	File	Description
Generate DDL Tab	Database Input File	Located in <i>PS_HOME\data</i> . This is the same file used by Data Mover to populate the PeopleSoft database.
General Parameters Tab	Input Database/Tablespace DDL File	The name of the default database, tablespace, and stogroup DDL script (i.e. <i>XXDDL.SQL</i> )
General Parameters Tab	Input Table DDL File	The <i>TBDDL.SQL</i> DDL script that was generated from the Generate DDL tab or delivered with the installation files.

GUI Tab	File	Description
General Parameters Tab	Input Index DDL File	The IXDDL.SQL DDL script that was generated from the Generate DDL tab or delivered with the installation files.
General Parameters Tab	Input Temp Table DDL File	A temporary table DDL script as generated by Application Designer.
General Parameters Tab	Input Individual Table File	Input file of non-temporary PeopleSoft PeopleTools and Application tables for which the %UpdateStats metaSQL function is called. This file is delivered with the installation files.
Unicode Conversion Tab	EBCDIC/Tablespace DDL File	An EBCDIC default database, tablespace, and stogroup DDL script (i.e. XXDDL.SQL).
Unicode Conversion Tab	Input EBCDIC Table DDL File	An EBCDIC table DDL script to be converted to Unicode data types. This can be a DDL script created from an Application Designer project that contains PeopleSoft PeopleTools record definitions; or, a default TBDDL.SQL script.  See <a href="#">Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS</a> , My Oracle Support, (search for the article title).

The following table describes the various output (new) files:

GUI Tab	File	Description
Generate DDL Tab  PSTAAT will write five files to the folder specified in 'Output Directory for Generated DDL Scripts', input parameter four (4), of the Generate DDL tab.	Output Table DDL File  Log File	Default table DDL script (i.e. TBDDL.SQL).  The actual script name will depend on the value entered in Output Table DDL File, parameter eight (8), of the Generate DDL tab. To maintain consistency with previous releases of PeopleSoft PeopleTools, we recommend that you name the Table DDL script 'TBDDL.SQL' as shown in the examples in these instructions.  A file with extension ".log" is also created with a name similar to the table DDL script (i.e. TBDDL.log). Each table name is written to this output log as Data Mover 'extracts' the table DDL from the database input file.

GUI Tab	File	Description
Generate DDL Tab	Output Index DDL File Log File	<p>Default index DDL script (i.e. IXDDL.SQL).</p> <p>The actual script name will depend on the value entered in Output Index DDL File, parameter nine (9), of the Generate DDL tab. To maintain consistency with previous releases of PeopleSoft PeopleTools, we recommend that you name the Index DDL script 'IXDDL.SQL' as shown in the examples in these instructions.</p> <p>A file with extension ".log" is also created with a name similar to the index DDL script (i.e. IXDDL.log). Each index name is written to this output log as Data Mover 'extracts' the index DDL from the database input file.</p>
Generate DDL Tab	pstaatExtractDDL.DMS	Data Mover extract script generated by PSTAAT. This is the actual script passed to Data Mover for the extraction of the default table and index DDL (TBDDL.SQL and IXDDL.SQL).
<p>General Parameters and Tablespace Override Tabs</p> <p>PSTAAT will write several new DDL scripts to the folder specified in 'Output Directory for Generated DDL Scripts', parameter seven (7), of the General Parameters tab. Each will be prefaced with a lower case 'n'. In addition to the DDL scripts, PSTAAT also produces a log file.</p>	nXXDDL.SQL	This is the new tablespace and database (DBD) DDL script. Non-temporary tables will be re-mapped among these tablespaces and databases based on the input parameters supplied to the General Parameters tab (that is, parameters 10-12; Maximum Number of Tables per Tablespace; Maximum Number of Tablespaces per Database, Bufferpool allocations, and so on).
<p>General Parameters and Tablespace Override Tabs</p>	nTBDDL.SQL	This is the new table DDL script. Non-temporary tables will be re-mapped among the tablespaces and databases found in the new nXXDDL.SQL script. The object mapping is based on the input parameters supplied to the General Parameters tab.
<p>General Parameters and Tablespace Override Tabs</p>	nIXDDL.SQL	This is the new index DDL script for all tables except temporary tables.

GUI Tab	File	Description
General Parameters and Tablespace Override Tabs	nTEMP.SQL	<p>This is the new temporary table DDL script. It contains DDL to create temporary tables and indexes. Tables will be re-mapped among the tablespaces and databases generated in the tXXDDL.SQL script (see below) The DBD mapping is based on the input parameters supplied to the General Parameters tab. Tablespace names for temporary tables only, are hard-coded with the following naming convention: TMPnnnn, where nnnn is an ascending sequence number.</p> <p><b>Note.</b> This file is produced only when the Input Temp Table DDL File parameter has been entered. See the task Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces elsewhere in this appendix for further details.</p>
General Parameters and Tablespace Override Tabs	tXXDDL.SQL	This script contains database and tablespace DDL for temporary tables
General Parameters and Tablespace Override Tabs	PTlog.txt	<p>This log file summarizes the re-mapped object counts by tablespace and database in the new nXXDL.SQL and nTBDDL.SQL scripts. See the sample PTlog.txt output following this table.</p> <p><b>Note.</b> The PTlog.txt log file contains non-temporary tables <i>only</i>.</p>
Unicode Conversion Tab	Output Unicode Database/Tablespace DDL File	This is the new Database/Tablespace DDL script for creating databases and tablespaces. All 'Create Database' DDL statements are appended to include 'CCSID Unicode'.
Unicode Conversion Tab	Output Unicode Table DDL File	This is the new table DDL script with the converted Unicode data types. Note that all character and long character fields are converted to vargraphic and long vargraphic respectively; while date, integer, small integer, decimal, timestamp, and long varchar for bit data types remain unchanged.

## Sample PTlog.txt output:

Database Summary:

PeopleSoft Primary Database: PSDB

Name	TableSpace	Count
PSDB0000		20
PSDB0001		20
PSDB0002		20
PSDB0003		20
PSDB0004		20
PSDB0005		20
PSDB0006		20
PSDB0007		20
PSDB0008		20
PSDB0009		20
PSDB000A		20
PSDB000B		20
Etc..		

## Tools TableSpace Summary:

Name	Database	Table	Count
PTTBL			
PTTBL01	PSDB0000		30
PTTBL02	PSDB0000		30
Etc..			

## Application TableSpace Summary:

Name	Database	Table	Count
OMAPP			
OMAPP01	PSDB000H		30
OMAPP02	PSDB000H		30
Etc.			
EXLARGE			
EXLARG01	PSDB0020		1
Etc.			

## **Task B-1: Using PSTAAT to Create TBDDL and IXDDL**

---

The Generate DDL tab of the PSTAAT interface is capable of extracting TBDDL.SQL and IXDDL.SQL scripts from the database import file located in *PS\_HOME\data*. Note that the TBDDL and IXDDL scripts extracted from PSTAAT will be identical to those delivered with the installation files. You are free to use either set of scripts

Perform this task on a workstation with the ability to connect to the DB2 z/OS database server. PSTAAT will invoke Data Mover to extract the default table and index DDL from the database file. Data Mover requires DB2 Connect. Recall that the User ID and Password input parameters require a valid mainframe ID (such as the database Access ID) and password because Data Mover will be invoked in bootstrap mode. Your mainframe security package (such as RACF or Top Secret) must be able to authenticate this ID.

To create the *TBDDL.SQL* and *IXDDL.SQL* scripts:

1. Start PSTAAT by double-clicking the PSTAAT executable file found in *PS\_HOME\bin\client\winx86*.
2. Enter input values for parameters 1-9; and 12-13 of the Generate DDL tab.

Refer to Generate DDL tab Input Parameters under the section titled Understanding the PSTAAT Graphical User Interface for a detailed explanation of each input parameter. To maintain consistency with previous releases of PeopleSoft PeopleTools, we recommend that you use *TBDDL* and *IXDDL* as the DDL script file names for input parameters eight (8) and nine (9).

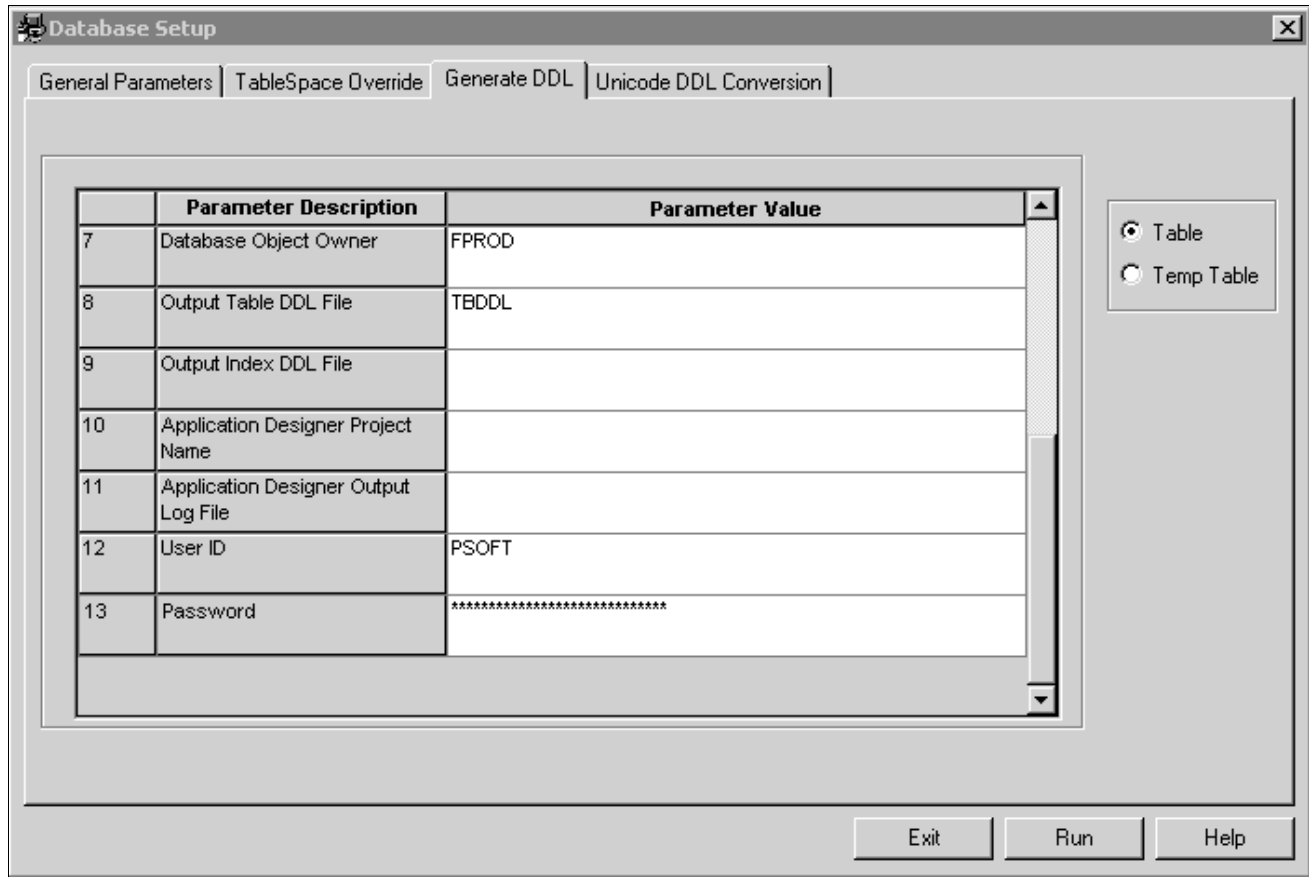
3. Select the Table radio button.

4. Click the Run button.

The screenshot shows the 'Database Setup' dialog box with the 'Generate DDL' tab selected. The dialog contains a table with 8 rows of parameters and their values. To the right of the table are two radio buttons: 'Table' (selected) and 'Temp Table'. At the bottom right are three buttons: 'Exit', 'Run', and 'Help'.

	Parameter Description	Parameter Value
1	PeopleSoft Database Name	FSCM89
2	Unicode?	NO
3	Database Input File	C:\PT848106R2\DATA\epends.db
4	Output Directory for Generated DDL Scripts	C:\PT848106R2\SCRIPTS\VPSTAAT
5	Tablespace Storage Group	PSRTD1SG
6	Index Storage Group	PSRTX1SG
7	Database Object Owner	FPROD
8	Output Table DDL File	TBDDL

Generate DDL page (1 of 2)



Generate DDL page (2 of 2)

Clicking the run button invokes Data Mover. Data Mover will open a window similar to the following two examples as it writes the TBDDL and IXDDL scripts to the path specified in input parameter four (4), Output Directory for Generated DDL Scripts. Table DDL is extracted first, followed by the index DDL. The example displays messages such as `Importing PSMSFPENVSTATE`, `Creating Table PSMSFPENVSTATE`, and `Records Remaining 917`.

---

**Note.** 'Creating Table ..' and 'Building required indexes for..' messages will scroll to the output window as Data Mover generates the DDL. These windows will close automatically as soon as Data Mover has completed. Data Mover is simply writing the DDL to an output file—it is *not* creating any database objects in the DB2 subsystem.

---



```

Data Mover
Records remaining: 918
Importing PSMSFPENUSTAGE
Creating Table PSMSFPENUSTAGE
Records remaining: 917
Importing PSMSFPUBDATA
Creating Table PSMSFPUBDATA
Records remaining: 916
Importing PSMSFREFRESH
Creating Table PSMSFREFRESH
Records remaining: 915
Importing PSMSFSEQ
Creating Table PSMSFSEQ
Records remaining: 914
Importing PSMSFTABLES
Creating Table PSMSFTABLES
Records remaining: 913
Importing PSMSFUSER
Creating Table PSMSFUSER
Records remaining: 912
Importing PSMSGAGTDEFN
Creating Table PSMSGAGTDEFN
Records remaining: 911
Importing PSMSGCATDEFN
Creating Table PSMSGCATDEFN

```

Data Mover extracting Table DDL

```

Data Mover
Building required indexes for MCFUQWORKSET
Records remaining: 1404
Building required indexes for MESSAGE_LOG
Records remaining: 1403
Building required indexes for MESSAGE_LOGPARM
Records remaining: 1402
Building required indexes for MESSAGE_SET_CPY
Records remaining: 1401
Building required indexes for MOBILEID
Records remaining: 1400
Building required indexes for MSF_PUBDATA_AET
Records remaining: 1399
Building required indexes for NUS_OPR_RPTS
Records remaining: 1398
Building required indexes for NUS_REPORT
Records remaining: 1397
Building required indexes for NUS_REPORT_AUTH
Records remaining: 1396
Building required indexes for NUS_REPORT_LANG
Records remaining: 1395
Building required indexes for NUS_SCOPE
Records remaining: 1394
Building required indexes for NUS_SCOPE_FIELD
Records remaining: 1393

```

Data Mover extracting Index DDL

---

**Note.** At this point, you have the option of executing the default TBDDL.SQL and IXDDL.SQL scripts as directed by the "Creating a Database" chapter; or you may continue to use PSTAAT to optimize them as described in the subsequent sections of this appendix.

---

## Task B-2: Using PSTAAT to Customize DDL

---

This section discusses:

- Understanding How PSTAAT Assigns an Object Naming Convention
- Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database
- Using the New Name Parameter to Override Tablespace Name
- Customizing DDL Scripts
- Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation With PSTAAT
- Using PSTAAT to Override the Default Bufferpool Assignment
- Using PSTAAT to Override the Default Segment Size
- Validating Input

### Understanding How PSTAAT Assigns an Object Naming Convention

For databases, PSTAAT uses the Primary Database Prefix of the General Parameters tab as a constant when deriving the naming convention to be used for the individual physical databases that will comprise the logical PeopleSoft database. PSTAAT will use the prefix entered here as the first part of the database naming convention, and generate an ascending sequence for the remainder of the eight character DB2 z/OS database name.

For example, entering *HCMPD* as the Primary Database Prefix on the General Parameters tab allows PSTAAT to use the remaining three "free" characters to generate database names with the following ascending naming convention:

HCMPD000, HCMPD001, HCMPD002, HCMPD003, ...HCMPD009, HCMPD00A, HCMPD00B...etc.

### Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database

*Databases:*

---

**Note.** Depending on the desired number of tables to be assigned per tablespace, desired number of tablespaces to be assigned per database, and the total number of tables to be created, entering a Primary Database Prefix value greater than five characters may cause PSTAAT to exhaust the possible unique values to use in generating the ascending sequence. *This can result in duplicate database names, causing the DDL to fail when it is ultimately executed on the DB2 z/OS database server.*

*A primary database prefix of three characters, or five characters at the most, is highly recommended to prevent duplicate database names in the generated DDL script.*

---

**Note.** The maximum number of databases that can be created in a DB2 subsystem is approximately 65,271 (see Appendix A of the DB2 for z/OS SQL Reference for details). Be aware that it is possible to reach this limit when using PSTAAT to install large PeopleSoft applications and in doing so, allocating very few tables per tablespace and grouping very few tablespaces per database. Hence, a complete one table per tablespace, one tablespace per database configuration may not be possible depending on the number of tables contained in the application. It is also possible to reach the internal DB2 database limit in situations where PeopleSoft applications share the subsystem with other applications.

IBM has suggested the following very general guidelines with respect to "object mapping" for DB2 z/OS:

- If possible, create no more than 50 tables per individual physical database.
- Try to limit the total number of objects created per database descriptor (DBD) to no more than 1000. Objects that constitute the DBD include, but are not limited to, all tablespaces, tables, indexes, index spaces, relationships, and so on, that reside in a single physical DB2 database.

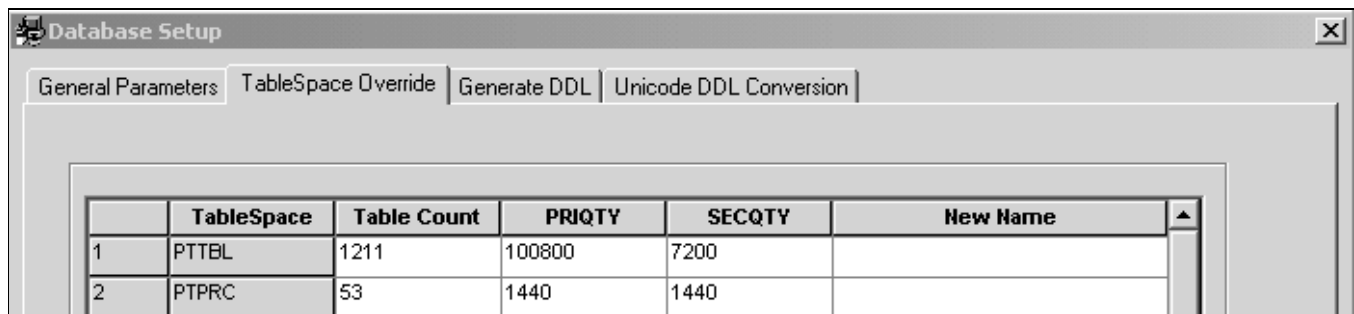
Note that these are only general guidelines and may not be adequate for every installation.

#### Tablespaces:

The tablespace naming convention is controlled internally by PSTAAT. PSTAAT derives an ascending sequence for tablespace names similarly to the manner in which it does so for database names. Depending on the length of the default tablespace name and the number of tables to be assigned per tablespace, PSTAAT will use up to five or six characters of the default tablespace name, and then append an ascending sequence for the remainder of the eight character DB2 z/OS tablespace name.

For example, the TableSpace Override tab (in the following example) indicates that there are 1,211 tables by default in tablespace PTTBL. Requesting a one table per tablespace configuration by entering one (1) in the Maximum Number of Tables per Tablespace text box of the General Parameters tab causes PSTAAT to create 1,211 tablespaces—one for each table delivered in tablespace PTTBL. The 1,211 tablespaces will be named as follows:

PTTBL01, PTTBL02, PTTBL03, PTTBL04...PTTBL0A, PTTBL0B...etc., through⇒ PTTBLXN



	TableSpace	Table Count	PRIQTY	SECQTY	New Name
1	PTTBL	1211	100800	7200	
2	PTPRC	53	1440	1440	

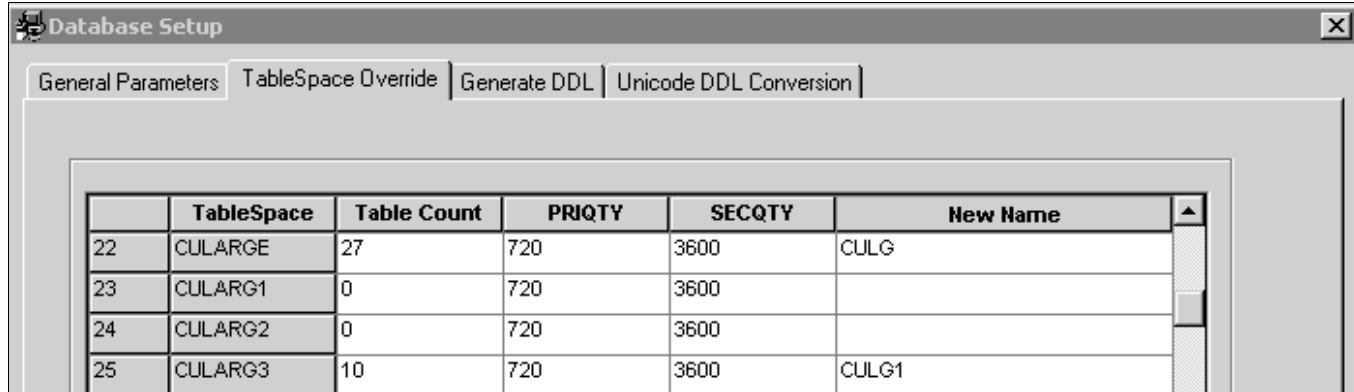
Reviewing Table Count on the TableSpace Override tab

## Using the New Name Parameter to Override Tablespace Name

As indicated previously, the New Name input parameter, found on the TableSpace Override tab, allows you to override the default tablespace name with a custom tablespace name. Although it is possible to completely override the name of any tablespace, we do recommend that you allow PSTAAT to determine new tablespace names for you except for the circumstance described in this section.

Use this information to prevent duplicate Tablespace names when the default *XXDDL* script contains similarly named Tablespace names.

Some of the delivered *XXDDL.SQL* scripts contain default tablespace names that are similar to the naming convention used by PSTAAT. The following example is from the *EPDDL.SQL* script:



	TableSpace	Table Count	PRIQTY	SECQTY	New Name
22	CULARGE	27	720	3600	CULG
23	CULARG1	0	720	3600	
24	CULARG2	0	720	3600	
25	CULARG3	10	720	3600	CULG1

Using the New Name parameter on the TableSpace Override tab

Because PSTAAT may use up to five or six of the original characters when determining the new tablespace name, it is possible that PSTAAT will create duplicate tablespace names when it encounters multiple tablespaces in the default *XXDDL.SQL* script named with as many identical, consecutive characters. For example:

CULARGE, CULARG1, CULARG2, CULARG3

To prevent duplicate tablespace names in this circumstance, review the list of default tablespace names in the TableSpace Override grid before clicking the Run button in the procedure below, Customizing DDL Scripts, to generate optimized DDL. Add an override value to the New Name text box next to any series of tablespaces for which the default naming convention includes 5 or more identical consecutive characters. PSTAAT will substitute the specified override value when it is generating tablespace names for optimized DDL.

## Task B-2-1: Customizing DDL Scripts

PSTAAT can assist you in the following:

- Customizing the DDL by allowing you to override the supported PeopleSoft PeopleTools DDL parameters for DB2 z/OS so they more closely fit standards at your site.
- Creating a more optimal mapping of non-temporary tables among tablespaces and databases.
- Isolating temporary tables and certain PeopleSoft application and PeopleSoft PeopleTools tables to individual tablespaces for use with the %UpdateStats metaSQL function and to enhance concurrency.

To optimize the default *XXDDL.SQL*, *TBDDL.SQL*, and *IXDDL.SQL* scripts:

1. If it is not already running, start PSTAAT by double-clicking on the executable file found in *PS\_HOME\bin\client\winx86*.
2. Select the General Parameters tab.
3. Enter the desired General Parameters input values.

For a detailed explanation of each of these input parameters, refer to the previous section titled General Parameters Tab Input under the section called Understanding the PSTAAT Graphical User Interface.

4. Select the TableSpace Override tab to view the table count per tablespace as defined by the default *XXDDL.SQL* and *TBDDL.SQL* scripts; and the default Primary and Secondary space allocations.
5. Click the Run button.

PSTAAT will parse the default *XXDDL*, *TBDDL*, *IXDDL* and Temp scripts, and the Individual table file table script (input parameters 2-6), and write the corresponding new DDL scripts.

- View the PTlog.txt file to see the database and tablespace names generated by PSTAAT, and the new object count per tablespace and database.

If you are unsatisfied with the object mapping and want to regenerate the DDL, you may do so by repeating steps 2-6 above using new input parameters. Each of the output scripts (nTBDDL.SQL, nIXDDL.SQL, Temp, and nXXDDL.SQL and so on) will be rewritten.

See the previous sections for important details to keep in mind when choosing the primary database prefix, table and tablespace counts per DBD, Bufferpool allocations, and the default Segsize.

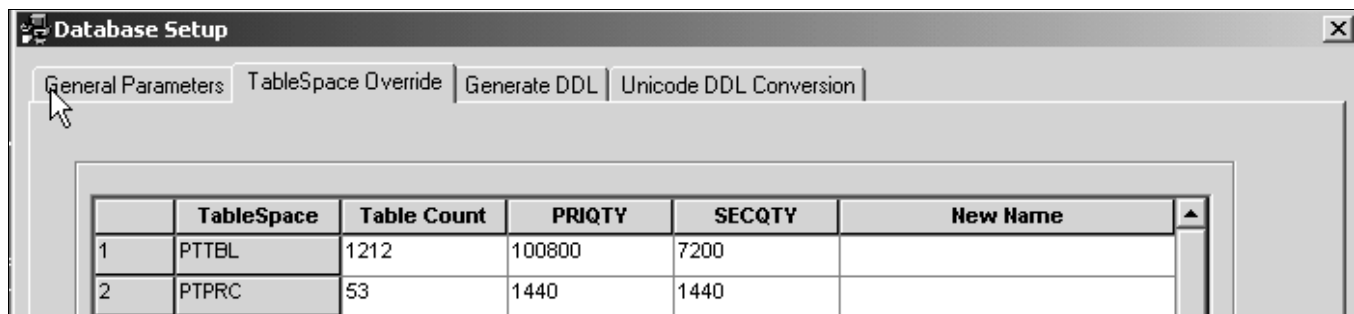
See Understanding How PSTAAT Assigns an Object Naming Convention.

See Choosing a Primary Database Prefix and Maximum Number of Tables per Tablespace and Tablespaces per Database.

See Using the New Name Parameter to Override Tablespace Name.

## Task B-2-2: Recalculating Primary and Secondary Space Allocations and Setting a Minimum Secondary Space Allocation With PSTAAT

As PSTAAT parses the Database and Tablespace DDL script (XXDDL.SQL) and writes new tablespace DDL based on the table count provided, it always applies the original primary and secondary space allocation to each new tablespace that is generated unless the Recalculate Tablespace Allocation text box (General Parameters) is set to *YES*. The original primary and secondary allocations as read from the XXDDL.SQL input file are always displayed in the TableSpace Override tab, as shown in this example:

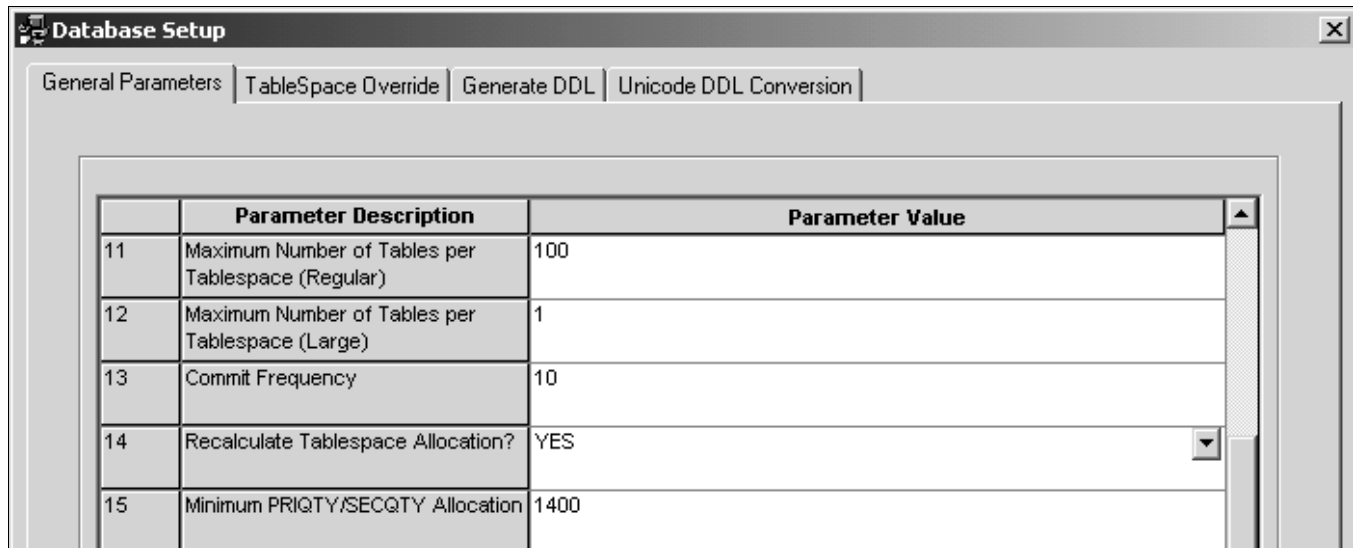


	TableSpace	Table Count	PRIQTY	SECQTY	New Name
1	PTTBL	1212	100800	7200	
2	PTPRC	53	1440	1440	

Reviewing primary and secondary space allocations on the TableSpace Override tab

Once again using PTTBL as an example, and a hypothetical value of one (1) for input parameter ten (10) of the General Parameters tab, Maximum Number of Tables per Tablespace (Regular), PSTAAT will create all 1,211 individual tablespaces for each table originally assigned to PTTBL with the original Primary and Secondary space allocations of 100800 and 72000, respectively.

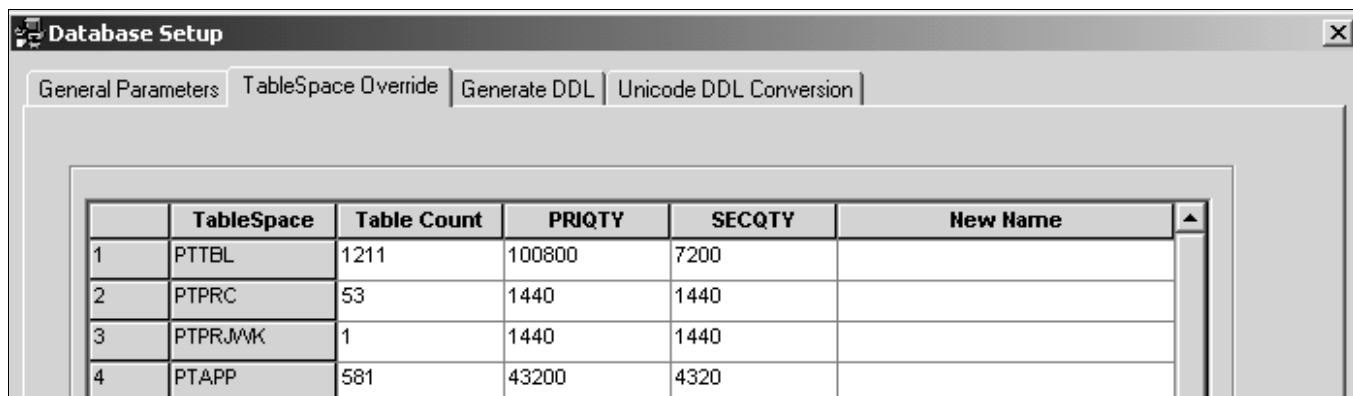
The default allocation may be less than ideal for each of the 1,211 tables when assigned to an individual tablespace. PSTAAT will thus recalculate these allocations when Input parameter 14, Recalculate Tablespace Allocation, is set to YES, and a value is provided for Minimum PRIQTY/SECQTY Allocation, as shown in this example:



	Parameter Description	Parameter Value
11	Maximum Number of Tables per Tablespace (Regular)	100
12	Maximum Number of Tables per Tablespace (Large)	1
13	Commit Frequency	10
14	Recalculate Tablespace Allocation?	YES
15	Minimum PRIQTY/SECQTY Allocation	1400

Setting up recalculation of tablespace allocation on General Parameters tab

This example shows the allocations for PTTBL and PTAPP on the TableSpace Override tab:



	TableSpace	Table Count	PRIQTY	SECQTY	New Name
1	PTTBL	1211	100800	7200	
2	PTPRC	53	1440	1440	
3	PTPRJWK	1	1440	1440	
4	PTAPP	581	43200	4320	

Reviewing allocations on TableSpace Override tab

The recalculation method is described here using tablespaces PTTBL and PTAPP as examples:

*Example with Tablespace PTTBL:*

PSTAAT creates DDL for 13 tablespaces each with a PRIQTY of 7753 and SECQTY of 5538.

```
CREATE TABLESPACE PTTBL01 IN HCMPD000
  USING STOGROUP PSRTD1SG PRIQTY 7753 SECQTY 5538
  FREEPAGE 20 PCTFREE 0
  SEGSIZE 4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE NO ;
```

- 1211 tables / 100 tables per tablespace = 13 tablespaces
- PRIQTY becomes 7753 (100800 / 13)
- SECQTY becomes 5538 (72000 / 13)

- The value for Input Parameter 15, Minimum PRIQTY/SECQTY Allocation (1440) was not used because it is less than the SECQTY calculated by PSTAAT.

*Example with Tablespace PTAPP:*

PSTAAT creates DDL for six tablespaces each with a PRIQTY of 7200 and SECQTY of 1440.

```
CREATE TABLESPACE PTAPP01 IN HCMPD001
    USING STOGROUP PSRTD1SG PRIQTY 7200 SECQTY 1440
    FREEPAGE 20 PCTFREE 0
    SEGSIZE 4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE NO ;
```

- 581 tables / 100 tables per tablespace = 6 tablespaces
- PRIQTY becomes 7200 (43200 / 6)
- The value for Input Parameter 15, Minimum PRIQTY/SECQTY Allocation, is substituted (1440) in this case because it is greater than the quantity calculated by PSTAAT: (4320 / 6 = 720).

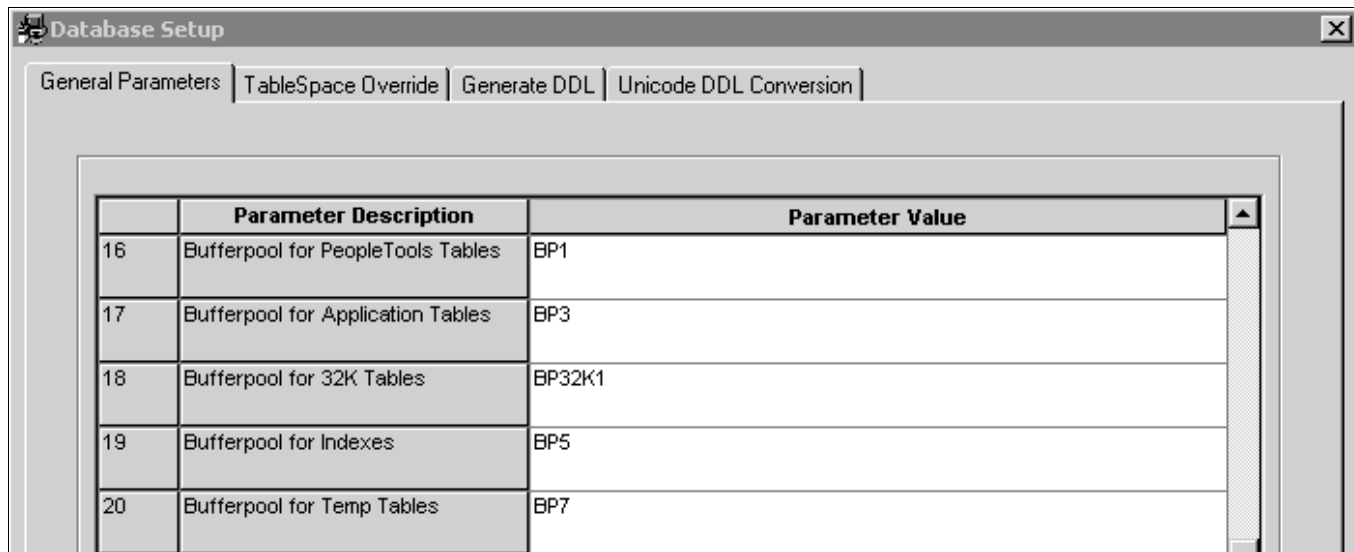
---

**Note.** PSTAAT will always choose the greater value between the value that it calculates and the value specified in the Minimum PRIQTY/SECQTY Allocation text box.

---

### Task B-2-3: Using PSTAAT to Override the Default Bufferpool Assignment

It is possible to override the default bufferpool assignments found in the XXDDL.SQL script with PSTAAT as follows:



Reviewing bufferpool assignments on General Parameters tab

- PeopleSoft PeopleTools tables and PeopleSoft application tables will be assigned to two separate bufferpools. On the example shown here, note that all PeopleSoft PeopleTools tables will be assigned to the bufferpool specified for General Parameters tab, Input parameter 16; and all PeopleSoft applications tables will be assigned to the bufferpool specified for Input parameter 17.
- Determine the specific 32 KB bufferpool (such as BP32K, BP32K1, and BP32K2) that you want to use for those objects that require a 32 KB bufferpool and enter it into input parameter 18. Certain PeopleSoft PeopleTools and PeopleSoft applications tables are assigned to BP32K through the default XXDDL.SQL and TBDDL.SQL scripts because their row length requires the larger page size. PSTAAT will substitute the value of input parameter 18 for each table originally assigned to BP32K in the default script.

- Indexes will be assigned to a specific bufferpool (input parameter 19).
- Temporary tables will be assigned to a specific bufferpool (input parameter 20).

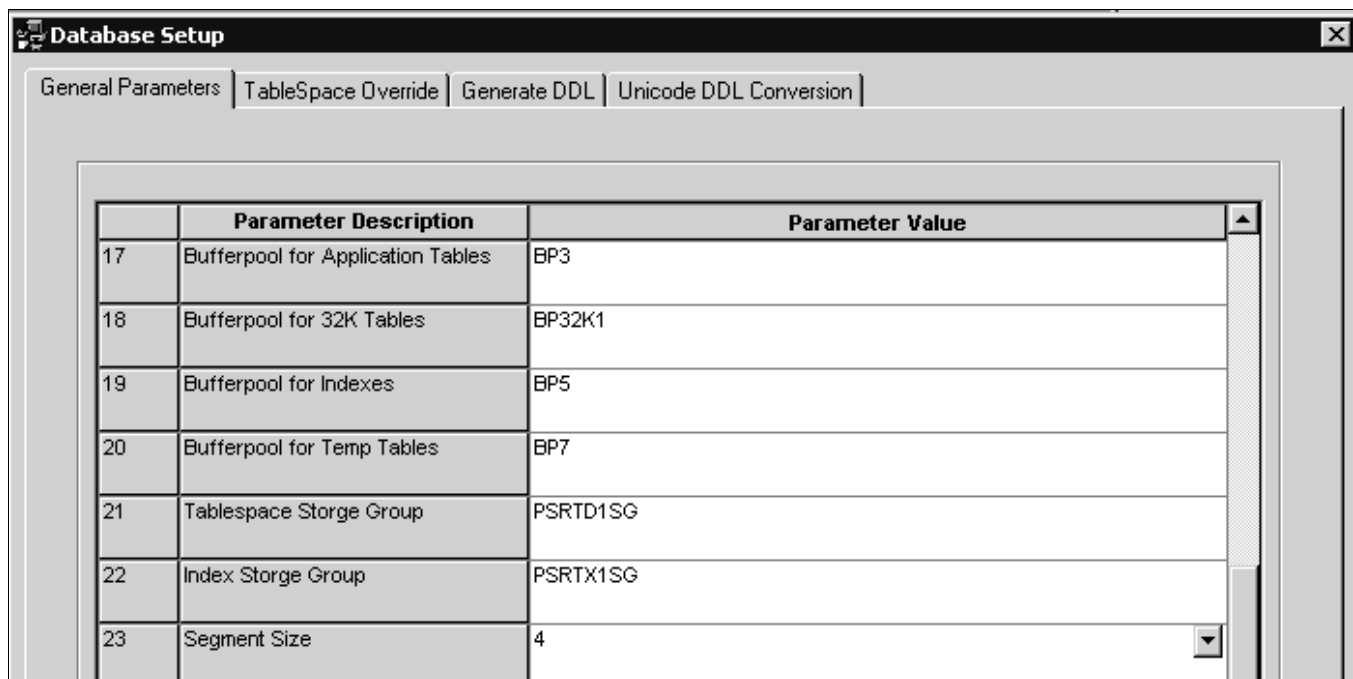
The default Unicode *XXDDL*.SQL script alternates bufferpool assignments between BP8K0, BP8K1, BP8K2, and BP8K3. When given an *XXDDL*.SQL script as input, PSTAAT simply substitutes the values of input parameters 16-20 for the default assignments in the original Unicode script. Be careful to specify legitimate 8 KB bufferpools when optimizing a *Unicode XXDDL*.SQL with PSTAAT. PSTAAT will not validate the validity of the bufferpools specified in the graphical user interface for a Unicode installation.

**Note.** You must enter legitimate, active bufferpools for input parameters 16-20, or the DDL generated by PSTAAT will fail. PSTAAT will not validate the syntax or legitimacy of the bufferpools entered for any of these input parameters.

The bufferpool override capability of PSTAAT is merely intended to provide a modest level of additional flexibility in making bufferpool assignments over the default assignments found in the *XXDDL*.SQL scripts. It is not possible for PSTAAT to determine an optimal run time configuration for production environments based on its script parsing and reformatting capabilities.

## Task B-2-4: Using PSTAAT to Override the Default Segment Size

It is possible to override the default SEGSIZE assignment for each tablespace found in the *XXDDL*.SQL script with PSTAAT as follows:



Reviewing segment size on General Parameters tab

- Select a valid SEGSIZE from the drop-down list box provided for input parameter 23 of the General Parameters tab, as shown in this example.
- PSTAAT will substitute the value selected from the list box of input parameter 23 for the SEGSIZE of *all* tablespaces.



---

**Note.** Obviously, using the same SEGSIZE value for all tablespaces leads to a less than optimal configuration for a production run-time environment. Using a particularly large SEGSIZE for a table that consumes few pages will waste excessive amounts of disk space.

---

Similar to the bufferpool override capability of PSTAAT, the SEGSIZE override is merely intended to provide a modest level of additional flexibility in making SEGSIZE assignments over the default assignments found in the *XXDDL.SQL* scripts. It is not possible for PSTAAT to provide an optimal run time configuration for a production environment based on its script parsing and reformatting capabilities.

For more details regarding the use of the SEGSIZE parameter, consult the DB2 for z/OS Administration Guide.

## Task B-2-5: Validating Input

As previously alluded, PSTAAT is not capable of validating the legitimacy of certain input parameters that will ultimately be substituted into the reformatted *nXXDDL.SQL*, *nTBDDL.SQL*, and *nIXDDL.SQL* scripts.

---

**Warning!** Caution must be exercised when entering certain input parameters because PSTAAT does not validate the syntax or legitimacy of these items. Review all DDL scripts generated by PSTAAT before executing them.

---

Invalid input for the following parameters could lead to DDL that will fail when executed on the DB2 z/OS database server:

*Generate DDL Tab:*

- **Input Parameter 1: PeopleSoft Database Name**  
PSTAAT is incapable of determining whether the logical database name that you have chosen already exists in PS.PSDBOWNER, nor can it validate that it has been properly cataloged with DB2 Connect.
- **Input Parameters 5 and 6: Tablespace and Index Storage Group**  
PSTAAT is not capable of pre-determining whether the STOGROUPs provided exist in the DB2 subsystem, nor can it validate the names for the presence of typographical errors.
- **Input Parameter 7: Database Object Owner**  
PSTAAT is incapable of determining whether the value entered as the Database Object Owner has already been used within the DB2 z/OS subsystem for a non-PeopleSoft application. Using an owner id previously used by a non-PeopleSoft application can create problems when auditing the PeopleSoft database. PSTAAT is also incapable of determining whether the proper security setup steps have been completed with respect to the Database Object Owner. Review the section Understanding Database Creation in the first chapter of this documentation for more details regarding the specific requirements of the Owner Id.  
See "Preparing for Installation," Planning Database Creation.
- **Input Parameter 10: Application Designer Project Name**  
PSTAAT is incapable of determining whether this project exists in the PeopleSoft database. This project must already exist, as PSTAAT will pass the project name directly to Application Designer to create temporary table DDL.

Any error messages that indicate a problem with the Application Designer project are directed to the log file specified in the Logging tab of the Build Settings dialog. Here is an example of the log file error output:

```
PeopleSoft Project Command Line
Build Project
Project Name: WRONG
Tools Release: 8.51
-CT Source Database Type = DB2ODBC
-CD Source Database Name = PTAAT848
```

```
-CO Source Database Operator = QEDMO
```

**Project WRONG is not valid or does not exist in the database.  
Error - failure in command line build**

See Using PSTAAT to Isolate Temporary Tables To Individual Tablespaces.

- Input Parameters 12 and 13: User Id and Password

PSTAAT will pass the user id and password entered in input parameters 12 and 13 directly to a command line initiated Data Mover or Application Designer task depending on the settings of the Table/Temporary Table radio buttons. Data Mover or Application Designer (not PSTAAT) will subsequently make a connection to DB2 z/OS through DB2 Connect when creating the default TBDDL.SQL and IXDDL.SQL scripts, or creating temporary table DDL.

PSTAAT is incapable of validating the accuracy of the user ID and password prior to passing them on to Data Mover or Application Designer. Both the Data Mover task initiated to extract default table and index DDL, and the Application Designer task initiated to create temporary tables run asynchronously to PSTAAT, and there will be no Windows message boxes sent to the workstation in the event that the user ID and password combination is invalid.

- Invalid ID and/or password passed to Data Mover:

When attempting to extract table and index DDL with an invalid ID or password, an error message is displayed temporarily as Data Mover scrolls data to its output window (see Using PSTAAT to Create TBDDL and IXDDL); and the task will end without generating DDL. In most cases, if PSTAAT runs but fails to generate the TBDDL.SQL and IXDDL.SQL, the cause will be an incorrect user ID-password combination, or a failed Data Mover connection to DB2 z/OS due to problems with the DB2 Connect configuration.

- Invalid ID and/or password passed to Application Designer:

When creating temporary table DDL, any messages issued by Application Designer due to an invalid ID and/or password will be written to the log file specified for input parameter 11, Application Designer Output Log File.

#### *General Parameters Tab:*

- Input Parameter 8: Primary Database Prefix

PSTAAT is incapable of determining whether the value supplied as the Primary Database Prefix will cause database names to be generated that already exist in the DB2 z/OS subsystem as it creates the new nXX DDL.SQL script.

- Input Parameter 9: Database Object Owner

The same restrictions apply to those for input parameter 7 of the Generate DDL tab (see above).

- Input Parameters 16-20: Bufferpool Overrides

PSTAAT cannot validate the syntax or legitimacy of the bufferpools entered for any of these input parameters. It cannot determine whether a particular bufferpool has been activated in the DB2 subsystem, or whether 32 KB or 8 KB bufferpools have been supplied when required.

See Using PSTAAT to Override the Default Bufferpool Assignment.

- Input Parameters 21-22: Tablespace and Index Storage Groups

The same restrictions apply to those for input parameters 5 and 6 of the Generate DDL tab (see above).

## Task B-3: Using PSTAAT to Reassign Temporary Tables to Additional Tablespaces

---

PSTAAT can be used to reassign temporary table instances to additional tablespaces. Doing so can improve the performance and concurrency of Application Engine and %UpdateStats processing.

Here is an overview of the process:

1. Generate the temporary table and index DDL from an Application Designer project.
2. Create the project as described in the task Building the Temporary Tables and their Indexes (steps 1-8).  
See "Creating a Database," Building Temporary Tables.
3. After the project has been created:  
Use PSTAAT to invoke Application Designer through the command line to build the project (write the table DDL script). This procedure is described below.  
OR  
Build the project manually by selecting the Build Script File option on the Build Execute Options dialog box as described in the task Building the Temporary Tables and their Indexes (steps 9-18).  
See "Creating a Database," Building Temporary Tables.

The result is identical whether you let PSTAAT call Application Designer to build the project, or build it yourself (by following steps 1-18 of the task Building the Temporary Tables and their Indexes)—the default temporary table and index DDL file.

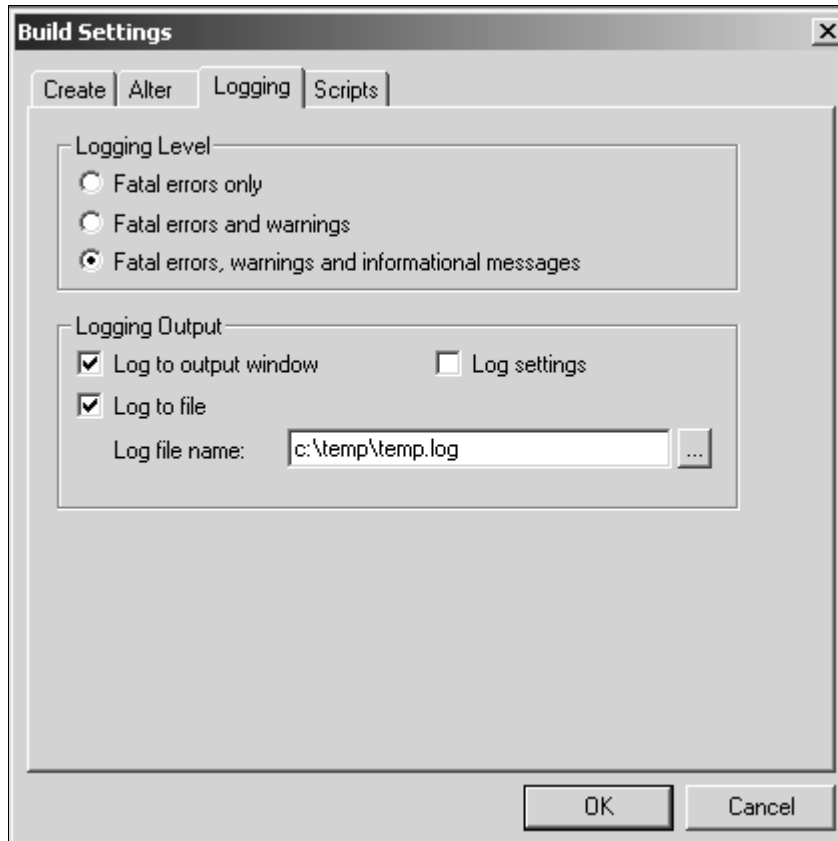
4. Use PSTAAT to parse the default temporary table DDL, create the additional databases, and remap the tablespace assignments.

Instructions for obtaining the default temporary DDL script by allowing PSTAAT to invoke Application Designer to build the project follow:

1. Start PSTAAT by double-clicking on the PSTAAT.exe found in *PS\_HOME*\bin\client\winx86.  
Select the Generate DDL tab.
2. Enter the name of the database into Parameter 1, PeopleSoft Database Name on the Generate DDL tab.  
Recall that a database connection is required to invoke Application Designer, so this database name must match the alias name cataloged with DB2 Connect.
3. Create an Application Designer project that contains the temporary table object definitions as described in steps 1-8 of the task Building the Temporary Tables and their Indexes.  
Save the project name as TEMPTBL.
4. From Application Designer, choose Build, Project.

5. In the Build Settings dialog box, enter a log file name on the Logging tab, and select Log to File if it is not already checked.

Enter the name of this log file into Parameter 11, Application Designer Output Log File, of the Generate DDL tab of PSTAAT. In this example, the log file name is C:\temp\temp.log.

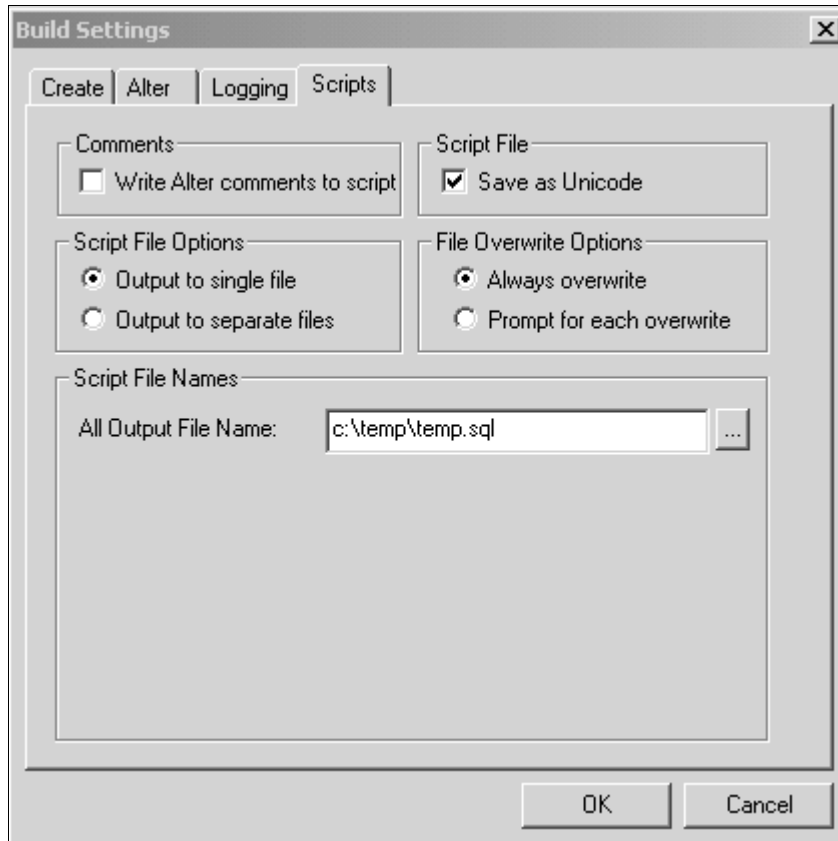


Build Settings dialog box: Logging tab

6. Select the Scripts tab of the Build Settings dialog box.

7. Select the Output to a single file radio button under Script File Options, and enter a script name for the DDL file to be created under Script File Names, which is c:\temp\temp.sql in this example. The temporary table DDL script will be written to this location.

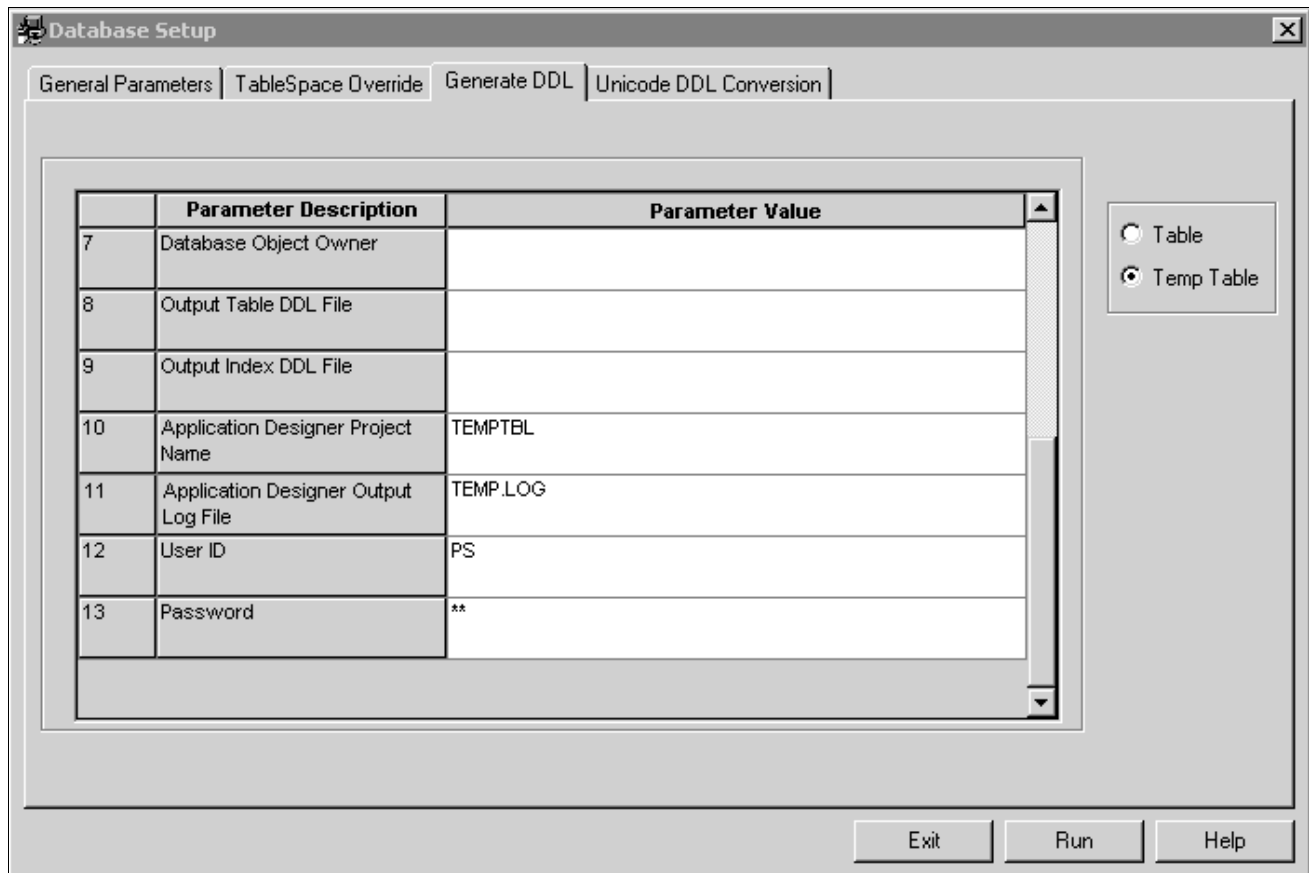
You may close Application Designer now.



Build Settings dialog box: Scripts tab

8. Enter the name of the project (TEMPTBL) into Parameter 10, Application Designer Project Name, of the Generate DDL tab of PSTAAT
9. Enter a valid PeopleSoft user ID and password combination (for example, VP1/VP1 or PS/PS) into input Parameters 12 and 13.

10. Select the Temp Table radio button on the Generate DDL tab of PSTAAT, as shown in this example:



Selecting Temp Table option on the Generate DDL tab

11. Click the Run button.

PSTAAT will invoke Application Designer via command line to build the project, and create the default temporary table DDL. If you closed Application Designer after creating the TEMPTBL project, you will briefly see the PeopleSoft PeopleTools splash screen as PSTAAT invokes Application Designer to build the TEMPTBL project and generate the default temporary table DDL script. This will be the only visual cue that Application Designer has been invoked. Note that you will not see the splash screen if you left Application Designer running after creating the TEMPTBL project.

12. Look for the temporary table DDL script in the folder specified on the Scripts tab of the Build Settings dialog box (see step 7 above).

13. Select the General Parameters Tab of PSTAAT to reassign the temporary tables to additional tablespaces and databases.

14. Copy the default temporary table DDL script just created (TEMP.SQL in the example shown) to the location specified in Parameter 1, Input Directory for DDL scripts on the General Parameters tab.

15. Enter the name of the temporary table DDL script (TEMP.SQL) for Parameter 5, Input Temp DDL File of the General Parameters tab.

16. Fill in all of the remaining General Parameters tab inputs.

Review these sections for more details on the General Parameters tab and its input parameters: Understanding the PSTAAT Graphical User Interface, Understanding the Various PSTAAT Input and Output Files, and Using PSTAAT to Customize DDL.

17. Select the TableSpace Override tab, and then click the Run button.

PSTAAT will write the following files to the Output Directory for Generated DDL Scripts:

```
tXXDDL.SQL
nTEMP.SQL
nXXDDL.SQL
nTBDDL.SQL
nIXDDL.SQL
Ptllog.txt
```

See the Output Files section of Understanding the Various PSTAAT Input and Output Files.

nTEMP.SQL is the "new" temporary table DDL script. tXXDDL.SQL contains database and tablespace DDL for the temporary tables found in nTEMP.SQL.

Tables will be re-mapped as follows:

- The DBD (database) mapping is based on the input parameters supplied to the General Parameters tab.
- Tablespace names within the tXXDDL.SQL script are hard-coded with the following naming convention, where *nnnn* is an ascending sequence number.

```
TMPnnnn
```

- PRI and SEC quantities are hard-coded (720 and 1400 respectively). You are free to customize them for your environment prior to executing the DDL.
- Bufferpool assignment, CLOSE rule, and SEGSIZE are determined by the input specified on the General Parameters tab.

Sample tablespace DDL:

```
CREATE TABLESPACE    TMP0001 IN Q848107G
      USING STOGROUP PSRTD1SG PRIQTY 720 SECQTY 1400
      FREEPAGE    10 PCTFREE 0
      SEGSIZE    4 BUFFERPOOL BP1 LOCKSIZE ANY CLOSE YES ;
```

## Task B-4: Using PSTAAT to Isolate Other Tables to Individual Tablespaces

---

PSTAAT is also capable of isolating certain non-temporary PeopleSoft PeopleTools and Application tables, for which the %UpdateStats metaSQL function is called, to individual tablespaces. Beginning with PeopleSoft Enterprise 9.0 Applications, PSTAAT will replace the previously delivered "enhanced" installation scripts.

A list of such tables is contained in the XXENHANCED.txt text file, where *XX* is the standard PeopleSoft application two-character prefix (the prefixes are listed in the section Transferring DDL Scripts to z/OS). The *XX* ENHANCED.txt file is located in the *PS\_HOME*\scripts directory of the installation files.

See "Creating a Database," Transferring DDL Scripts to z/OS.

---

**Note.** There may not be an *XXENHANCED.txt* file for all PeopleSoft applications (such as PeopleSoft Portal Solutions).

---

To remap these tables to individual tablespaces, use the PSTAAT General Parameters tab as follows:

1. Enter the name of the *XXENHANCED.txt* file as the input for parameter 6, Input Individual Table File, on the General Parameters tab
2. Copy the *XXENHANCED.txt* file from *PS\_HOME*\scripts to the location specified in Parameter 1, Input Directory for DDL scripts on the General Parameters tab.

3. Enter the remaining input parameters required by the General Parameters tab.  
See Understanding the PSTAAT Graphical User Interface.  
See Understanding the Various PSTAAT Input and Output Files.  
See Using PSTAAT to Customize DDL.
4. Click the Tablespace Override tab and click the Run button.  
PSTAAT will write the following files to the Output Directory for Generated DDL:  
Scripts: nTEMP.SQL, nXXDDL.SQL, nTBDDL.SQL, nIXDDL.SQL, Ptlog.txt  
See the output files section of Understanding the Various PSTAAT Input and Output Files for an explanation of each file.  
These tables will be remapped in the nXXDDL.SQL, nTBDDL.SQL and nIXDDL.SQL files based on the input parameters supplied to the General Parameters tab. PSTAAT will derive tablespace names by using the first three to five characters of the original tablespace name, followed by an ascending sequence number.

## **Task B-5: Using PSTAAT to Convert EBCDIC DDL to Unicode DDL**

This section discusses:

- Understanding the EBCDIC DDL to Unicode DDL Conversion
- Creating Database, Tablespace, and Table Shell DDL for an EBCDIC to Unicode Database Conversion

### **Understanding the EBCDIC DDL to Unicode DDL Conversion**

This section can be ignored entirely if you do not intend to store data using the Unicode encoding scheme in your PeopleSoft database. Likewise, if you intend to install and import a Unicode database from scratch, ignore this section and instead follow the standard instructions for installing a Unicode database previously documented in this PeopleTools installation documentation for DB2 for z/OS.

However, if you have an EBCDIC database that *already exists* and you wish to convert that database to the Unicode encoding scheme, continue with this section.

Converting an existing EBCDIC PeopleSoft database to a Unicode database requires a multi-phase process that is documented in the white paper titled "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS." See this white paper for complete details on completing an EBCDIC to Unicode encoding scheme conversion. One such step of this process with which PSTAAT is able to assist, is the "conversion" of the EBCDIC data types to Unicode data types within PeopleSoft PeopleTools and PeopleSoft application DDL. Specifically, DDL produced from the Unicode DDL Conversion tab of PSTAAT offers an additional option in creating the DDL scripts required to create the Unicode shell as described in Phase One, Creating the Unicode Database Shell, of the EBCDIC to Unicode conversion white paper. See the following sections of the "Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS" white paper for instructions on running the scripts that can be created either by the method described here with PSTAAT, or the method described in the conversion white paper:

- Phase One – Unicode Database Shell
- Creating Create Table and Create Index DDL for the Target Unicode Database
- Creating A DDL Script to Build the Target Unicode Physical Databases
- Creating A DDL Script to Build the Target Unicode Tablespaces
- Creating The Unicode Logical Database Shell



See [Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS](#), My Oracle Support, (search for the article title).

## Task B-5-1: Creating Database, Tablespace, and Table Shell DDL for an EBCDIC to Unicode Database Conversion

When supplied with EBCDIC Database/Tablespace (*XXDDL.SQL*) and table DDL scripts (*TBDDL.SQL*) as input, PSTAAT is capable of parsing and recreating them with the necessary data types for creating the Unicode shell database. For the table DDL script, PSTAAT converts all character and long character fields to vargraphic and long vargraphic respectively; while date, integer, small integer, decimal, timestamp, and long varchar for bit data types remain unchanged. All 'Create Database' DDL within the Database/Tablespace script will be appended with 'CCSID Unicode'.

---

**Note.** The following instructions are divided into two procedures.

---

To use PSTAAT to convert EBCDIC DDL to Unicode DDL, begin by inserting *all* of the record definitions contained in the EBCDIC database into an Application Designer project, and then create the EBCDIC DDL for all tables and indexes in the database:

1. Open Application Designer.
2. Choose File, New.  
In the New dialog box, select Project, and then click OK.
3. Choose Insert, Definitions into Project.
4. Set Definition Type to Records, and Type to All Records.

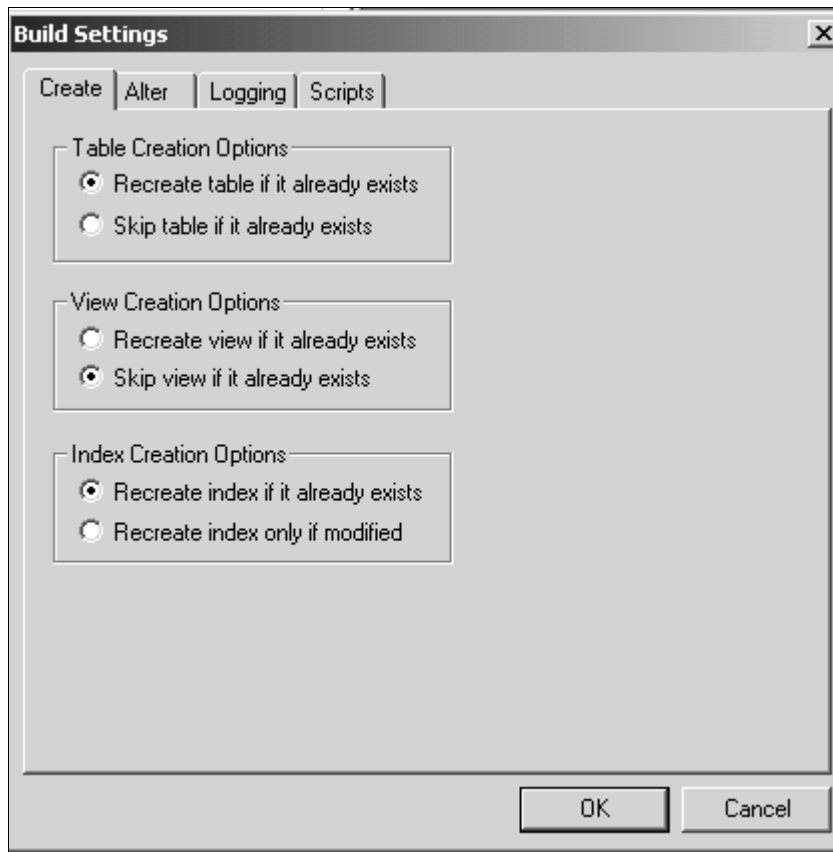
---

**Note.** Selecting All Records will insert views, sub-records, dynamic views and derived records in addition to table and temporary table definition types into the project. This is necessary to capture both the table and temporary table definition types in a single DDL file for PSTAAT. These are the two table types that will require the data type conversion from char to vargraphic and so on. Although these other definition types exist in the project, Application Designer will write table and index DDL for the table and temporary table definition types *only* based on the Build options that will be selected in a subsequent step.

---

5. Press ENTER, or click Insert and then click the Select All button.  
This selects all of the records.
6. Click Insert to insert all records into the new project.
7. Click Close to close the Insert into Project dialog box.
8. Before building the project, save it.  
Choose File, Save Project As and enter a project name.
9. Choose Build, Project.  
The Build dialog box appears.
10. In the Build Options group, select the Create Tables check box.  
The Create Index check box is checked by default.
11. Select Build script file to direct the DDL to a file.
12. Click the Settings button.  
The Build Settings dialog box appears.

13. On the Create tab, shown in this example, select the following options:



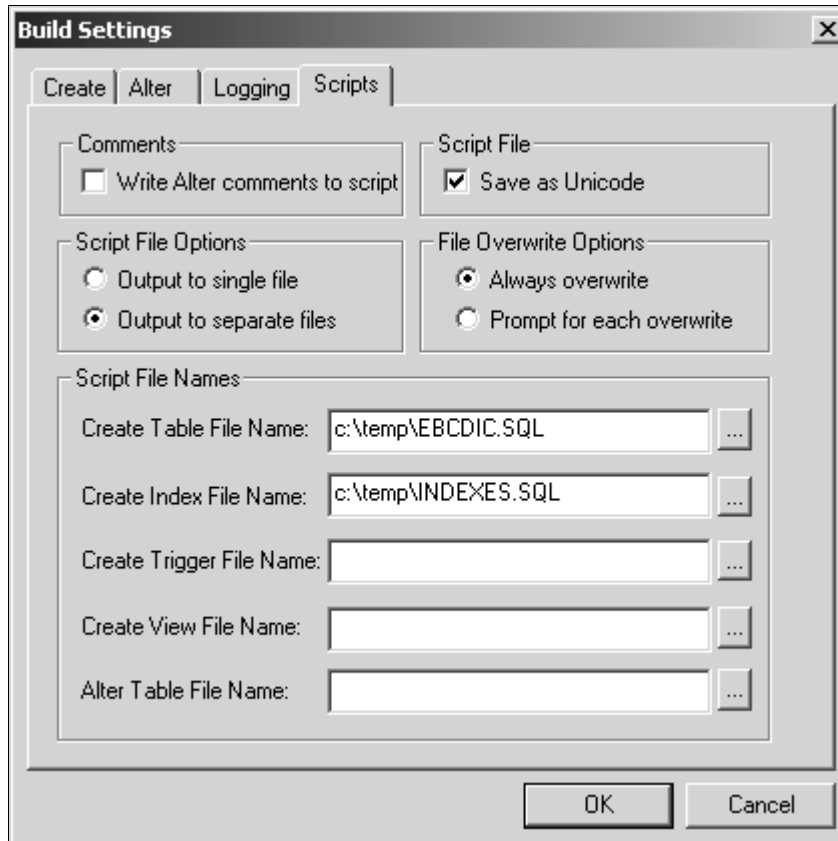
Build Settings dialog box: Create tab

- Recreate table if it already exists under Table Creation Options
- Skip view if it already exists under View Creation Options
- Recreate index if it already exists under Index Creation Options

14. Select the Scripts tab, and select Output to Separate Files under Script File Options.

15. Under Script File Names, specify the path and filename for the output files that will contain the table and index DDL.

In this example, the Table file name is c:\temp\EBCDIC.SQL, and the Index file name is c:\temp\INDEXES.SQL.



Build Settings dialog box: Scripts tab

16. Click OK to accept the build settings.

17. Click Build to create the table and index DDL script.

Disregard the subsequent warning message about "potentially destructive settings." The output is directed to a script only. Database objects will not be dropped.

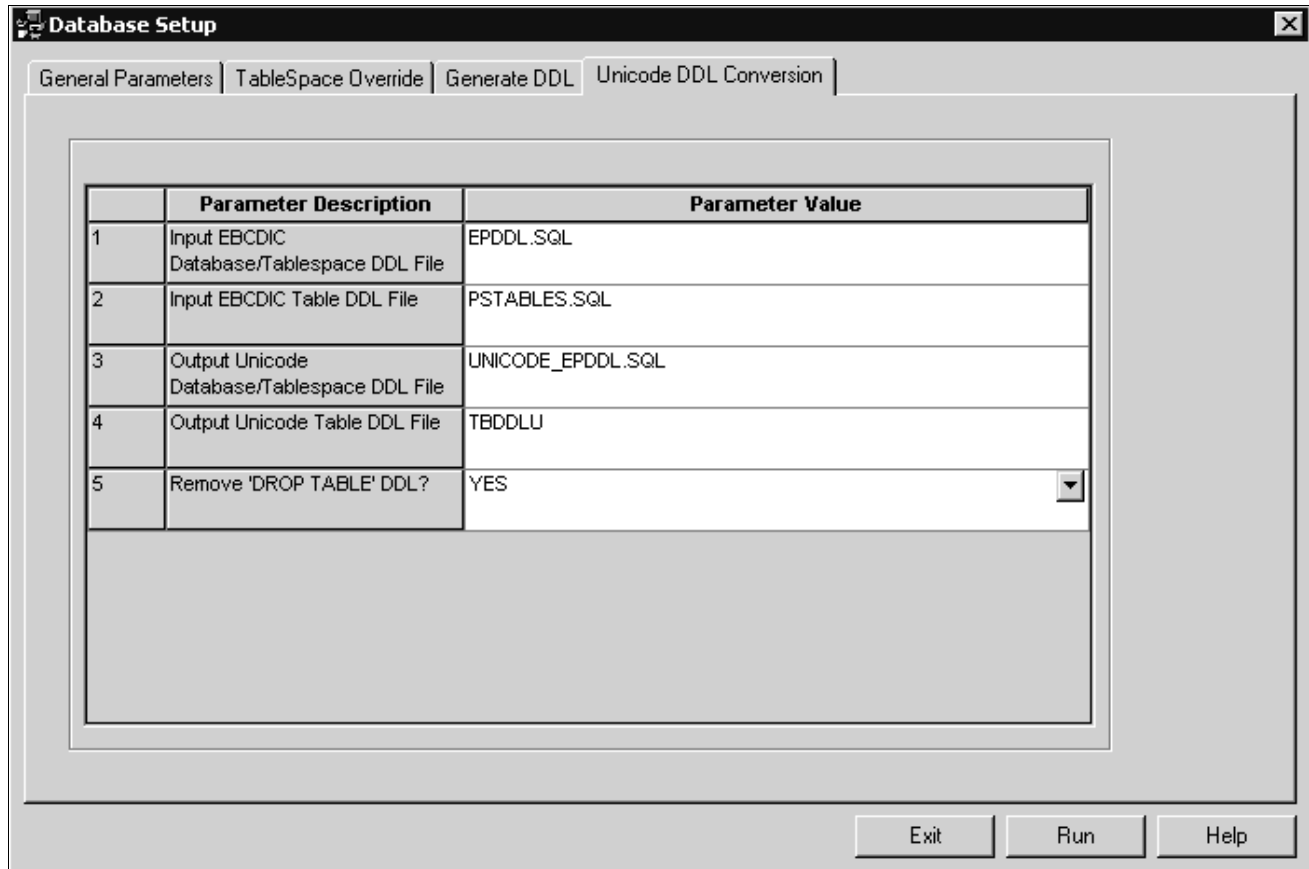
18. After the script generation process has finished, click Close in the Build Progress dialog box to return to Application Designer.

After completing the previous steps:

1. Start PSTAAT by double clicking on the PSTAAT.exe found in *PS\_HOME*\bin\client\winx86.  
Select the Unicode DDL Conversion tab.
2. Enter the EBCDIC Database/Tablespace DDL script (XXDDL.SQL) name into input parameter 1, Input EBCDIC Database/Tablespace DDL File, of the Unicode DDL Conversion tab.
3. Enter the name of the EBCDIC table DDL script that was just created by Application Designer in input parameter 2, Input EBCDIC Table DDL File, of the Unicode DDL Conversion tab (EBCDIC.SQL in the example shown above).

- Enter Output file names for input parameters three (3) and four (4) of the Unicode DDL Conversion tab.

These will become the names of the new DDL scripts. In this example, the value for input parameter 3 (Output Unicode Database/Tablespace DDL File), is UNICODE\_EPDDL.SQL. The value for input parameter 4 (Output Unicode Table DDL File), is TBDDL.U.



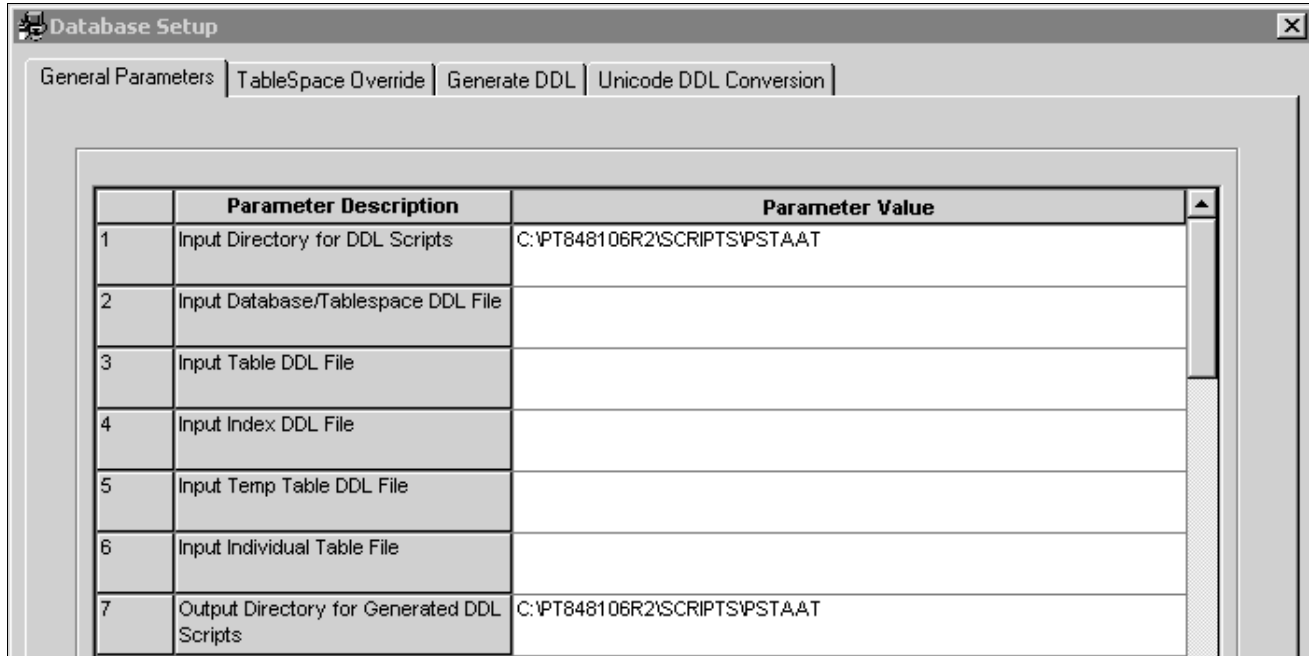
Specifying output files on Unicode DDL conversion tab

- Select YES from the drop-down list box in input parameter five (5), Remove 'Drop Table' DDL.

The Recreate table if it already exists option was set earlier in the Build Settings dialog box when the project was built so that Application Designer would create DDL for all record definitions for which a table exists in the database. Application Designer thus generates 'Drop Table' DDL prior to each 'Create table' DDL statement in the script. Choosing YES from this list box instructs PSTAAT to put comment marks prior to each Drop Table statement in the new Unicode table DDL script. This will prevent the EBCDIC tables from being dropped when the new Unicode DDL scripts are executed. Again, refer to the EBCDIC to Unicode conversion white paper before executing these scripts.

See [Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS](#), My Oracle Support, (search for the article title).

6. Select the General Parameters tab and enter the directory location of the EBCDIC Database/Tablespace script and the EBCDIC table DDL script (to be converted) into parameter 1 (Input Directory for DDL scripts). Enter the Output Directory for the new Unicode shell database scripts into parameter 7 (Output Directory for Generated DDL Scripts). In this example, the Output Directory is C:\PT848106R2\SCRIPTS\PSTAAT.



Specifying input and output directories on General Parameters tab

7. Click the Run button on the Unicode Conversion Tab.  
The new scripts will be written to the path specified in the Output Directory for Generated DDL Scripts on the General Parameters tab.

**Note.** All tablespaces in the converted tablespace DDL (nXXDDL.SQL) will be allocated to BP8K1 by default. The General Parameters tab can be used to further optimize the DDL and assign additional 8 KB bufferpools.

8. Continue with the rest of the process documented in the EBCDIC to Unicode conversion white paper. See *Converting a PeopleSoft Enterprise Database from EBCDIC to Unicode Encoding Scheme on DB2 for z/OS*, My Oracle Support, (search for the article title).

## Task B-6: Using PSTAAT to Install PeopleSoft Databases

Previous sections of this appendix describe the individual tabs of the PSTAAT graphical user interface and their various functions to either generate default DDL, or optimize default DDL. This section describes several important points to consider when using PSTAAT.

We recommend that you use PSTAAT to create environments that are more production-capable after you first become thoroughly familiar with the default installation process.

PSTAAT operates independently of the PeopleSoft PeopleTools metadata, has no direct knowledge of the data model of the individual PeopleSoft applications, and no mechanism itself to communicate directly with a DB2 for z/OS database server. Its primary capability is that of parsing DDL input files, and subsequently rewriting modified versions of those files for output. Because Application Designer is required to create temporary table DDL from a project containing record definitions, you must obviously complete enough of the installation steps to successfully connect Application Designer to the database. Additionally, because most customer installations will include multiple database environments, including one Demo copy of each PeopleSoft application, you may find it most convenient to use PSTAAT to create more production-worthy environments than the default installation process is capable of producing. PSTAAT can be used effectively to create such an environment as follows:

See "Creating a Database," Building Temporary Tables.

1. First, create and import a complete Demo environment without optimizing the DDL.

Obtain the default TBDDL.SQL and IXDDL.SQL scripts from the installation files, or use the Generate DDL tab of PSTAAT to create them.

2. Obtain a DDL script for temporary tables by building (script only) an Application Designer project (DDL script only) from the Demo environment created in step one (above) as directed in the task Building the Temporary Tables and their Indexes in this documentation.

See "Creating a Database," Building Temporary Tables.

3. Collect the following files for input to PSTAAT:

```
xxENHANCED.txt file for your application
xxDDL
TBDDL.SQL
IXDDL.SQL
Temporary table DDL script
```

See Using PSTAAT To Reassign Temporary Tables To Additional Tablespaces.

See Using PSTAAT to Isolate Other Tables to Individual Tablespaces.

4. Fill in *all* 24 text boxes of the General Parameters tab, and use the Tablespace Override tab to optimize the DDL as described in the previous sections of this appendix.
5. FTP the DDL generated from PSTAAT to the mainframe (HLQ.PPVVV.DDLIB) and make any other desired modifications.
6. Execute the DDL using DSNTEP2, or some other batch SQL processor.
7. Save a copy of the DDL scripts generated from PSTAAT in *PS\_HOME*\scripts on the file server.
8. Continue with the rest of the process as documented in this installation guide.

*Other important considerations when using PSTAAT:*

- Be sure to run the SETSPACE and SETTMPIN SQRs as directed after successfully executing all DDL as documented in this installation guide.
- PeopleSoft upgrade processes may attempt to create new tables in the default tablespaces. These scripts will fail if the default tablespace does not exist. To prevent failures during an upgrade, execute the default XX DDL.SQL script so the vanilla tablespaces exist in each of your environments. You may reduce the primary space allocations on these tablespaces to avoid excessive waste of disk space.
- As indicated previously, always store a copy of all PSTAAT modified DDL in the *PS\_HOME*\scripts folder of the PeopleSoft PeopleTools file server.

## Appendix C

# 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.

