BEA WebLogic Process Integrator

Installation and Configuration Guide

BEA WebLogic Process Integrator Installation and Configuration Guide

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About This Document

This document explains how to install BEA WebLogic Process Integrator™ and how to configure a database server and BEA WebLogic Server™ to run the BEA WebLogic Process Integrator application. It is organized as follows:

- Chapter 1, "Getting Started," provides an overview of package contents and hardware and software requirements for BEA WebLogic Process Integrator.

- Chapter 2, "Installing BEA WebLogic Process Integrator," provides instructions for installing BEA WebLogic Process Integrator on a Windows or UNIX system using the graphical installation program.

- Chapter 3, "BEA WebLogic Process Integrator Console-Mode Installation," provides instructions for installing BEA WebLogic Process Integrator on a UNIX system using a text-based installation procedure.

- Chapter 4, "Starting, Stopping, and Customizing BEA WebLogic Process Integrator," provides instructions for starting, stopping, and configuring BEA WebLogic Process Integrator Server, Studio, and Worklist components.

- Appendix A, "BEA WebLogic Process Integrator Sample Configuration Files," provides sample configuration files for BEA WebLogic Process Integrator. It also describes how these files are modified automatically during installation.

e-docs Web Site

BEA product documentation is available on the BEA corporate Web site. From the BEA Home page, click on Product Documentation or go directly to the "e-docs" Product Documentation page at `http://e-docs.bea.com`.

How to Print the Document

You can print a copy of this document from a Web browser, one file at a time, by using the File→Print option on your Web browser.

A PDF version of this document is available on the BEA WebLogic Process Integrator documentation Home page on the e-docs Web site (and also on the documentation CD). You can open the PDF in Adobe Acrobat Reader and print the entire document (or a portion of it) in book format. To access the PDFs, open the BEA WebLogic Process Integrator documentation Home page, click the PDF files button, and select the document you want to print.

If you do not have the Adobe Acrobat Reader, you can get it for free from the Adobe Web site at `http://www.adobe.com/`.

Related Information

The BEA WebLogic Process Integrator document set includes the following:

- *BEA WebLogic Process Integrator Release Notes*

- *BEA WebLogic Process Integrator Studio User Guide*

- *BEA WebLogic Process Integrator Worklist User Guide*

- *BEA WebLogic Process Integrator Tutorial*

- *BEA WebLogic Process Integrator Javadoc*

Contact Us!

Your feedback on the BEA WebLogic Process Integrator documentation is important to us. Send us e-mail at **docsupport@bea.com** if you have questions or comments. Your comments will be reviewed directly by the BEA professionals who create and update the BEA WebLogic Process Integrator documentation.

In your e-mail message, please indicate which release of the BEA WebLogic Process Integrator documentation you are using.

If you have any questions about this release of BEA WebLogic Process Integrator, or if you have problems installing and running BEA WebLogic Process Integrator, contact BEA Customer Support through BEA WebSupport at **www.bea.com**. You can also contact Customer Support by using the contact information provided on the Customer Support Card, which is included in the product package.

When contacting Customer Support, be prepared to provide the following information:

- Your name, e-mail address, phone number, and fax number

- Your company name and company address

- Your machine type and authorization codes

- The name and release of the product you are using

- A description of the problem and the content of pertinent error messages

Documentation Conventions

The following documentation conventions are used throughout this document.

Convention	Item
Ctrl+Tab	Indicates that you must press two or more keys simultaneously.
italics	Indicates emphasis or book titles.

`monospace`
`text`
	Indicates code samples, commands and their options, data structures and their members, data types, directories, and filenames and their extensions. Monospace text also indicates text that you must enter from the keyboard.
	
	Examples:
	
	`#include <iostream.h> void main ( ) the pointer psz`
	`chmod u+w *`
	`\tux\data\ap`
	`.doc`
	`tux.doc`
	`BITMAP`
	`float`

`monospace`
`italic`
`text`
	Identifies variables in code.
	
	Example:
	
	`String expr`

UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. *Example*s: LPT1 SIGNON OR
{ }	Indicates a set of choices in a syntax line. The braces themselves should never be typed.

Convention	Item

[ ]	Indicates optional items in a syntax line. The brackets themselves should never be typed.
	
	Example:
	
	`buildobjclient [-v] [-o name ] [-f file-list]...`
	`[-l file-list]...`

|	Separates mutually exclusive choices in a syntax line. The symbol itself should never be typed.

...	Indicates one of the following in a command line:
	
	■ That an argument can be repeated several times in a command line.
	
	■ That the statement omits additional optional arguments.
	
	■ That you can enter additional parameters, values, or other information.
	
	The ellipsis itself should never be typed.
	
	Example:
	
	`buildobjclient [-v] [-o name ] [-f file-list]...`
	`[-l file-list]...`

. . .	Indicates the omission of items from a code example or from a syntax line. The vertical ellipsis itself should never be typed.

1 Getting Started

This section describes what you need to know before you install and run BEA WebLogic Process Integrator. It includes the following topics:

- Introduction

- Checking Your Package

- Downloading the Software

- WebLogic Process Integrator Components

- Installation Prerequisites

Introduction

This document provides the information you need to successfully install and configure the WebLogic Process Integrator.

In most cases the WebLogic Process Integrator installation program is used to install the software. The installation program is a graphics-based program available for both Windows and UNIX systems. The WebLogic Process Integrator installation program guides you through the process of installing one of the following:

- WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

- WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1
  Note: If you intend to upgrade to WebLogic Server 6.0 in the near future, we recommended that you do so before installing WebLogic Process Integrator.

The installation program detects whether WebLogic Server 6.0 is installed, unpacks the correct distribution, performs basic configuration, and, on a Windows system, sets up shortcuts for running the WebLogic Process Integrator Server, Studio, and Worklist applications. For details about the installation program, see Chapter 2, "Installing BEA WebLogic Process Integrator."

Note: The WebLogic Process Integrator installation program requires a graphics (windowing) terminal or workstation.

On a UNIX system, you have the option of using console-mode installation. This text-only method can be used to install the WebLogic Process Integrator on a system that does not include a graphics terminal or workstation. For details about console-mode installation, see Chapter 3, "BEA WebLogic Process Integrator Console-Mode Installation."

Checking Your Package

If you purchased WebLogic Process Integrator from your local sales representative, you will find the following items in the WebLogic Process Integrator product package:

■ Software CD

The software CD contains the following BEA WebLogic Process Integrator components:

● BEA WebLogic Process Integrator Server

● BEA WebLogic Process Integrator Studio

● BEA WebLogic Process Integrator Worklist

- Documentation CD

  The documentation CD contains the following documents:

  - *BEA WebLogic Process Integrator Installation and Configuration Guide* (this document)

  - *BEA WebLogic Process Integrator Tutorial*

  - *BEA WebLogic Process Integrator Studio User Guide*

  - *BEA WebLogic Process Integrator Worklist User Guide*

  - *BEA WebLogic Process Integrator Javadoc*

- Printed Documentation

  - *BEA WebLogic Process Integrator Installation and Configuration Guide* (this document)

  - *BEA WebLogic Process Integrator Release Notes*

Downloading the Software

You can download the BEA WebLogic Server and WebLogic Process Integrator for a 30-day evaluation from the BEA Web site at:
`http://commerce.bea.com/downloads/weblogic_server.jsp`.

Information about purchasing licenses for BEA products can be found at
`http://www.beasys.com/buy`.

WebLogic Process Integrator Components

BEA WebLogic Process Integrator is made up of the following components:

- BEA WebLogic Process Integrator Server

- BEA WebLogic Process Integrator Studio

- BEA WebLogic Process Integrator Worklist

- Apache Xerces 1.2.0 and Apache Xalan 1.1 (Installed with WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1 only)

Note: The WebLogic Process Integrator Server must be installed on a system hosting WebLogic Server. The other WebLogic Process Integrator components, Studio and Worklist, can be installed on the same system or on another system that can connect to the WebLogic Process Integrator Server over the network.

Installation Prerequisites

Before you install the components included on the BEA WebLogic Process Integrator software CD, make sure your system meets the requirements. This section provides lists of the hardware and software requirements that are both specific to individual platforms and applicable to all platforms.

Platform-Specific Requirements

The following table lists the required operating system and processor requirements. Up-to-date information about platform support for BEA WebLogic Process Integrator is available at the following Web site:

```
http://www.bea.com/products/weblogic/integrator/datasheet.html
```

Table 1-1 Platform-Specific Requirements

Platform	Processor	Operating System	With
Windows	Intel Pentium II or better	Windows NT 4.0	Service Pack 5 or later
		Windows 2000 Professional or Server	
UNIX	Ultrasparc	Solaris 2.7 (from Sun Microsystems)	System patches recommended by Sun.
	PA-RISC, 100 MHz or higher	HP-UX (from HP)	
	RS/6000 PowerPC-604, 200 MHz or higher	AIX 4.3.3 (from IBM)	Performance Pack

General Requirements

The following items are required for all platforms, except as noted:

- Minimum of 256 MB of RAM
- 100 MB of free disk space
- Network connection
- Access to a CD reader (Required only if you obtain BEA WebLogic Process Integrator from the product software CD rather than from the BEA Web site.)
- Web browser
  - Microsoft Internet Explorer 5.x or above
  - Netscape Navigator 4.7 or above

- BEA WebLogic Process Integrator installation software and a valid BEA WebLogic Process Integrator license. (The installation software is available on CD or can be downloaded from the BEA Web site.)

- BEA WebLogic Server

  - BEA WebLogic Server 6.0 must be installed before you can install WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0.

    Users should have a solid understanding of WebLogic Server 6.0 configuration and the WebLogic Server 6.0 Administration Console. For detailed information, see `http://edocs.bea.com/wls/docs60`.

  - BEA WebLogic Server 5.1 must be installed before you can install WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

    Users should have a solid understanding of WebLogic Server 5.1 configuration. For detailed information, see `http://www.weblogic.com/docs51/resources.html`.

- Java 2 SDK

  - WebLogic Server 6.0 requires Java 2 SDK, Standard Edition, v1.3

    The WebLogic Server 6.0 distribution includes the required JDK.

  - WebLogic Server 5.1 requires Java 2 SDK, Standard Edition, v1.2.2 or v1.3

- One of the following supported databases:

  - Cloudscape 3.5.x

  - Sybase System 11

  - Microsoft SQL Server 7.0

  - Oracle

    WebLogic Server 6.0 is certified for use with Oracle 8.1.6.

    WebLogic Server 5.1 is certified for use with Oracle 8.1.5.

  BEA WebLogic Process Integrator must have access to a database server that is installed on the local network. You must also have a database server account with sufficient privileges to create a database with tables.

- EJB 2.0 Upgrade for WebLogic Server 6.0—This is available at the following BEA WebLogic Server download site:

  `http://commerce.bea.com/downloads/weblogic_server.jsp`.

  Copy the `EJB20.jar` file into the *WebLogic_Server_Home*/lib directory.

- JDBC driver for your database server:

  - *Cloudscape*
    The Cloudscape driver is bundled with your BEA WebLogic Server distribution; the `weblogic.jar` file contains the classes files.

  - *Sybase*
    The jConnect Type-4 driver from Sybase is bundled with your BEA WebLogic Server distribution; the `weblogic.jar` file contains the classes files.

  - *Microsoft SQL Server*
    BEA's WebLogic jDriver for SQL Server, a Type-4 driver that provides connectivity to the Microsoft SQL Server. You can download this driver from the BEA Web site. It is available in two versions: one for SQL Server version 6.5 and another for version 7.

  - *Oracle*
    The Oracle thin driver, the Type 4 driver available from Oracle.

    The Oracle JDBC thin driver is bundled with the WebLogic Server 6.0 distribution; the `weblogic.jar` file contains the classes files. The driver supports RDBMS 8.1.7, 8.1.6, 8.1.5, and earlier versions.

    If you have not yet upgraded to WebLogic Server 6.0, you can obtain the required Oracle8*i*8.1.7 JDBC thin driver files—`classes12.zip` and `nls_charset12.zip`—from the Oracle Technology Network Web site:

    `http://technet.oracle.com/software`.

    Copy these files to the *WebLogic_Server_Home*/lib directory. (**Note:** If you copy the files to another location, you must reset the JDBC_DRIVER to the appropriate classpath enty. For additional information, see Appendix A, "BEA WebLogic Process Integrator Sample Configuration Files.")

For additional information about the Oracle and Sybase JDBC drivers, see "Using Third-Party Drivers with WebLogic Server" at `http://e-docs.bea.com/wls/docs60/jdbc/thirdparty.html`.

Information about the WebLogic jDrivers for WebLogic Server 6.0 can be found at `http://e-docs.bea.com/wls/docs60/jdrivers.html`.

Information about the WebLogic jDrivers for WebLogic Server 5.1 can be found at `http://www.weblogic.com/docs51/classdocs/jdbcdrivers.html`.

2 Installing BEA WebLogic Process Integrator

This section provides the information you need to run the WebLogic Process Integrator installation program on a Windows or UNIX system. It includes the following topics:

- About the WebLogic Process Integrator Installation Program

- Step 1. Starting the Installation Program

- Step 2. Reviewing the License Agreement

- Step 3. Selecting Components

- Step 4. Selecting the Version of WebLogic Process Integrator

- Step 5. Specifying the BEA Home and Installation Location

- Step 6. Configuring the JDBC Connection Pool

- Step 7. Completing the Installation

- Step 8. Installing Your Software License

- Step 9. Creating the WebLogic Process Integrator Tables

- Step 10. Verifying the WebLogic Process Integrator Installation

- Uninstalling BEA WebLogic Process Integrator

- Troubleshooting the Installation

About the WebLogic Process Integrator Installation Program

The WebLogic Process Integrator installation program guides you through the process of installing either WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1 or WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0.

Note: If you intend to upgrade to WebLogic Server 6.0 in the near future, we recommend that you do so before installing WebLogic Process Integrator.

The installation detects whether WebLogic Server 6.0 is installed and prompts you to specify an installation location and other information required to perform basic WebLogic Process Integrator configuration. It then unpacks and installs the appropriate version of the software. The installation program requires a graphics (windowing) terminal or workstation. To install WebLogic Process Integrator on a UNIX system that does not support a graphics terminal or workstation, see Chapter 3, "BEA WebLogic Process Integrator Console-Mode Installation."

After you verify that the "Installation Prerequisites" on page 1-4 have been met, complete the following steps, which make up the installation procedure:

Step 1. Starting the Installation Program

Step 2. Reviewing the License Agreement

Step 3. Selecting Components

Step 4. Selecting the Version of WebLogic Process Integrator

Step 5. Specifying the BEA Home and Installation Location

Step 6. Configuring the JDBC Connection Pool

Step 7. Completing the Installation

Step 8. Installing Your Software License

Step 9. Creating the WebLogic Process Integrator Tables

Step 10. Verifying the WebLogic Process Integrator Installation

Detailed instructions for each step are provided in the following sections.

Step 1. Starting the Installation Program

You can install WebLogic Process Integrator from the CD-ROM included in the product package, or you can download the software from the BEA Web site as described in "Downloading the Software" on page 1-3.

The following section provides instructions for Windows platforms. If you are installing WebLogic Process Integrator on a UNIX system, skip the following section and go to "Starting the Installation Program on a UNIX System" on page 2-4.

Starting the Installation Program on a Windows System

To start the BEA WebLogic Process Integrator installation program on a Windows system:

1. Do one of the following:

   - If you are installing from CD, insert the BEA WebLogic Process Integrator CD in the CD tray.

   - If you downloaded the `wlpi_121_nt.exe` file from the BEA Web site, go to the next step.

2. Choose Start→Programs→Windows NT (or 2000) Explorer, then do one of the following:

   - If you are installing from CD, click on the CD drive, navigate to the NT folder, then double-click `wlpi_121_nt.exe` to run the installation program.

   - If you downloaded `wlpi_121_nt.exe` from the BEA web site, navigate to the folder in which you saved the file, then double-click `wlpi_121_nt.exe` to run the installation program.

   The BEA WebLogic Process Integrator splash screen is displayed briefly followed by the Introduction dialog box.

3. Click Next.

   The License Agreement dialog box is displayed.

4. Go to "Step 2. Reviewing the License Agreement" on page 2-5.

Starting the Installation Program on a UNIX System

To start the BEA WebLogic Process Integrator installation program on a UNIX system:

1. Do one of the following:

   - If you are installing from CD, insert the BEA WebLogic Process Integrator CD in the CD tray.

   Note: If the daemon `/usr/sbin/vold` is running, the CD should be mounted in the `/cdrom` directory. If `vold` is not running, see the instructions for mounting a CD in your UNIX administration documentation.

   - If you downloaded the `wlpi_121_unix.bin` file from the BEA Web site, go to the next step.

2. Do one of the following:

   - If you are installing from CD, go to the CD mount point and enter the following to go to the `unix` directory on the CD.

     `cd unix`

   - If you downloaded the `wlpi_121_unix.bin` file from the BEA Web site, go to the directory to which you saved the file.

3. Start the installation by entering `wlpi_121_unix.bin` at the prompt:

   The BEA WebLogic Process Integrator Splash screen is displayed briefly followed by the Introduction dialog box.

4. Click Next.

   The License Agreement dialog box is displayed.

5. Go to "Step 2. Reviewing the License Agreement."

Step 2. Reviewing the License Agreement

After you have clicked Next in the Introduction dialog box, the License Agreement is displayed as shown in the following figure.

Figure 2-1   License Agreement Dialog Box

Complete the following procedure:

1. Review the license agreement, using the scroll bar to display the text.

2. Click the Yes option button to accept the license agreement.

3. Click Next.

   The Important Information dialog box is displayed as shown in the following figure.

Figure 2-2 Important Information Dialog Box
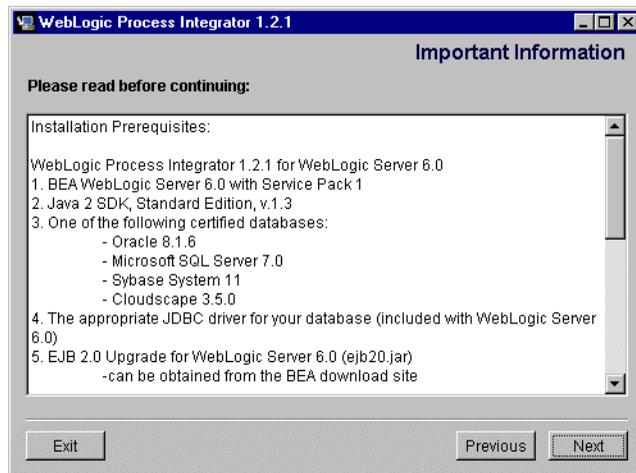
4. Review the installation requirements, using the scroll bar to display the text.

    Note: You must scroll down to view the installation prerequisites for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1.

5. Click Next to acknowledge that you have read and understood the requirements for WebLogic Process Integrator.

    The Choose Install Set dialog box is displayed.

6. Go to "Step 3. Selecting Components."

Step 3. Selecting Components

By default, BEA WebLogic Process Integrator installation program installs the following components:

- BEA WebLogic Process Integrator Server

- BEA WebLogic Process Integrator Studio

- BEA WebLogic Process Integrator Worklist

It is not necessary, however, to install all components on the same system. Although the WebLogic Process Integrator Server must be installed on a system hosting WebLogic Server, the other WebLogic Process Integrator components, Studio and Worklist, can be installed on the same system or on another system that can connect to the WebLogic Process Integrator Server over the network.

The components to be installed are selected in the Choose Install Set dialog box as shown in the following figure.

Figure 2-3   Choose Install Set Dialog Box
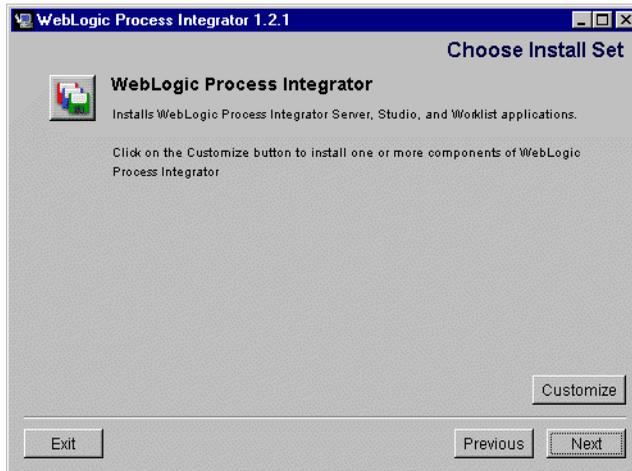
To install all components on the same system:

1. Click Next.

   The Select the Version of the WebLogic Process Integrator dialog box is displayed.

2. Go to "Step 4. Selecting the Version of WebLogic Process Integrator."

To customize the installation:

1. Click Customize.

   The Custom Install dialog box is displayed as shown in the following figure.

Figure 2-4   Customize Install Dialog Box
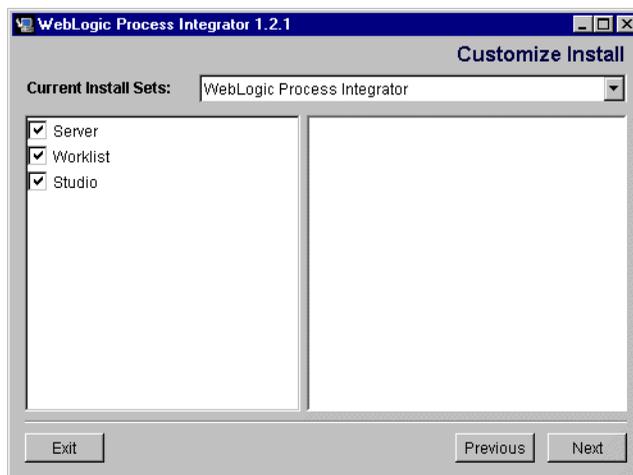
2. Click the check boxes to deselect or select components as required.

3. Click Next.

   The Select the Version of WebLogic Process Integrator dialog box is displayed.

4. Go to "Step 4. Selecting the Version of WebLogic Process Integrator."

Step 4. Selecting the Version of WebLogic Process Integrator

After you have selected the components, the Select the Version of WebLogic Process Integrator dialog box is displayed as shown in the following figure.

Figure 2-5   Select the Version of WebLogic Process Integrator Dialog Box
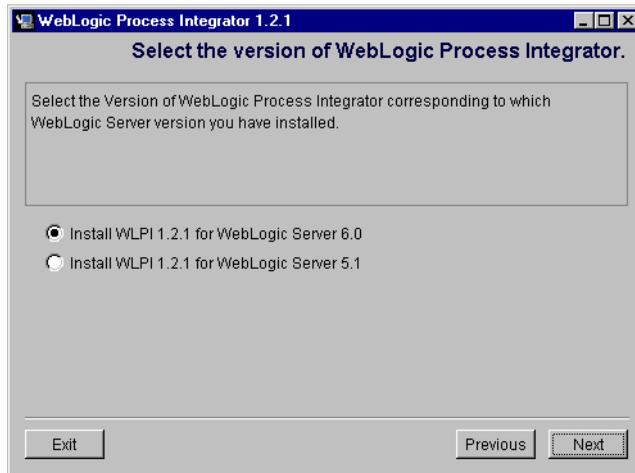
If WebLogic Server 6.0 is detected, the Install WLPI 1.2.1 for WebLogic Server 6.0 option is selected.

If WebLogic Server 6.0 is not detected, the Install WLPI 1.2.1 for WebLogic Server 5.1 option is selected.

1. Verify that the correct version of the software has been selected for the version of WebLogic Server installed on your system. If WebLogic Server 6.0 is installed but is not detected (that is, if Install WLPI 1.2.1 for WebLogic Server 5.1 is selected in this dialog box) go to "WebLogic Server 6.0 Not Detected" on page 2-31.

2. Click Next.

   The Choose BEA Home Directory dialog box is displayed.

   Note: If the WebLogic Server 6.0 Not Installed warning is displayed, go to
   "WebLogic Server 6.0 Not Detected" on page 2-31.

3. Go to "Step 5. Specifying the BEA Home and Installation Location"

Step 5. Specifying the BEA Home and Installation Location

After you have selected the version of WebLogic Process Integrator, the Choose BEA
Home Directory dialog box is displayed as shown in the following figure.

Figure 2-6   Choose BEA Home Directory Dialog Box
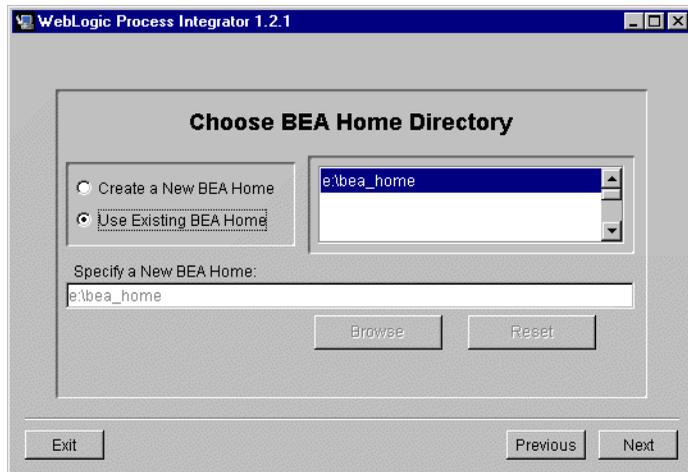
Before responding to the dialog box:

■ If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, the BEA Home directory serves as the central support directory for all the BEA products installed on your system. Therefore, we recommend that you use the existing BEA Home directory. For a detailed description of how the BEA Home directory is used in WebLogic Server 6.0, see "BEA Home Directory" at `http://e-docs.bea.com/wls/docs60/install/instpre.html#1026378`.

■ If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1 and you have never installed an earlier release of WebLogic Process Integrator, the first option (Create a New BEA Home) is selected by default, requiring you to create a new BEA Home directory. The BEA Home directory for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1 is not equivalent to the BEA Home directory in WebLogic Server 6.0. Rather than serving as the central support directory for all BEA products, this directory stores the license file and `registry.xml` file for WebLogic Process Integrator only.

To specify the BEA Home directory and installation location:

1. Do one of the following:

   ● Select an existing directory by selecting Use Existing BEA Home.

   ● Assign a new directory by selecting Create a New BEA Home. You can accept the default presented in the Specify a New BEA Home field, type in a new location, or select Browse to find and designate an existing directory as the BEA Home directory.

2. Click Next.

   If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, one of the following is displayed:

   ● If no previous installation of WebLogic Process Integrator is found in the specified BEA Home directory, the Choose Product Directory dialog box is displayed.

   ● If a previous version of WebLogic Process Integrator is found in the specified BEA Home directory, a warning is displayed. Go to "Previous Installation Found" on page 2-29.

   If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, the Choose Product Directory dialog box is displayed as shown in the following figure.

Figure 2-7   Choose Product Directory Dialog Box
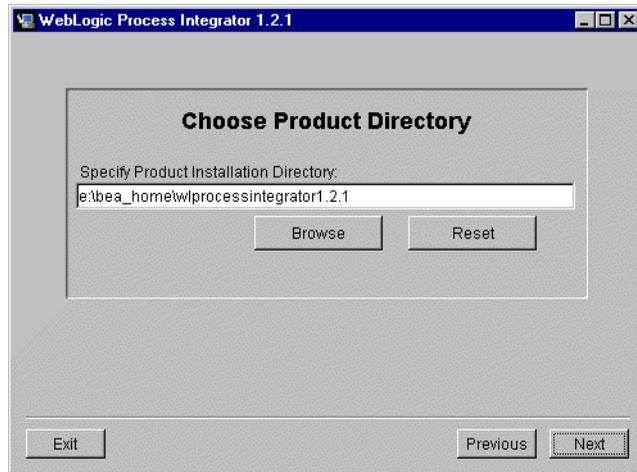
Note: If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, it is possible to overwrite an existing installation of WebLogic Process Integrator without warning.

3. Do one of the following:

   - Accept the default directory (recommended).

   - Click Browse to select an existing directory.

   - Type a new directory in the Specify Product Installation Directory field.

4. Click Next.

5. Go to "Step 6. Configuring the JDBC Connection Pool."

Step 6. Configuring the JDBC Connection Pool

As noted in "Installation Prerequisites" on page 1-4, you must have access to a supported database server and the JDBC driver required for that server must be installed before you can install WebLogic Process Integrator.

To enable WebLogic Process Integrator to communicate with your database server you must define a JDBC connection pool. As part of the installation process, you are prompted for information required to establish access to your database server. Other JDBC pool parameters, such as pool name and maximum connections, are set to default values. If necessary, after completing the installation, you can customize your configuration as described in Chapter 4, "Starting, Stopping, and Customizing BEA WebLogic Process Integrator."

SQL database definition language files are provided during installation. As described in "Step 9. Creating the WebLogic Process Integrator Tables" on page 2-24, these files are used by your database administrator to create tables required by WebLogic Process Integrator on your database server. The user name, password, and other identifiers used to access these tables must be chosen by you and your database administrator together, and they must reflect the JDBC connection pool information you provide in this step.

The information required to configure the JDBC connection pool depends on whether you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1 or for 6.0. The following section provides instructions for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0. If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, skip the following section and go to "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" on page 2-17.

Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

After you have selected the Product Directory, the JDBC Connection Pool dialog is displayed as shown in the following figure.

Figure 2-8   JDBC Connection Pool Dialog Box
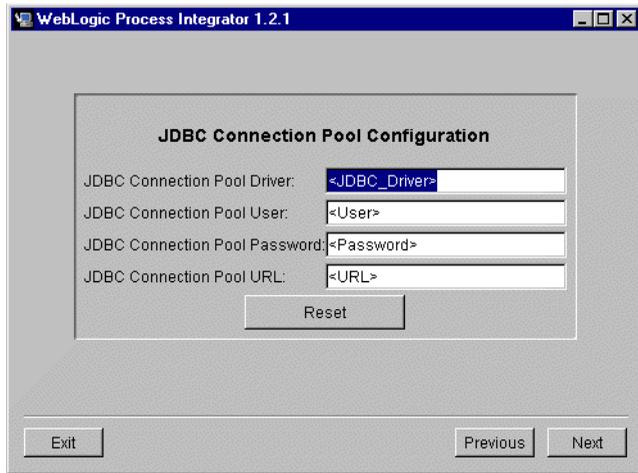
To configure the JDBC connection pool:

1. Enter values for the JDBC Connection Pool Driver, User, Password, and URL.

   The required information is summarized in "JDBC Connection Pool Parameters" at the end of this procedure.

2. Click Next.

   The Mail Session Configuration dialog box is displayed.

3. Go to "Step 7. Completing the Installation" on page 2-19.

JDBC Connection Pool Parameters

The following table summarizes the information required to configure the JDBC connection pool.

Table 2-1 JDBC Connection Pool Parameters

Parameters	Description
JDBC Connection Pool Driver	JDBC driver to be used to connect to the database. ■ If you are using the Oracle thin driver, enter: `oracle.jdbc.driver.OracleDriver` ■ If you are using the Sybase jConnect driver, enter: `com.sybase.jdbc.SybDriver` ■ If you are using the Cloudscape driver, enter: `COM.cloudscape.core.JDBCDriver` ■ If you are using the WebLogic jDriver for SQL Server, enter: `weblogic.jdbc.mssqlserver4.Driver`
JDBC Connection Pool User	Account login name required for connecting to the database server.
JDBC Connection Pool Password	Password required for connecting to the database server.
JDBC Connection Pool URL	URL for the database, as specified in the JDBC driver documentation. The format for the JDBC connection pool URL is discussed in the following section ("JDBC Connection Pool URL Format").

JDBC Connection Pool URL Format

The JDBC connection pool URL includes specification of the following:

- *host* specifies the name of the database server host.

- *database* specifies the database containing the WebLogic Process Integrator tables on the database server.

- *port* specifies the port to be used to connect to the database server.

The following provide sample URLs for each supported database.

- For the Oracle thin driver, the URL is

  `jdbc:oracle:thin:@`*host*`:`*port*`:`*database*

  For example: `jdbc:oracle:thin:@rdbmshost:1521:wlpi`

- For the Sybase jConnect driver, the URL is

  `jdbc:sybase:Tds:`*host*`:`*port*`/`*database*

  For example: `jdbc:sybase:Tds:rdbmshost:5000/wlpi`

- For the Cloudscape driver, the URL is

  `jdbc:cloudscape:`*database*

  For example: `jdbc:cloudscape:wlpi`

- For the WebLogic jDriver for Microft SQL Server, the URL is:

  `jdbc:weblogic:mssqlserver4:`*database*`@`*host*`:`*port*`?sql7=true`

  For example:
  `jdbc:weblogic:mssqlserver4:wlpi@rdbmshost:1433?sql7=true`

Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

After you have selected the Product Directory, the Database Selection dialog is displayed as shown in the following figure.

Figure 2-9   Database Selection Dialog Box
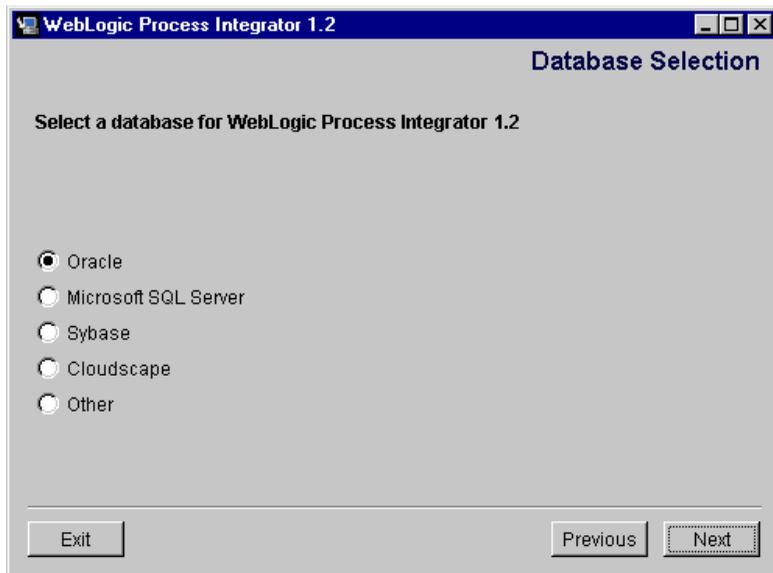
To configure the JDBC connection pool:

1. Select a database.

   Oracle, Microsoft SQL Server, Sybase, and Cloudscape are the only database platforms that are currently certified with BEA WebLogic Process Integrator release 1.2.1. If you select Other, you must configure the Driver and JDBC connection pool manually. For information about how these files might be modified, see the configuration files listed in Appendix A, "BEA WebLogic Process Integrator Sample Configuration Files."

2. Click Next.

   The database configuration dialog box is displayed.

   For example, the following figure shows the database configuration dialog box displayed when you select Oracle.

Figure 2-10   Oracle Configuration Dialog Box
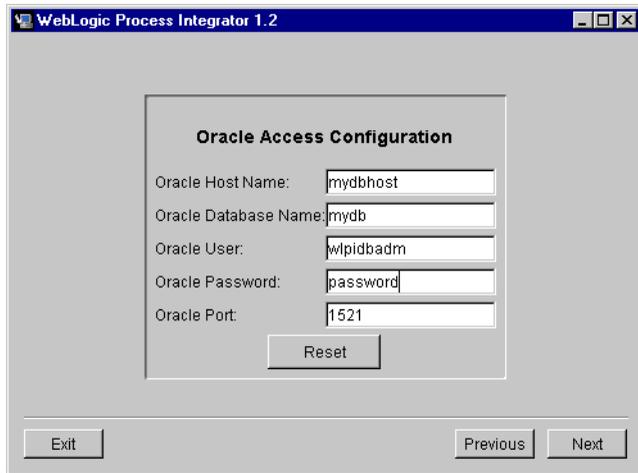
3. Enter values for the Host Name, Database Name, User, Password, and Port in the appropriate fields.

4. Click Next.

   The Confirm Selection of Base WebLogic Server Version dialog box is displayed.

5. Go to "Step 7. Completing the Installation."

Step 7. Completing the Installation

After you have provided the information required to configure the JDBC connection pool, the dialog box displayed depends on the version of WebLogic Process Integrator you are installing:

- If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, the Mail Session Configuration Dialog Box is displayed.

- If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, the Confirm Selection of Base WebLogic Server Version dialog box is displayed.

    Note: Mail session properties are not set as part of the installation of WebLogic Server 1.2.1 for WebLogic Server 5.1. For instructions for setting the mail session properties after installation, see "Setting the Mail Session Properties" on page 4-15.

These dialog boxes are shown in the following figures.

Figure 2-11   Mail Session Configuration Dialog Box
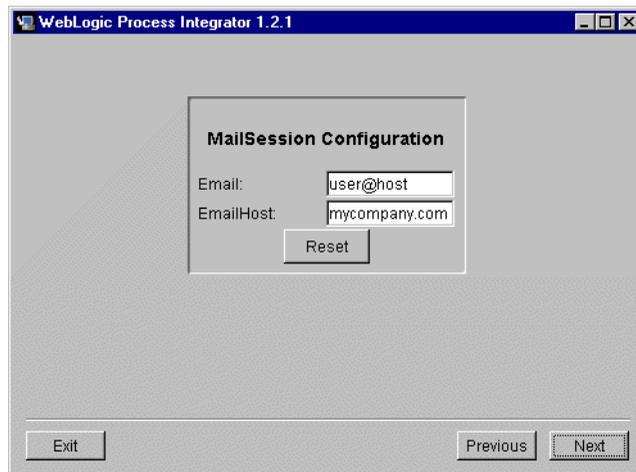
Figure 2-12   Confirm Selection of Base WebLogic Server Version Dialog Box
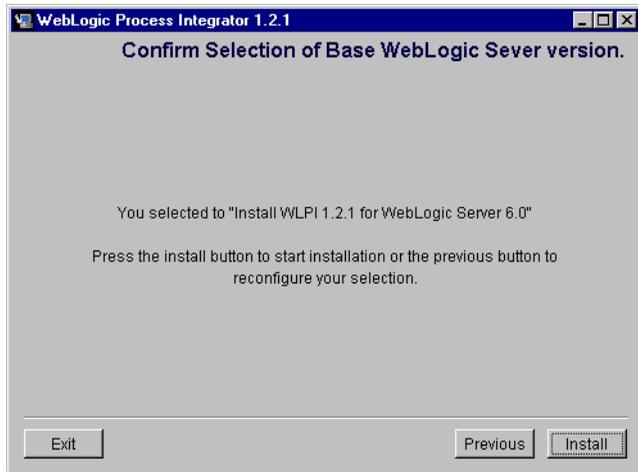
To complete the installation:

1. Do one of the following

   - If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, go to step 2.

   - If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, set the mail session properties by entering user e-mail address and e-mail host (the domain name for the default mail or SMTP server). Click Next.

     The Confirm Selection of Base WebLogic Server Version dialog box is displayed.

2. Click Next to begin installation.

   The Installation Status dialog box is displayed as shown in the following figure.

Figure 2-13   Installation Status Dialog Box
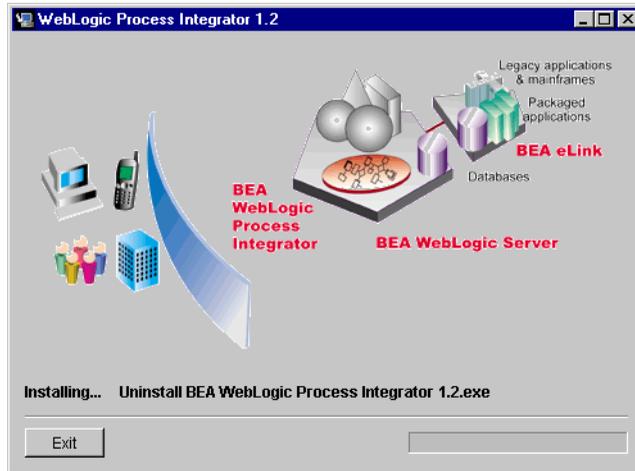
When installation is complete, the Installation Complete dialog box is displayed as shown in the following figure.

Figure 2-14   Install Complete Dialog Box
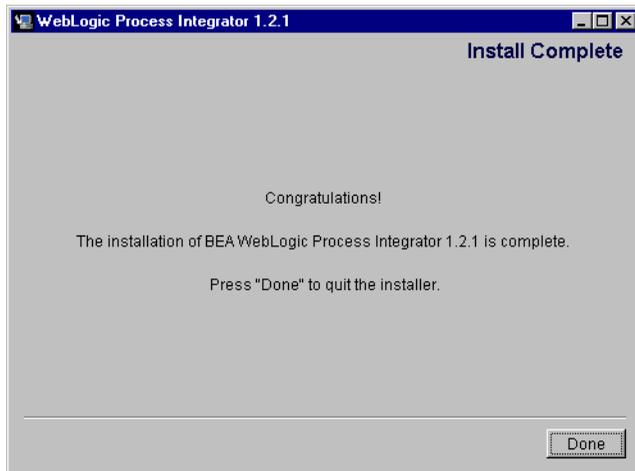
3. Click Done to dismiss the Installation Complete dialog box.

4. Go to "Step 8. Installing Your Software License."

Step 8. Installing Your Software License

BEA WebLogic Process Integrator cannot be used without a valid software license. If you purchased the software on CD-ROM, the license is provided on a diskette in the product box. If you purchased a license for a product downloaded from the BEA Web site, you receive the license as an e-mail attachment.

The method used to install the software license depends on which version of the product you have installed: Release 1.2.1 for WebLogic Server 6.0 or Release 1.2.1 for WebLogic Server 5.1. This section provides procedures for installing a license for both versions.

Installing the License: WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

To install your software license:

1. Save the license file from the appropriate diskette or e-mail attachment with a name other than `license.bea`, in the BEA Home directory. For example, save the file as `wpli_license.bea`. Use this file as the *license_update_file* in step 4.

   Warning: Do not overwrite the existing `license.bea` file.

2. Do one of the following:

   - On a Windows system, open an MS-DOS session then go to the BEA Home directory.

   - On a UNIX system, go to the BEA Home directory.

3. Add the JDK to your `PATH` variable by entering one of the following commands:

   - On a Windows system:
     ```
     set PATH=.\jdk130\bin:%PATH%
     ```

   - On a UNIX system:
     ```
     set PATH=./jdk130/bin:$PATH
     ```

4. Enter one of the following commands:

   - On a Windows system:
     ```
     UpdateLicense license_update_file
     ```

   - On a UNIX system:
     ```
     sh UpdateLicense.sh license_update_file
     ```

5. Save a copy of your updated license.bea file in a safe place outside the WebLogic Server and application installation directories.

   Although no one else can use your license file, you should save this information in a place protected from either malicious or innocent tampering by others.

Installing the License: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

To install the software license, copy the `license.bea` file from the diskette or e-mail attachment to the directory you designated as the BEA Home directory during installation.

Step 9. Creating the WebLogic Process Integrator Tables

Before you can run BEA WebLogic Process Integrator, you must first create the required database tables on the database server. The ddl subdirectory of the WebLogic Process Integrator product directory (for example, c:\bea\wlprocessintegrator1.2.1\ddl) contains SQL Data Definition Language (DDL) files that are used to create the required tables. Use the database administrator tool to execute the appropriate DDL file.

The procedure for using the DDL file to create the tables in Cloudscape are provided in the following section. For other supported databases, consult your database administrator for the procedure.

To create tables for this database . . .	Use this DDL file . . .
Oracle 8.1.5 or 8.1.6	wlpi_oracle.ddl
Microsoft SQL Server 7.0	wlpi_mssql.ddl
Sybase System 11	wlpi_sybase.ddl
Cloudscape 3.5.x	wlpi_cloudscape.ddl

Note: If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0 and you are using a Cloudscape database, in addition using the DDL file to create the required tables, you must update the server.cmd file as described in the following section.

Creating Tables and Updating Settings for Cloudscape

This section describes how to create the database tables and update configuration settings for a Cloudscape database.

To create the tables for Cloudscape

1. Start Cloudview, the Cloudscape administrative tool, by executing the following command (enter as a single line):

   ```
   java -classpath
   C:\bea_home\weblogic_server_dir\samples\eval\cloudscape\lib\
   tools.jar;C:\bea\wlserver6.0\samples\eval\cloudscape\lib\
   cloudscape.jar COM.cloudscape.tools.cview
   ```

2. In Cloudview, choose File→New→Database. Create a database called `wlpi`.

3. Click the Database tab, then click on the Script icon to open `wlpi_cloudscape.ddl`.

4. Click the Execute icon to run the script.

5. Close Cloudview.

If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, you must modify the `server.cmd` (Windows) or `server.sh` (UNIX) file for Cloudscape. The required settings are shown in "server.cmd/server.sh" in Appendix A.

If you entered the appropriate settings for Cloudscape in the "Step 6. Configuring the JDBC Connection Pool" on page 2-13, settings in the `config.xml` (WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0) or `weblogic.properties` (WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1) file have been updated as required.

If you are configuring a Cloudscape database after installation, refer to the sections appropriate to your installation.

- For WebLogic Process Integrator for WebLogic Server 6.0, see "Customizing Your JDBC Connection Pool Using the Administration Console" on page 4-14.

- For WebLogic Process Integrator for WebLogic Server 5.1, see "Updating the JDBC Configuration" on page 4-19 and "Editing the rdbmsrealm.properties File" on page 4-22.

Step 10. Verifying the WebLogic Process Integrator Installation

To verify the installation, start each application as described in "Starting and Stopping BEA WebLogic Process Integrator Components" on page 4-3.

Uninstalling BEA WebLogic Process Integrator

This section provides platform-specific procedures for uninstalling WebLogic Process Integrator. See the section appropriate for your platform:

■ Uninstalling WebLogic Process Integrator on a Windows system

■ Uninstalling WebLogic Process Integrator on a UNIX System

Uninstalling WebLogic Process Integrator on a Windows system

To uninstall BEA WebLogic Process Integrator on Windows:

1. Do one of the following:

   - Choose Start→Programs→BEA WebLogic E-Business Platform→WebLogic Process Integrator 1.2.1→Uninstall BEA WebLogic Process Integrator 1.2.1.

   - Choose Start→Run, then click Browse. Navigate to the `Uninstall BEA WebLogic Process Integrator 1.2.1.exe` file. This file is in the `uninstaller` (WebLogic Server 6.0 version) or `UninstallerData` (WebLogic Server 5.1 version) subdirectory of the WebLogic Process Integrator 1.2.1 distribution.

     The WebLogic Process Integrator Uninstall dialog box is displayed as shown in the following figure.

Figure 2-15   BEA WebLogic Process Integrator Uninstall Start Screen

2. Click Uninstall to remove WebLogic Process Integrator. When the program has been removed, the Uninstall Complete dialog box is displayed, as shown in the following figure.

Figure 2-16 Uninstall Complete Dialog Box
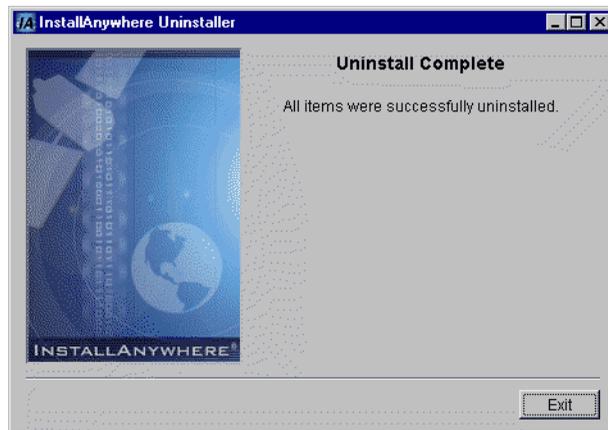
3. Click Exit to dismiss the dialog box.

Uninstalling WebLogic Process Integrator on a UNIX System

To uninstall BEA WebLogic Process Integrator on a UNIX system:

1. Do one of the following:

   If you are uninstalling WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, go to the `uninstaller` directory. (The default pathname for the directory is `/bea/wlprocessintegrator1.2.1/uninstaller`.).

   If you are uninstalling WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, go to the `UninstallerData` directory. (The default pathname for the directory is `/bea/wlprocessintegrator1.2.1/UninstallerData`.)

2. Type `Uninstall WebLogic Process Integrator` then press Enter.

   When the uninstallation process is complete, the message `Uninstall Complete` is displayed.

Troubleshooting the Installation

This section describes the problems that may occur during installation, and the symptoms, possible causes, and solutions for those problems: The following problems are described:

- Previous Installation Found

- WebLogic Server 6.0 Not Detected

Previous Installation Found

Symptom

You have selected a BEA Home directory in the "Choose BEA Home Directory Dialog Box" on page 2-10 and clicked Next. The Previous Installation Found warning is displayed as shown in the following figure.

Figure 2-17   Previous Installation Found Warning

Note: This warning is only displayed if you are installing WebLogic Server Process Integrator 1.2.1 for WebLogic Server 6.0. If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, it is possible to overwrite a previous installation without warning.

Solution

The warning dialog presents three options: Continue, Cancel and Exit:

If you select this option...	The results are as follows...
Continue	The installation continues and the product is installed in the same directory as the previous installation. overwriting previously installed BEA WebLogic Process Integrator files. Therefore, *any changes that you made to these files on the previous installation are lost*. If you have changed any of the BEA WebLogic Process Integrator files, you may want to copy them into a temporary directory before proceeding with this option.
Cancel	You are returned to the "Choose BEA Home Directory Dialog Box" on page 2-10. Select another BEA Home directory (or create a new BEA Home directory) in which to install.
Exit	The installation process is stopped and no changes are made to the system.

WebLogic Server 6.0 Not Detected

Symptom

You have installed WebLogic Server 6.0 but one of the following occurs:

- The Install WLPI 1.2.1 for WebLogic Server 5.1 option is preselected in the "Select the Version of WebLogic Process Integrator Dialog Box" on page 2-9.

- The WebLogic Server 6.0 Not Installed warning (shown in the following figure) is displayed when you manually select the Install WLPI 1.2.1 for WebLogic Server 6.0 option in the Select the Version of WebLogic Process Integrator dialog box then click Next.

Figure 2-18   WebLogic Server 6.0 Missing
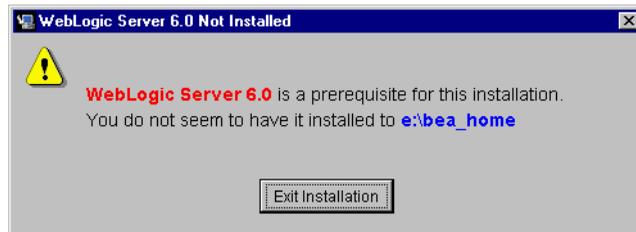
Possible Cause 1

Your WebLogic Server 6.0 installation has an evaluation license.

Solution 1

You must purchase WebLogic Server and update the license. Information about purchasing licenses for BEA software can be found at `http://www.beasys.com/buy`.

Possible Cause 2

You have more than one BEA Home directory configured and the selected directory does not correspond to a valid installation.

Solution 2

Click Cancel to dismiss the dialog box, then click Previous in the Select the Version of WebLogic Process Integrator dialog box to return to the Choose BEA Home Directory dialog box. Select a valid BEA Home directory. For information about the BEA Home directory, see "BEA Home Directory" at
`http://e-docs.bea.com/wls/docs60/install/instpre.html#1026378`.

Possible Cause 3

You have not installed WebLogic Server 6.0.

Solution 3

Click Exit to dismiss the dialog box and exit the installation. Install WebLogic Server 6.0 before installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

3 BEA WebLogic Process Integrator Console-Mode Installation

This section provides the information you need to install WebLogic Process Integrator on a UNIX system that does not include support for a graphics (windowing) workstation or terminal.

The text-based console-mode program mimics the graphical installation program. For details about the information you must provide, review the steps described in Chapter 2, "Installing BEA WebLogic Process Integrator."

To install WebLogic Process Integrator on a UNIX system:

1. If you are installing from CD, insert the BEA WebLogic Process Integrator CD in the CD tray. If you downloaded the `wlpi_121_unix.bin` file from the BEA Web site, then proceed to the next step.

   Note: If the `daemon /usr/sbin/vold` is running, the CD should be mounted in the `/cdrom` directory. If `vold` is not running, see the instructions for mounting a CD in your UNIX administration documentation.

2. Do one of the following:

   - If you are installing from CD, go to the CD mount point.

   - If you downloaded the `wlpi_121_unix.bin` file from the BEA Web site, go to the directory in which you saved the file.

3. Start the installation by entering the following command at the prompt:

   `sh wlpi_121_unix.bin -i console`

   Introductory information is displayed.

4. Press Enter to continue.

   The license agreement is displayed.

5. Review the agreement then enter `Y` to accept the terms.

   You are prompted to select the components to be installed.

6. Do one of the following:

   - Enter `1` to install the Server, Worklist, and Studio.

   - Enter `2` to customize the installation, then enter a comma separated list of numbers indicating the components to install (1=Server, 2=Worklist, 3=Studio).

   You are prompted to specify the version of the product to being installed.

7. Do one of the following:

   - Enter `1` to install BEA WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0.

   - Enter `2` to install BEA WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1.

   You are prompted to choose a BEA Home directory.

8. Enter `1` to create a new BEA Home directory or enter `2` to use an existing BEA Home directory. When prompted, enter the full pathname.

   You are prompted to choose a directory in which the product software will be installed.

9. Do one of the following:

   - Enter 2 to accept the default location.

   - Enter 1 to modify the location. When prompted, enter the full path for the desired location.

   You are prompted to provide JDBC configuration information.

10. Do one of the following:

   - If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, enter the JDBC driver, user ID, password, and URL when prompted. For detailed information about possible values, see "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" on page 2-14

   - If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, select the type of database by entering 1 for Oracle, 2 for Microsoft SQL Server, 3 for Sybase, 4 for Cloudscape, or 5 for Other. When prompted, enter the host name, database name, user ID, password, and port for the selected database.

   You are prompted for one of the following:

   - If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, you are prompted to set the Mail Session Configuration.

   - If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, you are prompted to Confirm Selection of Base WebLogic Server Version.

   Note: Mail session properties are not set as part of the installation of WebLogic Server 1.2.1 for WebLogic Server 5.1. For instructions for setting the mail session properties after installation, see "Setting the Mail Session Properties" on page 4-15.

11. Do one of the following

- If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, the installation program copies the necessary files and updates the configuration as required. A message indicating that the installation is complete is displayed when the process is complete.

- If you are installing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, set the mail session properties by entering user e-mail address and e-mail host (the domain for the default mail or SMTP server) when prompted.

  The installation program copies the necessary files and updates the configuration as required. A message indicating that the installation is complete is displayed when the process is complete.

12. Press Enter to exit the console-mode installation program.

4 Starting, Stopping, and Customizing BEA WebLogic Process Integrator

This section provides the information you need to start, stop, and customize the WebLogic Process Integrator components. It includes the following topics:

- WebLogic Process Integrator Users and Passwords

- Starting and Stopping BEA WebLogic Process Integrator Components

- Updating the WebLogic Process Integrator Environment Settings

- Customizing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

- Customizing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

- Configuring an Alternate Security Realm for BEA WebLogic Process Integrator

WebLogic Process Integrator Users and Passwords

The BEA WebLogic Process Integrator installation configures a default RDBMS security realm. When you create the database tables as described in "Step 9. Creating the WebLogic Process Integrator Tables" on page 2-24, the default users and passwords shown in the following table are defined. Additional users can be added through the WebLogic Process Integrator Studio interface.

Table 4-1 Default User Names and Passwords

User Name	Password
system	security
admin	security
mary	password
joe	password

If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, you can change the password for a default user through the WebLogic Server Administration Console as described in the following procedure:

1. Start the Administration Console as described in "Launching the Administration Console" on page 4-13.

2. Open the Users window in the Administration Console.

3. Enter the user name in the User field.

    For example, to change the system password, enter system.

4. Enter a new password in the Password field.

5. Confirm the password.

If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, the default passwords can only be changed directly in the database users table.

Starting and Stopping BEA WebLogic Process Integrator Components

The following sections describe how to start and stop each WebLogic Process Integrator component.

- Starting the WebLogic Process Integrator Server

- Starting the WebLogic Process Integrator Studio

- Starting the BEA WebLogic Process Integrator Worklist

- Stopping the BEA WebLogic Process Integrator Server

- Stopping the BEA WebLogic Process Integrator Studio or Worklist

Starting the WebLogic Process Integrator Server

The following sections provide instructions for starting the WebLogic Process Integrator Server on a Windows or UNIX system.

Note: When you start the WebLogic Process Integrator Server, the WebLogic Server is started with WebLogic Process Integrator specific settings. If the WebLogic Server is already running, you must stop it before starting the WebLogic Process Integrator Server.

Starting on Windows

To start the WebLogic Process Integrator Server on a Windows system:

■ Choose Start→Programs→BEA WebLogic E-Business Platform→WebLogic Process Integrator 1.2.1→Start Server.

If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1 start up messages are displayed.

If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, you are prompted to enter the WebLogic Server system password as shown in the following figure. After you have entered the password, start up messages are displayed.

Figure 4-1   Launch WebLogic Process Integrator Server
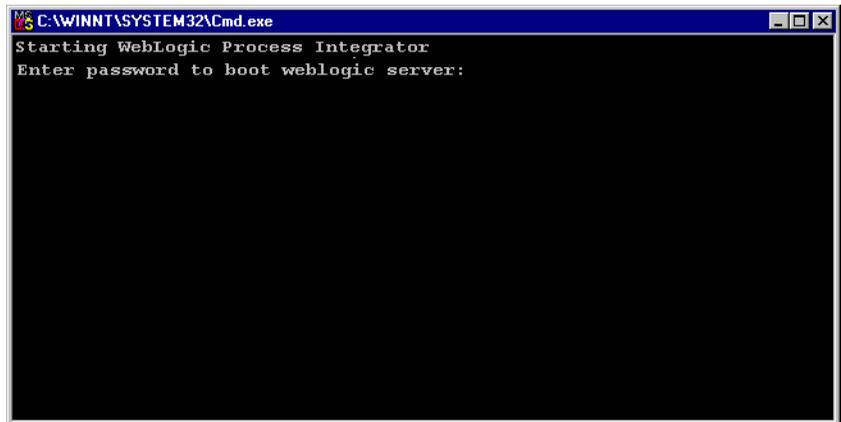
Note: If you have not yet changed the password, refer to "WebLogic Process Integrator Users and Passwords" on page 4-2 for the default password.

Starting on UNIX

To start the WebLogic Process Integrator Server on a UNIX system:

1. Go to the `bin` subdirectory of the WebLogic Process Integrator installation directory. For example, if the installation directory were `/bea/wlprocessintegrator1.2.1` you would enter:

   ```
   cd /bea/wlprocessintegrator1.2.1/bin
   ```

2. Run the script `server.sh`:

   ```
   . ./server.sh
   ```

   If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1, start up messages are displayed.

   If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0, you are prompted to enter the WebLogic Server `system` password. After you have entered the password, start up messages are displayed.

   Note: If you have not yet changed the password, refer to "WebLogic Process Integrator Users and Passwords" on page 4-2 for the default password.

Starting the WebLogic Process Integrator Studio

To start the BEA WebLogic Process Integrator Studio on Windows:

1. Do one of the following:

   - To start the WebLogic Process Integrator Studio on Windows, choose Start→Programs→BEA WebLogic E-Business Platform→WebLogic Process Integrator 1.2.1→Start Studio.

   - To start the WebLogic Process Integrator Worklist on UNIX, go to the `bin` subdirectory of the WebLogic Process Integrator installation directory, then run the `studio.sh` script. For example, if the installation directory were `/bea/wlprocessintegrator1.2.1` you would enter the following:

     ```
     cd /bea/wlprocessintegrator1.2.1/bin
     . ./studio.sh
     ```

   The Logon dialog box shown in the following figure is displayed in front of the BEA WebLogic Process Integrator Worklist application window.

Figure 4-2   BEA WebLogic Process Integrator Studio Logon Dialog Box

2. Enter the user name and password in the appropriate fields. If you have not yet been assigned a user name and password for WebLogic Process Integrator, enter a default user name and password. See "WebLogic Process Integrator Users and Passwords" on page 4-2.

3. In the Server [:port] field, specify the system that is running the WebLogic Process Integrator Server application as follows:

   `t3://host:7001`

   where *host* is the computer name or IP address of the system that is running the WebLogic Process Integrator Server. Specify `localhost` if the Server is running on the same computer as the Studio application.

Starting the BEA WebLogic Process Integrator Worklist

To start the BEA WebLogic Process Integrator Worklist:

1. Do one of the following:

   - To start the WebLogic Process Integrator Worklist on Windows, choose Start→Programs→BEA WebLogic E-Business Platform→WebLogic Process Integrator 1.2.1→Start Worklist.

   - To start the WebLogic Process Integrator Worklist on UNIX, go to the bin subdirectory of the WebLogic Process Integrator installation directory, then run the worklist.sh script. For example, if the installation directory were /bea/wlprocessintegrator1.2.1 you would enter the following:

     ```
     cd /bea/wlprocessintegrator1.2.1/bin
     . ./worklist.sh
     ```

   The Logon dialog box shown in the following figure is displayed in front of the BEA WebLogic Process Integrator Worklist application window.

   Figure 4-3   BEA WebLogic Process Integrator Worklist Logon Dialog Box

2. Enter the user name and password in the appropriate fields. If you have not yet been assigned a user name and password for WebLogic Process Integrator, enter a default user name and password. See "WebLogic Process Integrator Users and Passwords" on page 4-2.

3. In the Server [:port] field, specify the system that is running the WebLogic Process Integrator Server application as follows:

    ```
    t3://host:7001
    ```

    where *host* is the computer name or IP address of the system that is running the WebLogic Process Integrator Server. Specify localhost if the Server is running on the same computer as the Worklist application.

Stopping the BEA WebLogic Process Integrator Server

To stop the BEA WebLogic Process Integrator Server application:

1. Activate the Server Application (command prompt) window.

2. Press Ctrl+C. The following prompt is displayed:

    ```
    Terminate batch job (Y/N)
    ```

3. Press Y in response to prompt. The Server application (command prompt) window disappears, and the Server application stops.

Stopping the BEA WebLogic Process Integrator Studio or Worklist

To stop the BEA WebLogic Process Integrator Studio or Worklist:

1. Choose File→Logoff from the application window.

2. Choose File→Exit from the application window.

Updating the WebLogic Process Integrator Environment Settings

The WebLogic Process Integrator environment is set by the following files:

- The WebLogic Process Server environment is set by the `setwlpiserverenv.cmd` (Windows) or `setwlpiserverenv.sh` (UNIX) file.

- The WebLogic Process client (Worklist and Studio) environment is set by the `setwlpiclientenv.cmd` (Windows) or `setwlpiclientenv.sh` (UNIX) file.

These files are located in the `bin` subdirectory of the WebLogic Process Integrator installation directory. By default the pathname for this directory is `bea\wlprocessintegrator1.2.1\bin`.

Examples of these files are provided in Appendix A, "BEA WebLogic Process Integrator Sample Configuration Files." The content of these files depends on the version of the WebLogic Process Integrator you have installed. Refer to the section appropriate to the version installed on your system; either "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" or "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1."

Instructions for updating the server and client environment are provided in the following sections.

Updating the Server Environment

To update the server environment:

On a Windows System:

1. Navigate to the `bin` subdirectory of the WebLogic Process Integrator installation directory using Windows NT Explorer.

2. Right click `setwlpiserverenv.cmd` and select Edit from the pop-up menu to open the file in Notepad.

3. Set the following variables to values appropriate for your environment:

   - JAVA_HOME

   - WL_HOME

   - JDBC_DRIVER (WebLogic Server 1.2.1 for WebLogic Server 5.1 only)

   - BEA_HOME

   - WLPI_HOME

   For information about the required values, see "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" or "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" in Appendix A.

4. Save your changes and close the file.

The `setwlpiserverenv.cmd` file will run to set these environment variables for the Server environment when you start the WebLogic Process Integrator Server.

On UNIX:

1. Go to the `bin` subdirectory of the WebLogic Process Integrator installation directory. For example, if the software is installed in /bea/`wlprocessintegrator1.2.1`, you would enter the following:

   ```
   cd /bea/wlprocessintegrator1.2.1/bin
   ```

2. Open `setwlpiserverenv.sh` in your preferred text editor.

3. Set the following variables to values appropriate for your environment:

   - JAVA_HOME

   - WL_HOME

   - JDBC_DRIVER (WebLogic Server 1.2.1 for WebLogic Server 5.1 only)

   - BEA_HOME

   - WLPI_HOME

   For information about the required values, see "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" or "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" in Appendix A.

4. Save your changes and close the file.

The `setwlpiserverenv.cmd` file will run to set these environment variables for the Server environment when you start the WebLogic Process Integrator Server.

Updating the Client (Studio and Worklist) Environment

To update the client environment:

On Windows NT:

1. Navigate to `bea\wlprocessintegrator1.2.1\bin` using Windows NT Explorer.

2. Right click `setwlpiclientenv.cmd` and select Edit from the pop-up menu to open the file in Notepad.

3. Set the following variables to values appropriate for your environment:

   - JAVA_HOME

   - WLPI_HOME

   See "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" or "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" in Appendix A.

4. Save your changes and close the file.

The `setwlpiclientenv.sh` file will run to set these environment variables for the client environment when you start the Studio or the Worklist.

On UNIX:

1. Go to the `bin` subdirectory of the WebLogic Process Integrator installation directory. For example, if the software is installed in /bea/`wlprocessintegrator1.2.1`, you would enter the following:

   ```
   cd /bea/wlprocessintegrator1.2.1/bin
   ```

2. Open the `setwlpiclientenv.sh` script to in your preferred text editor.

3. Set the following variables to values appropriate for your environment:

   - JAVA_HOME

   - WLPI_HOME

   See "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" or "Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" in Appendix A.

4. Save your changes and close the file.

The `setwlpiclientenv.sh` file will run to set these environment variables for the client environment when you start the Studio or the Worklist.

Customizing WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

If you have installed WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0 changes to the configuration are made through the WebLogic Server 6.0 Administration Console interface.

This section describes how to make changes to the JDBC Connection Pool and Mail Session configurations through the Administration Console. For more information about using the WebLogic Server 6.0 Administration Console, refer to the WebLogic Server 6.0 documentation set at `http://e-docs.bea.com/wls/docs60.`

Launching the Administration Console

To launch the Administration Console:

1. Launch the WebLogic Process Integrator Server as described in "Starting the WebLogic Process Integrator Server" on page 4-3.

2. When the Server has started, launch the default Console by choosing Start →Programs →BEA WebLogic E-Business Platform →WebLogic Server 6.0→Start Default Console.

   Your default Web browser is started, then you are prompted to enter the user name and password.

3. Enter `system` in the user name field, then enter the `system` password.

   Note: If you have not yet changed the password, refer to "WebLogic Process Integrator Users and Passwords" on page 4-2 for the default password.

4. The Adminstration Console is displayed in you Web browser.

Refer to the WebLogic Server 6.0 documentation set for instructions on using and navigating the Console.

Customizing Your JDBC Connection Pool Using the Administration Console

To customize the JDBC Connection Pool:

1. Using the left pane tree view controls, navigate to Services > JDBC > Connection Pools > wlpipool.

2. In the Configuration/General tab, edit the URL, Driver Classname, and Properties as required to customize the settings for your JDBC connection pool.

3. Click Apply to save your changes.

4. Shut down the Administration Console.

5. Shut down and restart the WebLogic Process Integrator Server to initiate the new settings.

Modifying Your Mail Session Properties Using the Administration Console

To customize the Mail Session Properties:

1. Using the left pane tree view controls, navigate to Services > Mail > wlpiMailSession.

2. Edit the JNDIName and Properties fields as required to customized the settings for your mail session.

3. Click Apply to save your changes.

4. Shut down the Administration Console.

5. Shut down and restart the WebLogic Process Integrator Server to initiate the new changes.

Customizing WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

The following sections describe how to customize the WebLogic Process Integrator Mail Session, JDBC configuration, and RDBMS realm properties.

Setting the Mail Session Properties

Before you can use WebLogic Process Integrator to define workflows that include send e-mail actions, you must set the Mail Session properties in the `weblogic.properties` file and configure the mail session properties for the Workflow processor EJBs as described in the following sections.

Setting the Mail Session Properties in the weblogic.properties File

The `weblogic.properties` file is located in the WebLogic Process Integrator installation directory. By default the pathname for this directory is `c:\bea\wlprocessintegrator1.2.1`.

To set the mail session properties:

1. Do one of the following:

    - On a Windows system, use the Windows Explorer to navigate to the WebLogic Process Integrator installation directory.

    - On a UNIX system, go to the WebLogic Process Integrator installation directory. For example, if the WebLogic Process Integrator is installed in the `/bea/wlprocessintegrator1.2.1` directory, enter the following:

      `cd /bea/wlpiprocessintegrator1.2.1`

2. Open the `weblogic.properties` file in you preferred text editor.

3. Find the `WLPI Specific Settings` section.

4. Edit the `MailSession` properties `mail.from` and `mail.host`. The Listing following this procedure provides sample values.

5. Save the file and exit the text editor.

Listing 4-1   Mail Session Example

```
# Mail session
weblogic.resource.MailSession.com.bea.wlpi.MailSession=\
    mail.from=xyz@mycompany.com,\
    mail.host=smtp.mycompany.com
```

Configuring the Mail Session Properties for the Workflow Processor EJBs

To configure the mail-session properties:

1. Run the WebLogic EJB deployer tool.

    On Windows NT:

    a. Navigate to the `deployertool.cmd` file located in the `bin` subdirectory of the WebLogic Process Integrator installation. By default the pathname for this directory is `c:\bea\wlprocessintegrator1.2.1\bin`.

    b. Double click `deployertool.cmd` to start the WebLogic EJB deployer tool.

    On UNIX:

    a. Go to the WebLogic Process Integrator installation directory. For example, if the WebLogic Process Integrator is installed in the `/bea/wlprocessintegrator1.2.1` directory, enter the following:

    `cd /bea/wlpiprocessintegrator1.2.1`

    b. Run the WebLogic EJB deployer tool by entering the following:

    `. ./deployertool.sh`

    The EJB Deployer is displayed. The upper-left panel tree view controls are used to navigate to the hierarchy of entry types as shown in the following figure.

Figure 4-4   WebLogic EJB Deployer Tool Tree View Control
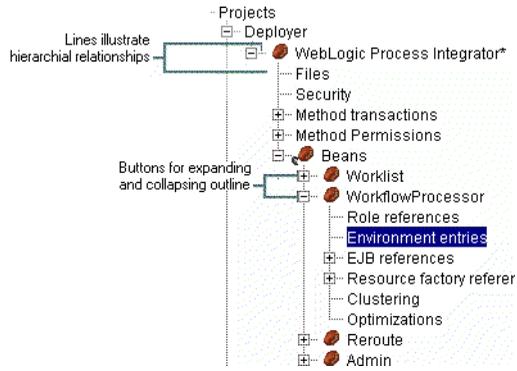
2. Use the tree view controls to navigate to Deployer > WebLogic Process Integrator > Beans >WorkflowProcessor > Environment Entries.

   The Environment Entries for the Workflow Processor EJB are displayed in the upper-right panel as shown in the following figure.

Figure 4-5   WebLogic EJB Deployer Tool Showing Environment Entries
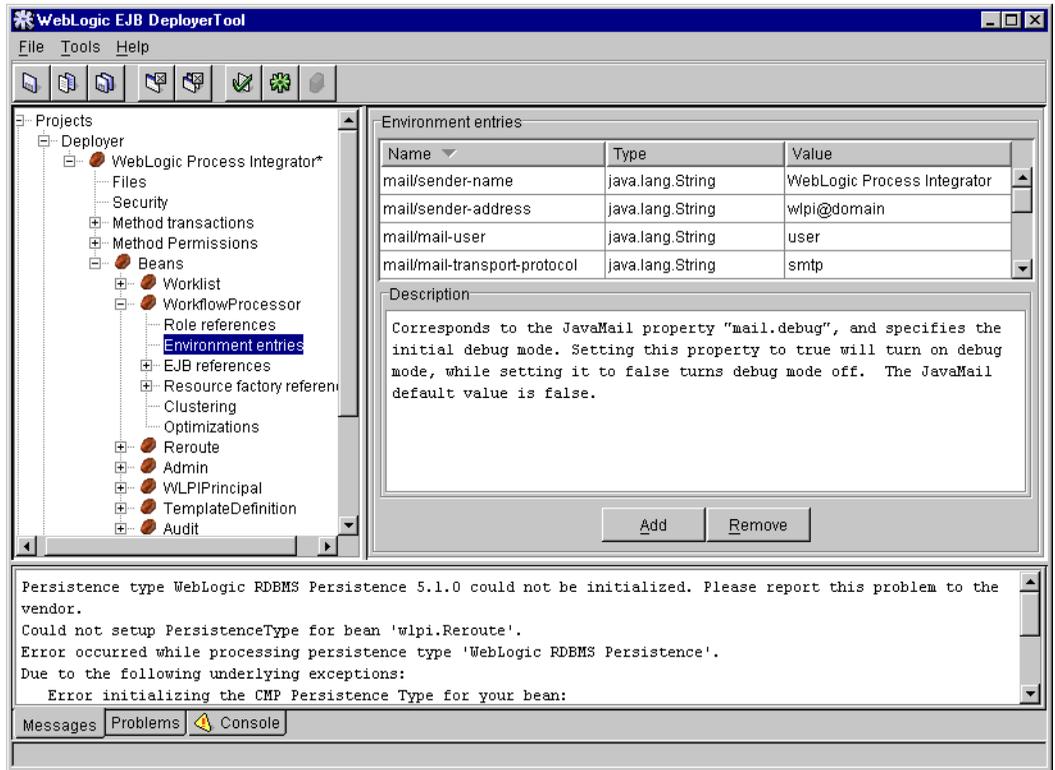
3. Define the following mail-session properties by double-clicking in the text field you want to edit and typing the appropriate value:

   - `mail/sender-name`

   - `mail/sender-address`

   - `mail/mail-user`

   - `mail/mail-transport-protocol`

   - `mail/mail-host`

   - `mail/mail-from`

   - `mail/mail-debug`

   - `mail/authenticator-password`

   - `mail/authenticator-id`

4. Choose File→Save to save your changes and exit.

    For more information, see *Deploying EJBs with the Deployer Tool* at
    `http://www.weblogic.com/docs51/classdocs/API_ejb/EJB_deploy.html`

Updating the JDBC Configuration

The JDBC Configuration is set in the weblogic.properties file located in the WebLogic
Process Integrator installation directory. By default the pathname for this directory is
`\bea\wlprocessintegrator1.2.1`.

To edit the JDBC configuration:

1. Do one of the following:

    -   On a Windows system, use the Windows Explorer to navigate to the
        WebLogic Process Integrator installation directory.

    -   On a UNIX system, go to the WebLogic Process Integrator installation
        directory. For example, if the WebLogic Process Integrator is installed in the
        `/bea/wlprocessintegrator1.2.1` directory, enter the following:

        `cd /bea/wlpiprocessintegrator1.2.1`

2. Open the `weblogic.properties` file in your preferred text editor.

3. Locate the `WLPI Specific Settings` section.

4. Uncomment the JDBC driver section for your database by removing the pound
    (#) characters.

5. Specify your database name, host server, and port in the line beginning with
    `url=`. Listing 4-2, Listing 4-3, and Listing 4-4 following this procedure provide
    examples for each supported database type.

6. Set `user=` and `password=` to an account with create, update, and delete
    privileges on the database server. Listing 4-2, Listing 4-3, Listing 4-4, Listing 4-5
    following this procedure provide examples for each supported database type.

7. Save your changes and close the file.

Listing 4-2   JDBC Connection Pool Properties for Oracle Thin

```
# Connection pool to Oracle using Thin
weblogic.jdbc.connectionPool.wlpiPool=\
      url=jdbc:oracle:thin:@MyOracleHost:1521:MyDB,\
      driver=oracle.jdbc.driver.OracleDriver,\
      loginDelaySecs=1,\
      initialCapacity=1,\
      maxCapacity=3,\
      capacityIncrement=1,\
      allowShrinking=true,\
      shrinkPeriodMins=15,\
      refreshTestMinutes=10,\
      props=user=MyUserName;password=MyPassword
```

Listing 4-3   JDBC Connection Pool Properties for MS SQL Server

```
# Connection pool for MS SQL Server 7.0 database connectivity
weblogic.jdbc.connectionPool.wlpiPool=\
      url=jdbc:weblogic:mssqlserver4:MyDB@MySqlServerHost\
      :1433?sql7=true,\
      driver=weblogic.jdbc.mssqlserver4.Driver,\
      loginDelaySecs=1,\
      initialCapacity=1,\
      maxCapacity=2,\
      capacityIncrement=1,\
      allowShrinking=true,\
      shrinkPeriodMins=15,\
      refreshTestMinutes=10,\
      props=user=MyUserName;password=MyPassword
```

Listing 4-4   JDBC Connection Pool Properties for Sybase jConnect

```
# Connection pool to Sybase using jConnect
weblogic.jdbc.connectionPool.wlpiPool=\
        url=jdbc:sybase:Tds:MySybaseHost:5000/MyDB,\
        driver=com.sybase.jdbc.SybDriver,\
        loginDelaySecs=1,\
        initialCapacity=1,\
        maxCapacity=3,\
        capacityIncrement=1,\
        allowShrinking=true,\
        shrinkPeriodMins=15,\
        refreshTestMinutes=10,\
        props=user=MyUserName;password=MyPassword
```

Listing 4-5   JDBC Connection Pool Properties for Cloudscape

```
# Connection pool to CLOUDSCAPE
weblogic.jdbc.connectionPool.wlpiPool=\
      url=jdbc:cloudscape:<CLOUDSCAPE_DBNAME>,\
      driver=COM.cloudscape.core.JDBCDriver,\
      initialCapacity=1,\
      maxCapacity=2,\
      capacityIncrement=1,\
      props=user=none;password=none;server=none
```

Editing the rdbmsrealm.properties File

The `rdbmsrealm.properties` file is located in the WebLogic Process Integrator installation directory. By default the pathname for this directory is `\bea\wlprocessintegrator1.2.1`.

To edit the `rdbmsrealm.properties` file:

1. Do one of the following:

   - On Windows NT, Choose Start→Programs→Windows Explorer, then navigate to the WebLogic Process Integrator installation directory.

   - On UNIX, go to the bin subdirectory of the WebLogic Process Integrator installation directory. For example, if the installation directory were /bea/wlprocessintegrator1.2.1 you would enter:

     ```
     cd /bea/wlprocessintegrator1.2.1/bin
     ```

2. Open the `rdmsrealm.properties` file in your preferred text editor.

3. Uncomment the JDBC driver section for your database by removing the pound (#) characters.

4. Specify your database name, host server, and port in the line beginning with `dbURL=`. The Listings (Listing 4-2, Listing 4-3, and Listing 4-4) preceding this procedure provide examples for each supported database type.

5. Set `dbUser=` and `dbPassword=` to the appropriate user account.

6. Save your changes and close the file.

Configuring an Alternate Security Realm for BEA WebLogic Process Integrator

By default, WebLogic Process Integrator users, organizations, and roles are maintained in an RDBMS security realm. This section provides instructions for configuring an alternate security realm.

Users, roles, and organizations within BEA WebLogic Process Integrator are maintained in a BEA WebLogic Server security realm. Creating a new user, role, or organization for use in BEA WebLogic Process Integrator means adding those entities to the BEA WebLogic Server security realm. Therefore, the functions of creating and deleting users, roles, and organizations are accessible only if a manageable realm is used and detected by BEA WebLogic Process Integrator.

For an overview of the available security realm types, see "Security Fundamentals" at `http://e-docs.bea.com/wls/docs60/security/concepts.html`.

When you install BEA WebLogic Process Integrator, the software is configured to use an RDBMS security realm, where users, groups, and access control lists are read from your configured database.

Using the default RDBMS security realm you can create users, organizations, and roles through the BEA WebLogic Process Integrator Studio interface.

If you use an alternate security realm the realm must conform to certain guidelines. The requirements and relationships between WebLogic Server security realm elements and the WebLogic Process Integrator users, roles, and organizations are summarized below:

- Security realm group names must accept the `@` symbol as well as the `+` symbol.

- BEA WebLogic Process Integrator users are BEA WebLogic Server users.

- You must create the following three users:

  - `wlpisystem`
  - `admin`
  - `system`

- You must create the following two WebLogic Server groups:
  - `wlpiUsers`
  - `wlpiAdministrators`

- The users `system` and `admin` must to belong to the `wlpiUsers` group.

- The users `wlpisystem`, `system`, and `admin` must belong to the `wlpiAdministrators` group.

- WebLogic Process Integrator organizations and roles are specialized BEA WebLogic Server groups.

- Organizations are WebLogic Server groups which conform to the following format:

  `WLPIOrg@OrgName`

  For example, to create an organization called `ORG1`, you must create the BEA WebLogic Server group `WLPIOrg@ORG1`.

- To assign users to an organization, add them to the appropriate WebLogic Server group.

  For example, to assign the users to the `ORG1` organization, add them to the `WLPIOrg@ORG1` group.

- Roles are WebLogic Server groups which conform to the following format:

  `WLPIRole@RoleName+OrgName`

  For example, to create a Role called `Role1` within the `ORG1` organization, you must create the BEA WebLogic Server group `WLPIRole@Role1+ORG1`.

- To assign users to a role add them to the appropriate WebLogic Server group.

  For example, to assign users to `Role1` assign them to the `WLPIRole@Role1+ORG1` group.

Once a manageable security realm is configured and populated in conformance with the above guidelines, you can create additional users, roles, and organizations through the WebLogic Process Integrator Studio interface.

A BEA WebLogic Process Integrator Sample Configuration Files

This section provides system administrators with sample configuration files for BEA WebLogic Process Integrator. During installation, these files are automatically customized, so they will work on any supported computer system and network. They are provided here with an explanation of what they should contain.

This section includes the following topics:

- Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

- Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0

The following sample configuration files are provided:

- config.xml

- setwlpiserverenv.cmd/setwlpiserverenv.sh

- setwlpiclientenv.cmd/setwlpiclientenv.sh

- server.cmd/server.sh

Each file includes sample values for parameters that are updated by the installation program. These sample values are highlighted in **bold** and the lines in which they appear are numbered. For example:

```
DriverName="oracle.jdbc.driver.OracleDriver"          (2)
```

The numbers correspond to numbered explanations of the parameters after each file listing.

config.xml

By default, the BEA WebLogic Process Integrator installation sets up the `wlpiDomainExample` domain. The configuration for this domain is defined in eXtensible Markup Language (XML). Persistent storage for the domain configuration is provided by a single XML configuration file located in `install_dir`/config/wlpiDomainExample/config.xml, where `install_dir` is the directory under which WebLogic Process Integrator has been installed (typically `wlprocessintegrator1.2.1`).

Selected sections of the `config.xml` file are provided in the following listing. The sections illustrated are those that are updated in the course of the installation. This sample is provided for informational purposes only. The `config.xml` file should not be edited directly. Updates to this file should only be made through the WebLogic Server 6.0 Administration Console. Any changes made to the file while the domain is active will not have any effect on the domain's configuration and are likely to be lost.

Listing A-1   Selected sections of the config.xml File

```
<!--If your domain is active, please do not edit the config.xml
file. Any changes made to that file while the domain is active
will not have any effect on the domain's configuration and are
likely to be lost. If your domain is inactive, you may edit this
file with an XML editor. If you do so, please refer to the
configuration DTD. In general, we recommend that changes to your
configuration file be made through the Administration Console.-->

  <Domain
     Name="wlpiDomainExample"
  >

    <MailSession
     JNDIName="com.bea.wlpi.MailSession"
     Name="wlpiMailSession"
     Properties="mail.from=xyz@bea.com;mail.host=bea.com      (1)
     Targets="myserver"
    />
    <Application
         Name="WLPI Application"
         Path="lib"
    >
    .
    .
    .
    <JDBCConnectionPool
     CapacityIncrement="1"
     DriverName="oracle.jdbc.driver.OracleDriver"             (2)
     InitialCapacity="1"
     LoginDelaySeconds="1"
     MaxCapacity="3"
     Name="wlpiPool"
     Properties="user=wlpidbadm;password=password"            (3)
     RefreshMinutes="10"
     ShrinkPeriodMinutes="15"
     ShrinkingEnabled="true"
     Targets="myserver"
     TestConnectionsOnRelease="false"
     TestConnectionsOnReserve="false"
     TestTableName="dual"
     URL="jdbc:oracle:thin:@mydbhost:port:wlpidb"             (4)
    />
    .
    .
    .
```

```
        <RDBMSRealm
         DatabaseDriver="oracle.jdbc.driver.OracleDriver"       (2)
         DatabasePassword="password"                            (3)
         DatabaseURL="jdbc:oracle:thin:@mydbhost:port:wlpidb"   (4)
         DatabaseUserName="wlpidbadm"                           (3)
         Name="wlpiRDBMSRealmForOracle"
         RealmClassName="com.bea.wlpi.rdbmsrealm.RDBMSRealm"
         SchemaProperties="getGroupMembers=SELECT GM_GROUP,
 GM_MEMBER from groupmembers WHERE GM_GROUP = ?;
 deleteGroup2=DELETE FROM aclentries WHERE A_PRINCIPAL = ?;
        .
        .
        .
      />
        .
        .
        .
   </Domain>
```

1. Mail session properties
   The user e-mail address and domain are set based on the values provided in "Step 7. Completing the Installation" on page 2-19. In this example, the user e-mail is `xyz@bea.com` and domain is `bea.com`.

2. JDBC driver
   The driver required to access the WebLogic Process Integrator database. This parameter is set based on the value entered as part of the JDBC configuration as shown in "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" on page 2-14

3. Database user name and password
   The username and password required to access the WebLogic Process Integrator database server. The account must include create, update, and delete privileges. In this sample the user is wlpidbadm and the password is password. This username and password are set based on the values entered as part of the JDBC configuration as shown in "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0" on page 2-14.

4. JDBC Connection Pool URL
   The URL for the database, as specified in the JDBC driver documentation. The URL specifies the database server host name, database name, and port. The format for the JDBC Connection Pool URL is discussed in "JDBC Connection Pool URL Format" on page 2-16.

setwlpiserverenv.cmd/setwlpiserverenv.sh

This executable file is used to set the environment variables for the BEA WebLogic Process Integrator server. It is installed in the `bin` directory under the BEA WebLogic Process Integrator installation directory. By default, the pathname for this directory is `c:\bea\wlprocessintegrator1.2.1\bin`.

On a Windows system, the file is named `setwlpiserverenv.cmd`; on a UNIX system, `setwlpiserverenv.sh`.

Listing A-2   Sample setwlpiserverenv.cmd/setwlpiserverenv.sh file

```
@rem Copyright (c) 2000 BEA Systems, Inc. All rights reserved.
@rem setWLPIServerEnv.cmd - establish WebLogic Process Integrator Server runtime
environment.
@echo off

rem Set JAVA_HOME to the directory containing your Java 2 runtime environment.
set JAVA_HOME=c:\bea\jdk130                                               (1)

rem Set WL_HOME to the directory containing WebLogic Server 6.0.
set WL_HOME=c:\bea\wlserver6.0sp1                                         (2)

rem Set BEA_HOME to the directory containing WebLogic Process Integrator license.
set BEA_HOME=c:\bea                                                       (3)

rem Set WLPI_HOME to the directory containing WebLogic Process Integrator.
set WLPI_HOME=c:\bea\wlprocessintegrator1.2.1                            (4)
```

1. JAVA_HOME
The root directory of the Java run-time environment. BEA WebLogic Process Integrator expects to find a Java archive called `jre\lib\rt.jar` in a subdirectory of this directory.

2. WL_HOME
The root directory of the BEA WebLogic Server installation. This directory is detected by the installation program.

3. BEA_HOME
The BEA Home directory specified in "Step 5. Specifying the BEA Home and Installation Location" on page 2-10

4. WLPI_HOME
The root directory of the BEA WebLogic Process Integrator installation specified in "Step 5. Specifying the BEA Home and Installation Location" on page 2-10.

setwlpiclientenv.cmd/setwlpiclientenv.sh

This executable file is used to set the environment variables for the BEA WebLogic Process Integrator Worklist and Studio client applications. It is installed in the `bin` directory under the BEA WebLogic Process Integrator installation directory. By default, the pathname for this directory is
`c:\bea\wlprocessintegrator1.2.1\bin`.

On a Windows system, the file is named `setwlpiclientenv.cmd`; on a UNIX system, `setwlpiclientenv.sh`.

Listing A-3   Sample setwlpiclientenv.cmd/setwlpiclientenv.sh File

```
@rem Copyright (c) 2000 BEA Systems, Inc. All rights reserved.
@rem SetWLPIClientEnv.cmd - establish WebLogic Process Integrator client runtime
environment.
@echo off

rem Set JAVA_HOME to the location of your Java 2 runtime environment.
set JAVA_HOME=c:\bea\jdk130                                                  (1)

rem Set WLPI_HOME to the directory containing WebLogic Process Integrator.
set WLPI_HOME=c:\bea\wlprocessintegrator1.2.1                                (2)
```

1. JAVA_HOME
   The root directory of the Java run-time environment. BEA WebLogic Process Integrator expects to find a Java archive called `jre\lib\rt.jar` in a subdirectory of this directory.

2. WLPI_HOME
   The root directory of the BEA WebLogic Process Integrator installation specified in "Step 5. Specifying the BEA Home and Installation Location" on page 2-10.

server.cmd/server.sh

This executable command file starts WebLogic Process Integrator 1.2.1 for WebLogic Server 6.0. It is installed in the `bin` directory under the BEA WebLogic Process Integrator installation directory. By default, the pathname for this directory is `c:\bea\wlprocessintegrator1.2.1\bin`.

On a Windows system, the file is named `server.cmd`; on a UNIX system, `server.sh`.

If you have configured a Cloudscape database for use with WebLogic Process Integrator, you must edit this file as follows:

- Comment out the line beginning with `set CLASSPATH`. Uncomment the `rem set CLASSPATH` line.

- Comment out the line beginning with `%JAVA_HOME`. Uncomment the `rem %JAVA_HOME` line.

The relevant items are shown in bold in the following listing.

Listing A-4   Sample server.cmd/server.sh File

```
@rem Copyright (c) 2000 BEA Systems, Inc. All rights reserved.
@rem Server.cmd - Launch WebLogic Server/Process Integrator.
@echo off

setlocal
call SetWLPIServerEnv
call ChkWLPIServerEnv
if "%ERROR%"=="true" goto end

echo Starting WebLogic Process Integrator
cd %WLPI_HOME%
set PATH=%WL_HOME%\bin;%WL_HOME%\bin\oci816_8;%PATH%

set
CLASSPATH=%WL_HOME%\lib\ejb20.jar;%WL_HOME%;%WL_HOME%\lib\weblogic_sp.jar;%WLPI_H
OME%\lib\mail.jar;%WL_HOME%\lib\weblogic.jar;%WLPI_HOME%\lib\wlpi-aux.jar;%WLPI_H
OME%\lib\rdbmsrealm.jar

rem For Cloudscape users, uncomment this classpath and rem the original.
rem This sets the cloudscape classes in the classpath (change if required).
rem set
CLASSPATH=%WL_HOME%\lib\ejb20.jar;%WL_HOME%;%WL_HOME%\lib\weblogic_sp.jar;%WLPI_H
OME%\lib\mail.jar;%WL_HOME%\lib\weblogic.jar;%WLPI_HOME%\lib\wlpi-aux.jar;%WLPI_H
OME%\lib\rdbmsrealm.jar;;%WL_HOME%\samples\eval\cloudscape\lib\cloudscape.jar

%JAVA_HOME%\bin\java -hotspot -ms64m -ms64m -classpath %CLASSPATH%
-Dbea.home=%BEA_HOME% -Dweblogic.home=%WL_HOME%
-Dweblogic.system.home=%WLPI_HOME% -Dweblogic.Domain=wlpiDomainExample
-Dweblogic.Name=myserver -Djava.security.policy==%WL_HOME%\lib\weblogic.policy
weblogic.Server

rem For Cloudscape users, uncomment these system properties and rem the original.
rem This includes the property that points to the directory containing the database
files.
rem Change -Dcloudscape.system.home if your database directory is different.
rem %JAVA_HOME%\bin\java -hotspot -ms64m -ms64m -classpath %CLASSPATH%
-Dbea.home=%BEA_HOME% -Dweblogic.home=%WL_HOME%
-Dweblogic.system.home=%WLPI_HOME% -Dweblogic.Domain=wlpiDomainExample
-Dcloudscape.system.home=%WL_HOME%\samples\eval\cloudscape\data
-Dweblogic.Name=myserver -Djava.security.policy==%WL_HOME%\lib\weblogic.policy
weblogic.Server

goto finish

:finish
cd config\wlpiDomainExample

endlocal
```

Configuration Files for WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1

The following sample configuration files are provided:

- weblogic.properties

- rdbmsrealm.properties

- setwlpiserverenv.cmd/setwlpiserverenv.sh

- setwlpiclientenv.cmd/setwlpiclientenv.sh

Each file includes sample values for parameters that are updated by the installation program. These sample values are highlighted in **bold** and the lines in which they appear are numbered. For example:

```
url=jdbc:oracle:thin:@mydbhost:1521:wlpidb,\                    (2)
```

The numbers correspond to numbered explanations of the parameters after each file listing.

You can refer to this section whenever you do any manual re-configurations after the initial installation of BEA WebLogic Process Integrator. For example, you may need to change:

- Database and/or database connection pool information.

- JDBC driver.

- Pathname of the directory in which BEA WebLogic Process Integrator or associated applications (such as BEA WebLogic Server, JDK, and JDBC drivers) are installed.

weblogic.properties

The BEA WebLogic Process Integrator installation includes a customized version of the weblogic.properties file which is installed in the root directory of the BEA WebLogic Process Integrator installation. (The default pathname for this directory is c:\bea\wlprocessintegrator1.2.1.)

This customized weblogic.properties file includes a section called "WLPI Specific Settings," which is shown in the following listing.

Listing A-5   Sample WLPI Specific Settings Section of weblogic.properties

```
# ***************************************************************
#    WLPI Specific Settings      *
# ***************************************************************

# Security realm
weblogic.security.realmClass=com.bea.wlpi.rdbmsrealm.RDBMSRealm
#weblogic.security.realm.debug=true

# ***************************************************************
# Information stored in the RDBMS realm
# If you want to use WebLogic Process Integrator with the Weblogic
# Properties Realm simply comment out the line
# "weblogic.security.realmClass=..." and
# un-comment the following lines.
# NOTE: any information added to the RDBMS realm after the initial
# installation will not be reflected here automatically - you must
# add it manually.
# ***************************************************************

# WLPI users
#weblogic.password.admin=security
#weblogic.password.system=security
#weblogic.password.wlpisystem=wlpisystem
#weblogic.password.joe=password
#weblogic.password.mary=password

# WLPI groups
#weblogic.security.group.wlpiUsers=system,joe,mary,admin
#weblogic.security.group.wlpiAdministrators=wlpisystem,system,admin,joe,mary

# WLPI orgs
#weblogic.security.group.WLPIOrg@ORG1=joe,mary,admin
#weblogic.security.group.WLPIOrg@ORG2=joe,mary,admin
```

```
# WLPI roles
#weblogic.security.group.WLPIRole@Role1+ORG1=joe,mary,admin
#weblogic.security.group.WLPIRole@Role1+ORG2=joe,mary,admin
#weblogic.security.group.WLPIRole@Role2+ORG1=joe,mary,admin
#weblogic.security.group.WLPIRole@Role2+ORG2=joe,mary,admin

# ACLs and permissions.
weblogic.allow.list.weblogic.jndi.weblogic=everyone
weblogic.allow.list.weblogic.jndi.weblogic.ejb=everyone
weblogic.allow.create.weblogic.jms.ServerSessionPool=everyone
weblogic.allow.execute.weblogic.servlet.containerManaged=everyone
weblogic.allow.reserve.weblogic.jdbc.connectionPool.wlpiPool=everyone
weblogic.allow.reset.weblogic.jdbc.connectionPool.wlpiPool=guest,admin
weblogic.allow.shrink.weblogic.jdbc.connectionPool.wlpiPool=guest,admin

# # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # # #
# WEBLOGIC EJB PROPERTIES
# ------------------------------------------------
# CLUSTER USERS: Note that ALL EJB deployment should be done in the
# *per-cluster* properties file ONLY.

# Workaround for WebLogic session bean timeout 'feature'.
weblogic.rmi.dgc.idlePeriodsUntilTimeout=1000

# Deploy enterprise JavaBeans.
weblogic.ejb.deploy=./lib/wlpi-ejb.jar,./lib/pobean.jar

# Connection pool for MS SQL Server 7.0 using Type 4 jDriver.
##MSSQL##weblogic.jdbc.connectionPool.wlpiPool=\
##MSSQL##
url=jdbc:weblogic:mssqlserver4:<MSSQL_DBNAME>@<MSSQL_HOSTNAME>:<MSSQL_PORT>?sql7
=true,\
##MSSQL##driver=weblogic.jdbc.mssqlserver4.Driver,\
##MSSQL##loginDelaySecs=1,\
##MSSQL##initialCapacity=1,\
##MSSQL##maxCapacity=2,\
##MSSQL##capacityIncrement=1,\
##MSSQL##allowShrinking=true,\
##MSSQL##shrinkPeriodMins=15,\
##MSSQL##refreshTestMinutes=10,\
##MSSQL##props=user=<MSSQL_USER>;password=<MSSQL_PASSWORD>

# Connection pool to Oracle using Type 4 (thin) JDBC driver.          (1)
weblogic.jdbc.connectionPool.wlpiPool=\
url=jdbc:oracle:thin:@mydbhost:1521:wlpidb,\                          (2)
driver=oracle.jdbc.driver.OracleDriver,\
loginDelaySecs=1,\
initialCapacity=1,\
maxCapacity=3,\
capacityIncrement=1,\
allowShrinking=true,\
```

```
shrinkPeriodMins=15,\
refreshTestMinutes=10,\
props=user=wlpidbadm;password=password;\                                          (3)

# Connection pool to Sybase using jConnect JDBC driver.
##SYBASE##weblogic.jdbc.connectionPool.wlpiPool=\
##SYBASE##url=jdbc:sybase:Tds:<SYBASE_HOSTNAME>:<SYBASE_PORT>/<SYBASE_DBNAME>,\
##SYBASE##driver=com.sybase.jdbc.SybDriver,\
##SYBASE##loginDelaySecs=1,\
##SYBASE##initialCapacity=1,\
##SYBASE##maxCapacity=3,\
##SYBASE##capacityIncrement=1,\
##SYBASE##allowShrinking=true,\
##SYBASE##shrinkPeriodMins=15,\
##SYBASE##refreshTestMinutes=10,\
##SYBASE## props=user=<SYBASE_USER>;password=<SYBASE_PASSWORD>,\

# Connection pool to CLOUDSCAPE
##CLOUDSCAPE##        weblogic.jdbc.connectionPool.wlpiPool=\
##CLOUDSCAPE##        url=jdbc:cloudscape:<CLOUDSCAPE_DBNAME>,\
##CLOUDSCAPE##        driver=COM.cloudscape.core.JDBCDriver,\
##CLOUDSCAPE##        initialCapacity=1,\
##CLOUDSCAPE##        maxCapacity=2,\
##CLOUDSCAPE##        capacityIncrement=1,\
##CLOUDSCAPE##        props=user=none;password=none;server=none

# DataSource setup
weblogic.jdbc.TXDataSource.com.bea.wlpi.TXDataSource=wlpiPool
# JMS topic connection factory. For persistent JMS, set DeliveryMode=persistent
weblogic.jms.connectionPool=wlpiPool
weblogic.jms.connectionFactoryName.wlpiFactory=com.bea.wlpi.TopicConnectionFacto
ry
weblogic.jms.connectionFactoryArgs.wlpiFactory=DeliveryMode=non_persistent

# JMS topics
weblogic.jms.topic.wlpiAudit=com.bea.wlpi.AuditTopic
weblogic.jms.topic.wlpiError=com.bea.wlpi.ErrorTopic
weblogic.jms.topic.wlpiEvent=com.bea.wlpi.EventTopic
weblogic.jms.topic.wlpiTimer=com.bea.wlpi.TimerTopic
weblogic.jms.topic.wlpiNotify=com.bea.wlpi.NotifyTopic
# Mail session
weblogic.resource.MailSession.com.bea.wlpi.MailSession=\
    mail.from=user@host,\
    mail.host=xyz.bea.com                                                         (4)
.
.
.
```

1. The JDBC connection pool section specific to your selected database is uncommented by removing the pound (#) characters. In this sample the Oracle JDBC driver section was uncommented.

2. The database name, host server, and port specified in "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" on page 2-17 are used to construct the URL required by your JDBC driver. In this sample the format required by the Oracle thin driver is shown. The sample host server is `mydbhost`, the port is `1521` (the default for Oracle), and the database name is `wlpidb`.

3. The `user=` and `password=` are set based on the values provided in "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" on page 2-17. The user name and password must correspond to an account with create, update, and delete privileges on the database server.

4. The user e-mail address and domain are set based on the values provided in "Step 7. Completing the Installation" on page 2-19. In this example, the user e-mail is `xyz@bea.com` and domain is `bea.com`.

setwlpiserverenv.cmd/setwlpiserverenv.sh

This executable file is used to set the environment variables for the BEA WebLogic Process Integrator server. It is installed in the bin directory under the BEA WebLogic Process Integrator installation directory. By default, the pathname for this directory is c:\bea\wlprocessintegrator1.2.1\bin. On a Windows system, the file is named setwlpiserverenv.cmd; on a UNIX system, setwlpiserverenv.sh.

Listing A-6   Sample setwlpiserverenv.cmd/setwlpiserverenv.sh file

```
@rem Copyright (c) 2000 BEA Systems, Inc. All rights reserved.
@rem setWLPIServerEnv.cmd - establish WebLogic Process Integrator
Server runtime environment.
@echo off

rem Set JAVA_HOME to the directory containing your Java 2 runtime
environment.
set JAVA_HOME=c:\jdk1.2.2                                      (1)

rem Set WL_HOME to the directory containing WebLogic Server 5.1.
set WL_HOME=c:\weblogic                                        (2)

rem Set JDBC_DRIVER to a classpath entry for the JDBC driver you
are using.
rem Classpath entries can be directories, zip files, or jar files.
Multiple entries
rem must be semicolon separated. You must install the JDBC driver
yourself.
rem Supported databases include:
rem Microsoft SQL Server
rem ##MSSQL## set JDBC_DRIVER=%WL_HOME%\mssqlserver4\classes
rem Oracle 8.1.5
set JDBC_DRIVER=%WL_HOME%\lib\classes12.zip;%WL_HOME%\lib\
nls_charset12.zip                                             (3)
rem Sybase System 11
rem ##SYBASE## set JDBC_DRIVER=%WL_HOME%\jConnect-4_2\classes
rem Cloudscape
rem ##CLOUDSCAPE## set
JDBC_DRIVER=%WL_HOME%\eval\cloudscape\lib\cloudscape.jar

rem Set WLPI_HOME to the directory containing WebLogic Process
Integrator.
set WLPI_HOME=c:\bea\wlprocessintegrator1.2.1                 (4)

rem Set BEA_HOME to the directory containing WebLogic Process
Integrator license.
set BEA_HOME=c:\bea                                           (5)
```

1. JAVA_HOME

   The root directory of the Java run-time environment. BEA WebLogic Process Integrator expects to find a Java archive called `jre\lib\rt.jar` in a subdirectory of this directory.

2. WL_HOME

   The root directory of the BEA WebLogic Server installation. This directory is detected by the installation program.

3. JDBC_DRIVER

   The directory in which the JDBC driver classes, `.jar`, or `.zip` files reside.

4. WLPI_HOME

   The root directory of the BEA WebLogic Process Integrator installation specified in "Step 5. Specifying the BEA Home and Installation Location" on page 2-10.

5. BEA_HOME

   The BEA Home directory specified in "Step 5. Specifying the BEA Home and Installation Location" on page 2-10.

setwlpiclientenv.cmd/setwlpiclientenv.sh

This executable file is used to set the environment variables for the BEA WebLogic Process Integrator Worklist and Studio client applications. It is installed in the `bin` directory under the BEA WebLogic Process Integrator installation directory. By default, the pathname for this directory is `c:\bea\wlprocessintegrator1.2.1\bin`.

On a Windows system, the file is named `setwlpiclientenv.cmd`; on a UNIX system, `setwlpiclientenv.sh`.

Listing A-7   Sample setwlpiclientenv.cmd (setwlpiclientenv.sh) File

```
@rem Copyright (c) 2000 BEA Systems, Inc. All rights reserved.

@rem SetWLPIClientEnv.cmd - establish WebLogic Process Integrator
client runtime environment.

@echo off

rem Set JAVA_HOME to the location of your Java 2 runtime
environment.

set JAVA_HOME=c:\jdk1.2.2 #                                        (1)

rem Set WLPI_HOME to the directory containing WebLogic Process
Integrator.

set WLPI_HOME=c:\bea\wlprocessintegrator1.2.1 #                    (2)
```

1. JAVA_HOME
   The root directory of the Java run-time environment. BEA WebLogic Process Integrator expects to find a Java archive called `jre\lib\rt.jar` in a subdirectory of this directory.

2. WLPI_HOME
   The root directory of the BEA WebLogic Process Integrator installation specified in "Step 5. Specifying the BEA Home and Installation Location" on page 2-10.

rdbmsrealm.properties

This executable file is used to set the environment variables for the database connections to BEA WebLogic Process Integrator. It is installed in the root directory of BEA WebLogic Process Integrator. By default, the pathname for this directory is `c:\bea\wlprocessintegrator1.2.1`.

Listing A-8   Sample rdbmsrealm.properties File

```
#####################################
# - - - - - - MS SQL Server 7.0 - - - - - - -
##MSSQL##driver=weblogic.jdbc.mssqlserver4.Driver
##MSSQL##dbURL=jdbc:weblogic:mssqlserver4:<MSSQL_DBNAME>@<MSSQL_HOSTNAME>:<MSSQ
L_PORT>?sql7=true
##MSSQL##dbUser=<MSSQL_USER>
##MSSQL##dbPassword=<MSSQL_PASSWORD>


# - - - - - - ORACLE Thin - - - - - - -                                    (1)
driver=oracle.jdbc.driver.OracleDriver
dbURL=jdbc:oracle:thin:@mydbhost:1521:wlpidb                               (2)
dbUser=wlpidbadm
dbPassword=password                                                       (3)

getGroupNewStatement=false


# - - - - - - SYBASE using jConnect - - - - -
##SYBASE##dbURL=jdbc:sybase:Tds:<SYBASE_HOSTNAME>:<SYBASE_PORT>/<SYBASE_DBNAME>
##SYBASE##driver=com.sybase.jdbc.SybDriver
##SYBASE##useMultipleConnections=true
##SYBASE##dbUser=<SYBASE_USER>
##SYBASE##dbPassword=<SYBASE_PASSWORD>

# - - - - - - CLOUDSCAPE - - - - - -
##CLOUDSCAPE##dbURL=jdbc:cloudscape:<CLOUDSCAPE_DBNAME>;create=true;autocommit=
false
##CLOUDSCAPE##driver=COM.cloudscape.core.JDBCDriver
##CLOUDSCAPE##getGroupNewStatement=true
##CLOUDSCAPE##dbUser=
##CLOUDSCAPE##dbPassword=
##CLOUDSCAPE##getGroupNewStatement=true

# Prepared statements for querying
```

```
getUser=SELECT U_NAME, U_PASSWORD FROM users WHERE U_NAME = ?
getGroupMembers=SELECT GM_GROUP, GM_MEMBER from groupmembers WHERE GM_GROUP = ?
getAclEntries=SELECT A_NAME, A_PRINCIPAL, A_PERMISSION FROM aclentries WHERE
A_NAME = ? ORDER BY A_PRINCIPAL
getUsers=SELECT U_NAME, U_PASSWORD FROM users
getGroups=SELECT GM_GROUP, GM_MEMBER FROM groupmembers ORDER BY GM_GROUP
getAcls=SELECT A_NAME, A_PRINCIPAL, A_PERMISSION FROM aclentries ORDER BY A_NAME,
A_PRINCIPAL
getPermissions=SELECT DISTINCT A_PERMISSION FROM aclentries
getPermission=SELECT DISTINCT A_PERMISSION FROM aclentries WHERE A_PERMISSION = ?

# Prepared statements for insertions

newUser=INSERT INTO users VALUES ( ? , ? )
addGroupMember=INSERT INTO groupmembers VALUES ( ? , ? )

# Prepared statements for deletions

removeGroupMember=DELETE FROM groupmembers WHERE GM_GROUP = ? AND GM_MEMBER = ?
removeLastGroupMember=UPDATE groupmembers SET GM_MEMBER = '' WHERE GM_GROUP = ?
AND GM_MEMBER = ?
deleteUser1=DELETE FROM users WHERE U_NAME = ?
deleteUser2=DELETE FROM groupmembers WHERE GM_MEMBER = ?
deleteUser3=DELETE FROM aclentries WHERE A_PRINCIPAL = ?
deleteGroup1=DELETE FROM groupmembers WHERE GM_GROUP = ?
deleteGroup2=DELETE FROM aclentries WHERE A_PRINCIPAL = ?
```

1. The JDBC connection pool section specific to your selected database is uncommented by removing the pound (#) characters. In this sample the Oracle JDBC driver section was uncommented.

2. The database name, host server, and port specified in "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" on page 2-17 are used to construct the URL required by your JDBC driver. In this sample the format required by the Oracle thin driver is shown. The sample host server is mydbhost, the port is 1521 (the default for Oracle), and the database name is wlpidb.

3. The dbuser= and dbpassword= are set based on the values provided in "Configuring JDBC: WebLogic Process Integrator 1.2.1 for WebLogic Server 5.1" on page 2-17. The user name and password must correspond to an account with create, update, and delete privileges on the database server. In this sample dbUser is set to wlpidbadm and dbPassword is set to password.