Installation and Configuration

Sun Solaris Operating Environment™ **Software and the IBM WebSphere® Application Server**

ea**Post**

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Preface

About Customer Self Service and eaSuite™

edocs has developed the industry's most comprehensive software and services for deploying Customer Self-Service solutions. **eaSuite**™ combines electronic presentment and payment (EPP), order management, knowledge management, personalization and application integration technologies to create an integrated, natural starting point for all customer service issues. eaSuite's unique architecture leverages and preserves existing infrastructure and data, and offers unparalleled scalability for the most demanding applications. With deployments across the healthcare, financial services, energy, retail, and communications industries, and the public sector, eaSuite powers some of the world's largest and most demanding customer self-service applications. eaSuite is a standards-based, feature rich, and highly scalable platform, that delivers the lowest total cost of ownership of any self-service solution available.

eaSuite is comprised of four product families:

- Electronic Presentment and Payment (EPP) Applications

- Advanced Interactivity Applications

- Enterprise Productivity Applications

- Development Tools
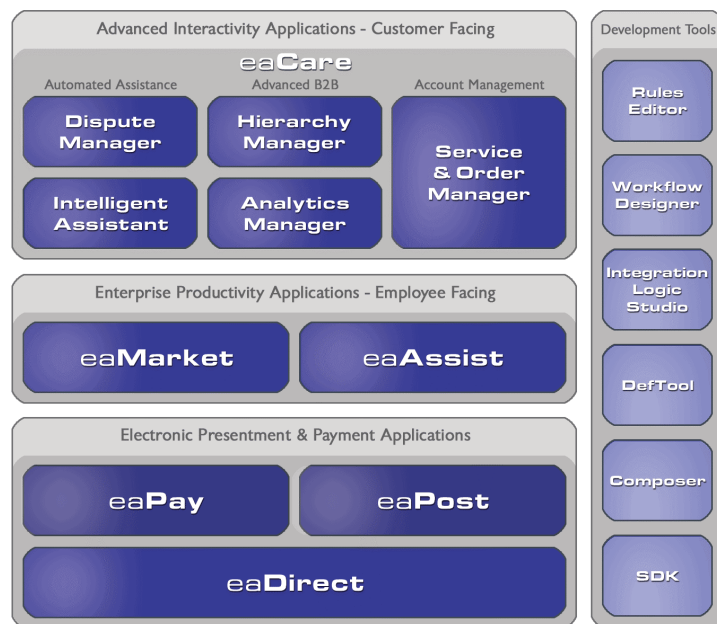
Electronic Presentment and Payment (EPP) Applications are the foundation of edocs' Customer Self-Service solution. They provide the core integration infrastructure between organizations' backend transactional systems and end users, as well as rich e-billing, e-invoicing and e-statement functionality. Designed to meet the rigorous demands of the most technologically advanced organizations, these applications power Customer Self-Service by managing transactional data and by enabling payments and account distribution.

> **eaDirect™** is the core infrastructure of enterprise Customer Self-Service solutions for organizations large and small with special emphasis on meeting the needs of organizations with large numbers of customers, high data volumes and extensive integration with systems and business processes across the enterprise. Organizations use eaDirect with its data access layer, composition engine, and security, enrollment and logging framework to power complex Customer Self-Service applications.

> **eaPay™** is the electronic payment solution that decreases payment processing costs, accelerates receivables and improves operational efficiency. eaPay is a complete payment scheduling and warehousing system with real-time and batch connections to payment gateways for Automated Clearing House (ACH) and credit card payments, and payments via various payment processing service providers.

> **eaPost**® is the account content distribution system that handles all the complexities of enrollment, authentication and secure distribution of summary account information to any endpoint, while also bringing customers back the organization's Website to manage and control their self-service experience.

Advanced Interactivity Applications are a comprehensive set of advanced customer-facing self-service capabilities that enable the full range of business and consumer customer service activities. These sophisticated modules have the flexibility to completely customize the Customer Self-Service solution to meet vertical industry and specific company requirements.

eaCare™ consists of a rich set of sophisticated self-service modules – Dispute Manager, Intelligent Assistant, Hierarchy Manager, Analytics Manager, and Service and Order Manager - for automated assistance, advanced business-to-business applications and account management. These capabilities come together to create a web self-service dashboard for customers to access all service offerings from a single, easy-to-use interface. eaCare's modularity accelerates time to market with components that can be deployed incrementally in a phased approach.

Enterprise Productivity Applications are employee-facing solutions that empower customer service representatives, sales agents, account managers, marketing managers, broker-dealers and channel partners within an organization and external partner organizations to facilitate self-service and to support assisted service. Employees leverage edocs' Customer Self-Service solution to deliver customer service, access information, create and deploy marketing and customer service content, and perform activities for the benefit of customers.

eaAssist™ reduces interaction costs and increases customer satisfaction by enabling enterprise agents – customer service representatives (CSRs), sales agents, broker-dealers and others – to efficiently access critical account data and service-related information to effectively service customers. Through its browser interface designed especially for the enterprise agent, eaAssist enables agents to take advantage of customer-facing online capabilities to provide better service by more efficiently resolving customer account inquiries at the point of customer contact.

eaMarket™ is the personalization, campaign and content management solution that enables organizations to increase revenue and improve customer satisfaction by weaving personalized marketing and customer service messages throughout the Customer Self-Service experience. The transactional account data that provides the foundation for a Customer Self-Service solution – such as transaction activity, service or usage charges, current task and prior service history – bring valuable insight into customers and can help optimize personalized marketing and customer service campaigns. eaMarket leverages that data to present relevant marketing and customer service messages to customers.

edocs' **Development Tools** are visual development environments for designing and configuring edocs' Customer Self-Service solutions. The Configuration Tools encompass data and rules management, workflow authoring, systems integration, and a software development kit that makes it easy to create customer and employee-facing self-service applications leveraging eaSuite.

Obtaining edocs Software and Documentation

You can download edocs software and documentation directly from Customer Central at https://support.edocs.com. After you log in, click on the Downloads button on the left. When the next page appears, you will see a table displaying all of the available downloads. To search for specific items, select the Version and/or Category and click the Search Downloads button. If you download software, an email from edocs Technical Support will automatically be sent to you (the registered owner) with your license key information.

If you received an edocs product installation CD, load it on your system and navigate from its root directory to the folder where the software installer resides for your operating system. You can run the installer from that location, or you can copy it to your file system and run it from there. The product documentation included with your CD is in the Documentation folder located in the root directory. The license key information for the products on the CD is included with the package materials shipped with the CD.

Related Documentation

Online Help for Command Center functions, and a PDF version of this guide are also available.

Online	How to Access
Help	Select Help from eaPost Command Center screens.
A PDF of this guide	A PDF of this guide is available on the eaPost product CD-ROM.

This guide is part of the eaPost documentation set. For more information about implementing your eaPost application, see one of the following guides:

Print Document	Description
Portal Consolidation Production Guide	How to configure and operate the eaPost production environment. It describes configuration tasks done after installation.
Data Presentation Production Guide	How to set up and run a live eaDirect application in a J2EE environment.
Deploying and Customizing J2EE Applications	How to customize J2EE web applications for deployment with the eaSuite.

The eaSuite products eaDirect, eaMarket, eaPay and eaAssist provide their own documentation.

If you need help

Technical support is available to customers who have valid maintenance and support contracts with edocs. Technical support engineers can help you install, configure, and maintain your edocs application.

edocs provides global Technical Support services from the following Support Centers:

US Support Center
Natick, MA
Mon-Fri 8:30am – 8:00pm US EST
Telephone: 508-652-8400

Europe Support Center
London, United Kingdom
Mon-Fri 9:00am – 5:00 GMT
Telephone: +44 20 8956 2673

Asia Pac Rim Support Center
Melbourne, Australia
Mon-Fri 9:00am – 5:00pm AU
Telephone: +61 3 9909 7301

Customer Central
https://support.edocs.com

Email Support
mailto:support@edocs.com

When you report a problem, please be prepared to provide us the following information:

- What is your name and role in your organization?

- What is your company's name?

- What is your phone number and best times to call you?

- What is your e-mail address?

- In which edocs product did a problem occur?

- What is your Operating System version?

- What were you doing when the problem occurred?

- How did the system respond to the error?

- If the system generated a screen message, please send us that screen message.

- If the system wrote information to a log file, please send us that log file.

If the system crashed or hung, please tell us.

1

Installation

Installation Overview

Before you can install eaPost, you must install eaDirect and configure the eaDirect database to interact with eaPost (see the *Installing and Configuring eaDirect Guide* for information about these procedures).

This document assumes that you have the application server and database server on different systems.

The steps required to implement eaPost are:

1. Install eaDirect along with the required software.

    See the *eaDirect Installation and Configuration Guide* for more information about installing eaDirect.

2. Install eaPost and configure system wide options.

    Install the eaPost application, first on the database server, then on the application server.

    If you are upgrading from a previous release, please see the section *Upgrading eaPost*.

3. Configure the eaPost Settings page steps, and create eaPost jobs in the Command Center. For more information about eaPost settings and jobs, see the *Portal Consolidation Production Guide*.

Hardware and Software Requirements

Confirm that your system meets the minimum recommended hardware and software requirements for installing eaPost, as described in the release notes.

2

Setting Up a Database Server for eaPost

Overview

To install and configure eaPost on the database server, you will need to:

1. Install the eaPost database components.

   There are separate scripts for configuring a new Oracle9i database for eaPost and for migrating an existing eaPost database to the new schema.

2. Configure a new Oracle9i database for eaPost or migrate an existing eaPost database to the new schema.

3. Add the eaPost jobs to the eaDirect database.

4. Enable access to the eaPost database.

User Privileges Required for Installing eaPost Database Server Components

In order to install eaPost and manipulate Oracle files and scripts (including eaDirect database server components) requires *root* and *oracle* administrator privileges. Specifically, *root* privileges are required to install the eaPost database server components, and *oracle* administrator privilege to run the eaPost database configuration script.

By default, the database files copied to */db/oracle* are assigned the user and group account *oracle:dba*. We recommended that you use the default user and group account to help ensure a successful installation. The Oracle examples in this guide also show the default user and group account *oracle:dba*.

Throughout this installation guide, you will be prompted to switch to the appropriate user privilege when necessary.

Installing eaPost Database Components

The following installation procedure shows how to install the eaPost database server components using the InstallAnywhere GUI.

To install eaPost database components:

1. Log in to your server as the root user.

2. After you obtain and locate the eaPost software installer as described in the Preface of this guide, you can run it as follows:

   `# ./Postins.bin`

   A start-up screen appears.

3. On the Introduction screen, read the eaPost introductory information. Then click **`Next`**.

4. On the License Agreement screen, carefully read and accept the terms of the license agreement (use the scroll bars to move up and down on the screen) by clicking the appropriate radio button. Then click **`Next`**.

5. On the Enter Serial Number screen, enter your product serial number. It is stapled to the inside front cover of this guide (if your serial number has been misplaced, contact edocs Technical Support). Then click **`Next`**.

6. On the Owner of Web Application Server screen, enter the name of the application server owner (the recommended 'owner' is *nobody*). Then click **`Next`**.

7. On the Group of Web Application Server screen, enter the name of the group for the application server (the recommended group is *nobody*). Then click **`Next`**.

8. On the Choose Install Folder screen, accept the default installation folder (*/opt/EDCSpost*) or click **`Choose`** to specify another installation folder. Then click **`Next`**.

9. On the Choose Product Features screen, click **`Database`**. Then click **`Next`**.

10. On the Pre-Installation Summary screen, confirm that the information is accurate. Then click **`Install`**.

    At this point, the eaPost database server components are copied to the designated installation folder. A status bar on the bottom of the screen shows each database server component being installed. No user intervention is required.

    The Install Complete screen reports a successful installation and the directory that contains the database server components.

11. Click **`Done`** to exit the installer.

Configuring the Oracle Database for eaPost

To configure a new eaPost Oracle9i database, you must run the *eapost_admin.sh* script.

Run the database install script

1. Log in as the *oracle* user.

2. Set the Oracle SID to the one you will configure for eaPost. For example:

    ```
    ORACLE_SID=epx0
    export ORACLE_SID
    ```

3. Change the directory to the default location where you installed the eaPost files. For example:

    ```
    cd /opt/EDCSpost/db/oracle
    ```

4. Enter the following command at the prompt:

    ```
    ./eapost_admin.sh
    ```

    The edocs eaPost server Administration Main Menu displays an initial set of options.

    ```
      eaPost Database Installation Administration Menu
      ---------------------------------------------------

           [1] Sign in Menu

           [2] Capture Database File Locations

           [3] Install eaPost database



           [Q] Quit

      ---------------------------------------------------

     Enter Your Selection:
    ```

Sign in to the database

This installation process assumes the Oracle Optimal Flexible Architecture (OFA) for the database files. When you installed the Oracle9i server software distribution, you should have created at least four mount points (one for the software and three for the database files). See the Oracle9i server installation documentation for more information about OFA and creating mount points.

To sign in to the database:

1. From the Administration screen, select Option 1, `Sign in Menu`. The database sign-in screen appears.

2. At each prompt, enter a username, password, and SID for the eaPost Oracle9i database. For example:

    ```
    Enter Database USERNAME: epx_dba
    Enter Database PASSWORD: epx
    Enter ORACLE_SID: epx0
    ```

3. After you have entered all the required information, you will return to the main menu.

Capture database file locations

This option specifies the absolute path for the files that make up the eaPost database. The location of these files depends on the type of file structure you are using.

During this session, you will be prompted to define absolute paths (mount points) for the database files.

If you plan to use only one disk location, you can define a single directory path. For example:

```
$ORACLE_HOME/oradata
```

However, if you plan to distribute the software over several disks (for example, to improve performance), you may want to define a group of related subdirectory paths. For example:

Database File	Suggested Mount Point
Redo log file location	`/u01/oradata`
System tablespace file location	`/u02/oradata`
Temporary tablespace file location	`/u03/oradata`
Rollback tablespace file location	`/u04/oradata`
Data tablespace file location	`/u05/oradata`
Index tablespace file location	`/u06/oradata`
Control files location	`/u07/oradata`

To capture database file locations:

1. From the Administration menu, select option 2, `Capture Database File Locations.`

2. At the prompt, enter an absolute path for each group of files:

    - Redo Log files
    - System Tablespace file
    - Temporary Tablespace files
    - Rollback Tablespace file
    - Data Tablespace file
    - Index Tablespace file
    - Control file

3. For the Redo log file location, a second prompt asks for a second location for log files. This step is recommended, but not required.

4. The script then validates the locations you specified. If the locations are valid, you will see this message:

   ```
   Capture of Database file locations completed.
   ```

   If the locations are not valid, you will return to the main menu. Select **Option 2, Capture Database File Locations**, and reenter the paths.

5. After you have entered all the required information, the main menu appears.

Install edocs eaPost

From the Administration menu, select **Option 3, Install edocs eaPost.** The Install eaPost Oracle Database screen appears.

```
Install eaPost Oracle Database
 ------------------------------------
 [1] Initialize Database I -  Creation

 [2] Shutdown Database

 [3] Startup Database

 [4] Initialize Database II - Define Dictionary & eaPost DB Layout

 [5] Install Application Database I - Schema Installation

 [6] Install Application Database II - Install PL/SQL Code Base

 [7] View Status Log Directory

 -- ----------------------------------
 [R] & Return to previous menu

SELECT YOUR OPTION:
```

Initialize Database I

This option begins the installation of the physical database.

To initialize the database (part I):

1. Select **Option 1, Initialize Database I**. This step does not require user input. When the process is complete, you will return to the Install eaPost Oracle Database screen.

2. Select **Option 2, Shut Down Database**. Wait for the process to complete and return you to the Install eaPost Oracle Database screen.

3. Select **Option 3, Start Up Database.** Wait for the process to complete and return you to the Install eaPost Oracle Database screen.

   These options let you perform a quick test on the database you just defined. The Shutdown Database and Startup Database options must be executed in succession.

4. When the process is complete, the Install eaPost Oracle Database screen appears.

Initialize Database II

These utility scripts define the data dictionary for the new database and create a stored procedure for the tablespaces and rollback segment data files required by eaPost. The stored procedure also contains the absolute paths defined in Option 2, Capture Database File Locations.

To initialize the database (Part II):

1. Select **Option 4, Initialize Database II.** No user input is required for this option.

2. Wait for the process to complete. This might take several minutes. During this process, status messages indicate that the utility scripts and the stored procedure are executing. A final message indicates whether the processing was successful.

3. When the process is complete, the Install eaPost Oracle Database screen appears.

Install Application Database I

This option creates the eaPost database tables and indexes.

To install the Application Database I:

1. Select Option 5, **Install Application Database I - Schema Installation**.

2. No user input is required for this option. The "error" messages displayed during this step are part of the process and can be ignored.

3. When the process is complete, the Install eaPost Oracle Database screen appears.

Install Application Database II

This option compiles the application-defined stored procedures. These stored procedures constitute the database processing for eaPost.

To install the application database (part II):

1. Select **Option 6, Install Application Database II.**

2. No user input is required for this option. Wait for the process to complete. This might take several minutes. During this process, status messages indicate that the individual program modules are compiling. A final message indicates whether the processing was successful.

3. Select **Return to Previous Menu**. The eaPost server Administration Main Menu appears.

Adding eaPost Jobs to eaDirect

You must run a shell script to add the eaPost jobs to the eaDirect Command Center.

1. Log in as the oracle user.

2. Set the ORACLE SID to the eaDirect SID. For example:

```
ORACLE_SID=edx0
export ORACLE_SID
```

3. Change the working directory to the *$EPX_HOME/db/oracle* directory. For example:

```
cd /opt/EDCSpost/db/oracle
```

4. Run the eaPost job installation script, providing the eaDirect database username and password as arguments. For example:

```
./install_task.sh edx_dba edx
```

Enabling Access to the eaPost Database

The final step in configuring a new eaPost Oracle9i database is to edit the *tnsnames.ora* and *listener.ora* files to ensure proper access to the database.

If you are upgrading your existing eaPost database, this information may already exist. You should still confirm that the required code exists in the *tnsnames.ora* and *listener.ora* file.

To enable access to the eaPost database:

1. Log in as the **oracle** user.

2. Change directory to the *$ORACLE_HOME/network/admin* directory. For example:

```
cd /export/home/oracle/product/9.2.0/network/admin
```

3. Add the following lines to the file *tnsnames.ora* (or confirm that they exist):

```
epx.db =
 (DESCRIPTION =
 (ADDRESS_LIST =
 (ADDRESS = (PROTOCOL=TCP)(HOST=<your_database_server>)(PORT =
1521))
 )
 (CONNECT_DATA = (SID = epx0))
 )
```

Be sure to substitute the name of your database server for
your_database_server.

4. Save and close the *tnsnames.ora* file.

5. Add the following lines to the file *listener.ora* (or confirm that they exist):

```
(SID_DESC =
  (SID_NAME = epx0)
  (ORACLE_HOME = /export/home/oracle/product/9.2.0)
)
)
```

6. Save and close the *listener.ora* file.

Troubleshooting Your Database Configuration

At some point during the eaPost Oracle9i configuration process, you might encounter problems. Although you may be able to troubleshoot the process using the error messages displayed, you may still have to quit the session and run the configuration script again. This results in the loss of any information you had entered.

If terminating and restarting the session is your only option, you must first do a manual cleanup of the partially configured database.

To clean up a partially configured database:

1. Use the **Shutdown Database** option to shut down any database that has been created.

2. Change directory to the $ORACLE_BASE/*admin* directory. For example:

/export/home/oracle/admin

3. Remove any directories whose name matches the *oracle* SID defined in the Setting User and Database Identification Menu option, for example, **epx0**.

4. Change directory to the **$ORACLE_HOME/dbs** directory. For example:

   `/export/home/oracle/product/9.2.0/dbs`

5. Remove any references to the initialization file created during the installation process. The references you are looking for take the form: *initepx0.ora*.

6. Change directory to the individual directories that you specified in the Capture Database File Locations option.

7. Remove any directories whose name matches the *oracle* SID (for example, *epx0*) defined in the Sign in Menu option.

3

Installing eaPost on the Application Server

Installing eaPost Application Components

This process loads all the eaPost application files using the hierarchy of subdirectories that eaPost uses to store the application files. The default directory for the eaPost distribution is **/opt/EDCSpost**.

To install eaPost application components:

1. Log in to the application server as the root user.

2. After you obtain and locate the eaPost software installer as described in the Preface of this guide, you can run it as follows:

   # ./Postins.bin

   A start-up screen appears.

3. On the Introduction screen, read the eaPost introductory information. Then click **Next**.

4. On the License Agreement screen, carefully read and accept the terms of the license agreement (use the scroll bars to move up and down on the screen) by clicking the appropriate radio button. Then click **Next**.

5. On the Enter Serial Number screen, enter your product serial number. It is stapled to the inside front cover of this guide (if your serial number has been misplaced, contact edocs Technical Support). Then click **Next**.

6. On the Owner of Web Application Server screen, enter the name of the application server owner (the recommended 'owner' is *nobody*). Then click **Next**.

7. On the Group of Web Application Server screen, enter the name of the group for the application server (the recommended group is *nobody*). Then click **Next**.

8. On the Choose Install Folder screen, accept the default installation folder (*/opt/EDCSpost*) or click **Choose** to specify another installation folder. Then click **Next**.

9. On the Choose Product Features screen, click **Application**, or select **Custom** and then select the components you wish to install. Then click **Next**.

10. On the Pre-Installation Summary screen, confirm that the information is accurate. Then click **Install**.

    At this point, the eaPost application server components are copied to the designated installation folder. A status bar on the bottom of the screen shows each database server component being installed. No user intervention is required.

    The Install Complete screen reports a successful installation and the directory that contains the database server components.

11. Click **Done** to exit the installer.

Configuring eaPost on the Application Server

After you have installed the eaPost application server files have been installed, they need to be deployed, and WebSphere must be configured for eaPost:

1. Merge the eaPost EAR into the eaDirect EAR.

2. Assemble and re-deploy the updated eaDirect EAR.

3. Assemble and deploy the eaPost sample application to view redirected bills.

4. Add a database pool and datasource to WebSphere for eaPost.

Updating the eaDirect EAR

The *ear-eadirect.ear* file must be updated for eaPost. eaPost installs a file called *ear-eapost.ear*, which must be merged into the *ear-eadirect.ear* file.

To Update the eaDirect EAR:

1. Before you start, please make a backup copy of the original *ear-eadirect.ear*.

2. Log on as the root user, and change your working directory to *$EPX_HOME/lib*.

3. Run the database configuration tool, using the following command.

   ```
   java -jar ear_merge_app.jar
   ```

4. Enter the paths to the EAR files and the EAR which will be replaced with the merged EAR file, similar to the following example:
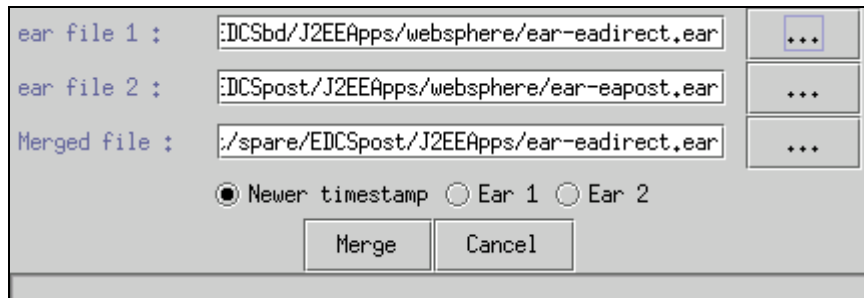
You can click on the **...** button to bring up a file dialog to locate the EAR files. Be sure to select which method to use when merging the EAR files. The example shows EAR 2 as the selected method, which means the *ear-eapost.ear* file's contents will override any entries in EAR 1.

5. The utility places the updated EAR file as specified by the Merged File parameter.

Command Line Merge

The merge utility can also be run from the command line, as follows:

```
java -jar ear_merge_app.jar
<-newertimestamp|-ear1|-ear2> <file1> <file2> <mergedfile> [-
overwrite]
```

where the parameters between:

<> are required
 [] are optional

and the parameters are defined as:

-newertimestamp: if the contents of the two files are the same, use the one with the newer time stamp

-ear1: prioritize the content in file 1

-ear2: prioritize the content in file 2

-overwrite: overwrite the merged file if it exists. (the default is to not overwrite)

For example:

```
java -jar ear_merge_app.jar -ear2
/opt/EDCSbd/J2EEApps/websphere/ear-eadirect.ear
/opt/EDCSpost/J2EEApps/websphere/ear-eapost.ear
/opt/EDCSpost/J2EEApps/ear-eadirect.ear
```

The preceding example produces a new merged EAR file called *ear-eadirect.ear* in the directory */opt/EDCSpost/J2EEApps*.
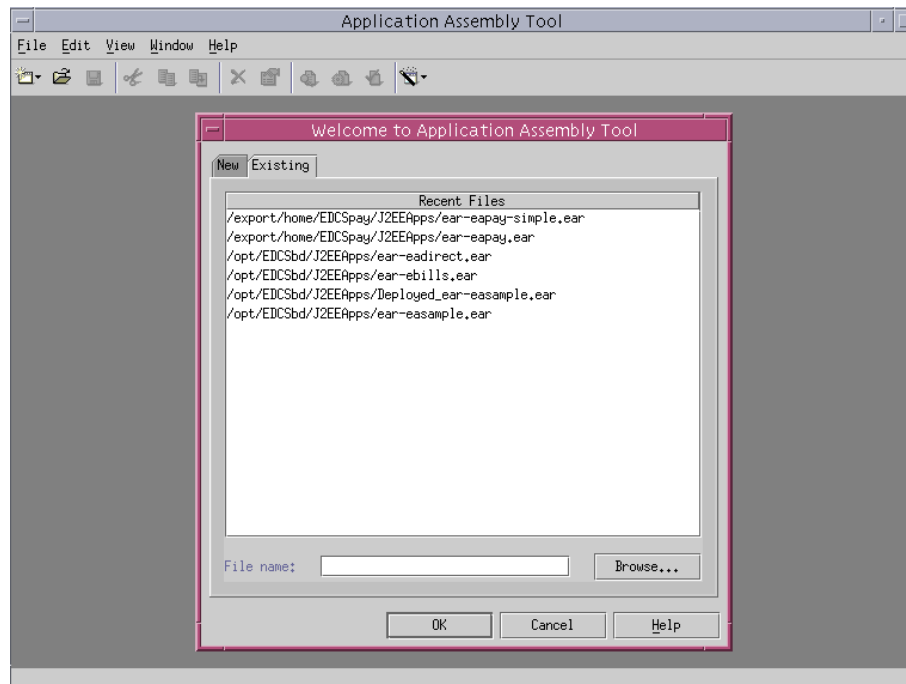
Assembling the EAR Files for Websphere

The archives must be assembled, before they can be deployed in the WebSphere server.
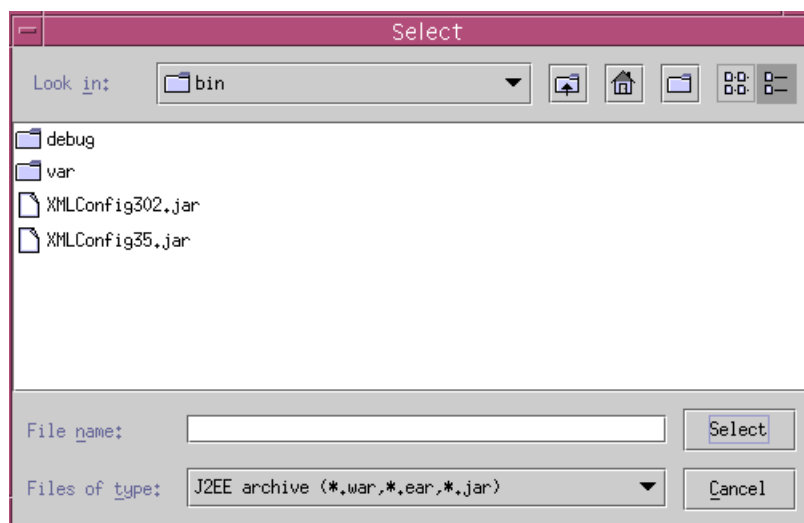
To Assemble the EAR Files:

1. Start the WebSphere assembler script, for example:

    ```
    cd /opt/WebSphere/bin
    ./assembly.sh &
    ```


2. Select the **Existing** tab, then click on **Browse**.

3. Navigate to the directory where you put the updated eaDirect EAR file, and Select *ear-eadirect.ear*.

4. Select **File**, then **Generate code for deployment**. A screen similar to the following displays:

5. Enter the values for the fields described in the following table:

Field	Description
Deployed module location	Enter the path to the assembled *.ear* file.
Dependent classpath	Enter the java Classpaths *$EDX_HOME/lib/edx_system.jar*, *$EDX_HOME/lib/edx_client.jar* and *$EDX_HOME/lib/edx_common.jar*
Database type	Click on the down arrow and select **Oracle version 8**.

6. Leave all other fields as they are, and click on **Generate Now**.

    Generating code can take quite a while, depending on the speed of the system.

7. Repeat steps 1 through 6, this time choosing *ear-eapost-sample.ear* to deploy the sample eaPost application (optional).

To Assemble and Deploy the eaPost Sample Application:

The eaPost sample application allows bills to be redirected. It can be used as a base for your site's application if you wish to customize the web application.

*   To assemble and install the eaPost sample application, follow the same steps that show how to assemble and deploy the updated *ear-eadirect.ear*, but use the file *%EPX_HOME%/samples/J2EEApps/weblogic/eapost-sample.ear*.

Configuring WebSphere

1. Make sure the WebSphere server is running.

2. Start the administrative console. For example:

   /opt/WebSphere/AppServer/bin/adminclient.sh &

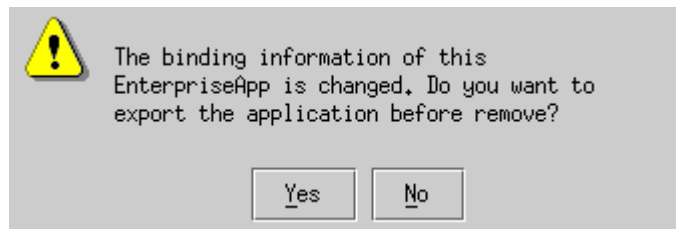All the following sections start from the Administrative Console.

Removing the eaDirect Enterprise Application

You must remove the existing eaDirect Enterprise Application before deploying the
updated, assembled WebSphere EAR file.

1. Under the WebSphere Tree, expand **Enterprise Applications**. Right click on
   eaDirect and select **Stop**.

   An OK message displays.

2. Right click on **eaDirect**, and select **Remove**.

   > ⚠ The binding information of this
   > EnterpriseApp is changed. Do you want to
   > export the application before remove?
   >
   > [Yes]   [No]

3. Click **No** to the question about exporting the existing Enterprise application.

4. A message appears asking if you really want to remove the Enterprise application.
   Click the **Yes** button.

   A message displays indicating that the Enterprise Application was successfully
   removed.

Re-Installing the eaDirect Enterprise Application

Now you can deploy the updated, assembled WebSphere EAR file.

1. Right click on **Enterprise Applications** on the WebSphere tree, and select
   Install Enterprise Application. A wizard starts to create the new
   Application Server:
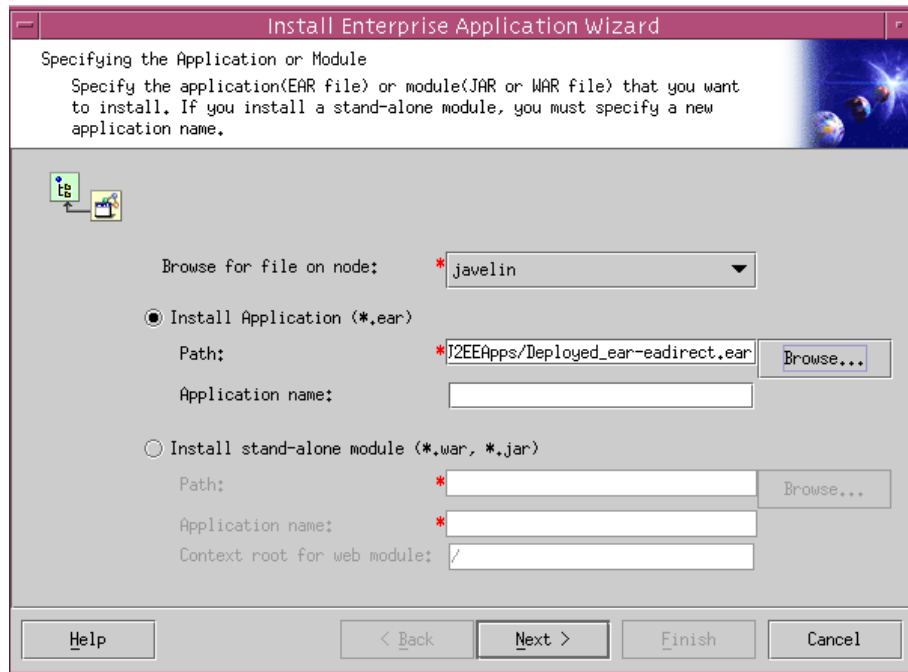
2. Browse to find the updated *Deployed-ear-eadirect.ear* file that you assembled from the updated archive.

3. Enter the **Application name** (eaDirect) and click on **Next**. Keep clicking **Next** until you get to the page that asks you to select a server:
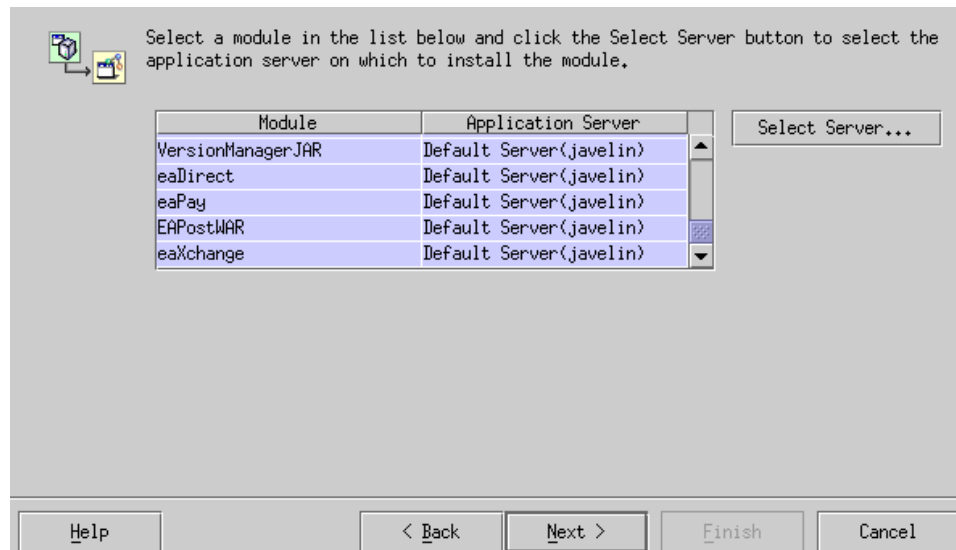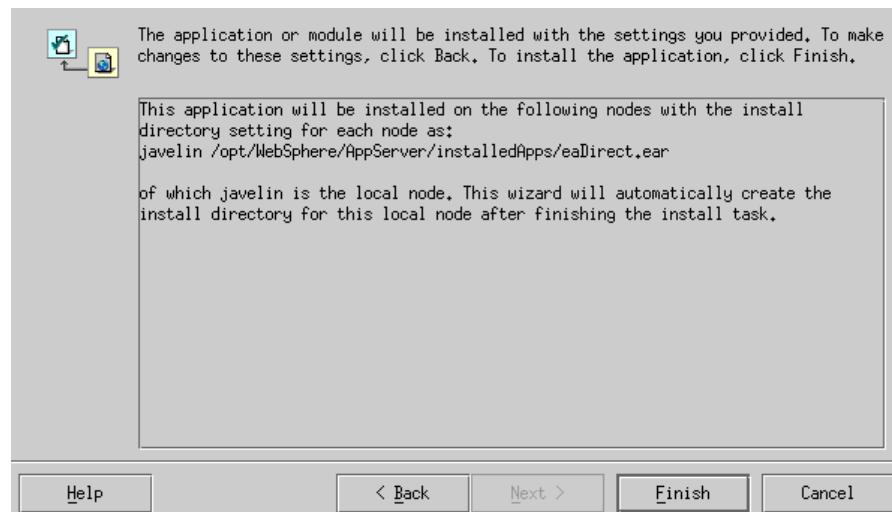

4. Select all in the list by selecting the first module in the list, holding down the Shift key, and selecting the last module in the list. Then click the **Select Server** button.
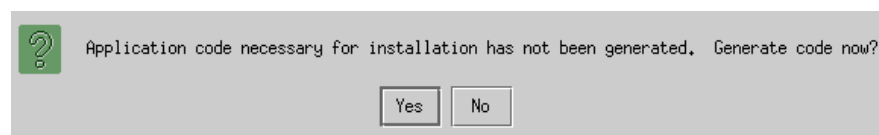
Application Server:

Default Server(javelin)

OK

Cancel

Server Group:
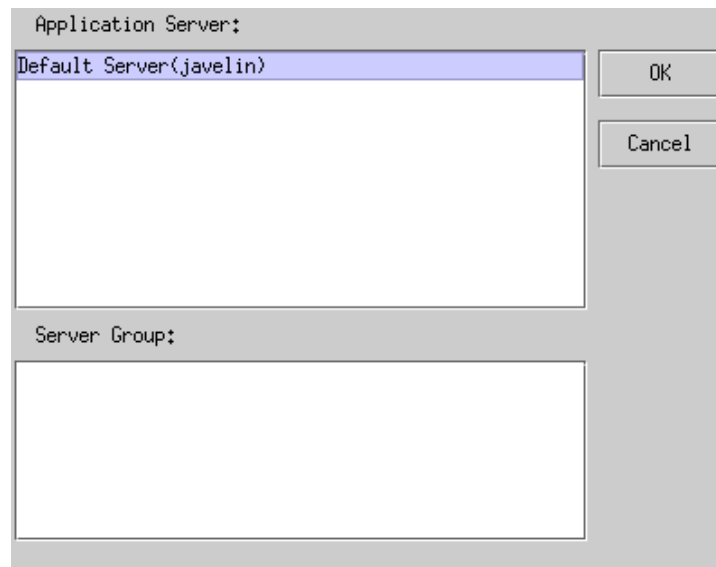
5. Select the **Default Server** (**javelin** in this example). Click on the **OK** button. This must be the same server that eaDirect is installed on.

   This returns you to the previous page. Keep clicking **Next** until you see the last page:

The application or module will be installed with the settings you provided. To make changes to these settings, click Back. To install the application, click Finish.

This application will be installed on the following nodes with the install directory setting for each node as:
javelin /opt/WebSphere/AppServer/installedApps/eaDirect.ear

of which javelin is the local node. This wizard will automatically create the install directory for this local node after finishing the install task.

| Help | | < Back | Next > | Finish | Cancel |

6. Click **Finish**. The following question may appear:

Application code necessary for installation has not been generated. Generate code now?

Yes   No

7. Click **No**, which returns you to the previous page.

8. Click **Finish** again. The new eaDirect assembled EAR file are installed as an Enterprise Application.

Regenerating the Webserver Plug-in

1. Delete the files in the *$WAS_HOME/temp* directory.

2. Start the WebSphere administration client.

3. Expand the WebSphere console tree to see the *Nodes-> <local_host>*.

4. Right-click on the local host, and select `Regen Webserver Plugin`.

Restart the IBM HTTP and WebSphere Application Servers

1. Change your working directory to */opt/IBMHTTPD/bin*, and run the *apachetcl* script to stop and then start the HTTP server. For example:

    ```
    ./apachetctl stop
    ./apachectl start
    ```

2. On the WebSphere tree, restart the Application Servers. Start up the Default Server, the server you created for eaDirect, and any other servers your site requires for other applications.

Configuring a JDBC Connection Pool

A connection pool contains named groups of JDBC connections that are created when the connection pool is registered, usually when starting up the WebSphere Server. The WebSphere Server opens JDBC connections to the database during the startup process and adds the connections to the pool.

Your application borrows a connection from the pool, uses it, and then returns it to the pool by closing it. You will create one JDBC Connection Pool for eaPost.

**To configure the eaPost JDBC connection pool and JDBC driver:**

1. Expand the Resources folder in your domain, right-click on `JDBC Providers`, and then select `New` from the menu.
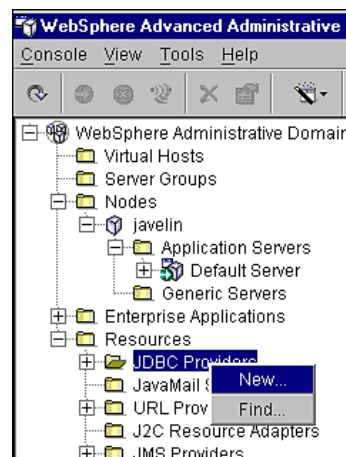
The JDBC Provider Properties dialog appears.
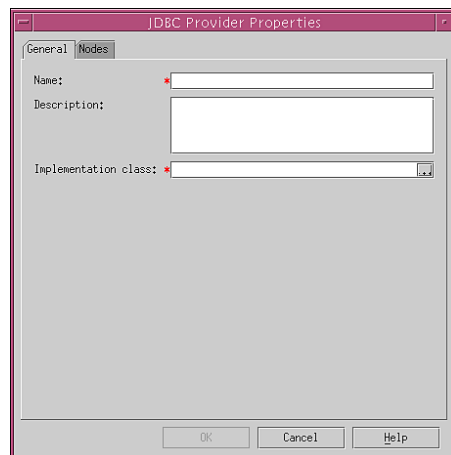
2. On the General tab, enter **eaPostConnectionPool** in the Name field.

3. Click the (...) button next to the Implementation Class field. The Select an Implementation Class dialog appears.

4. From the list of implementation classes, select **oracle.jdbc.pool.OracleConnectionPoolDataSource**.
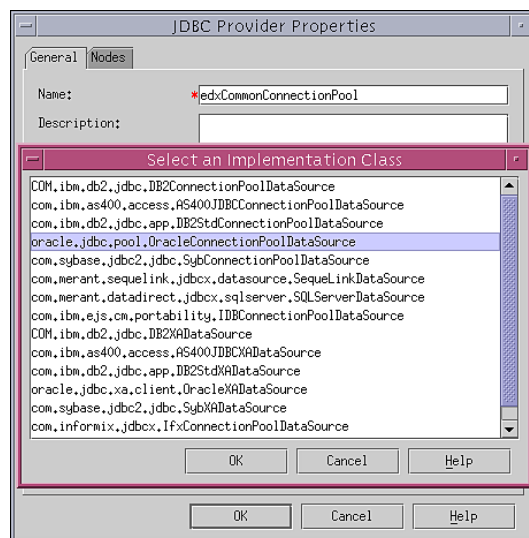
5. Click **OK**. The name of the implementation class is added to the Implementation class field in the JDBC Provider Properties dialog.
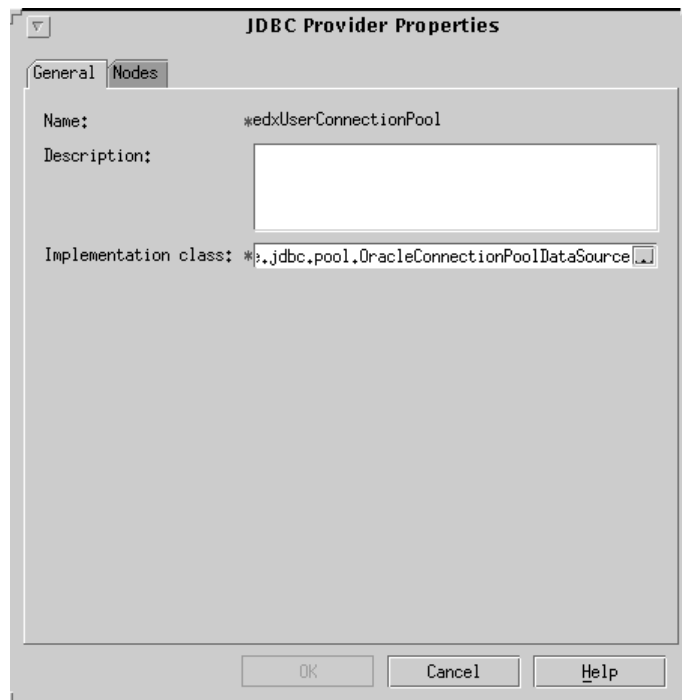
6. Click the **Nodes** tab, and click **Install New**. The Install Driver dialog appears.

7. Select the node (that is, the name of the machine that your application server is on. For example, javelin) on which you want to install the JDBC driver.
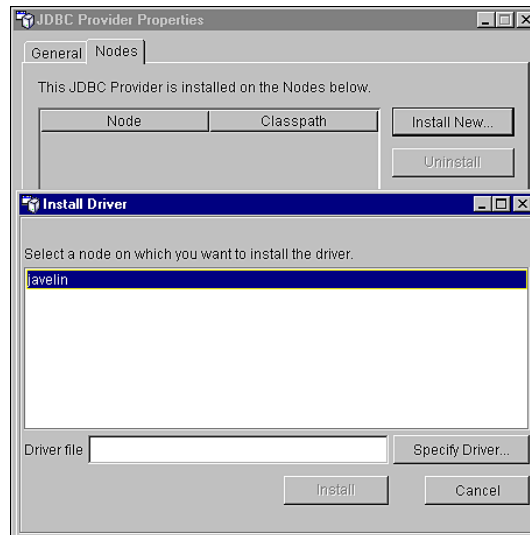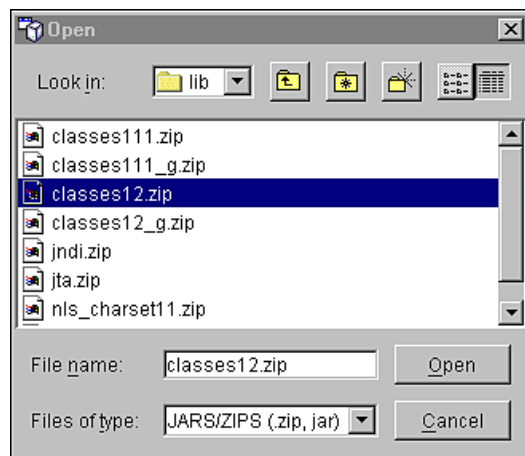

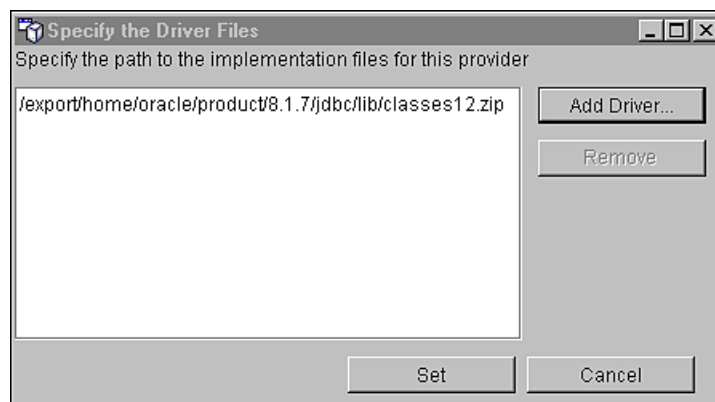8. Click **Specify Driver**. The Specify the Driver Files dialog appears.
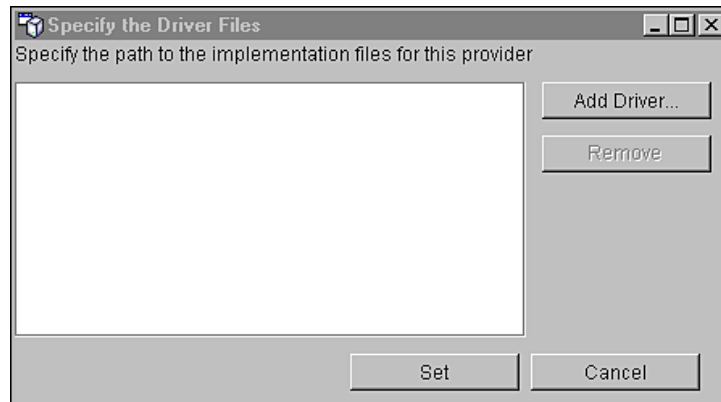
9. Click **Add Driver** and in the Open dialog, navigate to *$ORACLE_HOME/jdbc/lib*.

10. Select *classes12.zip*. The file is added to the File name field.

11. Click **Open**. The Specify the Driver Files dialog appears, showing the absolute pathname to the JDBC driver you just selected.

12. Click **Set**. The Install Driver dialog appears, showing the pathname to the selected JDBC driver in the Driver file field.
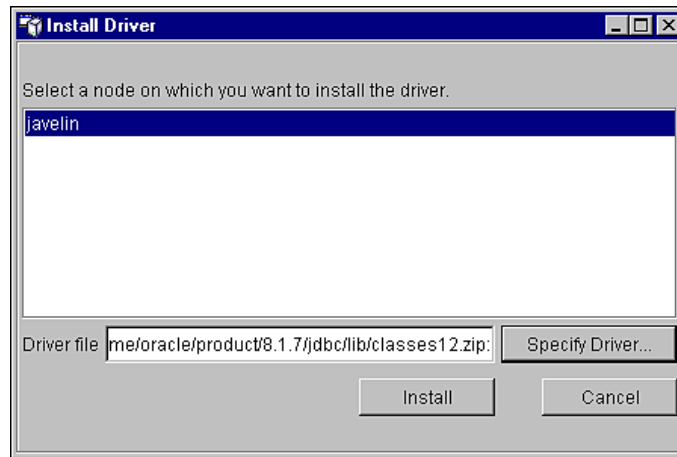
13. Click **Install**. The node and Classpath of the JDBC driver are added to the JDBC Provider Properties dialog.
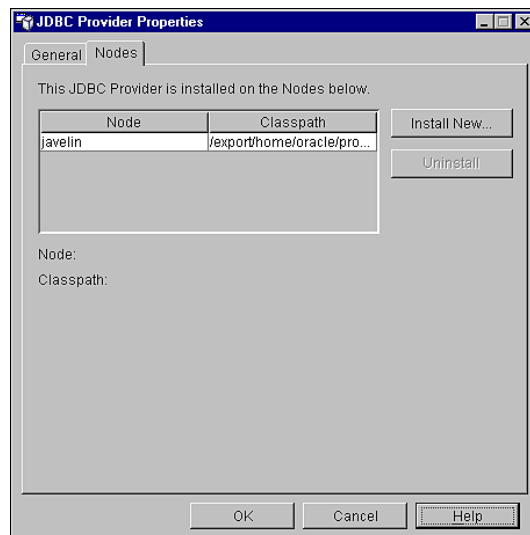
14. Click **OK**. You should see:
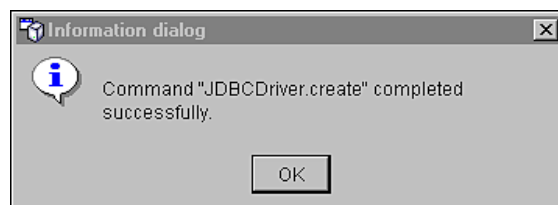
15. Click **OK** to close the Information dialog.

16. Click **Apply** for the changes to take effect.

17. Expand the Resources folder and the JDBC Providers folder to confirm that the new JDBC connection pool, eaPostConnectionPool, has been added.

Configuring JDBC transaction (TX) data sources

A transaction data source enables JDBC clients to obtain a connection to a Database Management System (DBMS). Each data source points to the value specified for the Name attribute when a JDBC connection pool was configured.

Configure one TX Data Source for eaPost.

To configure a data source for eaPostConnectionPool:

1. Expand the `Resources` folder in your domain to show the JDBC Providers folder.

2. Expand the `JDBC Providers` folder and expand `eaPostConnectionPool`.

3. Right-click on `Data Sources`, and then select `New` from the menu.
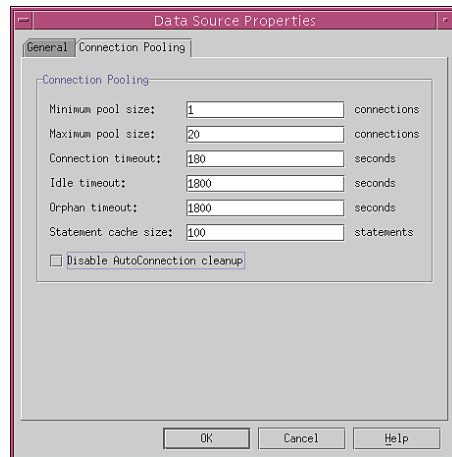
   The Data Source Properties dialog appears.

4. On the `General` tab, enter the following values for the Name and JNDI Name parameters (entering a description is optional):

| Field	Value
Name	`eapostDataSource` (case-sensitive)
JNDI Name	`eapost.databasePool` (required; case-sensitive)
user	`epx_dba` (or the name of the Oracle database user you specified during the database configuration procedure)
password	`epx` (or the name of the Oracle database password you specified during the database configuration procedure. Make sure you confirm your password.)
databaseName	`epx0` (or the name of the Oracle SID you specified during the database configuration procedure)

5. Scroll down to Custom Properties, and enter the following database properties by clicking `Add` to open a new line:

Parameter	Value

URL	`jdbc:oracle:thin:@<servername>:1521:<ORACLE_SID>`
	
	For example:
	`jdbc:oracle:thin:@javelin:1521:edx0`

6. Click the `Connection Pooling` tab. In the Maximum pool size field, set the maximum pool size to 20.

7. Make sure that the Disable AutoConnection cleanup parameter is enabled (box unchecked).

8. Click **OK** to close the Data Source Properties dialog. You should see:
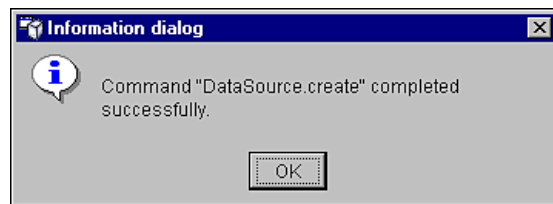
9. Click **OK** to close the Information dialog.

Once eaPost has been successfully installed, you can configure the portal and biller(s), plus configure the eaPost jobs in the Command Center. For information about how to do this, see the *Portal Consolidation Production Guide*.

Passing Environment Data to Websphere

You pass your eaPost environment to WebSphere by 'sourcing' (that is, having WebSphere call and dynamically process a file) the configuration file, *epx.confi*g, in the WebSphere Administration Server start up script, *startupServer.s*h.

To pass your eaDirect environment to WebSphere:

1. Switch to *root* user.

2. Change directory to *$WAS_HOME/bin* (for example, */opt/WebSphere/AppServer/bi*n) and stop the application server (the server you started with the *startupServer.sh* comman*d*). You can use the **kill** command to stop the application server. Open *startupServer.sh* and declare and initialize the variable *$EPX_HOME* near the beginning of the file with other variable declarations. For example:

```
# !/bin/ksh
binDir=`dirname $0`
. $binDir/setupCmdLine.sh
WAS_HOME=/opt/WebSphere/AppServer/
export WAS_HOME
EPX_HOME=/export/home/EDCSpost/
export EPX_HOME
```

3. In the same file, source *epx.config* just before the command to start the JVM (the dot and space preceding the pathname are a required part of the syntax):

```
. $EPX_HOME/config/epx.config
${JAVA_EXE?}\
-classpath $WAS_HOME/lib/bootstrap.jar:$CLASSPATH\
-Dws.ext.dirs=$WAS_EXT_DIRS\
-Djavax.rmi.CORBA.UtilClass=com.ibm.CORBA.iiop.Util\
-Dcom.ibm.CORBA.iiop.noLocalCopies=true\
-DDER_DRIVER_PATH=$DER_DRIVER_PATH\
-Dserver.root=$WAS_HOME\
-Xbootclasspath/a:$JAVA_HOME/jre/lib/ext/ibmorb.jar\
com.ibm.ws.bootstrap.WSLauncher\
com.ibm.ejs.sm.util.process.Nanny
$WAS_HOME/bin/admin.config
```

Note: The block of code in the sample above is similar to another block of code that appears in *startupServer.s*h. Make sure that you modify the appropriate block of code, which begins below the line: **if ["${DB_TYPE}" != "DB2"].**

4. Save and close *startupServer.s*h.

4

Upgrading from a Previous Version of eaPost

Upgrading eaPost

When upgrading from earlier versions of eaPost, you should:

- Migrate the existing eaPost database to the new format

- Update the eaPost jobs in the eaDirect database

- Reconfigure the portal and biller settings

- Convert the data in the eaPost database to the new format

- Add the eaPost jobs to the eaDirect database

The upgrade path depends on installation of all sequential releases and patches. edocs does not support upgrading from skipped versions. For detailed upgrade assistance, contact your edocs Professional Services representative.

For information about migrating from Oracle 8i to 9i, see the *Upgrading eaSuite 4.0 from Oracle8i to Oracle9i* guide.

Upgrading an Existing eaPost Database

You can upgrade your existing eaPost v1.2 or V1.1.1 database to eaPost v4.0.

To upgrade an existing Oracle8i database:

1. Log in as the *oracle* user.

2. Change directory to the default location where you installed the eaPost files. For example:

   `cd /opt/EDCSpost/db/oracle/migration/12to40`

   to migrate an eaPost v1.2 database, or

   `cd /opt/EDCSpost/db/oracle/migration/111to40`

to migrate an eaPost v1.1 database.

3. Set the ORACLE_SID environment variable to an eaPost database value, using the syntax from the following examples.

    The default ORACLE_SID value is typically set to the eaDirect environment variable. Changing the environment variable to eaPost will not affect eaDirect.

    Example for a Bourne or Korn shell:

    `export ORACLE_SID=bpx0`

    Example for a C shell:

    `setenv ORACLE_SID=bpx0`

4. Run the database upgrade shell script by entering the appropriate command at the prompt:

    `./migrate_111_to_40.sh`

    or

    `./migrate_12_to_40.sh`

    Both scripts ask for the following information:.

    ```
    Please enter Oracle SID       -->
    Please enter eaPost Username -->
    Please enter Password         -->
    ```

    Enter the SID and database username and password for the existing eaPost database. The updated database will use the same values.

5. The script then updates the database, and creates a log file in the current directory.

Updating the eaDirect Database

Update the eaPost tasks in the eaDirect database, so the command center will have the correct eaPost jobs.

1. Log in as the *oracle* user.

2. Change directory to the default location where you installed the eaPost files. For example, to migrate an eaPost v1.2 database:

    `cd /opt/EDCSpost/db/oracle/migration/12to40`

    or, to migrate an eaPost v1.1 database:

    `cd /opt/EDCSpost/db/oracle/migration/111to40`

3. Set the ORACLE_SID environment variable to the eaDirect database value, using the syntax from the following examples.

    Example for a Bourne or Korn shell:

    `export ORACLE_SID=epx0`

    Example for a C shell:

    `setenv ORACLE_SID=epx0`

4. Run the task update shell script by entering the appropriate command at the prompt:

    ```
    ./install_eadirect_task.sh
    ```

Reconfiguring Portal and Biller Settings

Before converting the previous version data to the new tables, you must redefine the portal and biller settings using the Command Center. Edit the aliases for the portal and the biller such that:

- match only one entry of *biller_symbol* column in the old *biller_alias* table with one entry of *billeralias* column in the new *eapost_corebilleralias* table.

- make sure one entry of the *portalalias* column in the new *eapost_coreportalalias* table matches one entry of *portal_cd* column in the old *portal* table.

Migrating existing data

Now the the portal and biller aliases are properly defined, you can run the data conversion script to convert the existing eaPost data to the new format.

1. Log in as the *oracle* user.

2. Change directory to the default location where you installed the eaPost files. For example:

    ```
    cd /opt/EDCSpost/db/oracle/migration/12to40
    ```

    to migrate an eaPost v1.2 database, or

    ```
    cd /opt/EDCSpost/db/oracle/migration/111to40
    ```

    to migrate an eaPost v1.1 database.

3. Set the ORACLE_SID environment variable to an eaPost database value, using the syntax from the following examples.

    The default ORACLE_SID value is typically set to the eaDirect environment variable. Changing the environment variable to eaPost will not affect eaDirect.

    Example for a Bourne or Korn shell:

    ```
    export ORACLE_SID=bpx0
    ```

    Example for a C shell:

    ```
    setenv ORACLE_SID=bpx0
    ```

4. Run the data conversion shell script by entering the appropriate command at the prompt:

    ```
    ./convert_eapost_data.sh
    ```

Upgrade eaPost jobs

For eaPost v4.0, you will need to create new eaPost jobs using the new job types. You should remove all existing eaPost v1.2 job types when upgrading, since these job types have been changed during the conversion to support J2EE.

To upgrade eaPost jobs:

1. Create and test new eaPost jobs for each job type, using the same configuration values as you used for the old jobs. For more information on creating jobs in eaPost, see the *Portal Consolidation Production Guide.*

2. From the edocs Command Center, delete the old eaPost jobs. For more information on deleting jobs and using the Command Center, see the *eaDirect Administrator's Guide*.