Installation and Configuration

eaPost

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Table of Contents

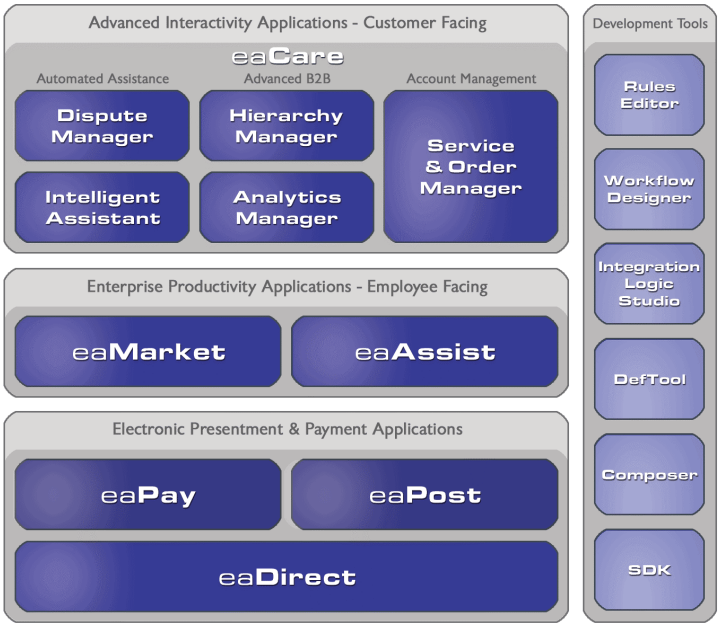
Preface

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.

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
eaPost Installation and Configuration Guide	How to install and configure eaPost on a Windows system.
Portal Consolidation Production Guide	How to configure and operate the 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.

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

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.

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:

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

Customer Central
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Email Support
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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 and configure eaDirect (see the eaDirect installation guides 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 guides for more information about installing eaDirect.

2. Install eaPost and configure system wide options.

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

   If you are upgrading from a previous release, please see the appropriate section to upgrade your database and the section *Upgrading from a Previous Version*.

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*.

System Requirements

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

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. For Unix (Solaris, HP/UX or AIX), log in as the root user on the database server.
2. After you obtain and locate the eaPost software installer as described in the Preface of this guide, you can run it as follows:

   For Unix (Solaris, HP/UX or AIX), enter **`./Postins.bin`** from a command prompt at the directory location where the installer resides.

   For Windows, double-click the **`Postins.exe`** installer application at the directory location where it resides.
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 or was emailed to you. 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 same one you used when installing eaDirect). Then click **`Next`**.
7. On the Group of Web Application Server screen, enter the name of the group for the application server (the same one you used when installing eaDirect). Then click **`Next`**.
8. On the Choose Install Folder screen, accept the default installation folder or click **`Choose`** to specify another installation folder. This document refers to that directory as EAPOST_HOME. 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.
11. The Install Complete screen reports a successful installation and the directory that contains the database server components.
12. Click **`Done`** to exit the installer.

Installing eaPost Application Components

This process loads all the eaPost application files into a hierarchy of subdirectories that eaPost uses to store the application files.

To install eaPost application components:

1. For Unix (Solaris, HP/UX or AIX), 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:

   For Unix (Solaris, HP/UX or AIX), enter **`./Postins.bin`** from a command prompt at the directory location where the installer resides.

   For Windows, double-click the **`Postins.exe`** installer application at the directory location where it resides.
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 or was emailed to you. 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. Then click **`Next`**.
7. On the Group of Web Application Server screen, enter the name of the group for the application server. 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 server component being installed. No user intervention is required.
11. The Install Complete screen reports a successful installation and the directory that contains the database server components.
12. Click **`Done`** to exit the installer.

2

Configuring the eaPost Database

Overview

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

1. Configure a new database for eaPost.
2. Add the eaPost jobs to the eaDirect database.
3. 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, you will need *oracle* administrator privileges. Specifically, you will need *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.

Configuring eaPost for Oracle

Configuring the eaPost database consists of running a script that creates a database for eaPost, plus tables and indexes in the that database.

Running the database creation script for Oracle in Unix

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 your working directory to the *db/oracle* directory under 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:
```

Signing in to the database

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

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 Oracle 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.

Capturing 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.

Installing 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.

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.`

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.

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.

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 Oracle 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 Oracle configuration process, you may 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.

Recovering from a Failed Database Configuration

If you have to abort the database creation and configuration procedure, or if it fails to create and configure the database, do the following steps before running the database tool again.

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:

   cd /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:

   ```
   cd /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 will 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.

Configuring eaPost for MSSQL

Configuring the Database for eaPost

To configure a new eaPost database, you must:

1. Update the file that sets the environment variables for eaPost.

2. Run the database creation script.

To edit the environment variables:

1. Edit *set_env_var.bat*, which is in *%EPX_HOME%\db\mssql*.

2. For a default instance, customize the eaPost server name using network name of computer:

   ```
   set _server_name=MYSERVER
   ```

   For a named instance, customize eaPost server name using both the network name of the computer and the instance name. For example:

   ```
   set _server_name=MYSERVER\MYINSTANCE
   ```

3. Check that the log and database file locations provide the correct drive and path:

   ```
   set _data_file_path = <your drive>:\<your path>\data
   set _log_file_path = <your drive>:\<your path>\logs
   ```

The _data_file_path in *set_env_var.bat* uses the C: drive, and the_log_file_path uses the E: drive. This is to encourage you to use separate drives for the data and log directories. Make sure you edit the drive letter for your installation.

4. Check the database name, database user name and password that will be created for eaPost to make sure they don't conflict with an existing database or user name.

   ```
   set _db_name=eapost
   set _db_user=epx_dba
   set _db_passwd=epx
   ```

To run the database installation script:

1. Make sure you know the password of the *sa* user (system administrator) login.
2. Open a command prompt window and change the directory to the default location where you installed the eaPost files. For example:

   ```
   C:
   cd \EDCSpost\db\mssql
   ```

3. Enter the following command at the prompt:

   ```
   eapost_admin.bat <system administrator> <password>
   ```

   For example:

   ```
   eapost_admin.bat sa edocs
   ```

   This batch file creates a log file, and prints a successful installation line if there are not problems. If you do not see the success message, then check the log file to see what problems occurred. It also creates a database named eaPost, and a login using the information in *set_env_var.bat*.

Installing the eaPost jobs on eaDirect

1. Open a command prompt window and change the directory to the default location where you installed the eaPost files. For example:

   ```
   C:
   cd \EDCSpost\db\mssql
   ```

2. Enter the following command at the prompt:

   ```
   install_task.bat <server instance> <database> <database user>
   <password>
   ```

   For example:

   ```
   install_task.bat docausten edx0 edx_dba edx
   ```

Troubleshooting your database configuration

At some point during the eaPost 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.

Recovering from a failed database configuration

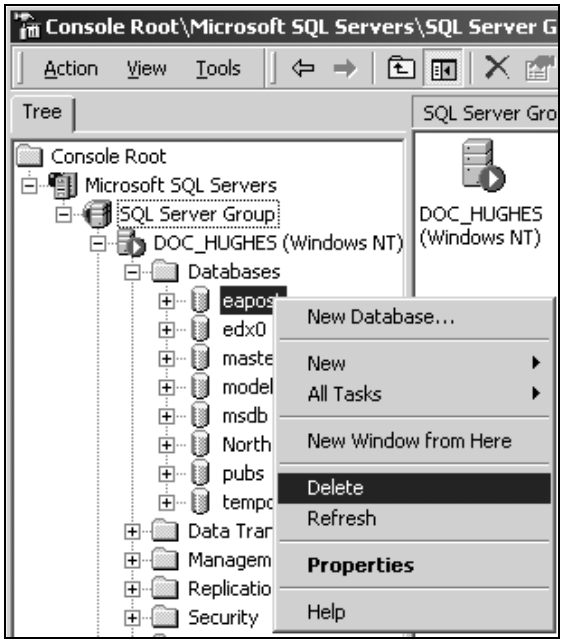
If you have to abort the database creation and configuration procedure, or if it fails to create and configure the database, do the following steps before running the database tool again.

To recover from a failed database configuration:

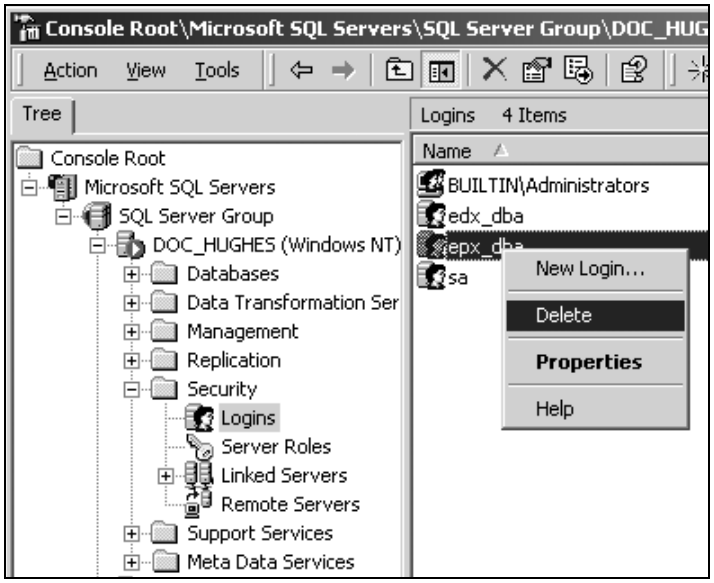
From the Start menu, select **`Programs`** and **`Microsoft SQL Server`**, and click **`Enterprise Manager`**. The Enterprise Manager screen appears.

1. Expand the SQL Server Group and click the **`Database`** folder.

2. Highlight the name of the newly created database and delete it from the list of installed databases. The sample screen shows the database, *eapost*, being deleted.



3. Scroll down to the Security folder and expand it to show Logins. Delete the user for the database that you just deleted. The sample screen shows the database user *epx_dba* being deleted.



4. Open a Command Prompt window and run the database creation script again.

Migrating an existing Oracle database

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
- Reconfigure the eaPost jobs

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.

Migrating an eaPost database

You can upgrade your existing eaPost v4.0, v1.2 or v1.1.1 database to eaPost v4.4. If your version of eaPost is earlier than version 4.0, you must run the migration script to migrate to 4.0 first.

Be sure to backup your existing database before starting the upgrade.

To upgrade an existing Oracle database:

1. Log in as the *oracle* user.

1. Change directory to the default location where you installed the eaPost files. For example, to migrate an eaPost v4.0 database::

   ```
   cd /opt/EDCSpost/db/oracle/migration/40to42
   ```

   or, to migrate an eaPost v1.2 database:

   ```
   cd /opt/EDCSpost/db/oracle/migration/12to44
   ```

   or, to migrate an eaPost v1.1 database:

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

2. Set the ORACLE_SID environment variable to the 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=epx0
```

Example for a C shell:

```
setenv ORACLE_SID=epx0
```

3. Run the database upgrade shell script(s) by entering the appropriate command at the prompt: to migrate a 4.0 database:

   ```
   ./migrat.sh
   ```

   or for v1.2 to 4.0:

   ```
   ./migrate_12_to_40.sh
   ./convert_eapost_data.sh
   ```

   or, for v1.1.1 to 4.0:

   ```
   ./migrate_111_to_40.sh
   ./convert_eapost_data.sh
   ```

   The migration script may ask for the the SID and database username and password for the existing eaPost database. The updated database will use the same values.

4. 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. This step is only required when upgrading eaPost from versions **earlier than 4.0**.

1. Log in as the *oracle* user.

   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/12to44
   ```

   or, to migrate an eaPost v1.1 database:

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

2. 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=edx0
   ```

   Example for a C shell:

   ```
   setenv ORACLE_SID=edx0
   ```

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

   ```
   ./install_eadirect_task.sh
   ```

Migrating existing data

Now 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. If your version of eaPost is earlier than version 4.0, you must run the migration script for each conversion.

1. Log in as the *oracle* user.

   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/12to44
   ```

   or, to migrate an eaPost v1.1 database:

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

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

   ```
   convert_eapost_data.bat
   ```

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
   ```

Reconfiguring the eaPost Jobs

If you are upgrading from eaPost v1.2, you must 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.

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*.

Migrating and existing MSSQL database

To upgrade from earlier versions of eaPost, you must:

- Migrate the existing eaPost database to the new format
- Update the eaPost jobs in the eaDirect database
- 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.

You can upgrade your existing eaPost v1.2 or v1.1.1 database to eaPost v4.4. Be sure to backup your existing database before starting the upgrade.

Updating the eaPost jobs in the eaDirect database

Update the eaPost jobs in the eaDirect database, so the command center will have the correct eaPost jobs. This step is only required when upgrading eaPost from versions **earlier than 4.0**.

1. Open a command prompt window and change the directory to the default location where you installed eaDirect. For example, to update an eaDirect v1.2 database:

   ```
   cd C:\EDCSbd\db\mssql\migration\12to40
   ```

   or, to migrate an eaDirect v1.1 database:

   ```
   cd C:\EDCSbd\db\mssql\migration\111to40
   ```

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

   ```
   install_eadirect_task.bat
   ```

Migrating existing data for MSSQL

Now 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. If your version of eaPost is earlier than version 4.0, you must run the migration script for each conversion.

1. Open a command prompt window and change directory to the default location where you installed the eaPost files. For example, to migrate an eaPost v1.0.2 database:

   ```
   cd C:\EDCSpost\db\mssql\migration\102to34
   ```

   or, to migrate an eaDirect v1.1 database:

   ```
   cd C:\EDCSbd\db\mssql\migration\111to44
   ```

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

```
convert_eapost_data.bat
```

Adding eapost Jobs to eaDirect

You must run a shell script to add the eaPost jobs to the eaDirect command center.

1. Open a command prompt and change the working directory to the *$EPX_HOME/db/oracle* directory. For example:

   ```
   cd C:\EDCSpost\db\mssql
   ```

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

   ```
   install_task.bat edx_dba edx
   ```

3

Configuring WebLogic for Unix

Configuring eaPost on the Application Server

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

1. Update the eaDirect EAR file with the eaPost EAR, and re-deploy the updated eaDirect EAR
2. Deploy the eaPost sample application to view redirected bills
3. Configure WebLogic for eaPost

Updating the eaDirect EAR

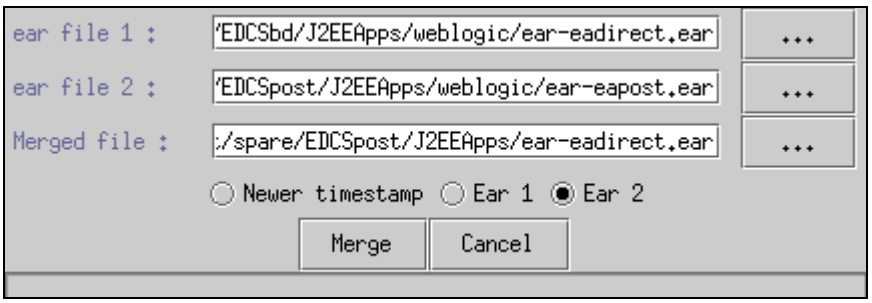
The *ear-eadirect.ear* file must be updated for eaPost. eaPost installs a file called *ear-eapost.ear*, which must be merged into the *ear-eadirect.ear* file.

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

1. Log on as the root user, and change your working directory to *$EPX_HOME/lib*.
2. Run the database configuration tool, using the following command.

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

3. 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.

4. 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/weblogic/ear-eadirect.ear
/opt/EDCSpost/J2EEApps/weblogic/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*.

To Deploy the Updated eaDirect EAR:

eaPost requires that the eaDirect EAR be re-deployed, since it was updated in the previous step. You will also want to deploy your site's application, as created by edocs Professional Services, or by your development team.

The following steps describe how to deploy an EAR file.

1. Make sure the WebLogic server is running. If it is not running, start it. For example:

   ./startWebLogic.sh

2. Open a URL to the WebLogic console.

3. Select **Mydomain,** then **Deployments**, then **Applications**, and click on **Install New Application**.

4. Browse to a copy of the *ear-eadirect.ear* file that you updated for eaPost. Then click **`Upload`**. WebLogic will upload the *ear-eadirect.ear* file, install it over the existing *ear-eadirect.ear* file, and (usually) re-deploy the EAR file and it's components.

You should check to make sure all the EJB and WAR Deployments under the *ear-eadirect* application in WebLogic properly deployed. If not, check **`Deployed`**, and click on **`Apply`**. Also, check that the Targets tab for each EJB deployment shows that the server is chosen. If not, move the server into the Chosen column, and click **`Apply`**.

5. Restart the WebLogic server by stopping it, and then restarting as described in step 1.

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

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 WebLogic Server. WebLogic 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. For more information about how WebLogic Server uses JDBC connection pools, refer to the WebLogic programming and user documentation at http://bea.com.

You will create one JDBC Connection Pools for eaPost.

JDBC properties vary by both application and database server. Use the Appendix A: WebLogic Reference on page 51 to select the properties for your combination:

4

Configuring WebLogic for Windows

Configuring eaPost on the Application Server

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

1. Update the eaDirect EAR file with the eaPost EAR, and re-deploy the updated eaDirect EAR.
2. Deploy the eaPost sample application to view redirected bills.
3. Configure WebLogic 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.

1. Before you start, please make a backup copy of the original *ear-eadirect.ear*.
2. Open a command prompt, 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:

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, open a command prompt and type:

```
java -jar ear_merge_app.jar -ear2
C:\EDCSbd\J2EEApps\weblogic\ear-eadirect.ear
C:\EDCSpost\J2EEApps\weblogic\ear-eapost.ear
C:\EDCSpost\J2EEApps\ear-eadirect.ear
```

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

To Deploy the Updated eaDirect EAR:

eaPost requires that the eaDirect EAR be re-deployed, since it was updated in the previous step. You will also want to deploy your site's application, as created by edocs Professional Services, or by your development team.

The following steps describe how to deploy an EAR file.

1. Make sure the WebLogic server is running. If it is not running, start it. For example:

   ```
   startWebLogic.cmd
   ```

2. Open a URL to the WebLogic console.

3. Select **Mydomain,** then **Deployments**, then **Applications**, and click on **Install New Application**.

4. Browse to a copy of the *ear-eadirect.ear* file for eaPost. Then click **Upload**. WebLogic will upload the *ear-eadirect.ear* file, install it over the existing *ear-eadirect.ear* file, and (usually) re-deploy the EAR file and its components.

You should check to make sure all the EJB and WAR Deployments under the *ear-eadirect* application in WebLogic properly deployed. If not, check **Deployed**, and click on **Apply**. Also, check that the Targets tab for each EJB deployment shows that the server is chosen. If not, move the server into the Chosen column, and click **Apply**.

5. Restart the WebLogic server by stopping it, and then restarting as described in step 1.

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

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 WebLogic Server. WebLogic 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. For more information about how WebLogic Server uses JDBC connection pools, refer to the WebLogic programming and user documentation at http://bea.com.

JDBC properties vary by both application and database server. Use the Appendix A: WebLogic Reference on page 51 to select the properties for your combination:

- WebLogic JDBC connections for Oracle, see page 54.
- WebLogic JDBC connections for DB2, see page 51.

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*.

5

Configuring WebSphere for Unix

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 the updated EAR file (for WebSphere 5.0 only).
3. Re-deploy the updated eaDirect EAR.
4. Assemble (for WebSphere 5.0 only) and deploy the eaPost sample application to view redirected bills.
5. Add a datasource to WebSphere for eaPost.

Updating the eaDirect EAR

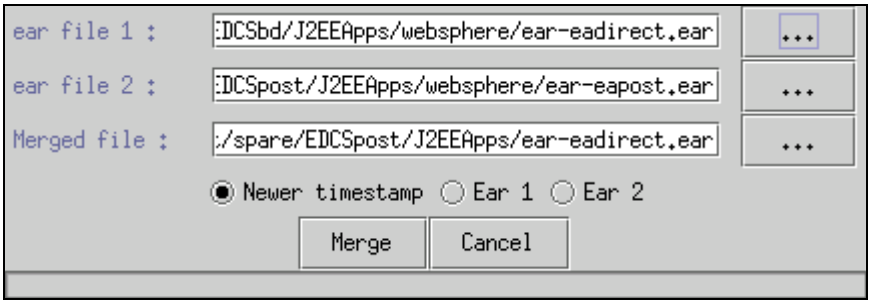
The *ear-eadirect.ear* file must be updated for eaPost. eaPost installs a file called *ear-eapost.ear*, which must be merged into the *ear-eadirect.ear* file.

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*.

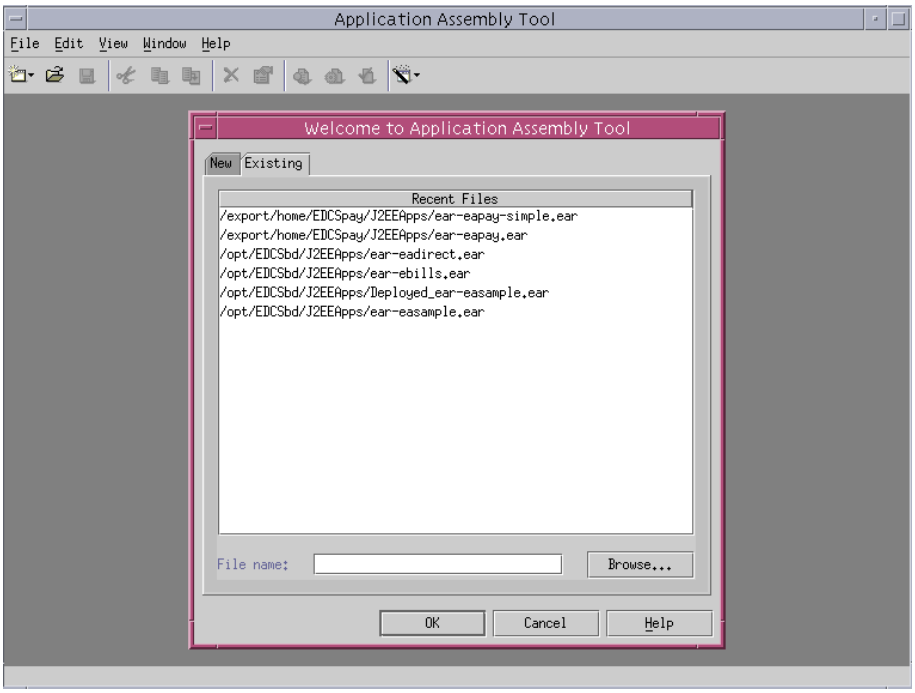
Assembling the EAR files for WebSphere 5.0

The archives must be assembled, before they can be deployed in the WebSphere 5.0 server. WebSphere 5.1 does not require the EAR to be assembled.

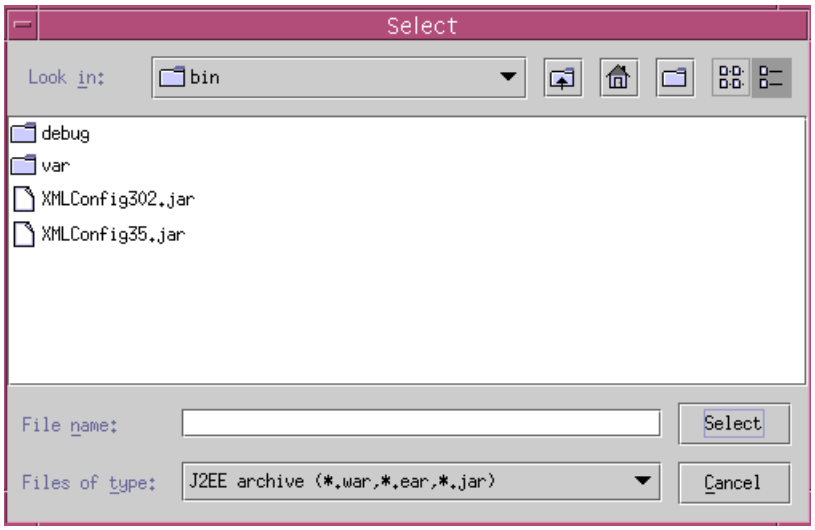
To Assemble the EAR Files:

1. Start the WebSphere assembler script, for example:

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

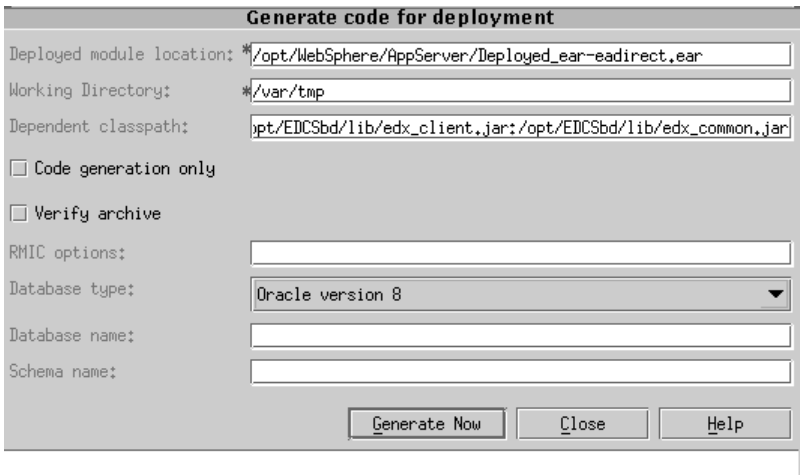


2. Select the **`Existing`** tab, then click on **`Browse`**.



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	Not applicable.

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).

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 (for WebSphere 5.0 only) and install the eaPost sample application, follow the same steps that show how to assemble (for WebSphere 5) and deploy the updated *ear-eadirect.ear* (as described in the next step), but use the file *%EPX_HOME%/samples/J2EEApps/weblogic/eapost-sample.ear*.

Deploying eaPost for WebSphere

This section describes how to deploy eaPost using the WebSphere application server.

The specific steps for your application server may differ from the ones described below. You should consult your System Administrator and application server documentation for complete details of how to deploy a J2EE application based on your system's configuration.

To deploy a web application with WebSphere:

1. From the WebSphere Administrative Console, expand the Applications branch and click on **`Install New Application`**.
2. Select "Server Path" and then type in the absolute path to your merged EAR file. For example, for WebSphere 5.1:

   `/opt/EDCSpost/J2EEApps/websphere/ear-eadirect.ear`

   or for WebSphere 5.1:

   `/opt/EDCSpost/J2EEApps/websphere/Deployed_ear-eadirect.ear`
3. Keep clicking **`Next`** until you reach the last page, and then click **`Finish`**. Use the default settings for each step.
4. Save to the Master Configuration.

See the Deployment Guide for information about deploying additional edocs applications.

Java Virtual Machine (JVM) Settings for WebSphere

To configure JVM settings for WebSphere:

In the WebSphere Administrative console, click on **`Servers`**, then **`Application Servers`**, then the server for eaDirect, then **`Process Definition`**, then **`Java Virtual Machine`**.

On the General Properties page:

Property Name	Value
Classpath	Path to **`EPX_HOME/lib/eapost_common.jar`**. For example: **`/usr/EDCSpost/lib/eapost_common.jar`**

After applying the new settings, **make sure you**:

1. Save the master configuration.
2. Restart the server.

6

Configuring Java Resources for WebSphere for UNIX

Overview

This chapter assumes in-depth understanding of and practical experience with application server administration. It is designed for experienced WebSphere administrators and primarily presents only the steps and settings specific to eaPost.

See WebSphere Server documentation for detailed step-by-step instructions on Java resource configuration, performance, and tuning. You must also consult your application server administrator for settings that may be specific to your configuration.

You must start WebSphere Server and bring up the Administrative Console before you begin this chapter.

If you cannot bring up the WebSphere Console/Client, you will be unable to proceed with configuring your application server for eaPost.

Configuring Java Database Connectivity (JDBC) for eaPost

After you have successfully configured the eaPost database, you must configure Java Database Connectivity (JDBC) resources on the eaPost application server. JDBC Connections on the application server support data retrieval from relational databases and other data sources.

About JDBC configuration for eaPost

JDBC transaction data sources enable 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.

eaPost requires one **JDBC Transaction (Tx) Data Sources:** eapostDataSource.

Use the *Appendix B: WebSphere Reference* on page 59 **JDBC Connections** settings for your application server to configure each connection pool.

Make sure you are using the correct properties for your application server and database combination.

Configuring JDBC Connections for WebSphere

JDBC properties vary by both application and database server. Use the *Appendix B: WebSphere Reference* on page 59 to select the properties for your combination:

- WebSphere for Oracle, see page 60.
- WebSphere for DB2, see page 61.

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.sh*.

To pass your eaDirect environment to WebSphere:

1. Switch to *root* user.
2. Change directory to *$WAS_HOME/bin* (for example, */opt/WebSphere/AppServer/bin*) and . Open *startupServer.sh* and declare and initialize the variable *$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.

7

Upgrading from a Previous Version of eaPost

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.

Upgrade eaPost jobs

If you are upgrading from a version of eaPost previous to version 4.0, then you must 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*.

Appendix A: WebLogic Reference

WebLogic for SQL Server (Windows)

You may save time by **cloning** additional Java resources. Right-click a resource and select **`Clone <name>`**, then change the resource name and properties as required.

JDBC Connection Pools for WebLogic 8

Create a JDBC Connection Pool, using WebLogic Server documentation at http://bea.com. Make sure to deploy them to the server you are configuring for eaPost (in the examples of this guide, the default **`myserver`**).

WebLogic 8 creates a new JDBC Connection Pool using a wizard. Follow the prompts, and enter:

- **Database type** = MS SQL Server
- **Database Drive**r = Other

Use the following names and properties:

Name	**`eaPostConnectionPool`**
URL	**`jdbc:inetpool:inetdae7://localhost:1433`**
Driver Classname	**`com.inet.pool.PoolDriver`**
Database User	Enter the database user name. This document uses **`epx_dba`**.
Password	Enter the password for the database user. This document uses **`epx`**.

After the wizard completes, go to the Configuration page to make adjustments using the values shown in the following table (on the Connections tab, click **`Show`** for Advanced Options):

Connections Tab	
Initial Capacity	`1`
Maximum Capacity	`20`
Capacity Increment	`5`
Login Delay	`1`
Statement Cache Size	`300`
Test Frequency	`60`
Allow Shrinking	**`True`** (box checked)
Shrink Frequency	`15`
Test Reserved Connections	**`TRUE (checked)`**
Test Released Connections	**`FALSE (unchecked)`**
Test Table Name	`job`

Click **`Apply`** to save these values for each connection pool.

JDBC Data Sources for WebLogic 8

Create a transaction data source, using WebLogic Server documentation at http://bea.com.

Name	**`eapostDataSource`**
JNDI Name	**`eapst.databasePool`**
Pool Name	**`eaPostConnectionPool`**

Configuration Tab - Advanced Options (use defaults)	
Emulate Two-Phase Commit for non-XA Driver	**`FALSE (unchecked)`**
Row Prefetch Enabled	**`FALSE (unchecked)`**
Stream Chunk Size: bytes	`256`

On the **`Targets`** tab, select the server that will use this Data Source.

JDBC Connection Pools for WebLogic 7

Create a JDBC Connection Pool, using WebLogic Server documentation at http://bea.com. Move the Targets-Server from **`Available`** to **`Chosen`** as you configure.

Name	**`eaPostConnectionPool`**
URL	**`jdbc:inetpool:inetdae7://localhost:1433`**
Driver Classname	**`com.inet.pool.PoolDriver`**
Properties	**`poolurl=jdbc:inetpool:inetdae7://localhost:1433`** **`user=epx_dba`** **`password=epx`**

Connections Tab	
Initial Capacity	**`1`**
Maximum Capacity	**`20`**
Capacity Increment	**`5`**
Login Delay Seconds	**`1`**
Refresh Period	**`1`**
Supports Local Transaction	**`False`** (box unchecked)
Allow Shrinking	**`True`** (box checked)
Shrink Period	**`15`**
Prepared Statement Cache Size	**`300`**
XAPrepared Statement Cache Size	**`300`**

Testing Tab	
Test Table Name	**`job`**
Test Reserved Connections	**`TRUE (checked)`**
Test Released Connections	**`FALSE (unchecked)`**

Targets Tab

Targets Tab	
Targets-Server	[move **myserver** from **Available** to **Chosen**]

JDBC Tx Data Sources for WebLogic 7

Create a transaction data source, using WebLogic Server documentation at http://bea.com. Remember to move the Targets-Server from **Available** to **Chosen** as you configure.

Name	**eaPostDataSource**
JNDI Name	**eapost.databasePool**
Pool Name	**eaPostConnectionPool**

Configuration Tab (use defaults)	
Emulate Two-Phase Commit for non-XA Driver	**FALSE (unchecked)**
Row Prefetch Enabled	**FALSE (unchecked)**
Row Prefetch Size:	**48**
Stream Chunk Size: bytes	**256**

Targets Tab	
Targets-Server	[move **myserver** from **Available** to **Chosen**]

WebLogic for Oracle (all platforms)

JDBC Connection Pools for WebLogic 8

Create a JDBC Connection Pools, using WebLogic Server documentation at http://bea.com. Make sure to deploy the connection pool to the server you are configuring for eaPost (in the examples of this guide, the default is **myserver**).

WebLogic 8 creates a new JDBC Connection Pool using a wizard. Follow the prompts, and enter:

- **Database type** = Oracle
- **Database Drive**r = Oracle's Driver (Thin)

For the connection pool, use the following names and properties:

Name	**eaPostConnectionPool**
Database Name	Enter the database name. This document uses **epx0**
Host Name	Name of the database server.
Port	Enter the database port number.
Database User Name	Enter the database user name. This document uses **epx_dba**
Password	Enter the password for the database user. This document uses **epx**.
URL	**jdbc:oracle:thin:@DB_host:DB_port:eaPost_DB:SID** For example: **jdbc:oracle:thin:@localhost:1521:epx0**
Driver Classname	**oracle.jdbc.driver.OracleDriver**

After the wizard completes, go to the Configuration page to make adjustments using the values shown in the following table (on the Connections tab, click **Show** for Advanced Options):

Connections Tab	
Initial Capacity	**1**
Maximum Capacity	**20**
Capacity Increment	**5**
Statement Cache Type	**LRU**
Statement Cache Size	**300**
Login Delay	**1**
Allow Shrinking	**True** (box checked)
Shrink Frequency	**15**
Test Frequency	**60**
Test Reserved Connections	**TRUE (checked)**
Test Released Connections	**FALSE (unchecked)**
Test Table Name	**dual**

Click **Apply** to save these values for each connection pool.

JDBC (Tx) Data Sources for WebLogic 8

Create a transaction data source, using WebLogic Server documentation at http://bea.com.

Name	**eaPostDataSource**
JNDI Name	**eapost.databasePool**
Pool Name	**eaPostConnectionPool**

After creating the data source, open it up and make sure the following options are set:

Configuration Tab - Advanced Options (use defaults)	
Row Prefetch Enabled	**FALSE (unchecked)**
Stream Chunk Size: bytes	**256**
Emulate Two-Phase Commit for non-XA Driver	**FALSE (unchecked)**

On the **Targets** tab, select the server that will use this Data Source.

JDBC Connection Pools for WebLogic 7

Create a JDBC Connection Pools, using WebLogic Server documentation at http://bea.com. Remember to move the Targets-Server from **Available** to **Chosen**as you configure.

Name	**eaPostConnectionPool**
URL	**jdbc:oracle:thin:@DB_host:DB_port:eaPost_DB:SID**. For example, **jdbc:oracle:thin:@localhost:1521:epx0**
Driver Classname	**oracle.jdbc.driver.OracleDriver**
Properties	Substitute the **localhost:port:SID**, user and password as required: **poolurl=jdbc:oracle:thin:@localhost:1521:epx0** **user=epx_dba** **password=epx**

Connections Tab	
Initial Capacity	**1**
Maximum Capacity	**20**
Capacity Increment	**5**
Login Delay Seconds	**1**
Refresh Period	**1**
Supports Local Transaction	**False** (box unchecked)
Allow Shrinking	**True** (box checked)
Shrink Period	**15**

Connections Tab	
XA Prepared Statement Cache Size	`300`

Testing Tab	
Test Table Name	`dual`
Test Reserved Connections	**`TRUE (checked)`**
Test Released Connections	**`FALSE (unchecked)`**

Targets Tab	
Targets-Server	[move **`myserver`** from **`Available`** to **`Chosen`**]

JDBC Tx Data Sources for WebLogic 7

Create three transaction data sources, using WebLogic Server documentation at http://bea.com. Remember to move the Targets-Server from **`Available`** to **`Chosen`** for each data source as you configure it.

Name	**`eaPostDataSource`**
JNDI Name	**`eapost.databasePool`**
Pool Name	**`eaPostConnectionPool`**

Configuration Tab (use defaults)	
Emulate Two-Phase Commit for non-XA Driver	**`FALSE (unchecked)`**
Row Prefetch Enabled	**`FALSE (unchecked)`**
Stream Chunk Size: bytes	`256`

Targets Tab	
Targets-Server	[move **`myserver`** from **`Available`** to **`Chosen`**]

Appendix B: WebSphere Reference

WebSphere Environment Variables

VARIABLE	DESCRIPTION	WINDOWS	SOLARIS	AIX	CUSTOM
WAS_HOME	Application Server home	C:\WebSphere\AppServer	/opt/WebSphere/AppServer	/usr/WebSphere/AppServer	
APP_OWNER	app server owner		edxadmin	edxadmin	
APP_GROUP	app server group		edxadmin	edxadmin	
APP_PORT	app server port	9080	9080	9080	
ADMIN_PORT	app server admin port	900	900	900	
JAVA_HOME	Java home directory	C:\WebSphere\AppServer\java	$WAS_HOME/java	$WAS_HOME/java	
JMS_HOME	MQSeries java client directory	C:\Program Files\IBM\MQSeries	/opt/mqm/java	/usr/mqm/java	

Make sure you set all paths to the appropriate point releases/patches for your application server and JDK, if necessary. Check the Release Notes and your system documentation for updated requirements.

WebSphere for Oracle (Unix)

JDBC Connection Pools

Configure a new **JDBC Provider**, choose **`Oracle JDBC Driver`** from the JDBC Providers drop-down list.

Also configure the following properties:

Name	Value
Classpath	$ORACLE_HOME**`/jdbc/lib/classes12.zip`** Enter the explicit path; do not use the variable.

Data Sources

Create the following **Data Sources (Version 4)** for the new JDBC Provider:

Name	**`eaPostDataSource`**
JNDI Name	**`eapost.databasePool`**
Database Name	The name of the eaDirect database. For example, **`epx0`**
Default User ID	The eaDirect database user. For example, **`epx_dba`**
Default Password	The password for the eaDirect database user. For example, **`epx`**

For **Connect Pool**:

Maximum Pool Size	**`20`**

Custom Properties:

URL	**`jdbc:oracle:thin:@DB_host:DB_port:eaPost_DB.`** For example, **`jdbc:oracle:thin:@localhost:1521:epx0`**

After configuring JMS for WebSphere, be sure to s**ave to the master configuration**.

WebSphere for DB2 (Unix)

JDBC Connection Pools

Configure a new **`JDBC Provider`**; expand Resources, JDBC Providers and select **`New`**. Then choose **`DB2 JDBC provider`** from the JDBC Providers drop-down list.

Property	Value
Classpath	$DB_HOME**`/db2inst1/sqllib/java12/db2java.zip`** Enter the explicit path for $DB2_HOME; do not use the variable.
Implementation Classname	**`COM.ibm.db2.jdbc.DB2ConnectionPoolDataSource`**

Expand Resources, then JDBC Profilers, then DB2 JDBC Provider, then Data Sources (Version 4). Create the following **Data Sources (Version 4)** for the new JDBC Provider:

Name	**`eaPostDataSource`**
JNDI Name	**`eapost.databasePool`**
Database Name	The name of the eaDirect database. For example, **`epx0`**
Default User ID	The eaDirect database user. For example, **`epx_dba`**
Default Password	The password for the eaDirect database user. For example, **`epx`**

Expand Resources, then JDBC Profilers, then DB2 JDBC Provider, then Data Sources (Version 4), then Data Source Name, then Connection Pool. For **Connect Pool** set:

Maximum Pool Size	**`20`**

Expand Resources, then JDBC Profilers, then DB2 JDBC Provider, then Data Sources (Version 4), then Data Source Name, then Custom Properties. For **Custom Properties** set:

connectionAttribute	**`cursorhold=1`**

After configuring JMS for WebSphere, be sure to s**ave to the master configuration**.

WebSphere for SQL Server (Windows)

JDBC Connection Pools

Configure a new **JDBC Provider**, choose **`Microsoft JDBC Driver for MSSQL 2000`** from the JDBC Providers drop-down list.

Also configure the following properties:

- **Implementation Classname:**
  com.ibm.websphere.jdbcx.sqlserver.SQLServerDataSource

And check the that following properties match these values, and that the JAR files are available in the specified directory:

Name	Value
Classpath	${WAS_LIBS_DIR}/sqlserver.jar ${WAS_LIBS_DIR}/base.jar ${WAS_LIBS_DIR}/util.jar ${WAS_LIBS_DIR}/spy.jar
Implementation Classname	com.ibm.websphere.jdbcx.sqlserver.SQLServerDataSource

Data Sources

Create the following **Data Sources (Version 4)** for the new JDBC Provider:

Name	**`eaPostDataSource`**
JNDI Name	**`eapost.databasePool`**
Database Name	The name of the eaDirect database. For example, **`epx0`**
Default User ID	The eaDirect database user. For example, **`epx_dba`**
Default Password	The password for the eaDirect database user. For example, **`epx`**

For **Connect Pool**:

Maximum Pool Size	**`20`**

Expand Resources, then JDBC Profilers, then DB2 JDBC Provider, then Data Sources (Version 4), then Data Source Name, then for **Custom Properties** set:

server name	Enter the name of your database server.

After configuring JMS for WebSphere, be sure to s**ave to the master configuration**.