



Installation Guide for Oracle Siebel eStatement Manager

Version 4.7

For Microsoft Windows 2003 Operating System,
BEA WebLogic Server, and Oracle® Database

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ORACLE®

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Preface

About This Guide

The Installation and Configuration Guides describe how to install eaSuite, configure the third-party platforms that support the eaSuite production environment, and deploy eaSuite J2EE web applications.

This guide describes how to install and configure eStatement Manager. It is intended for IT professionals and other technical personnel responsible for installing, configuring, and maintaining eStatement Manager. It assumes in-depth understanding of and practical experience with system administrator responsibilities, including:

Operating System Administration Requirements

- Determine software patch/pack levels
- Install software & patches/packs
- Manipulate text files
- Create files and directories
- Use basic network commands
- Transfer files with FTP
- Monitor processes & system resource usage
- Perform system backups and recovery
- Implement system security

If you are unfamiliar with any of these tasks, please consult the related documentation for your system requirements.

Related Documentation

This guide is part of the eStatement Manager documentation set. For more information about using eStatement Manager, see the following guides:

Print Document	Description
<i>Installation Guide for Oracle Siebel eStatement Manager</i>	How to install and configure eStatement Manager in a distributed environment.

Print Document	Description
<i>Deploying and Customizing J2EE Applications Guide for Oracle Siebel eStatement Manager</i>	How to customize J2EE web applications for deployment with eaSuite.
<i>Data Definition (DefTool) Guide for Oracle Siebel eStatement Manager</i>	How to create data extraction and definition rules for an eStatement Manager application with DefTool.
<i>Presentation Design (Composer Guide) for Oracle Siebel eStatement Manager</i>	How to design data presentment for an eStatement Manager application with Composer.
<i>Administration Guide for Oracle Siebel eStatement Manager</i>	How to set up and run a live eStatement Manager application in a J2EE environment.
<i>SDK Guide for Oracle Siebel eStatement Manager</i>	How to work with auditing datastreams, user management frameworks, line item disputes and annotations, custom jobs, content access, and charting.
<i>Reporting Guide for Oracle Siebel eStatement Manager</i>	How to use the Reporting and Analytics Module to create preconfigured telecommunication reports from live and indexed data for various criteria.
<i>Troubleshooting Guide for Oracle Siebel eaSuite</i>	How to initiate the troubleshooting process, identify critical information about what is happening in your system and applications when a problem occurs, and resolve the problem.
<i>Migration Guide for Oracle Siebel eaSuite</i>	How to migrate an existing eStatement Manager database to a newer version.
<i>Oracle eStatement Manager 4.7 Release Notes</i>	This discusses any open issues at the time of release of the application.

2 Getting Started

Preparing Your Platform

Before installing eStatement Manager, verify that your platform is ready:

- Install and test required hardware and software for Windows.
- Start and test your database server. See your server documentation.
- Start and test your application server. See your server documentation.

Overview of the Installation Process

Configuring your database server requires you to:

- Define database server environment variables.
- Create and configure the eStatement Manager database.
- Connect to your eStatement Manager database before configuring your application server.

eStatement Manager System Requirements

Operating System

Microsoft Windows 2003 SP1

For Windows-based DefTool and Composer Tools only, either:

- Windows XP Professional SP2
- Windows Server 2003 SP1

Hardware

- CD-ROM
- Disk space (database) 2.6 GB
- Disk space (software) 60 MB

- Pentium III or compatible processor
- RAM 512 MB per CPU (1 GB recommended)

JAVA/C++

- JDK version that comes with the BEA WebLogic Server 9.2
- JRockit, a supported JVM for BEA WebLogic for Windows OS deployments

Supported Database Servers

- Oracle 10g Release 2 Enterprise Edition
 - Native Oracle Partition Support for Index Tables (Purging)
- Oracle 10g client software (for application server)
- Oracle 10g JDBC driver

Supported Application Servers

- BEA WebLogic Server 9.2

Supported Browsers

Internet Explorer 6.0, 7.0

- Firefox 2.0
- Netscape 8.1.2

Open Source Items

The following required open source library binaries are not distributed with the product:

- Ant 1.6.5 is required to run the supplied Ant database scripts.
- Hibernate 3.1.3 is required for high performance object/relational persistence and query services.
- c3p0 0.9.0 is required for JDBC3 connection and statement pooling.

3 Installing eStatement Manager

This chapter assumes in-depth understanding of and practical experience with system administration responsibilities. Consult your system documentation as necessary.

This chapter provides a step-by-step guide to installing eStatement Manager with the InstallAnywhere installer.

Installing eStatement Manager with InstallAnywhere

The InstallAnywhere installer is a graphical cross-platform wizard that installs eStatement Manager components for any supported platform of eStatement Manager.

In a distributed environment, install:

- eStatement Manager application server components on each application server
- eStatement Manager database server components on each database server
- Database client software on **each** application server

To install eStatement Manager with InstallAnywhere on Windows

- 1 Obtain and locate the InstallAnywhere installer as described in the Preface of this guide.
- 2 Launch InstallAnywhere by typing Dirins.exe.
- 3 INTRODUCTION: Be sure you have quit all programs.
- 4 LICENSE AGREEMENT: Select Yes to accept the License Agreement.
- 5 ENTER SERIAL NUMBER provided when you purchased eStatement Manager.
- 6 CHOOSE INSTALL FOLDER: Accept the default or choose another directory.
- 7 CHOOSE PRODUCT FEATURES: Options depend on features purchased.
 - All choices install J2EE web applications, documentation, and online Help.
 - **Full** (default) installs all eStatement Manager components on a single machine.
 - **Database** and **App Server** are for distributed environments.
 - **Custom** installs individual components that you specify.
 - **SDK** requires a separate license.
 - **Tools** installs DefTool and Composer.
- 8 CHOOSE SHORTCUT FOLDER

- 9 PRE-INSTALLATION SUMMARY: Review the screen to confirm your product and version, Install folder, Product Components, and Disk Space required and available.
- 10 InstallAnywhere then sets up the directory hierarchy on each server and copies files to the appropriate directories.
- 11 INSTALL COMPLETE: If installation is successful, you see a Congratulations message.
- 12 COPYRIGHT INFORMATION: Please review and click Done. Quit InstallAnywhere.
- 13 Repeat installation for other eStatement Manager servers on your network as necessary.

Installing Design Tools

Install the Windows-based tools DefTool and Composer on a Windows XP machine on your network. Follow the instruction provided in the README file that comes with the distribution.

Where to Go From Here

Distributed Environments

If you are installing in a **distributed environment**, be sure that you have installed all eStatement Manager components as follows before proceeding to the database configuration section for using ANT.

- **Database** components on database server(s)
- **App Server** components on application server(s)
- **Tools** components on a Windows machine (accessible to UNIX servers)
- **Database client software** on application server(s)

Configure Your Database

If you have installed eStatement Manager **on a single machine** using the **Full** installation option, you can proceed directly to the database configuration section for using ANT.

eStatement Manager Directory Structure

The eStatement Manager home directory contains all the files needed to create and configure the eStatement Manager production database. When you install eStatement Manager components, you are prompted to specify a destination directory. By default, this directory is `C:\eStatement`, which has a pre-defined hierarchical directory structure.

To designate a different destination directory, enter the pathname when prompted during installation.

TIP: Oracle recommends that you install eStatement Manager in the same top-level directory on both the database server and the application server.

Configuring Your Database Server

Where to Find Database Components

`eStatement\db` contains platform-specific subdirectories for database creation and configuration. Each `\db` subdirectory also contains the directory `migration`, which contains migration scripts. Be sure to use the correct version for Windows.

Where to Find Application Server Components

`eStatement\J2EEApps` contains platform-specific subdirectories for eaSuite J2EE and web applications to be deployed to your application server. Be sure to deploy the correct version for Windows.

Where to Find Sample Applications

`eStatement\samples` contains sample J2EE, Web, and eStatement Manager applications for use with the eaSuite. For more information on sample applications, see *Deploying and Customizing J2EE Applications Guide for Oracle Siebel eStatement Manager*.

Where to Find Input and Output Data

`eStatement\AppProfiles` stores information on each new eStatement Manager application created in the Command Center. `eStatement\Input` is the default input directory used by each Command Center job. `eStatement\Data` stores data processed by the Command Center. `eStatement\Output` stores the output of jobs.

An additional directory, `eStatement\Store`, appears when the first Command Center job runs. The Store directory holds temporary files created during job run time. When the job completes, eStatement Manager automatically cleans up these temporary files.

Where to Find Documentation

`eStatement\pdf` contains PDF versions of eaSuite documentation. If your license includes the eaSuite SDK, you will find SDK documentation in `eStatement\pdf`. Online help may be accessed through the eStatement Manager Command Center, DefTool, or Composer.

Overview

This chapter assumes in-depth understanding of and practical experience with database administration. Consult your database documentation as necessary.

Oracle recommends that you install and configure eStatement Manager in the same top-level directory structure, first on the database server, then the application server.

TIP: For distributed environments, ensure that you have any required database client software installed on your application server and any other client machines of your database server.

This chapter provides instructions for configuring your database server to support a **new** eStatement Manager database. It includes:

Using database partitioning with eStatement Manager

CAUTION: The installation and configuration examples shown in this guide use default eStatement Manager pathnames. If you choose not to accept the default values, make sure that your values are consistent on all servers across your installation of eStatement Manager.

Using Database Partitioning with eStatement Manager

Oracle eStatement Manager 4.0 introduced the high-performance feature of database partitioning. Partition splitting reduces the number of tables to be scanned when indexing your data. You can now specify the number of partitions when you create a DDN in the Command Center. At the first run of the Indexer job, eStatement Manager creates and populates a set of partitioned index tables to maintain your dynamic data.

The number of tables you need depends on your database platform and the anticipated volume of data.

Native partitioning can be applied to a single index table depending on your Oracle software license. For an Oracle database, we recommend you create one index table per DDN, and use Oracle's native table partitioning functionality for higher performance. Oracle recommends choosing the range partition on the **Z_DOC_DATE** column.

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Configuring the eStatement Manager Database

You can use ANT build scripts to create and configure the eaSuite production database. Because the eStatement Manager database is the production database for eaSuite, it is also called the eaSuite database. Before running ant, do the following:

- 1 Install or Upgrade your database server software as necessary.
- 2 Make a full backup of your current database.
- 3 Check the database product *Release Notes* for disk space requirements and confirm that you have sufficient disk space on your database server. Insufficient disk space can cause database configuration to fail.
- 4 Install Apache ant version 1.6.5 or higher. You can download this software from <http://ant.apache.org/>. The installation directions can be found on that site as well.
- 5 Set ANT_HOME and JAVA_HOME environment variables and add ANT_HOME\bin and JAVA_HOME\bin to the system PATH variable.

Configure ANT *property files*, as described in following sections.

Configuring edxadmin.properties

This step in setting up the database server is to edit the properties file that controls the eaSuite production database ant installation.

CAUTION: When creating an Oracle database, limit its name to eight characters. Defining or entering an Oracle SID with more than eight characters causes Oracle database configuration to fail.

The following example for EDX_HOME\db\oracle\edxadmin.properties shows sample values that should be replaced with the appropriate paths, usernames, passwords, and SID settings:

```
Correcti on: ORACLE_HOME=E:\oracl e\product\10. 2. 0\db_1
ORACLE_BASE=E:\oracl e\product\10. 2. 0
DB_USER=edx0
DB_PASSWD=edx47
DB_SI D=edx47
SYS_PASSWD=change_on_i nstal l
--data tabl espace fil e locati on
L_DB_EDX_DATA_TB_FI LE_LOC=E:\oracl e\product\10. 2. 0\db_1\oradata
--i ndex data tabl espace fil e locati on
L_DB_EDX_I NDX_TB_FI LE_LOC=E:\oracl e\oradata
--Applicati on data tabl espace fil e locati on
```

```
L_DB_APP_DATA_TB_FILE_LOC=E:\oracl e\oradata
--Application index data tablespace file location
L_DB_APP_INDX_TB_FILE_LOC=E:\oracl e\oradata
--Detail extractor data tablespace file location
L_DB_LOAD_DATA_TB_FILE_LOC=E:\oracl e\oradata
--Detail extractor index tablespace file location
L_DB_LOAD_INDX_TB_FILE_LOC=E:\oracl e\oradata
--FS data tablespace file location
L_DB_FS_DATA_TB_FILE_LOC=E:\oracl e\oradata
--FS index tablespace file location
L_DB_FS_INDX_TB_FILE_LOC=E:\oracl e\oradata
--Stage data tablespace file location
L_DB_STG_DATA_TB_FILE_LOC=E:\oracl e\oradata
--Stage index tablespace file location
L_DB_STG_INDX_TB_FILE_LOC=E:\oracl e\oradata
--Large data tablespace file location
LARGE_DB_EDX_DATA_TB_FILE_LOC=E:\oracl e\oradata
--Large index tablespace file location
LARGE_DB_EDX_INDX_TB_FILE_LOC=E:\oracl e\oradata
--medium data tablespace file location
MEDIUM_DB_EDX_DATA_TB_FILE_LOC=E:\oracl e\oradata
--medium index tablespace file location
MEDIUM_DB_EDX_INDX_TB_FILE_LOC=E:\oracl e\oradata
---the first control file location
DB_CONTROL_FILE_LOCN1=E:\oracl e\oradata
---the second control file location
DB_CONTROL_FILE_LOCN2=E:\oracl e\oradata
---the third control file location
DB_CONTROL_FILE_LOCN3=E:\oracl e\oradata
---Redo-Log file location
REDO_LOG_FILE_LOCN=E:\oracl e\oradata
--System tablespace file location
SYSTEM_FILE_LOCN=E:\oracl e\oradata
```

```
--Temporary tablespace file location
TEMP_FILE_LOCN=E:\oracle\oradata
--UNDO tablespace file location
UNDO_FILE_LOCN=E:\oracle\oradata
TRACE_FILE_LOCN=E:\oracle\oradata
--backup file location
L_BACKUP_FILE=E:\oracle\oradata\expedxtest.dmp
--backup log file location
L_LOG_FILE=E:\oracle\oradata\expedxtest.log
```

Following Oracle configurations are recommended by CBA team for Windows/Oracle stack.

Modifying Oracle Parameters

Modify Oracle parameters as shown in the table below before creating a new database. To do so, edit the file at EDX_HOME/db/oracle/init10g.ora.

Parameter	Default Value	Preferred Value
sga_target	1256194048	512M
pga_aggregate_target	418381824	256M

Update these parameters with appropriate values according to your environment.

Configuring a New eaSuite Database

To configure a new eaSuite database:

- 1 Change directory to your eaSuite database home directory. For example:
cd <EDX_HOME>\db\oracle
- 2 There are multiple ant targets you can use that automate the installation process. (To run the steps manually, go to Step 3.) The install-new target creates new eaSuite instances with the SIDs specified in the properties file:

```
ant install-new
```

Check the following log files for any errors:

- o create_db.log

- o configure_ts.log
- o setup_user.log
- o create_tables.log
- o create_views.log
- o compile_sproc.log

NOTE: After setting up the database, configure required oracle services. Please refer to the "Configuring Oracle Services" section

The install-existing target creates new eaSuite schemas on an existing instance with the usernames/passwords specified in the properties file:

ant install-existing

Check the following log files for any errors:

- o configure_ts.log
- o setup_user.log
- o create_tables.log
- o create_views.log
- o compile_sproc.log

3 If you prefer to manually run each install step, start the ant script with the command:

ant

The Main Menu appears:

mai n:

[echo] [1]. Instal l eaSui te Database

[echo] [2]. Ini ti al Data Popul ati on

[echo] [0]. Qui t

[i nput] Enter your selection (1, 2, q, 0)

a. Select option 1, **Install eaSuite Database**. The Install eaSuite Database menu appears:

CreateIni tDatabaseMenu:

[echo] Instal l eaSui te Database

[echo] [1]. Create Oracl e Instance

[echo] [2]. Shutdown Database

[echo] [3]. Startup Database

[echo] [4]. Instal l Applicati on Database I - Create tablespa ce/user

[echo] [5]. Instal l Applicati on Database II - Create tables

```
[echo] [6]. Install Application Database III - Install PL/SQL Code Base
```

```
[echo] [0]. Quit
```

```
[input] Enter your selection (1, 2, 3, 4, 5, 6, q, 0)
```

- b. Select option 1, Create Oracle Instance. This creates a database instance for eaSuite, and defines a data dictionary and stored procedure for the new database. If successful, the following message appears:

```
init:
```

```
[echo] Creating database instance... please wait
```

```
[exec] SQL*Plus: Release 10.2.0.1.0 - Production on Wed Jul 5  
15:59:24 2006
```

```
[exec] Copyright (c) 1982, 2005, Oracle. All rights reserved.
```

```
[exec] Connected to an idle instance.
```

```
[exec] ORACLE instance started.
```

```
[exec] Total System Global Area 1258291200 bytes
```

```
[exec] Fixed Size 1978336 bytes
```

```
[exec] Variable Size 318771232 bytes
```

```
[exec] Database Buffers 922746880 bytes
```

```
[exec] Redo Buffers 14794752 bytes
```

```
[exec] SQL> Disconnected from Oracle Database 10g Enterprise  
Edition Release
```

```
[exec] With the Partitioning, OLAP and Data Mining options
```

```
[echo] Initializing database instance... please wait
```

This option may take more than 30 minutes to complete. Please check the "create_db.log" log files for any errors.

After creating the database instance, the Command prompt appears. You must execute ant build script again, which takes you to the CreateInitDatabaseMenu Menu.

- c. Select option 2, **Shutdown Database**. If successful, you see the following message:

```
ShutdownDatabase:
```

```
[echo] Shutdown database... please wait
```

```
[exec] Database closed.
```

```
[exec] Database dismounted.
```

```
[exec] ORACLE instance shut down.
```

- d. Select option 3, **Startup Database**. If successful, you see the following message :

StartupDatabase:

[echo] Startup database... please wait

[exec] ORACLE instance started.

[exec] Total System Global Area 1258291200 bytes

[exec] Fixed Size 1978336 bytes

[exec] Variable Size 318771232 bytes

[exec] Database Buffers 922746880 bytes

[exec] Redo Buffers 14794752 bytes

[exec] Database mounted.

[exec] Database opened.

- e. Select option 4, Install Application Database I - Create tablespace/user. You see the following message

[echo] Creating tablespace... please wait

This option creates new eaSuite database tablespaces and users. Please check the "configure_ts.log" and "setup_user.log" files for any errors.

- f. Select option 5, **Install Application Database II - Create tables**. You see the following message:

CreateObjects:

[echo] Creating tables/views... please wait

This option creates database tables, views and indexes. Please check the "create_tables.log" and "create_views.log" for any errors. The following error messages at the start of this log files can be ignored:

ORA-00942: table or view does not exist - drop table statement

ORA-02289: sequence does not exist - drop sequence statement

ORA-01418: specified index does not exist - drop index statement

- g. Select option 6, Install Application Database III - Install PL/SQL Code Base.

CompileProc:

[echo] Compiling packages... please wait

This option compiles stored procedures to support database processing. Please check the "compile_sproc.log" for any errors.

- h. Select option 2, **Initial Data Population**, to display this menu:

OtherOperationsMenu:

```
[echo] [1]. Import initial data set
[echo] [2]. Export eaSuite database data
[echo] [0]. Quit
[input] Enter your selection (1, 2, q, 0)
```

- i. Select option 1, **Import initial data set**. This option populates the initial data.
- j. Select option 2, **Export eaSuite database data**. This option takes a backup of an eaSuite database schema into "L_BACKUP_FILE" location that is specified in the "edxadmin.properties" property file.

Migrating an Existing eStatement Manager Database

To migrate an existing eStatement Manager database to a newer version, you run the database setup with ANT build scripts. For complete details of migration, refer to *Migration Guide for Oracle Siebel eaSuite*.

Configuring Oracle Services

The next step in setting up the database server is to edit two Oracle configuration files that control access to the eStatement Manager production database.

TIP: Always consult with your onsite DBA and your Oracle Professional Services representative to configure database connectivity, to make sure you comply with client standards for the enterprise.

listener.ora includes service names and address of all listeners on a computer, the instance names of the databases for which they listen, and listener control parameters. The address for a server in **listener.ora** requires the SID (SID_NAME) of a database server in **tnsnames.ora**.

You need to modify listener.ora on the database server machine.

tnsnames.ora includes a list of service names of network databases that are mapped to connect descriptors. It is used by clients and distributed database servers to identify potential server destinations. The address of a given database server in **tnsnames.ora** matches the address of a listener for that server in **listener.ora**.

You need to modify tnsnames.ora on the database client machine. By default, these files are installed to the network administration directory of your database server, %ORACLE_HOME%\network\admin.

To configure Oracle services for Windows:

- 1 Change directory to the network administration directory of your **database server**. For example:

```
cd E:\oracle\product\10.2.0\db_1\network\admin
```

- 2 Open **listener.ora** and edit the **SID_LIST_LISTENER** section to reflect your Oracle SID and database home directory. For example:

```
(SID_DESC =
  (SID_NAME = edx0)
  (ORACLE_HOME = E:\oracle\product\10.2.0\db_1)
)
```

- 3 Save and close **listener.ora**.

- 4 Change directory to the network administration directory of your **database client**. For example:

```
cd \export\home\oracle\product\10.2.0\db_1\network\admin
```

- 5 Open **tnsnames.ora** and edit the database service that identifies your protocol, host, and port. This example uses the service name **edx.db** (your service name might be different), installed on the database server **localhost**.

```
edx.db =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1521))
    )
  (CONNECT_DATA =
    (SID = edx0)
  )
)
```

- 6 Save and close **tnsnames.ora**.

- 7 (*single machine environments only*) Repeat Step 5 for the **tnsnames.ora** file on your **application server**. This file is installed with your database client software. Distributed environments may skip this step.

- 8 Stop and restart the Oracle listener with the listener control commands.

```
lsnrctl stop
lsnrctl start
```

- 9 After the Oracle listener has been restarted, you should see a service handler for the eStatement Manager instance.

```
Services Summary...
PLSExtProc has 1 service handler(s)
edx0 has 1 service handler(s)
```

This service handler should match the name you entered for the Oracle SID during database configuration, in this example **edx0**.

Connecting to Your Oracle Database

Once you have configured Oracle services, you should now be able to connect to your eStatement Manager database.

To connect to an Oracle database for Windows

- 1 Run the `sqlplus` command on your eStatement Manager database, with arguments for your database username, password, and connection string (database alias). For example:

```
sqlplus edx_dba/edx@edx.db
```

If the database is connected successfully, you see a connection message.

```
Connected to: Oracle Database 10g Enterprise Edition Release 10.2.0.1.0
```

- 2 At the SQL prompt, enter a database query command, for example:

```
SQL> show parameters db_name
```

If the database is connected successfully, you see output for your database instance:

```
NAME TYPE VALUE
-----
db_name string edx0
SQL>
```

Start and Test your Database Server

Start and test your database server using the server documentation for Windows. If you encounter any errors, then double-check the steps in this chapter before proceeding.

After your database server starts successfully with the eStatement Manager database installed, you can proceed to configure your application server.

5

Configuring the WebLogic Application Server for Windows

Overview

This chapter assumes in-depth understanding of and practical experience with application server administration. Consult WebLogic Server documentation as necessary.

Oracle recommends that you install and configure eStatement Manager in the same top-level directory structure, first on the database server, then the application server.

If you have not already installed database server components and configured the database server for eStatement Manager, do so now.

CAUTION: For distributed environments, ensure that you have any required database client software installed on your application server and any other client machines of your database server.

This chapter provides instructions for configuring WebLogic Server to support eStatement Manager.

The installation and configuration examples shown in this guide use default eStatement Manager pathnames. If you choose not to accept the default values, then make sure that your values are consistent on all servers across your installation of eStatement Manager.

About Example Windows Domains in This Guide

This guide uses the default WebLogic domain `%WL_HOME%\user_projects\domains\mydomain` (`%WL_HOME%` is the directory path where you installed WebLogic). WebLogic users may use the Domain Configuration Wizard to create this domain or replace these pathnames with a custom domain created by your system administrator.

Starting and Stopping WebLogic Server

Developers and system administrators will need to be familiar with how to stop and start WebLogic Server and any active web applications for Windows.

WebLogic Server startup script must be edited to **source** your customized version of the configuration file `edx.config`, thus passing your eStatement Manager environment to WebLogic Server at startup. For details, see [Passing Windows Environment Data to WebLogic](#).

For details on starting and stopping WebLogic Server and for verifying startup, please consult the BEA WebLogic documentation for Windows.

Starting and Stopping an Active Application Server

Improperly starting or stopping an application server in an active eStatement Manager production environment can produce unexpected and unintended results. You can **and should** create custom startup and shutdown scripts that include all your command parameters, as well as the command used to start or stop the eStatement Manager Scheduler.

The default command-line startup shell scripts are fine for an inactive production environment where there are no running jobs. However, the startup process will stop immediately if you enter a **Ctrl+C** (often used to force a hard shutdown of the server) in the startup directory, or if you close the terminal session.

By default, if you use the Windows Control Panel to stop a server instance, the Windows Service Control Manager (SCM) kills the server's Java Virtual Machine (JVM). If you kill the JVM, the server immediately stops all processing. Any session data is lost. If you kill the JVM for an Administration Server while the server is writing to the config.xml file, you can corrupt the config.xml file. See BEA Documentation for Enabling Graceful Shutdowns from the Control Panel.

Capturing Your Windows Environment for eStatement Manager

eStatement Manager installs several configuration files that you use to define your eStatement Manager environment. These configuration scripts are required **only on the application server**.

<code>%EDX_HOME%\config\edx_env.bat</code>	Editable configuration file stores environment variables required by your application server
<code>%EDX_HOME%\config\edx_load.config.bat</code>	Editable configuration file stores database Java options required by your application server
<code>%EDX_HOME%\config\edx.config.bat</code>	Batch file passes the environment data in <code>edx_env.bat</code> and <code>edx_load.config.bat</code> to your application server when called in your startup script

NOTE: This section describes how to edit `edx_env.bat`, and `edx_load.config.bat` to store your environment variables. For more information on `edx.config.bat`, see [Passing Windows Environment Data to WebLogic](#).

Using `edx_env.bat`, `edx_load.config.bat`, and `edx.config.bat` to Store Environment Data

You must edit the configuration file `edx_env.bat` to set values for your eStatement Manager home, application server home, and Java home directories.

To edit Windows environment data with `edx_env.bat`

- 1 Navigate to `%EDX_HOME%\config` and open `edx_env.bat`.
- 2 Modify the default settings to reflect your eStatement Manager environment. For example:

```
@rem define APP_SERVER
@set APP_SERVER=wl
@rem define APP_SERVER

@rem define EDX_HOME
@set EDX_HOME=C:\eStatement
@rem define EDX_HOME
```

```
@rem define JAVA_HOME
@set JAVA_HOME=C:\bea\jrockit90_150_04
@rem define JAVA_HOME

@rem define WL_HOME
@set WL_HOME=C:\bea\wl_ogi_c92
@rem define WL_HOME
```

CAUTION: Make sure you set all paths to the appropriate point releases and patches for WebLogic Server and JDK, if necessary. Check the Release Notes and your system documentation for updated requirements.

- 3 Save and close the file.

You must also edit the configuration file `edx_load.config.bat` to set values for your database user, password, and server name. This file is called by `edx_env.bat`.

To edit Windows Java Options with `edx_load.config.bat`

- 1 Navigate to `%EDX_HOME%\config` and open `edx_load.config.bat`.
- 2 Modify the default settings for `com.edocs.tasks.loader` to reflect your database user, password, and server name. Use the settings for your database from the. For example:

```
@set JAVA_OPTIONS=%JAVA_OPTIONS% -Dcom.edocs.tasks.loader.user=edx_dba
@set JAVA_OPTIONS=%JAVA_OPTIONS% -Dcom.edocs.tasks.loader.password=edx
@set JAVA_OPTIONS=%JAVA_OPTIONS% -Dcom.edocs.tasks.loader.alias=database
tnsnames/alias name
```

- 3 Save and close the file.

CAUTION: Make sure you set all paths to the appropriate point releases and patches for WebLogic Server and JDK, if necessary. Check the Release Notes and your system documentation for updated requirements.

You must also edit the file `edx.config.bat` to set JVM memory parameters.

To edit JVM memory parameters in `edx.config.bat`

- 1 Navigate to `EDX_HOME\config` and open `edx.config.bat`.
- 2 Set Optional JVM settings as follows:

Replace the line `@set JAVA_OPTIONS=%JAVA_OPTIONS% -ms128m -mx128m -Xnoclassgc`
With `@set JAVA_OPTIONS=%JAVA_OPTIONS% -Xnoclassgc`

NOTE: Alternatively you can comment out the entire line and add the following line to `startWebLogic.cmd` file before sourcing the `edx.config.bat` file. For example, `@set JAVA_OPTIONS=%JAVA_OPTIONS% -Xnoclassgc`.

NOTE: Other optional JVM parameters (to improve performance) can be set as well. For example, `@set JAVA_OPTIONS=%JAVA_OPTIONS% -Xnoclassgc -XX:+UseThreadPriorities`.

Using the JRockit JVM

On the Windows platform, Oracle recommends to use JRockit JVM (jrockit90_150_04) bundles with WebLogic 9.2 for better scalability.

To run the application with the JRockit JVM

- 1 During WebLogic domain creation, select the JRockit JVM. Refer to WebLogic documentation for details.
- 2 Set the JRockit HOME as the JAVA_HOME in EDX_HOME\config\edx_env.bat file.
- 3 Set JVM memory parameters in EDX_HOME\config\edx.config.bat as defined in "[Using edx_env.bat, edx_load.config.bat, and edx.config.bat to Store Environment Data.](#)"

Configuring XMA

Notification

Change the notification-consumer-cfg.xma.xml file, which is located in %EDX_HOME%\xma\config\com\edocs\common\notification\ for proper mail server configuration.

Set property **smtpHost** corresponding to your mail server IP under the tag

```
<bean id="config"> <\bean>
```

Example:

```
<property name="smtpHost"><value>172.20.2.34<\value><\property>
```

Hibernate properties

Change the persistence.xma.xml file which is located in %EDX_HOME%\xma\config\modules\ to set the correct hibernate.dialect key in tag <bean id="defaultHibernateProps"><\bean> According to Database type.

Example: Database – Oracle 10g:

```
<prop key="hibernate.dialect">org.hibernate.dialect.Oracle9Dialect<\prop>
```

Configuring the Logger

The **log4j_cc.xml** file is located in %EDX_HOME%\config folder. The default appender for the logger is **JMS**. This logs the logger data in the database. Additionally the **File appender** and the **Console appender** could be used. It is not recommended to use the **JMS** appender when it comes to enabling **DEBUG** priority because it leads to flooding the database with lots of data.

The changes done to the **log4j_cc.xml** configuration will be dynamically picked up, and the application server or the scheduler does not need to be restarted.

When defining paths for Logger, use one of the following standards:

- 1 Use a forward slash as in.
EDX_HOME=C:/eStatement
- 2 Use two backslashes for each single backslash in the path as in
EDX_HOME=C: \\eStatement

File Appender

There are three file appenders specified in the log4j_cc.xml, namely FILE_ESTATEMENT, FILE_SCHEDULER and FILE_Thirdparty.

Such as:

FILE_ESTATEMENT:

```
<appender name="FILE_ESTATEMENT"
class="org.apache.log4j.RollingFileAppender">
    <param name="File" value="log4j_eStatement.log"/>
```

FILE_SCHEDULER (used for pwc scheduler code):

```
<appender name="FILE_SCHEDULER"
class="org.apache.log4j.RollingFileAppender">
    <param name="File" value="log4j_Scheduler.log"/>
```

FILE_Thirdparty (used to redirect third party library logs):

```
<appender name="FILE_Thirdparty"
class="org.apache.log4j.RollingFileAppender">
    <param name="File" value="log4j_Thirdparty.log"/>
```

The above log files will be created in the domain folder of the application server. Additionally you can specify the fully qualified path if those files does not need to be created under the domain folder.

JMS Appender

The JMS appender is used to log the data to database. It is recommended to set the **Threshold** value for the JMS appender as **INFO** so that it limits only INFO, ERROR, and WARN messages to be logged to the database. Enabling the Threshold for **DEBUG** will flood the database and cause performance issues.

```
<appender name="JMS"
class="com.edocs.fs.logging.appenders.JMSQueueAppender">
    <param name="QueueConnectionFactoryBindingName"
value="edx/lcf"/>
    <param name="QueueBindingName"
value="edx/queue/logger"/>
```

```
<param name="Threshold" value="INFO"/>
<layout class="org.apache.log4j.PatternLayout">
    <param name="ConversionPattern" value="%c %x -
    %m"/>
</layout>
</appender>
```

Log Category

You can get the logging information for specified different package levels and different appender types. Set parameters in tag `<category></category>` according to your requirement.

```
<category name="Package_Name" additivity="false">
    <priority value="Priority_Level"/>
    <appender-ref ref="Appender_name"/>
</category>
```

Example:

```
<category name="com.edocs.pwc.scheduler"
additivity="false">
    <priority value=" INFO "/>
    <appender-ref ref="FILE_SCHEDULER"/>
    <appender-ref ref="CONSOLE"/>
    <appender-ref ref="JMS"/>
</category>
```

Note: The property "additivity" must be set to **false** to avoid replication of data.

Generally priority level is set to "INFO" to avoid the overhead consumed by the application server.

The logging information that is not related to the defined package level will be placed at the `<root></root>` appender. The **FILE_Thirdparty** appender is specified under this, so that any errors in third party libraries will be routed to this file.

Logging to a Non-Default Directory

If logs need to be put into a directory other than the default location of the WebLogic domain directory, then you must change the `log4j_cc.xml` file to include the complete path with slashes ("/"). For example, to change the location of `log4j_eStatement.log`, edit the following line in `log4j_cc.xml` to include the complete path as shown:

```
<param name="File" value="E:/eStatement/logs/log4j_eStatement.log"/>
```

Passing Windows Environment Data to WebLogic

`edx.config.bat` is a batch file that you call and process in your application server startup script to pass your eStatement Manager environment (stored in `edx_env.bat` and `edx_load.config.bat`) to WebLogic. You can edit `edx.config` to change the memory settings.

CAUTION: Do not confuse `edx.config.bat` with `edx_env.bat`, in which you enter the environment data to pass to the server. For details, see [Using `edx_env.bat` and `edx_load.config.bat` to Store Environment Data](#).

This section describes how to use `edx.config.bat` to pass your environment data to WebLogic at server startup. For information on `edx_env.bat` and `edx_load.config.bat`, see [Capturing Your Windows Environment for eStatement Manager](#).

To pass your eStatement Manager environment to WebLogic (overview)

- 1 Determine whether you wish to start WebLogic as a Windows Service or directly from the startup script. Use the appropriate procedure for your service or startup scripts.
- 2 In your **domain** service or startup script, set your eStatement Manager home directory, `%EDX_HOME%`.
- 3 In your **domain** service or startup script, call and process the configuration script `edx.config.bat`. This procedure is called **sourcing** your configuration.
- 4 In the **master** service or startup script, set your CLASSPATH to use the classpath defined in `edx.config.bat`.

TIP: Because `edx_env.bat` calls `edx_load.config.bat`, you need not source this database config file directly in your startup script.

Passing Your Configuration to WebLogic Running as a Windows Service

Oracle recommends installing WebLogic Server as a Windows Service, and modifying the script that calls that service. For WebLogic, this file is

```
%WL_HOME%\user_projects\domains\mydomain\InstallSvc.cmd.
```

Before editing either of these files, be sure to save a backup copy *in a different directory*.

Example of InstallSvc.cmd for WebLogic

Bold indicates text that you should add or change from the default.

```
.
.
.

@rem Set WLS_USER equal to your system username and WLS_PW equal
@rem to your system password for no username and password prompt
@rem during server startup. Both are required to bypass the startup
@rem prompt.

set WLS_USER=
set WLS_PW=

.
.
.

set EDX_HOME= C:\eStatement
call %EDX_HOME%\config\edx.config.bat

@rem Set JAVA_OPTIONS to the java flags you want to pass to the vm. i.e.:
@rem set JAVA_OPTIONS=-Dweblogic.attribute=value -Djava.attribute=value

set JAVA_OPTIONS=%JAVA_OPTIONS%

@rem Set JAVA_VM to the java virtual machine you want to run. For instance
@rem set JAVA_VM=-server

set JAVA_VM=

@rem Set MEM_ARGS to the memory args you want to pass to java. For instance
@rem set MEM_ARGS=-Xms32m -Xmx200m

.
.
.

:installSvc

rem *** Set up extrapath for win32 and win64 platform separately

if not "%WL_USE_64BITDLL%" == "true" set
EXTRAPATH=%WL_HOME%\server\bin;%JAVA_HOME%\jre\bin;%JAVA_HOME%\bin;%WL_HOME%\server\bin\oci920_8;%EDX_HOME%\lib

if "%WL_USE_64BITDLL%" == "true" set
EXTRAPATH=%WL_HOME%\server\bin\win64;%WL_HOME%\server\bin;%JAVA_HOME%\jre\bin;%JAVA_HOME%\bin;%WL_HOME%\server\bin\win64\oci920_8;%EDX_HOME%\lib

rem *** Install the service

"%WL_HOME%\server\bin\beasvc" -install -svcname:"beasvc %DOMAIN_NAME% %SERVER_NAME%" -
javahome:"%JAVA_HOME%" -execdir:"%USERDOMAIN_HOME%" -extrapath:"%EXTRAPATH%" -
password:"%WLS_PW%" -cmdline:%CMDLINE%
```

```
: fi ni sh  
ENDLOCAL
```

To edit InstallSvc.cmd for WebLogic

See the example above for default settings. Make sure to change these as needed for your environment.

CAUTION: Make sure you set all paths to the appropriate point releases and patches for WebLogic Server and JDK, if necessary. Check the Release Notes and your system documentation for updated requirements.

- 1 Stop WebLogic Server and all application server instances.
- 2 Navigate to the %WL_HOME%\user_project\domains\mydomain subdirectory of your application server home directory.
- 3 Open `InstallSvc.cmd` by right clicking on its name, and selecting **Edit**.
- 4 Before the `JAVA_OPTIONS` definition, set `EDX_HOME` and call `edx.config.bat`. For example:

```
set EDX_HOME= C:\eStatement  
call %EDX_HOME%\config\edx.config.bat
```

- 5 Set `JAVA_OPTIONS` to %JAVA_OPTIONS%.
- 6 Set `JAVA_VM` to null.
- 7 Add your eStatement Manager `\lib` directory to the `EXTRAPATH` setting. See the examples above.
- 8 (Optional) You can set your application server user and password in the script (to bypass entering it in a console window) by specifying them for `WLS_USER` and `WLS_PW`.
- 9 Save and close `InstallSvc.cmd`.

To edit InstallSvc.cmd for WebLogic

CAUTION: This procedure is required by a defect in WebLogic that does not correctly pass classpath settings from the domain to the master when the master script is called. Consult your WebLogic administrator when editing scripts that control multiple domains.

- 1 Stop WebLogic Server and all application server instances.
- 2 Navigate to the %WL_HOME%\weblogicXX\server\bin subdirectory of your application server home directory, where `XX` is the version of WebLogic installed.
- 3 Open `InstallSvc.cmd` by right clicking on its name, and selecting **Edit**.
- 4 Set your eStatement Manager home directory and call your eStatement Manager environment script right after the `CLASSPATH` setting. For example:

```
set EDX_HOME=C:\eStatement  
call %EDX_HOME%\config\edx.config.bat
```

- 5 Save and close `InstallSvc.cmd`.

Passing Your Configuration in a Startup Script for WebLogic

You can also choose to start WebLogic Server directly by modifying the server startup script to source your configuration. WebLogic recommends that you start up the server from your domain, using `%WL_HOME%\user_projects\domains\mydomain\startWebLogic.cmd`. Before editing this file, be sure to save a backup copy *in a different directory*.

Example of startWebLogic.cmd for WebLogic

```
@REM Call setDomainEnv here.

set DOMAIN_HOME=C:\bea9.2\user_projects\domains\mydomain
for %%i in ("%DOMAIN_HOME%") do set DOMAIN_HOME=%%~fsi

call "%DOMAIN_HOME%\bin\setDomainEnv.cmd" %*

set SAVE_JAVA_OPTIONS=%JAVA_OPTIONS%

set SAVE_CLASSPATH=%CLASSPATH%

@REM Start PointBase

set PB_DEBUG_LEVEL=0

if "%POINTBASE_FLAG%"=="true" (
  call "%WL_HOME%\common\bin\startPointBase.cmd" -port=%POINTBASE_PORT% -
  debug=%PB_DEBUG_LEVEL% -console=false -background=true -
  ini=%DOMAIN_HOME%\pointbase.ini >"%DOMAIN_HOME%\pointbase.log" 2>&1
)

set JAVA_OPTIONS=%SAVE_JAVA_OPTIONS%

set SAVE_JAVA_OPTIONS=

set CLASSPATH=%SAVE_CLASSPATH%

set SAVE_CLASSPATH=

if "%PRODUCTION_MODE%"=="true" (
  set WLS_DISPLAY_MODE=Production
) else (
  set WLS_DISPLAY_MODE=Development
)

if NOT "%WLS_USER%"==" " (
  set JAVA_OPTIONS=%JAVA_OPTIONS% -Dweblogic.management.username=%WLS_USER%
)

if NOT "%WLS_PW%"==" " (
  set JAVA_OPTIONS=%JAVA_OPTIONS% -Dweblogic.management.password=%WLS_PW%
)

set CLASSPATH=%CLASSPATH%;%MEDREC_WEBLOGIC_CLASSPATH%
```

```
echo .

echo .

echo JAVA Memory arguments: %MEM_ARGS%

echo .

echo WLS Start Mode=%WLS_DISPLAY_MODE%

echo .

echo CLASSPATH=%CLASSPATH%

echo .

echo PATH=%PATH%

echo .

echo *****

echo * To start WebLogic Server, use a username and *
echo * password assigned to an admin-level user. For *
echo * server administration, use the WebLogic Server *
echo * console at http:\\hostname:port\console *
echo *****

@REM Set up IP Migration related variables.

@REM Set interface name.

if NOT "%Interface%"==" " (
    set IFNAME=%Interface%
) else (
    set IFNAME=
)

@REM Set IP Mask.

if NOT "%NetMask%"==" " (
    set IPMASK=%NetMask%
) else (
    set IPMASK=
)

@REM Perform IP Migration if SERVER_IP is set by node manager.
```

```
if NOT "%SERVER_IP%"==" " (
  call "%WL_HOME%\common\bin\wlsifconfig.cmd" -addif "%IFNAME%" "%SERVER_IP%"
  "%IPMASK%"
)

@REM set MEM_ARGS=-server -Xms512m -Xmx512m -XX:+UseThreadPriorities

set MEM_ARGS=-Xms1024m -Xmx1024m
@REM set MEM_ARGS=-Xms2048m -Xmx2048m

set EDX_HOME=C:\eStatement
call %EDX_HOME%\config\edx.config.bat

echo %CLASSPATH%

@REM START WEBLOGIC

echo starting weblogic with Java version:

%JAVA_HOME%\bin\java %JAVA_VM% -version

if "%WLS_REDIRECT_LOG%"==" " (
  echo Starting WLS with line:
  echo %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% %JAVA_OPTIONS% -
  Dweblogic.Name=%SERVER_NAME% -
  Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %PROXY_SETTINGS%
  %SERVER_CLASS%
  %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% %JAVA_OPTIONS% -
  Dweblogic.Name=%SERVER_NAME% -
  Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %PROXY_SETTINGS%
  %SERVER_CLASS%
) else (
  echo Redirecting output from WLS window to %WLS_REDIRECT_LOG%
  %JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% %JAVA_OPTIONS% -
  Dweblogic.Name=%SERVER_NAME% -
  Djava.security.policy=%WL_HOME%\server\lib\weblogic.policy %PROXY_SETTINGS%
  %SERVER_CLASS% >"%WLS_REDIRECT_LOG%" 2>&1
)
```

To edit startWebLogic.cmd for WebLogic

See the example above for default settings. Make sure to change these as needed for your environment.

- 1 Stop WebLogic Server and all application server instances.
- 2 Edit %WL_HOME%\user_projects\domains\<mydomain>\bin\startWebLogic.cmd
- 3 Set JVM memory parameters as follows:

```
set MEM_ARGS=-Xms<min>m -Xmx<max>m
```

Where <min> and <max> are minimum and maximum JVM memory allocated in megabytes. Best practice is to keep the same memory value for both. You have to specify these values depending on the available physical and virtual memory in your machine. Please refer the Java documentation for more information about the JVM setting. For example, set MEM_ARGS=-Xms1024m -Xmx1024m.

- 4 Set your EDX_HOME directory %EDX_HOME% and call edx.config.bat just after the set CLASSPATH statement. For example:

```
set EDX_HOME=C:\eStatement
call %EDX_HOME%\config\edx.config.bat
```

- 5 Save and close **startWebLogic.cmd**.

To edit startWLS.cmd for WebLogic:

CAUTION: This procedure is required by a defect in WebLogic that does not correctly pass classpath settings from the domain to the master when the master script is called. Consult your WebLogic administrator when editing scripts that control multiple domains.

- 1 Stop WebLogic Server and all application server instances.
- 2 Edit %WL_HOME%\weblogicXX\server\bin\startWLS.cmd, where XX is the WebLogic version installed.
- 3 Add the classpath parameter to the java command so it uses the paths to eStatement Manager classes that are set by **startWebLogic.cmd**. For example:

```
"%JAVA_HOME%\bin\java" %JAVA_OPTIONS% -classpath "%CLASSPATH%" -
Dweblogic.Domain=%WL_DOMAIN% -Dweblogic.Name=myserver "-
Dbea.home=C:\bea" -Dweblogic.management.password=%WLS_PW%
-Dweblogic.ProductionModeEnabled=%STARTMODE%
"-Djava.security.policy=C:\bea\wlserver7\lib\weblogic.policy"
weblogic.Server
```

- 4 Save and close **startWLS.cmd**.

Windows Services for eStatement Manager

Setting up a WebLogic Server Instance as a Windows Service

If you want a WebLogic Server instance to start automatically when you boot a Windows host computer, you can set up the server as a Windows service.

For detailed instructions on setting up WebLogic Server as a Windows Service, see the BEA documentation.

Setting Up the eStatement Manager Scheduler as a Windows Service

After all eaSuite EAR files have been deployed to the application server and WebLogic is running, you must start the eStatement Manager Scheduler in order to schedule and run jobs in the eStatement Manager Command Center. If you attempt to run a new job with the Scheduler not running, the job will not run and you will see 'Not yet started' as its status.

To install the Scheduler as a Windows Service, you must modify the Scheduler template file **SCH.txt**, installed to the **bin** directory for eStatement Manager.

To install the Scheduler as a Windows Service:

- 1 Navigate to the **bin** directory for eStatement Manager, or **%EDX_HOME%\bin**.
- 2 Open the Scheduler template file **SCH.txt** and modify the Java classpath to reflect your active Java environment. For example:

```
classpath=c:\jdk131\lib\tools.jar;c:\bea\wlserver\lib\weblogic.jar;c:\eStatement\lib\edx_client.jar;c:\eStatement\lib\edx_common.jar
```

CAUTION: Make sure you set all paths to the appropriate point releases and patches for WebLogic Server and JDK, if necessary. Check the Release Notes and your system documentation for updated requirements.

- 3 Confirm that the following line of code is present in the file for your host and port:

```
-Djava.naming.provider.url=t3://localhost:7001
```

- 4 If you want the Scheduler to log information to a file rather than to the console, add the following value in **SCH.txt**:

```
-Dcom.edocs.pwc.debug=true scheduler_logfile_name
```

- 5 Confirm that all the directory references in **SCH.txt** are correct.
- 6 Save and close **SCH.txt**.

TIP: If you have a 2.x or earlier version of the Scheduler installed as a Windows service, you must remove it before installing the new version of the Scheduler.

- 7 Open a command prompt window, and then change directory to **%EDX_HOME%\bin**. Use the **schedulersvc** command to install the Scheduler as a Windows Service, for example:

```
C:\> schedulersvc -install C:\eStatement\bin\SCH.txt
```

- 8 If the Scheduler service is installed successfully, a confirmation message appears.

Troubleshooting Tips for WebLogic on Windows

If the WebLogic service is unable to find **edx_load.config.bat** at startup:

Add the path **-extrapath:C:\bea\weblogicXX\server\bin;%PATH%** to **installNtService.cmd** (substituting your drive where necessary). For example

```
"C:\bea\weblogic92\server\bin\beasvc" -install -svcname:myservice  
-javahome:"%JAVA_HOME%" -execdir:"C:\bea\weblogic92"  
-extrapath:"C:\bea\weblogic92\server\bin;%PATH%" -cmdline:%CMDLINE%  
-password:lovelyday
```

If you encounter problems when running customized Web pages:

- 1 From your domain in the WebLogic Server Console, select **servers** and **myserver**. A tabbed dialog with the name of your server appears in the right pane.
- 2 On the Configuration/Compilers tab, change the Java Compiler value from the default **javac** to the location of **javac** in the JDK installed **with WebLogic Server**.
- 3 Restart WebLogic Server.

CAUTION: Make sure you set all paths to the appropriate point releases and patches for WebLogic Server and JDK, if necessary. Check the Release Notes and your system documentation for updated requirements.

6

Configuring Java Resources for WebLogic

Overview

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

See WebLogic 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 your WebLogic Server instance and bring up the Administrative Console before you begin this chapter.

DB Client Install and Configurations

This activity is required only if you are setting up a distributed environment, that is, when configuring separate database and application server nodes.

Install Oracle DB client (Version 10g R2) Utilities and Net Protocol on the machine where the application server is installed.

Create **Oracle DB Alias** to access Database server.

To create **Oracle DB Alias** name, navigate to **ORACLE_CLIENT_HOME\bin** directory and run **netmgr** file to get **Oracle Net Manager**. From that select **Service Naming** to add new alias.

NOTE: Where **ORACLE_CLIENT_HOME** is your Oracle DB client installation directory.

Setting the JTA Option

JTA is a configurable parameter that you must set according to environmental conditions such as number of users, access method, and load. Customize the value accordingly. A good starting value for the JTA option is 60 seconds.

To set the JTA option

- 1 Log in to the WebLogic Administrative Console.
- 2 Navigate to Services > JTA.
- 3 Set the value for JTA to 60 seconds or other value that you have determined.

Configuring Java Database Connectivity (JDBC) for eaSuite

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

About JDBC Connections for eaSuite

JDBC connection pools contain 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 startup and adds these connections to the pool. A J2EE web application borrows a connection from the pool, uses it, and then returns it to the pool by closing it.

JDBC 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.

For more details on configuring JDBC Connections, see the JDBC documentation for your application and database servers.

JDBC Data Sources

Create five JDBC data sources using the following values. Create five Data sources for eStatement application as given in Table 07-01.

Data Sources For eStatement Manager:

Name	JNDI Name	Transaction
edxAdminDataSource	edx.databasePool	Emulate Two-Phase Commit
edxLoggerDataSource	edx.logger.databasePool	Emulate Two-Phase Commit
edxMessagingDataSource	edx.messaging.databasePool	Emulate Two-Phase Commit
edxXMADDataSource	edx\xma\databasePool	Emulate Two-Phase Commit
edxUserDataSource	edx.user.databasePool	Emulate Two-Phase Commit

Table 07-01

NOTE: No data source configurations are required for ePayment application.

- 1 Navigate to **Services>JDBC>Data Sources**. Click **Lock and Edit**, then click **New** to create a new Data Source.
- 2 For all Data Sources, select **Database Type** as Oracle and **Database Driver** as Oracle's Driver (Thin) and click **Next**.
- 3 Select Check box **Supports Global Transactions** for all Data Sources and select the corresponding **Transaction** option.

- For Connection Properties, provide correct value for the following properties:

Connection Properties	
Database Name	<Your Oracle Database Alias Name>
Host Name	<Your Oracle Database server host name>
Port	<DB server listening port>
Database User Name	<Your Oracle Database User Name>
Password	<Your Oracle Database Password>

Table 07-02

- Select your target server and click Finish. The default is **AdminServer**.

Connection Pool Settings

- Enter the following values for the connection pool settings for each created JDBC data source:

Property	Status/Value
Initial Capacity	5
Maximum Capacity	20
Capacity Increment	5
Statement Cache Type	FIXED
Statement Cache Size	300
Test Connections On Reserve	Selected
Test Frequency	120
Test Table Name	DUAL
Shrink Frequency	15
Login Delay	1

Table 07-03

Configuring JMS Resources for eaSuite

JMS Connection Factories

- To create JMS Connection factories you have to create Module first. For this you have to navigate through **Services>Messaging>JMS Modules** Then click **Lock and Edit**. Then click **New** to create a new **JMS Module** and provide your JMS Module Properties.

Property	Value
Name	<Your JMS Module Name>
Descriptor File Name	<Your Descriptor File Name>

Location In Domain	<Your Location In Domain>
Targets	<Select Your Server>

Table 07-05

Example:

Property	Value
Name	Factories
Descriptor File Name	Factories
Location In Domain	Factories
Targets	AdminServer

Table 07-06

- 1 Add three Connection Factories using the following values to the JMS Module created above.

Name	JNDI Name	Target
LoggerConnectionFactory	edx\lcf	Select Your Server (AdminServer)
EventsConnectionFactory	edx.qcf	Select Your Server (AdminServer)
EventsforeignConnectionFactory	edx.foreign.qcf	Select Your Server (AdminServer)

Table 07-07

- 2 Select each created connection factory and enable **XA** Transaction under **Transactions** tab.

JMS Persistence Store

- 1 Select the **Services->Persistence Stores** and then select **New->Create File Store**. You must create two file stores with appropriate values as given in Table 07-08:

Name	Target	Directory
LoggerFileStore	Select Your Server (AdminServer)	<Directory Location to Save Store>
EventsFileStore	Select Your Server (AdminServer)	<Directory Location to Save Store>

Table 07-08

JMS Servers

- 1 Select the **Services->Messaging->JMS Servers->New** and then create two JMS Servers using the values given in following Table 07-09.

Name	Type	Target
LoggerJMSServer	LoggerFileStore	Select Your Server (AdminServer)
EventsJMSServer	EventsFileStore	Select Your Server (AdminServer)

Table 07-09

JMS Queue

- 1 Create new JMS Module and add three Queues with values given in following Table 07-10.

Name	JNDI Name	Target
LoggerQueue	edx\queue\logger	LoggerJMSServer
EventsQueue	edx.queue.outbound	EventsJMSServer
EventsforeignQueue	edx.foreign.queue.outbound	EventsJMSServer

Table 07-10

- 2 Provide Queue **Name** and **JNDI Name** and click **Next**.
- 3 Click **Create a New Subdeployment**. You will see the created queue name as **Subdeployment Name**.
- 4 Accept it and Click **OK**.
- 5 Then select **Subdeployment** and Corresponding target **JMS Server**.

Deploying the eStatement Manager Application

After configuring your WebLogic server, you can deploy the eStatement Manager EAR file to that server.

To deploy the eStatement Manager application

- 1 Select Deployments and click Install.
- 2 Browse to the location of your EAR file, select it, and click Next.
- 3 Select **Install this deployment as an application**, and click Next.
- 4 Leave the default settings in the Optional Settings page, and click Finish.
- 5 After activating the changes, select the newly deployed EAR file in the Summary of Deployments page and start it.

Starting the Scheduler

To start the eStatement Manager Scheduler from the command line:

1 Navigate to the directory EDX_HOME\bin.

2 Run the following command at the console:

```
wl_scheduler -start -url iiop://<Application Server Name>:<Port Number>
```

Note the J2EE client protocol for Scheduler is IIOP.

For example:

```
wl_scheduler -start -url iiop://localhost:7001
```

3 You can stop Scheduler by replacing the `-start` parameter with the `-stop` parameter.

The `com.edocs.pwc.cli.CLIScheduler` application is a command line interface for use with Scheduler. For details about this application, see *SDK Guide for Oracle Siebel eStatement Manager*.

7

Packaging the Hibernate and C3PO Libraries

This chapter covers the packaging of the Hibernate and C3PO third-party libraries.

Prerequisites to Packaging

You must have installed:

- At least one of the following eaSuite 4.7 components:
 - eStatement Manager
 - ePayment Manager
 - eaAssist
- JDK 1.5
- Ant 1.6.5 or later

Configuring the Environment for Packaging

Assure that Ant and Java paths are properly set. Configure the environment for them as follows:

```
Set ANT_HOME=C:\apache-ant-1.6.5
Set JAVA_HOME=C:\jdk1.5.0_04
Set PATH=%ANT_HOME%\bin;%JAVA_HOME%\bin;%PATH%
```

Downloading and Installing the Third-Party Libraries

Download the following required third-party libraries:

- Hibernate 3.1.3
- C3PO 0.9.0

The following table shows the library names and installation instructions for the Windows platform:

JAR File Name (Linked to the download site)	File Name after downloading	Tool/Commands to install
hibernate-3.1.3.jar	hibernate-3.1.3.zip	Use WinZip
c3p0-0.9.0.jar	c3p0-0.9.0.bin.zip	Use WinZip

Install these libraries on a server that eaSuite 4.7 application server components can access. Set proper permissions to these libraries in order to package them with the eaSuite product. The next section describes packaging.

Packaging eStatement Manager

When defining paths for the Windows platform in the package.properties files, use one of the following standards:

- 1 Use a forward slash as in
EDX_HOME=C: /eStatement
- 2 Use two backslashes for each single backslash in the path as in
EDX_HOME=C: \\eStatement

To package eStatement Manager

- 1 Edit the EDX_HOME/pkgUtil/package.properties property file located in EDX_HOME/ pkgUtil as shown in the following table:

Property Name	Value
EDX_HOME	C:/eStatement
HIBERNATE_JARFILE_LOC	C:/eStatement/hibernate-3.1
C3P_JARFILE_LOC	C:/eStatement/c3p0-0.9.0/lib

- a Set EDX_HOME to the eStatement Manager home.
- b Set the property value HIBERNATE_JARFILE_LOC to the Hibernate installation location. If you downloaded the hibernate jar file some other way, then provide up to the folder location where hibernate3.jar resides. For example, to set the location of the hibernate3.jar file, do the following:

```
HI BERNATE_JARFI LE_LOC=C: /hi bernate-3. 1
```

- c Set the property value C3P_JARFILE_LOC to the location where the c3p0-0.9.0.jar file resides. For example, to set the c3p0-0.9.0.jar file location, do the following:

```
C3P_JARFI LE_LOC=C: /c3p0-0. 9. 0/I i b
```

- 3 Navigate to EDX_HOME/pkgUtil and invoke Ant without arguments. For example:

```
cd C: \eStatement\pkgUt i l
ant
```

The Ant script completes the repackaging task and displays a message of success.

Failure Recovery

Several reasons exist for getting a BUILD FAILED message during Ant execution:

- Incorrect package.properties file:
 - PRODUCT_HOME is incorrect.

For example, for ePayment Manager a valid path entry like the following must exist:

```
PAYMENT_HOME=C: /ePayment
```

Setting an invalid path or property name causes an error, as in the following assignment:

```
EDX_HOME=C: /ePayment
```
- Either HIBERNATE_JARFILE_LOC or C3P_JARFILE_LOC is incorrect.
- Either the property HIBERNATE_JARFILE_LOC or the property C3P_JARFILE_LOC is not defined at all.
- Unavailability of JAR files in the specified locations.
- Incorrect JAR file names. The expected jar files are hibernate3.jar and c3p0-0.9.0.jar.

NOTE: You may get a BUILD SUCCESSFUL message without causing any repackaging if you remove the PRODUCT_HOME property from the package.properties file.
- System crash during the Ant execution.
- Lack of free disk space.

To recover from any of these issues, correct them and re-invoke the Ant target. No manual removal of partially built components or temporary directories is required.

8

Uninstalling eStatement Manager

Overview

This chapter describes how to uninstall and remove eStatement Manager components, deployed J2EE applications, and Windows services.

Repeat the sequence used to install components: uninstall eStatement Manager from the **database server** first, then the **application server**.

The uninstaller does *not* delete any directories that contain files modified since installation. Instead, it lists these items, which must then be manually removed.

Uninstalling eStatement Manager

Before uninstalling eStatement Manager components, you must:

Stop your application server.

Stop your database instance.

The Uninstaller is located in the **Uninstall** folder of your eStatement Manager home directory.

To uninstall eStatement Manager:

- 1 Navigate to the **Uninstall** folder of your eStatement Manager home directory, **%EDX_HOME%**.
- 2 Either run the command-line script **Uninstall_eStatement Manager.bat**, or select Start Menu > Programs > eStatement Manager > Uninstall eStatement Manager.
- 3 The Uninstall screen appears.
- 4 Click **Uninstall**. A second uninstall screen appears showing eStatement Manager components being removed from your machine.
- 5 When the uninstaller is finished, a screen appears listing any items that could not be removed.
- 6 Change directory to your eStatement Manager home directory and manually remove any remaining files and directories as necessary.
- 7 Click **Done** to close the uninstaller.
- 8 Repeat this procedure on your application server and any other installations.

Undeploying eStatement Manager J2EE Applications

When migrating to a new version of eStatement Manager, you must first undeploy J2EE applications running on your application server. After you have migrated your database, redeploy the new versions of each eaSuite web applications, including eStatement Manager and samples.

Uninstalling Windows Services

Uninstalling WebLogic Server as a Windows Service

Uninstalling this Windows Service requires that you start and stop WebLogic Server from the command line or the administrative console.

To uninstall WebLogic Server as a Windows Service

- 1 Open a Command Prompt window, and change directory to the **domain** directory of your application server home directory.

```
C:\> cd %WL_HOME%\config\mydomain
```

- 2 Uninstall WebLogic Server as a Windows Service with the **uninstallNtService** command:

```
C:\> uninstallNtService.cmd
```

You do not have to specify the WebLogic service name on the command line, because it is named in **uninstallNtService.com**.

Uninstalling the eStatement Manager Scheduler as a Windows Service

Uninstalling this Windows Service requires that you start and stop the Scheduler from the command line.

To uninstall the Scheduler as a Windows Service

- 1 Open a command prompt window, and change directory to the **\bin** directory of your eStatement home directory.

```
C:\> cd %EDX_HOME%\bin
```

- 2 Uninstall the Scheduler as a Windows Service with the **-remove** command:

```
C:\> Schedulersvc -remove
```