Installation Guide for Oracle Siebel eStatement Manager

For Linux Operating System, Oracle® Application Server, and Oracle® Database

Version 4.7

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ORACLE®

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1   Preface

About This Guide

This installation guide describes how to install eStatement Manager and configure the third-party platforms that support the eStatement Manager production environment.

This guide is intended for system administrators 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

- Start up and shut down the system

- Log in and out of the system

- Determine software patch/pack levels

- Install software & patches/packs

- Navigate the file system

- Manipulate text files

- Create files and directories

- Change permissions of files and directories

- Use basic network commands

- Transfer files with FTP

- Monitor processes & system resource usage

- Perform system backups and recovery

- Implement system security

Database Administration Requirements

- Install and configure your database server

- Start and stop your database server and database instances

- Use administrative tools

- Manage users, privileges, and resources

- Create an operational database

- Manage database files

- Manage tables and indexes

- Back up and restore databases

- Monitor database performance

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

Application Server Administration Requirements

- Install and configure your application server

- Start and stop your application server

- Use administrative tools

- Manage users, privileges, and resources

- Configure Java resources

- Package and deploy web applications

- Monitor application server performance

This guide does not describe general UNIX or Windows system administration. See the appropriate UNIX or Windows user documentation.

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
Installation Guide for Oracle Siebel eStatement Manager	How to install and configure eStatement Manager in a distributed environment.
Deploying and Customizing J2EE Applications Guide for Oracle Siebel eStatement Manager	How to customize J2EE web applications for deployment with eaSuite.
Data Definition (DefTool) Guide for Oracle Siebel eStatement Manager	How to create data extraction and definition rules for an eStatement Manager application with DefTool.
Presentation Design (Composer Guide) for Oracle Siebel eStatement Manager	How to design data presentment for an eStatement Manager application with Composer.
Administration Guide for Oracle Siebel eStatement Manager	How to set up and run a live eStatement Manager application in a J2EE environment.
SDK Guide for Oracle Siebel eStatement Manager	How to work with auditing datastreams, user management frameworks, line item disputes and annotations, custom jobs, content access, and charting.

Print Document	Description
Reporting Guide for Oracle Siebel eStatement Manager	How to use the Reporting and Analytics Module to create preconfigured telecommunication reports from live and indexed data for various criteria.
Troubleshooting Guide for Oracle Siebel eaSuite	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.
Migration Guide for Oracle Siebel eaSuite	How to migrate an existing eStatement Manager database to a newer version.
Oracle eStatement Manager 4.7 Release Notes	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 your supported platform.

- Define required user and group permissions for your database server and application server.

- Start and test your database server. See your database server documentation.

- Start and test your application server. See your application server documentation.

- For distributed environments, make sure you have any required database client software installed on your application server and any other client machines of your database server.

Overview of the Installation Process

The process of installing and setting up Oracle eStatement Manager includes the following steps:

1   Installing Oracle Platform Services and eStatement Manager on your database and application servers. You can install these individually or together using the Custom install feature.

   NOTE: If you are installing Platform Services and eStatement Manager on different servers, install Platform Services and get it running before installing eStatement Manager.

2   Installing Oracle Tools on a Windows XP machine, install it there and exclusively install Tools.

3   Configuring the database server.

4   Configuring the application server.

Follow the chapters in this guide in sequence, consulting your third-party documentation as needed.

After you successfully install eStatement Manager and configure your database and application servers, you can customize and deploy your J2EE application.

Configuring your database server requires you to

1   Define database server environment variables.

2   Create and configure the eStatement Manager database.

3   Connect to your eStatement Manager database before configuring your application server.

Configuring your application server requires you to

1   Define application server environment variables.

2   Create an application server instance for eStatement Manager.

3   Configure Java/JVM resources for eStatement Manager on your application server.

4   Configure JMS resources for eStatement Manager on your application server.

Customizing and Deploying J2EE Applications

After installing eStatement Manager and configuring your database and application servers, you can:

1   Customize your J2EE web application(s) for eStatement Manager.

2   Deploy J2EE web applications for eStatement Manager.

3   Deploy your custom J2EE web application.

eStatement Manager System Requirements

OPERATING SYSTEM

- Linux
- For Windows-based DefTool and Composer Tools only, either one of these:
  - Windows XP Professional
  - Windows Server 2003 SP1

HARDWARE

- CD-ROM
- Disk space (database) 2.6 GB
- Disk space (software) 60 MB
- Sun SPARC platform
- Swap space 512 MB per CPU (1 GB recommended)
- RAM 512 MB per CPU (1 GB recommended)

JAVA/C++

- Sun Studio 11 for SPARC

SUPPORTED DATABASE SERVERS

- Oracle 10g Release 3 Enterprise Edition
    - Native Oracle Partition Support for Index Tables (Purging)
- Oracle 10g client software (for application server)
- Oracle 10g JDBC driver

SUPPORTED APPLICATION SERVERS

- Oracle Application Server 10g (Release 3)

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 Oracle Siebel eStatement Manager

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

Linux Permissions for Installation

You must have **root** privilege on each server to install and uninstall eStatement Manager components.

O/S	DEFAULT	EXAMPLE
Linux	`root:other`	`edxadmin:edxadmin`

For your application and database servers, you will also need the owner (user) and group permissions specified during installation. For details on user and group permissions, see Linux Permissions.

CAUTION: Oracle does not recommend administering eStatement Manager with the user and group `nobody:nobody`.

NOTE: Client browsers connecting to any eaSuite product must be enabled to run JavaScript. To check whether JavaScript is enabled for:

IE – Navigate to Internet Options > Security > Internet. Click Custom Level, and under Scripting > Active scripting, select Enable.

Netscape - Under Edit > Preferences, click **Advanced**, and make sure that Enable JavaScript is selected.

For the latest software and hardware requirements, see the release notes that came with your distribution.

Installing eStatement Manager with InstallAnywhere for Linux

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 use InstallAnywhere on a Linux system you also need to:

■ Install Xwindows software to support the InstallAnywhere GUI

■ Install the Windows-based tools **DefTool** and **Composer** on a Windows machine on your network

■ Ask your system administrator for the user and group name of the application server owner, in this example `edxadmin:edxadmin`

■ Set and export the DISPLAY environment variable for your machine, for example:

DISPLAY=localhost:0.0

export DISPLAY

To install eStatement Manager with InstallAnywhere for Linux

1 Ask your system administrator for the user and group name of the application server owner, in this example edxadmin:edxadmin.

2 Set and export the DISPLAY environment variable for your machine, for example DISPLAY=localhost:0.0 export DISPLAY.

3 Obtain and locate the InstallAnywhere installer as described in the Preface of this guide.

4 Launch InstallAnywhere by typing Dirins.bin.

5 INTRODUCTION: Be sure you have quit all programs.

6 LICENSE AGREEMENT: Select Yes to accept the License Agreement.

7 ENTER SERIAL NUMBER provided when you purchased eStatement Manager.

8 OWNER OF WEB APPLICATION SERVER: For example, edxadmin.

9 GROUP OF WEB APPLICATION SERVER: For example, edxadmin.

10 CHOOSE INSTALL FOLDER: Accept the default or choose another directory.

11 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.

12 PRE-INSTALLATION SUMMARY: Review the screen to confirm your product and version, Install folder, Product Components, and Disk Space required and available.

13 InstallAnywhere then sets up the directory hierarchy on each server and copies files to the appropriate directories.

14 INSTALL COMPLETE: If installation is successful, you see a Congratulations message.

15 COPYRIGHT NOTICE: Please review and click Done. Quit InstallAnywhere.

16 Repeat installation for other eStatement Manager servers on your network as necessary.

Installing eStatement Manager in Console Mode

You can choose one of two installation modes to install eStatement Manager with InstallAnywhere:

■ GUI Mode (default)

■ Console Mode

The installation procedures in this guide show eStatement Manager being installed using the InstallAnywhere GUI. Console Mode is an interactive character-based installation in which you are prompted to respond to several installation questions.

To install eStatement Manager in Console Mode for Linux:

1 Navigate to the InstallAnywhere directory for your platform and run the command to invoke InstallAnywhere, using the –i console flag. For example:

`./Dirins.bin –i console`

InstallAnywhere displays the banner:

`Preparing CONSOLE Mode Installation...`

2 Respond to each prompt to proceed to the next step in the installation. If you want to change something on a previous step, type back.

3 A successful installation displays the message:

`Congratulations! <Application Name and Version> has been successfully installed to:`

` /opt/eStatement`

where /opt/eStatement is the eStatement Manager home directory, $EDX_HOME, that you specified in response to the installation prompts.

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 chapter 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.

The 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 **/eStatement**, which has a predefined 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.

Where to Find Required Library Files

The following library files must be present in <EDX_HOME> /lib/Linux_ia32:

- libdb_cxx-4.1.so

- libFormatter.so

- libIndexer.so

- libxerces-c2_1.so

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 your platform.

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 your platform.

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*.

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

Online help may be accessed in the eStatement Manager Command Center and the Tools (DefTool and Composer).

4 Preparing to Configure Your Database Server

Overview

This chapter assumes in-depth understanding of and practical experience with database administration. Consult your database documentation as necessary. For distributed environments, make sure you have any required database client software installed on your application server and any other client machines of your database server.

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.

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

- Linux permissions for your database server
- Using database partitioning with eStatement Manager

CAUTION: The installation and configuration examples shown in this guide use default eStatement Manager pathnames, privileges, and permissions. 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.

Linux Permissions for Your Database Server

Before creating the eStatement Manager database using Ant build scripts, verify that the owner and group permissions (userid:groupid) of the EStatement Manager database directory, including all subfolders, are set to the DB Admin user defined during database installation.

This guide uses the example username and password edx_dba:edx as the owner and group for the Oracle database user. This is the user for your database instance. This guide also uses the example database instance name edx0.

Oracle recommends that you install eStatement Manager database components with the default owner and group for your platform. After installation, change the user and group ownership of eStatement Manager database server components to that of the DB Admin user.

DATABASE	DB ADMIN USER	DB USER
Oracle	Oracle:dba	edx_dba:edx

NOTE: The **DB Admin** user has special privileges on Oracle. For details on owner and group permissions for your database server, please consult the database documentation for your platform.

If your database administrator uses custom user and group permissions, then you can reset these permissions with the **chown** command.

To reset user and group permissions for Oracle

1 Switch user to **root.**

su - root

2 Recursively change the user and group permissions of your EDX_HOME directory and all subdirectories to the eStatement Manager instance owner.

chown -R edxadmin:edxadmin /opt/eaSuite/**eStatement**

3 Recursively change the user and group permissions of your EDX_HOME database directory and all subdirectories to the database instance owner.

chown -R oracle:dba /opt/eaSuite/**eStatement**

TIP: Verify the owner information in any profile files used by the database server owner and application server owner. See your server documentation for details.

Developers and system administrators need to be familiar with how to stop and start a database server and an active eStatement Manager database instance for your platform.

For details on starting and stopping your database server and instances, please consult the database documentation for your platform.

Using Database Partitioning with eStatement Manager

Database partitioning (partition splitting) reduces the number of tables the system must scan when indexing your data. You 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.

Oracle does not support partitioned views. Native partitioning can be applied to a single index table depending on your Oracle software license. For an Oracle database, we recommend that 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.

5   Configuring Your Database Server

You can use Ant build scripts to create and configure the eStatement Manager database. Before running Ant, do the following:

1   Install/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 are on that site as well.

5   Set ANT_HOME and JAVA_HOME environment variable.

6   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/<db>/**edxadmin.properties** shows sample values that should be replaced with the appropriate paths, usernames, passwords, SID settings:

```
ORACLE_HOME=/home/oracle/product/10.2.0/db_1

ORACLE_BASE=/home/oracle/product/10.2.0

DB_USER=edx_dba

DB_PASSWD=edx

DB_SID=EDX0

SYS_PASSWD=oracle

-- file location of data tablespace

L_DB_EDX_DATA_TB_FILE_LOC=/data/oradata

-- file location of index data tablespace

L_DB_EDX_INDX_TB_FILE_LOC=/data/oradata
```

```
-- file location of Application data tablespace
L_DB_APP_DATA_TB_FILE_LOC=/data/oradata
-- file location of Application index data tablespace
L_DB_APP_INDX_TB_FILE_LOC=/data/oradata
-- file location of Detail extractor data tablespace
L_DB_LOAD_DATA_TB_FILE_LOC=/data/oradata
-- file location of Detail extractor index tablespace
L_DB_LOAD_INDX_TB_FILE_LOC=/data/oradata
-- file location of FS data tablespace
L_DB_FS_DATA_TB_FILE_LOC=/data/oradata
-- file location of FS index tablespace
L_DB_FS_INDX_TB_FILE_LOC=/data/oradata
-- file location of Stage data tablespace
L_DB_STG_DATA_TB_FILE_LOC=/data/oradata
-- file location of Stage index tablespace
L_DB_STG_INDX_TB_FILE_LOC=/data/oradata
--- file location of the first control file
DB_CONTROL_FILE_LOCN1=/data/oradata
--- file location of the second control file
DB_CONTROL_FILE_LOCN2=/data/oradata
--- file location of the third control file
DB_CONTROL_FILE_LOCN3=/data/oradata
--- file location of Redo-Log file
REDO_LOG_FILE_LOCN=/data/oradata
-- file location of System tablespace
SYSTEM_FILE_LOCN=/data/oradata
-- file location of Temporary tablespace
TEMP_FILE_LOCN=/data/oradata
-- file location of UNDO tablespace
UNDO_FILE_LOCN=/data/oradata
TRACE_FILE_LOCN=/data/oradata
-- file location of backup file
L_BACKUP_FILE=/data/oradata/expedxtest.dmp
-- file location of backup log file
L_LOG_FILE=/data/oradata/expedxtest.log
```

Configuring a New eaSuite Database

To configure a new eaSuite database:

1   Switch user to the DB admin user. Oracle requires the administrative user in order to create files. For example.

     `$ su – oracle`

2   Change directory to your easuite database home directory. For example:

     `cd <EDX_HOME>/db/oracle`

3   There are multiple Ant targets you can use that will automate the installation process. The install-new target will create new easuite instances with the SIDs specified in the properties file:

     `ant install-new`

Check the following log files for any errors:

- create_db.log

- configure_ts.log

- setup_user.log

- create_tables.log

- create_views.log

- 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 will create 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

- configure_ts.log

- setup_user.log

- create_tables.log

- create_views.log

- compile_sproc.log

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

ant

The main menu appears:

main:

    [echo] [1]. Install eaSuite Database

    [echo] [2]. Initial Data Population

    [echo] [Q]. Quit

  [input] Enter your selection (1, 2, q, Q)

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

        CreateInitDatabaseMenu:

    [echo] Install eaSuite Database

    [echo] [1]. Create Oracle Instance

    [echo] [2]. Shutdown Database

    [echo] [3]. Startup Database

    [echo] [4]. Install Application Database I – Create tablespace/user

    [echo] [5]. Install Application Database II – Create tables

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

    [echo] [Q]. Quit

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

    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 this step is 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 it will come to the command prompt again. User needs to execute Ant build script again to come to "*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 this step is 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, 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 bring this menu.

OtherOperationsMenu:

     [echo] [1]. Import initial data set

     [echo] [2]. Export eaSuite database data

     [echo] [Q]. Quit

    [input] Enter your selection (1, 2, q, Q)

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.

6   Introducing the Oracle Enterprise Manager Console to Configure JMS

Overview

This chapter assumes in-depth understanding of and practical experience with application server administration. Consult Oracle Application Server 10g documentation if necessary.

Accessing the Oracle Enterprise Manager Console

Navigate to the WebSphere 6.1 administration console in the web browser by giving the proper URL in the following format:

```
http://<hostname>.<domain>:<port number>/
```

Example: http://172.20.2.69:7777/

TIP: The Administration port number is automatically assigned at installation time and may be different for your installation. When you are prompted for user name and password, enter correct values and click **Login**.

Starting, Stopping, and Restarting Oracle Application Server 10g Release 3 Components

To start, stop, and restart the Oracle Application Server

1 On the Application Server Control Console's Home page, view the Members table.

2 Start the HTTP Server and the OC4J components. To do this, select the check box next to each component and then click Start.

3 Stop the HTTP Server and the OC4J components. To do this, select the check box next to each component and then click Stop.

4   Restart the HTTP Server and the OC4J components; select the check box next to each component and then click Restart.

The following figure shows the Members table and related buttons.

Figure 6-1: Members table and related buttons

Creating an OC4J Instance

To create an OC4J instance:

1   Switch to the AS_HOME/bin directory, where AS_HOME is your application server installed directory.

Example: /opt/oracle/product/10.1.3/OracleAS_1/bin

2   Run the following command at the console:

`./createinstance –instancename <Your OC4J instance name>`

where your OC4J instance name is OC4J instance name, for example, eStatement.

3   Provide the password for the OC4J instance. You cannot provide an empty password.

Introduction to OC4J Instance/Component Configuration

Select the OC4J component link that was created for an eaSuite application from the list to navigate to the OC4J component page. The OC4J component page appears with the Home page link that provides status and performance information for this OC4J component.
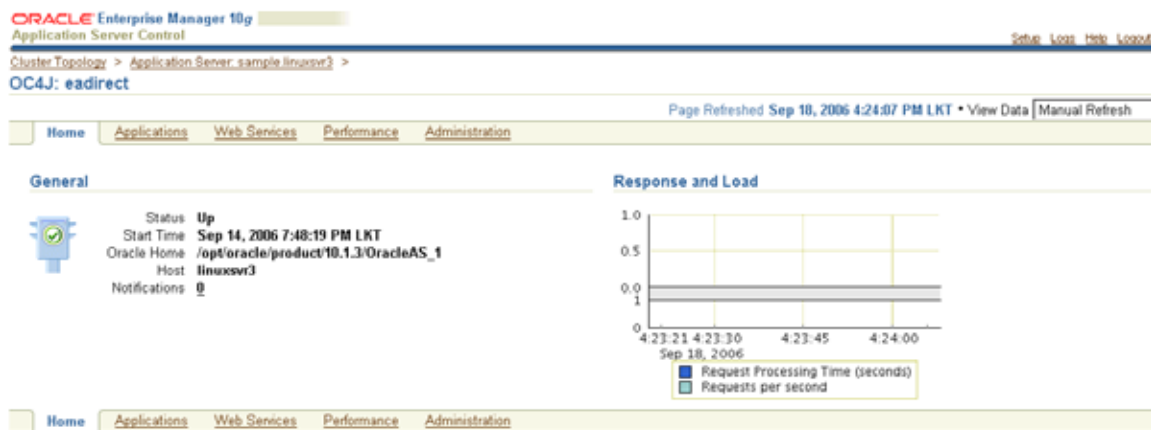
Figure 6-2: The eStatement Manager OC4J Component in the Home Page

Use the Applications property page link to view and manage the J2EE applications that have been deployed to the container and information on their usage and performance.

On the Administration property page, you can manage the details of the OC4J configuration such as JDBC configurations, JMS Configurations, and JAVA VM environment configuration.

7 Configuring the Oracle Application Server

Overview

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

See Oracle 10g R3 Application Server documentation for detailed step-by-step instructions for Java resource configuration, performance, and tuning. You must also consult your application server administrator for settings that may be specific to your configuration.

Start your Application Server instance and bring up the Administrative Console before you begin this chapter.

Database Client Installation and Configuration

1 Install Oracle DB client (Version 10g R2) Utilities and Net Protocol.

2 Create tns name to access Database server. Make <TNS_NAME> equal to the alias name that you gave in JAVA OPTIONS. For example, Dcom.edocs.tasks.loader.alias=<SAME AS TNS_NAME>.

To create an Oracle database alias name

1 Navigate to the ORACLE_CLIENT_HOME/bin/ directory, where ORACLE_CLIENT_HOME is your Oracle DB client installation directory.

2 Run netmgr file to open Oracle Net Manager.

3 From Oracle Net Manager, select Service Naming to add a new alias.

Performing General Configuration

To perform general configuration

1   Create an OC4J Instance-component, for example, OracleInfo. As necessary, see Chapter 6 for details.

2   Start Oracle Enterprise Manager 10g Application Server Control if it is not already running.

3   Start the HTTP Server and the created OC4J instance if they are not already running.

4   Select the OC4J instance link, which you created, from the list of System Component to navigate to the created OC4J home component page.

Setting Transaction Timeout

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 transaction timeout:

1   Log in to the Oracle Application Server Console.

2   Navigate to Administration tab > Services > Transaction Manager (JTA) > Administration tab > Set value for Transaction Timeout.

3   Set the value for Transaction Timeout to 60 seconds.

4   Restart Oracle Application Server after changing the values.

Configuring Java Resources

Establishing Database Connectivity (JDBC) for eStatement Manager

In this section, you will create container-level data sources. These data sources provide access to the database used to store and retrieve data for the eStatement Manager application.

To select a service

1   Click the Administration property link.

2   On the Administration property page, select JDBC Resources under Services.

Fig. 7-1: JDBC Resource Selection

To create a connection pool:

1   Click Create under Connection Pools, and select Application as the default and Connection Pool Type as New Connection Pool.

2   Click Continue.

3   Provide values for connection pool Name and Connection Factory Class according to the following table.

Table 7-1: Connection Pools and Factory Classes for eStatement Manager

Connection Pool Name	Connection Factory Class
edxAdminConnectionPool	oracle**.**jdbc**.**OracleDriver
edxLoggerConnectionPool	oracle**.**jdbc**.**OracleDriver
edxUserConnectionPool	oracle**.**jdbc**.**OracleDriver
edxMessagingConnectionPool	oracle**.**jdbc**.**OracleDriver
edxXMAConnectionPool	oracle**.**jdbc**.**OracleDriver

4   Provide JDBC URL according to following format under the URL portion:

<Driver Type>:@//<DB Host Name>:<Port Number>/DB Alias Name

Example: jdbc:oracle:thin:@//172.20.2.51:1521/EDX0

5   Provide values for DB Login Information such as Username and the Password.

To create a data source:

1   After you finished the creation of connection pools, select JDBC Resources under Services in Administration property page and click Create under Data Sources.

2   Select Application as default and Data Source Type as Managed Data Source.

3   Click Continue.

4   Provide the following properties for the data source by referring to Table 7-02 and Table 7-03.

Table 7-2: Properties and Related Statuses and Values for Data Sources

Property	Status/Value
Name	<Data Source Name>
JNDI Location	<Data Source Related JNDI>
Transaction Level	Global & Local Transactions
Connection Pool	< Data Source Related Connection Pool>
Login Timeout (seconds)	<Default Value>

Table 7-3: Data Sources for eStatement Manager

Data Source Name	JNDI Location	Connection Pool
edxAdminDataSource	edx.databasePool	edxAdminConnectionPool
edxLoggerDataSource	edx.logger.databasePool	edxLoggerConnectionPool
edxUserDataSource	edx.user.databasePool	edxUserConnectioPool
edxMessagingDataSource	edx.messaging.databasePool	edxMessagingConnectionPool
edxXMADataSource	edx/xma/databasePool	edxXMAConnectionPool

NOTE: Under Credential you can override login information that you provide while creating a connection pool.

5   Click Finish to create the data source.

Configuring JMS Resources for eStatement Manager

To Configure JMS Providers, click the Administration property page and select Services > JMS Providers.

JMS Providers – Queue Connection Factory

To create a queue connection factory

1   Navigate to Services > JMS Providers-> Connection Factory > Create New.

2   Create the connection factories shown in the following table:

Table 7-4: Connection Factory Types

Connection Factory Type	JND Location
Queue	edx/lcf
Queue	edx.foreign.qcf
Queue	edx.qcf

JMS Providers – Queue Destinations

To create a queue destination

1   Navigate to Services > JMS Providers > Destinations > Create New.

2   Create queue destinations as shown in the following table:

Table 7-5: Queue Destination Types

Destination Type	Destination Name	JNDI Location
Queue	QueueBindingName	edx/queue/logger
Queue	EventsforeignQueue	edx.foreign.queue.outbound
Queue	EventsQueue	edx.queue.outbound

NOTE: Keep the value of the Persistence File field set to Empty.

Configuring Library Paths for eaSuite

To configure library paths for eaSuite

1   Navigate to the Administration property page.

2   Select Properties > Shared Libraries.

3   Click Create to add new Shared Library.

4   Provide values for Shared Library Name and Shared Library Version, and click Next.

For example, the value for Shared Library Name can be eStatement Manager or eaSuite, and the value for Shared Library Name can be 4.7.

The application server administrator can give any name for Shared Library Name and any version number for Library Version. Oracle recommends using a meaningful value for both.

5   Select the option button called **File is already present on the server where the target OC4J instance is running**, the third option button.

6   Provide the <EDX_HOME>/config path in the text box called **Location on Target Server**. For example, the path can be "/opt/eStatement/config."
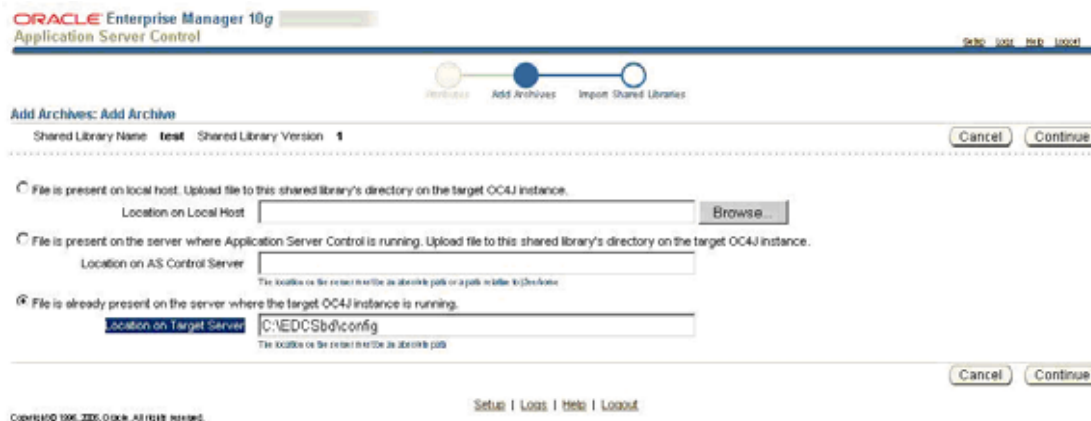
Figure 7-2: Configuration of Library Paths for eaSuite

Configuring Command Line Options for eaSuite

To configure command line options

1   Open for edit the opmn.xml file, which is located in the <AS_HOME>/opmn/config folder.

2   Find the tag <process-type></process-type> that is related to the OC4J instance that you created. For example, this may be something like OracleInfo.

3   Under tag <category id="start-parameters"></category>, which is a child tag of <module-data>, add your corresponding JAVA and OC4J environmental variable to the <data id="java-options" value=""/> and <data id="oc4j-options" value=""/>portion. Keep one space between two command line options. See the edited sample opmn.xml file for clarification.

   a   Use the following Java options:

        -Djava.ext.dirs=<EDX_HOME>/lib/ext:<Oracle AS home Directory> /jdk/jre/lib/ext

        -Dcom.edocs.tasks.loader.alias=<database server tns name>

        -Dcom.edocs.tasks.loader.user=<user name for database>

        -Dcom.edocs.tasks.loader.password=<password for database>

        -Djava.protocol.handler.pkgs=com.edocs.protocol

        -Dedx.home=$EDX_HOME

    b   Use the following OC4J options:

        -userThreads

Configuring Environment Variables

To configure environment variables:

1   Open for edit the opmn.xml file, which is located in the <AS_HOME>/opmn/config folder.

2   Find the tag <process-type></process-type> that is related to the OC4J instance that you created. For example, this may be something like OracleInfo.

3   Add child tag <environment></environment>, and within that add your environmental variable name and value according to the following format:

```
<variable id="VARIABLE_NAME" value="VARIABLE_VALUE" append="BOOLEAN_VALUE"/>
```

Do not use the Append tag for fields that are not listed in the following tables. See the edited sample opmn.xml file for clarification.

Table 7-6: Environment Variables for Linux

Name	Value	Append
EDX_HOME	<eStatement Home Directory>	
LD_LIBRARY_PATH	<EDX_HOME>/lib/Linux_ia32:$LD_LIBRARY_PATH	true
ORACLE_HOME	<Oracle DB Client Home Directory>	
PATH	<Oracle DB Client Home Directory>/bin:$PATH	true

Table 7-7: Example of Environment Variables for Linux

Name	Value
EDX_HOME	/opt/eStatement
LD_LIBRARY_PATH	/opt/eStatement/lib/Linux_ia32/:$LD_LIBRARY_PATH
ORACLE_HOME	/opt/oracle/oracle/product/10.2.0/client_1
PATH	/opt/oracle/oracle/product/10.2.0/client_1/bin:$PATH

Example of an Edited opmm.xml File

```
<process-type id="OracleInfo" module-id="OC4J" status="enabled">
          <environment>
              <variable id="EDX_HOME" value="/opt/eStatement"/>
```

```
                <variable id="LD_LIBRARY_PATH"
value="/opt/eStatement/lib/Linux_ia32/:$LD_LIBRARY_PATH" append="true"/>

                <variable id="ORACLE_HOME"
value="/opt/oracle/product/10.2.0/client_2"/>

                <variable id="PATH"
value="$PATH:/opt/eStatement/bin:/opt/oracle/product/10.1.3/OracleAS_1/jdk:/opt/oracle
/product/10.2.0/client_2/bin" append="true"/>

            </environment>

            <module-data>

                <category id="start-parameters">

                    <data id="java-options" value="-server -
Djava.security.policy=$ORACLE_HOME/j2ee/eadirect/config/java2.policy -
Djava.awt.headless=true -Dhttp.webdir.enable=false -
Djava.ext.dirs=/opt/eStatement/lib/ext:/opt/oracle/product/10.1.3/OracleAS_1/jdk/jre/l
ib/ext -Dcom.edocs.tasks.loader.user=edx_dba -

Dcom.edocs.tasks.loader.password=edx -Dcom.edocs.tasks.loader.alias=EDX0 -
Dedx.home=$EDX_HOME -Djava.protocol.handler.pkgs=com.edocs.protocol"/>

                    <data id="oc4j-options" value="-userThreads"/>

                </category>

                <category id="stop-parameters">

                    <data id="java-options" value="-
Djava.security.policy=$ORACLE_HOME/j2ee/eadirect/config/java2.policy -
Djava.awt.headless=true -Dhttp.webdir.enable=false"/>

                </category>

            </module-data>

            <start timeout="600" retry="2"/>

            <stop timeout="120"/>

            <restart timeout="720" retry="2"/>

            <port id="default-web-site" range="12501-12600" protocol="ajp"/>

            <port id="rmi" range="12401-12500"/>

            <port id="jms" range="12601-12700"/>

            <process-set id="default_group" numprocs="1"/>

        </process-type>
```

Deploying the eStatement Manager (EAR J2EE) Application

Complete XMA configuration before deploying eStatement Manager or any other EAR J2EE application, and restart the application server after deploying the EAR J2EE applications.

To deploy the eStatement Manager application

1   Click the OC4J instance, for example, OracleInfo, and click Applications > Deploy.

2   Select type of Archive, Deployment Plan, and Browse for file path. Then click Next.

3   Provide values for Application Name, Parent Application, and Bind Web Module to Site. Click Next.

4   Under Deployment Task, select Configure Class Loading.

5   Import your created library by selecting Shared Library > OK > Deploy.

As a value for Deploy Application, use the default URL mapping for Web modules.

Deployment Guidelines

Depending on requirements, it is possible to install any number of different ear files, but use the following guidelines. They help you to remove JNDI cross-references between applications, which references Oracle Application Server 10g R3 does not support.

To deploy only the eStatement Manager application and the eaSample application

1   Deploy the eaSample application.

2   Deploy the eStatement (Manager) application, and select the eaSample application as the parent of the eStatement (Manager) application.

3   Use the jndi name of the data source that is in the eaSample application to create DDNs instead of edx/ejb/EdocsDataSource.

For example, when DDNs are created, use edx/Sample/ejb/EdocsDataSource as a data source name instead of edx/ejb/EdocsDataSource.

For installation of other combinations of eaSuite applications, such as those involving Oracle Siebel ePayment Manager, see the corresponding installation guide for similar guidelines.

Configuring Security for eStatement Manager

To configure security for eStatement Manager

1   Select the deployed application and navigate to Administration > Security-> Security Provider > Realms. See the screen shot below.

2   On the Realms tabbed page, click the link under Users, and then click Create.

A configuration window appears with which you can add information about a new user and role.

3   Create a user with value admin and the associated password with value welcome, and provide the available user roles.

4   If you create a user and password with values different from those listed in step 3, then add them to Scheduler as well.

Running the Scheduler

To run the Scheduler:

1   Change your current working directory to <EDX_HOME>\bin.

2   If you are going to create a new user in the Users section of the Oracle Application Server console Security window, add the following new user and password information for Scheduler:

■ Default user – admin:

```
JAVA_OPTIONS="$JAVA_OPTIONS -Djava.naming.security.principal=admin"
```

■ Default user – password:

```
JAVA_OPTIONS="$JAVA_OPTIONS -Djava.naming.security.credentials=welcome"
```

3 Run the following command in the command line, giving the required parameters:

```
-start –url <prefix>://<host>:<opmn-request-port>:<oc4j_instance>/<application-
name>
```

Where the parameters are defined as follows:

■ <opmn-request-port>: In this configuration, you must use the OPMN request port instead of the ORMI port. You can find the OPMN request port in the opmn.xml file as follows:

```
<notification-server>
<port local="6003" remote="6200" request="6004"/>
...
</notification-server>
```
The default OPMN request port is 6003.

■ prefix: Use opmn:ormi for Oracle Application Server applications.

■ oc4j_instance: The name of the OC4J instance as defined in Enterprise Manager.

Example: OracleInfo

■ application-name: The name of your application.

Example of the entire command:

```
./oas_scheduler -start -url opmn:ormi://localhost:6005:OracleInfo/eStatement
```

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.*

Running eStatement Manager

To run the eStatement Manager Command Center:

1 Enter the following URL from a browser:

```
http://<hostname>:<port>/eBilling
```

Where <hostname> is the application server machine name and <port> is the number of the port configured during configuration of Oracle Application Server.

Linux Environment Variables for Oracle Application Server

About Linux Config Files for Your eStatement Manager Environment

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.

■ $EDX_HOME/bin/edx_config: This shell script prompts you to specify environment variables for your application server.

■ $EDX_HOME/bin/edx_env: This configuration file stores the environment variables you specify in edx_config, to pass at application server startup.

■ $EDX_HOME/bin/edx.config: This script file passes the environment data in edx_env to your application server through your startup script.

This section describes how to run edx_config to capture your environment variables and store them in edx_env. This assumes that EDX_HOME is your eStatement Manager installation directory.

Setting UNIX Environment Data with *edx_config*

edx_config prompts you to enter values for your Java and database installation, including absolute directory pathnames or user identification information. **Run this script any time you need to modify your eStatement Manager environment**. **Do not modify edx_env directly**.

If you have not already done so, verify that the ownership of the $EDX_HOME directory is set to the user and group of the application server owner. If not, change it before running edx_config.

CAUTION: Be sure the time zone (TZ) for your server is set to your system time zone. eStatement Manager jobs can fail if Java system time does not match actual system time.

To set environment data for Oracle Application Server with edx_config

1   Switch user to the application server owner, in this example **edxadmin**.

     su - edxadmin

2   Navigate to the **bin** directory for eStatement Manager on your application server, for example

     cd $EDX_HOME/bin

3   Run the script **edx_config**.

     ./edx_config

4   Enter values as prompted by the script for your database home, database username and password, application server, Java home, and application server profile location.

CAUTION: Make sure that the database values that you enter in this session are the same values specified during database configuration. Consult your DBA for any custom settings specific to your platform.

Configuring the Logger

The log4j_cc.xml file is located in the %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 can be used. It is not recommended to use the JMS appender for enabling DEBUG priority because it tends to flood the database with data.

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

File Appender

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

That is,

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.

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>
```

8 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:

```
ANT_HOME=/opt/apache-ant-1.6.5

JAVA_HOME=/opt/jdk1.5.0_04

export ANT_HOME

export JAVA_HOME

PATH=$JAVA_HOME/bin:$ANT_HOME/bin:$PATH

Export 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 Linux platform:

JAR File Name (Linked to the download site)	OS	File Name after downloading	Tool/Commands to install
hibernate-3.1.3.jar	UNIX (Linux)	hibernate-3.1.3.tar.gz	gzip -d hibernate-3.1.3.tar.gz tar –xvf hibernate-3.1.3.tar
c3p0-0.9.0.jar	UNIX (Linux)	c3p0-0.9.0.bin.gz	gzip -d c3p0-0.9.0.bin.gz tar -xvf c3p0-0.9.0.bin

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

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

    c Set EDX_HOME to the eStatement Manager home.

    d 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:

```
HIBERNATE_JARFILE_LOC=C:/hibernate-3.1
```

    e 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_JARFILE_LOC=C:/c3p0-0.9.0/lib
```

2 Navigate to EDX_HOME/pkgUtil and invoke Ant without arguments. For example,

```
cd /opt/eStatement/pkgUtil

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=/opt/ePayment
        ```

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

        ```
        EDX_HOME=/opt/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.prioperties 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.

9 Uninstalling eStatement Manager

Overview

This chapter describes how to uninstall and remove eStatement Manager components, deployed J2EE applications, and Windows services. This chapter applies to all platforms. UNIX users do not need to uninstall Windows services unless your system uses both platforms.

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.

■ Stop your database server.

■ UNIX users should also switch user to `root`, which is the default owner of the Uninstall directory.

The Uninstaller is located in the `Uninstall` folder of your eStatement Manager home directory. See Installing eStatement Manager.

To uninstall eStatement Manager:

1 Navigate to the `Uninstall` folder of your eStatement Manager home directory, `$EDX_HOME.`

2 UNIX users may launch the eStatement Manager Uninstaller with the command ./Uninstall_eStatement. The dot and slash are required, and there is no space after the slash.

   `./Uninstall_eStatement`

3 Windows users may run the command-line script `Uninstall_eStatement.bat`, or select Start Menu > Programs > eStatement > Uninstall eStatement.

4 The Uninstall screen appears.

5 Click `Uninstall`. A second uninstall screen appears showing eStatement Manager components being removed from your machine.

6   When the uninstaller is finished, a screen appears listing any items that could not be removed.

7   Change directory to your eStatement Manager home directory and manually remove any remaining files and directories as necessary.

8   Click **Done** to close the uninstaller.

9   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, then redeploy the new versions of each eaSuite web applications, including eStatement Manager and samples.

For more information on deployment, see *Deploying and Customizing J2EE Applications Guide for Oracle Siebel eStatement Manager.*

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.

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
```

Uninstalling the eStatement Manager Logger as a Windows Service

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

To uninstall the Logger 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 Logger as a Windows Service with the **–remove** command:

```
C:\> Loggersvc –remove
```

10 Appendix A: Operating System Quick Reference

Overview

This section contains platform-specific variables and settings for eStatement Manager. In the front of this guide, you will find an outline of the workflow for installing and configuring eStatement Manager. Experienced system administrators may find this outline and appendix useful as a quick reference for configuration and troubleshooting, but they are **not intended as a standalone guide to configuration**.

Whenever you install or upgrade eStatement Manager, please follow the steps in each chapter of this *Installation Guide* in sequence, consulting your third-party documentation as necessary.

Owner and Group Privileges for eStatement Manager

Installation

You must have **root** privilege on each server to install and uninstall eStatement Manager components.

| O/S	DEFAULT	EXAMPLE	CUSTOM
Linux	root:other	edxadmin:edxadmin	

Database Server

After installation, change the user and group ownership of eStatement Manager database server components to that of the **database user**.

DATABASE	DEFAULT	EXAMPLE	CUSTOM
Oracle	oracle:dba	edx_dba:edx	

Application Server

After installation, change the user and group ownership of eStatement Manager application server components to that of the **application server owner**.

APP SERVER	DEFAULT	EXAMPLE	CUSTOM
WebSphere	<none>	edxadmin:edxadmin	

11 Appendix B: Database Quick Reference

Overview

This section contains platform-specific variables and settings for eStatement Manager. In the front of this guide, you will find an outline of the workflow for installing and configuring eStatement Manager. Experienced system administrators may find this outline and appendix useful as a quick reference for configuration and troubleshooting, but they are *not intended as a standalone guide to configuration*.

Whenever you install or upgrade eStatement Manager, please follow the steps in each chapter of this guide in sequence, consulting your third-party documentation as necessary.

Database Server Environment Variables

Oracle

VARIABLE	DEFINITION	Linux
EDX_HOME	eStatement Manager home path	opt/eStatement
ORACLE_BASE	Mount point base path	apps/oracle
ORACLE_HOME	Oracle product directory	$ORACLE_BASE/product/10.2.0.2
LD_LIBRARY_PATH	Shared Library Path	$ORACLE_HOME/lib:/usr/lib:/usr/ucblib
PATH	Database Path	$ORACLE_HOME/bin:$PATH
ORACLE_DATA	Data File Path	$ORACLE_HOME/oradata
ORACLE_PASSWD	Database password	edx
ORACLE_SID	Database instance name	edx0
ORACLE_USER	Database user name	edx_dba
ORACLE_DBALIAS	Database alias	edx.db