Installation Guide for Oracle Siebel eStatement Manager

For Sun Solaris Operating Environment,
BEA WebLogic Server, and Oracle® Database

Version 4.7

May 31, 2007

ORACLE®

Contents

4 Configuring Your Database Server

5 Configuring the eStatement Manager Database for Oracle Using ANT

6 Configuring the WebLogic Application Server for UNIX

Contents

1   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

- 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

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
Deploying and Customizing J2EE Applications Guide for Oracle Siebel eStatement Manager	How to deploy and customize the J2EE applications provided by eStatement Manager. This guide also describes how to deploy the Sample application provided by eStatement Manager and how to validate that it is set up correctly by running a job through your installed eStatement Manager environment.
Data Definition (DefTool) Guide for Oracle Siebel eStatement Manager	How to create Data Definition Files (DDFs) for use in indexing your application and extracting data for live presentment.
Presentation Design (Composer Guide) for Oracle Siebel eStatement Manager	How to create Application Logic Files (ALFs) to present statement data for dynamic online display.
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.
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:

1 Install and test required hardware and software for your platform.

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

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

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

Overview of the Installation Process

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.

eStatement Manager System Requirements

Operating System

- Sun Solaris 10 (for SPARC)
- 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 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.

UNIX Permissions for Installation

You do not require root privilege on each server to install and uninstall eStatement Manager components. Consult your system administrator for details of user setup.

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

For your application and database servers, you need the owner (user) and group permissions specified during installation.

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

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

❑   **Internet Explorer** 6– Navigate to Internet Options > Security > Internet. Click Custom Level, and under Scripting > Active scripting, select Enable.

❑   **Netscape** 8- Under Edit, then Preferences, click **Advanced,** and make sure "Enable JavaScript" is checked.

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

The eStatement Manager Directory Structure

TIP: This chapter applies to all platforms. Windows paths should use a \ (backslash) in place of a / (forward slash).

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 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.

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 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

Online help may be accessed through the eStatement Manager Command Center, DefTool, or Composer.

Configuring Oracle Services

Before you can install eStatement Manager, you must 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 will 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 will 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 UNIX

1 Switch user to the **DB admin** user.

```
su - oracle
```

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

cd /export/home/oracle/product/10.2.0/db_1/network/admin

where /export/home/oracle/product/10.2.0/db_1 = ORACLE_HOME

3 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 = /export/home/oracle/product/10.2.0/db_1)
 )
```

4 Save and close `listener.ora`.

5 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

where /export/home/oracle/product/10.2.0/db_1 = ORACLE_HOME

6 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)
 )
 )
```

7 Save and close **tnsnames.ora**.

8 *(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.

9 Stop and restart the Oracle listener with the listener control commands.

```
lsnrctl stop

lsnrctl start
```

10 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**.

Installing eStatement Manager with InstallAnywhere for UNIX

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 **UNIX** system (Solaris), 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 (UNIX)

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 (UNIX)

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 UNIX

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 2003 SP1 or XP machine on your network. Follow the instruction provided in the README file that comes with the distribution.

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.

■ **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 Chapter 5 to configure the database.

4   Configuring Your Database Server

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:

- UNIX 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 your values are consistent on all servers across your installation of eStatement Manager.

UNIX Permissions for Your Database Server

Before creating the eStatement Manager database using ANT 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 eaSuite **database user**. This is the user for your database instance. This guide 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`

CAUTION: 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, 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 **eStatement Manager home** directory and all subdirectories to the **eStatement Manager instance owner**.

> chown -R edxadmin:edxadmin /opt/eStatement

3 Recursively change the user and group permissions of your **eStatement Manager database home** directory and all subdirectories to the **database instance owner**.

> chown -R oracle:dba /<EDX_HOME>/db

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.

Oracle no longer supports partitioned views. 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.

5 Configuring the eStatement Manager Database for Oracle Using ANT

You can use ANT build scripts to create and configure the eaSuite production 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. This software can be downloaded from http://ant.apache.org/. The installation directions can be found 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 eStatement Manager 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, and 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=EDXO

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
```

Configure a New eStatement Manager Database

To configure a new eStatement Manager 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 eStatement Manager database home directory. For example:

```
cd <EDX_HOME>/db/oracle
```

3 You can use multiple ant targets to automate the installation process. The install-new target creates new eStatement Manager 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

The install-existing target will create new eStatement Manager 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 appears:

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 step creates a database instance for eaSuite, 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 displays the command prompt again.
Execute the ant build script again to come to the CreateInitDatabaseMenu
menu.

c. Select option 2, **Shutdown Database**. If this step is 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. Check the "compile_sproc.log" for any errors.

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)
```

h. Select option 1, **Import initial data set**. This option populates the initial data.

i. 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 Oracle Database

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

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 UNIX

1   Switch user to the **DB Admin** user.

```
su – oracle
```

2   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 will see a connection message.

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

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

```
SQL> show parameters db_name
```

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

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

Starting and Testing Your Database Server

Start and test your database server using the server documentation for your platform. 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.

6   Configuring the WebLogic Application Server for UNIX

Overview

This chapter assumes in-depth understanding of and practical experience with application server administration. Consult WebLogic Server documentation at http://bea.com as necessary.

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

CAUTION: If you cannot bring up the WebLogic Console, you will be unable to proceed with configuring your application server for **eStatement Manager.**

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.

About Example UNIX Domains in This Chapter

This guide uses the example UNIX domain
$WL_HOME/user_projects/domains/mydomain.
WebLogic users may use the Domain Configuration Wizard to create the UNIX domain
$WL_HOME/user_projects/domains /mydomain,
or replace these pathnames with a custom domain created by your system administrator.

CAUTION: If you use a custom domain, the examples in this guide must be changed accordingly or they may not work. Oracle does not recommend that you accept the default path of
`/user_projects.`

UNIX Permissions for Installation

Application servers running eStatement Manager will not function correctly without access to eStatement Manager config files, storage directories, and related resources. When installing eStatement Manager on WebLogic Server, you were asked to specify the owner and group permissions (`userid:groupid`) of the application server. If you made a mistake during installation, you must change the owner and group permissions for the directory, including all subfolders, to the application server owner.

This guide uses the example username and password `edxadmin:edxadmin` as the application server owner and group for the eaSuite.

DEFAULT	EXAMPLE
`root:other`	`edxadmin:edxadmin`

Ask your system administrator for the user and group name of the application server owner. In this example they are edxadmin:edxadmin.

To reset user and group permissions

1   Switch user to the default owner of WebLogic Server home directory, for example `root`.

> `su – root`

2   Recursively change the user and group permissions of the application server installation directory and all subdirectories to the application server owner.

> `chown –R` **`edxadmin:edxadmin`** `/export/home/bea`

3   Switch user to WebLogic Server owner and configure WebLogic Server with your new owner.

> `su – edxadmin`

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

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 your platform. Please consult your BEA WebLogic documentation for instructions on how to do this.

About Sourcing Your Configuration

Before you start your server instance, you must edit its WebLogic Server startup script 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 *Sourcing Your Configuration*.

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 create custom startup and shutdown scripts that include all your command parameters, as well as the command used to start or stop the Scheduler, to schedule and run jobs in the eStatement Manager Command Center.

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. This can damage your configuration file. Oracle recommends using the web console and/or the SHUTDOWN command to ensure a graceful shutdown.

To start WebLogic in an active eStatement Manager production environment, Oracle recommends that you use the **nohup** command to ignore hang-ups. This will leave the server running in the background

even if you end your terminal session or try to force a hard shutdown, providing a more stable
production environment.

Capturing Your UNIX Environment for eStatement Manager

Class Path / Environment variable Settings for WebLogic:
Oracle eStatement Manager installs several configuration files that you use to define your eStatement
environment. These configuration scripts are required only on the application server.

$EDX_HOME/bin/edx_config	executable shell script prompts you to define environment variables required by your application server
$EDX_HOME/config/edx_env	non-editable configuration file stores the environment variables you specify in edx_config
$EDX_HOME/config/edx.config	shell script passes the environment data in edx_env to your application server when sourced in your startup script

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

Using edx_config to Capture Environment Data

edx_config prompts you to enter values for your Java and database installation, including absolute
directory pathnames or user identification information. It stores these values in the configuration file
edx_env.

Run edx_config any time you need to modify your eStatement environment. Do not modify edx_env
directly.

To capture environment data with edx_config for WebLogic

1   Switch user to the $EDX_HOME owner, in this example edxadmin:

    su - edxadmin

2   Navigate to the bin directory for eStatement 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 home. The WebLogic home

directory pathname is where its application server files were installed, usually some place like
/opt/bea/weblogicXX, where XX is your WebLogic version number.

Sourcing Your Configuration

The **startWebLogic.sh** script for your domain sets values for some domain-specific variables and
then calls the master startup script, **startWLS.sh.** The master startup script sets environment
variables, such as the location of the JVM, and then starts the JVM with WebLogic Server arguments.

Oracle recommends that WebLogic users source your eStatement Manager configuration directly in
startWebLogic.sh for your domain, for consistency with this feature of WebLogic.

Users with clustered installations or with custom domain names will need to study the new features of
domain configuration in your WebLogic Server documentation.

To edit startWebLogic.sh *for WebLogic*

1   Switch user to your application server owner, for example **edxadmin**:

   su - edxadmin

2   Stop WebLogic Server and all application server instances.

3   Navigate to the application server startup script for your domain and open the file for editing. For
   example:

   cd $WL_HOME/user_projects/domains/mydomain/bin
   vi startWebLogic.sh

4   Set the server name variable for the server instance you wish to start. For example:

   SERVER_NAME=myserver

5   Define and export the environment variable for your eStatement Manager home directory. For
   example:

   EDX_HOME=/opt/eStatement
   export EDX_HOME

6   Set memory arguments not to over allocate memory to the JVM. System processes like the
   garbage collector consume available memory, and performance can degrade when the application
   server is not able to respond to other requests. For example:

       MEM_ARGS="-ms128m -mx128m -Xss1m -noclassgc"

7   **Password**: (optional) Set **WLS_USER** equal to your system username and **WLS_PW** equal to your
   system password for no username and password prompt during server startup. Both are required
   to bypass the startup prompt.

   TIP: Instead of using a cleartext password variable, BEA recommends that you use a boot
   identity file. See WebLogic Server documentation at http://bea.com.

8   Source **edx.config** just after the **setDomainEnv.sh** command to set the production mode. The
   dot and space preceding the pathname are a required part of the syntax. For example:

           . ${DOMAIN_HOME}/bin/setDomainEnv.sh $*

```
. /opt/eStatement/config/edx.config
```

9 Save and close **startweblogic.sh**.

To edit startWebLogic.sh for WebLogic to enable mtmalloc (optional)

1 LD_PRELOAD_32=/usr/lib/libmtmalloc.so

2 LD_PRELOAD_64=/usr/lib/sparcv9/libmtmalloc.so

3 export LD_PRELOAD_32

4 export LD_PRELOAD_64

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
will be JMS. This will log 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, since it will lead to flood 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.

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.

7   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.

Configuring Java Database Connectivity (JDBC) for eStatement Manager

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 eStatement Manager

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, please see the JDBC documentation for your application and database servers.

JDBC Data Sources

1   Create five JDBC data sources for eStatement Manager using the values in Table 07-01. Navigate to **Services>JDBC>Data Sources** then click **Lock and Edit**. Then click **New** to create new Data Source.

   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
edxXMADataSource	edx/xma/databasePool	Emulate Two-Phase Commit
edxUserDataSource	edx.user.databasePool	Emulate Two-Phase Commit

Table 07-01

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 corresponding **Transaction** option.

4   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

5 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 sources:

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 eStatement Manager

JMS Connection Factories

1 To create JMS Connection factories, you first create a Module. Navigate to **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 07-04

Example:

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

Table 07-05

2 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 07-06

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

JMS Persistence Store

4 Select the **Services->Persistence Stores** and then select **New->Create File Store**. You have to create two file stores with appropriate values as given in following Table 07-07.

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

Table 07-07

JMS Servers

5 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 07-08

JMS Queue

6 Create a new JMS Module and add three Queues with the values shown in Table 07-10.

Name	JNDI Name	Target

LoggerQueue	edx/queue/logger	LoggerJMSServer
EventsQueue	edx.queue.outbound	EventsJMSServer
EventsforeignQueue	edx.foreign.queue.outbound	EventsJMSServer

<div align="center">Table 07-09</div>

7 Provide the Queue **Name** and **JNDI Name** and click **Next**.

8 Click **Create a New Subdeployment**. You see the created queue name as **Subdeployment Name**.

9 Accept it and Click **OK**.

10 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 UNIX command line

1 Switch user to the application server owner:

```
su - edxadmin
```

2 Navigate to the directory EDX_HOME/bin.

3 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.

Example:

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

4   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*.

8 Packaging the Hibernate and C3PO Libraries

This chapter describes packaging of 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 Solaris platform:

JAR File Name (Linked to the download site)	OS	File Name after downloading	Tool/Commands to install
hibernate-3.1.3.jar	UNIX (Solaris)	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 (Solaris)	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

    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,

        `HIBERNATE_JARFILE_LOC=/opt/hibernate-3.1`

    c Set the property value C3P_JARFILE_LOC to the location where the c3p0-0.9.0.jar file resides.

    For example:

        `C3P_JARFILE_LOC =/opt/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.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.

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.

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 application, including eStatement Manager and samples.

Uninstalling eStatement Manager

Before uninstalling eStatement Manager components, you must:

1 Stop and undeploy the ear files.

2 Stop the scheduler and WebLogic server.

3 Clear the cache.

4 Stop the database and listener.

5 Remove the database components.

6 Uninstall eStatement Manager.

7 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.

To uninstall eStatement Manager

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

2 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   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.