

**Oracle® Financial Services Crime and Compliance
Management Studio Application**

Installation Guide

Release 8.0.5.0.0

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Document Control

This section provides the revision details of the document.

Version Number	Revision Date	Changes Done
8.0.5.0.0	Created: October 2017 Updated: March 2018	Created first version of CCMS Installation Guide for 8.0.5.0.0 Release.

This document includes the necessary instructions to install the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application 8.0.5.0.0 and perform the required post installation configurations. The latest copy of this guide can be accessed from the [OHC Documentation Library](#).

Preface

This section provides supporting information for the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application Installation Guide and includes the following topics:

- [Summary](#)
- [Audience](#)
- [Related Documents](#)
- [Conventions](#)
- [Abbreviations](#)

Summary

Before you begin the installation, ensure that you have access to the Oracle Support Portal with valid login credentials to quickly notify us of any issues at any stage. You can obtain the login credentials by contacting Oracle Support. You can find the latest copy of this document on [OHC Documentation Library](#).

Audience

The Installation Guide is intended for System Engineers who are responsible for installing and configuring the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application's components.

Prerequisites for the Audience

The document assumes that you have experience in installing Enterprise components and basic knowledge about the following are recommended:

- Scala, PGQL, and PGX
- UNIX commands
- Database concepts
- Web Application Server
- Big Data

Related Documents

This section identifies additional documents related to CCMS application. You can access the following documents from [OHC Documentation Library](#):

- *Oracle Financial Services Crime and Compliance Management Studio Administration Guide*
- *Oracle Financial Services Crime and Compliance Management Studio User Guide*
- *Oracle Financial Services Crime and Compliance Management Studio Release Notes*

Conventions

The following table lists the text conventions used in this document:

Table 0–1 Conventions used in this guide

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Abbreviations

The following table lists the abbreviations used in this document:

Table 0–2 Abbreviations and their meaning

Abbreviation	Meaning
OFS	Oracle Financial Services
CCMS	Crime and Compliance Management Studio
HTTPS	Hypertext Transfer Protocol Secure
JDBC	Java Database Connectivity
LDAP	Lightweight Directory Access Protocol
LHS	Left Hand Side
MOS	My Oracle Support
OS	Operating System
SFTP	Secure File Transfer Protocol
URL	Uniform Resource Locator
Web application ARchive	WAR
Java ARchive	JAR
PGX	Parallel Graph AnalytiX
PGQL	Property Graph Query Language
XML	Extensible Markup Language

Understanding CCMS Application Installation

This chapter provides necessary information required to understand the installation of the Oracle Financial Service Crime and Compliance Management Studio (CCMS) Application 8.0.5.0.0.

This chapter includes the following topics:

- [Installation Overview](#)
- [Hardware and Software Requirements](#)

Installation Overview

Users or Administrators, who wish to install a new instance of the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application 8.0.5.0.0 should download this installer. [Figure 1-1](#) shows the order of procedures required to install a new instance of the CCMS Application 8.0.5.0.0.

Figure 1–1 Installation Overview

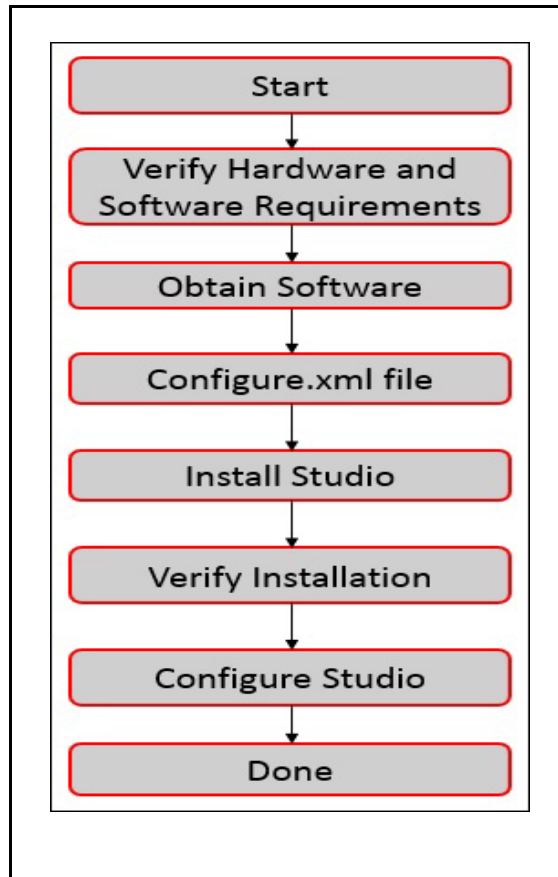


Table 1–1 provides additional information to specific documentation for each task in the flowchart.

Table 1–1 CCMS Application Installation Tasks and Descriptions

Tasks	Details and Documentation
Verify Hardware and Software requirements.	To verify that your system contains the required hardware and software requirements to install the Studio application, see Hardware and Software Requirements .
Obtain the Software	To access and download the CCMS application, see Obtaining the Software .
Configure.XML File	To configure the XML file, see Configuring InstallConfig.xml .
Install CCMS Application	To install the CCMS application, see Installing the CCMS Application .
Verify Installation	To verify installation of CCMS application, see Verifying Installation .
Configure CCMS Application	To configure CCMS application, See Post Installation Configurations .

Hardware and Software Requirements

This section describes the various Operating Systems, Database, Web Server, and Web Application Server versions, and other variant details on which this release of the

CCMS application has been qualified. For information on the requirements, see [OHC Documentation Library](#).

Configurations Supported for Java 8

Table 1–2 Configurations Supported for Java 8

BIG DATA	
Cloudera Distribution Hadoop 5.12	<ul style="list-style-type: none"> ▪ CDH Version 5.12 ▪ Hadoop-2.5.0+cdh5.3.3+844 ▪ Hive-0.13.1+cdh5.3.3+350 ▪ Sqoop1 V 1.4.4+cdh5.3.3+67
Cloudera Hive Connectors	Hive JDBC Connectors V 2.5.15
Oracle R Advanced Analytics for Hadoop	Oracle R Advanced Analytics for Hadoop (ORA AH) 2.4.0
Hadoop Security Protocol	<ul style="list-style-type: none"> ▪ Kerberos R release 1.6.1 ▪ Sentry-1.4.0
Hortonworks Data Platform (HDP 2.5)	<ul style="list-style-type: none"> ▪ CDH Version 2.5 ▪ Hadoop-2.7.3+hdp2.5+844 ▪ Hive-1.2.1+hdp2.5+350 ▪ Sqoop1 V 1.4.4+hdp2.5+67 ▪ Sqoop2 V 1.99.4+hdp2.5+23 ▪ Oracle Loader For Hadoop (OLH) V 3.2
Hortonworks Hive Connectors	Hive JDBC Connectors V 2.5.15
Oracle R Advanced Analytics for Hadoop	Oracle R Advanced Analytics for Hadoop (ORA AH) 2.4.0
Hadoop Security Protocol	<ul style="list-style-type: none"> ▪ Kerberos 5 release 1.6.1 ▪ Sentry-1.4.0

Preparing for Installation

This chapter provides necessary information to review before installing the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application 8.0.5.0.0.

This chapter includes the following sections:

- [Installer and Installation Prerequisites](#)
- [Obtaining the Software](#)
- [Performing Common Pre-Installation Tasks](#)

Installer and Installation Prerequisites

[Table 2-1](#) provides the list of prerequisites required before beginning the installation of the CCMS application. The Installer or Environment Check Utility notifies you if any requirements are not met.

Table 2–1 Prerequisite Information

Category	Sub-Category	Expected Value
Environment Settings	PGX Settings	PGX_HOME path and SPARK_HOME path needs to be set in the Environment variables
	Java Settings	<ul style="list-style-type: none"> ■ PATH in .profile to be set to include the Java Runtime Environment absolute path. The path should include java 8. <p>Note:</p> <ul style="list-style-type: none"> ■ Ensure the absolute path to JRE/bin is set at the beginning of PATH variable. ■ For example, PATH=/usr/java/jre1.8/bin:\$ORACLE_HOME/bin:\$PATH ■ Ensure no SYMBOLIC links to JAVA installation is being set in the PATH variable
	Oracle Database Settings	<ul style="list-style-type: none"> ■ TNS_ADMIN to be set in .profile pointing to appropriate tnsnames.ora file ■ ORACLE_HOME to be set in .profile pointing to appropriate Oracle Client installation PATH in .profile to be set to include appropriate \$ORACLE_HOME/bin path. ■ PATH in .profile to be set to include appropriate \$ORACLE_HOME/bin path ■ Ensure to add an entry (with SID/ SERVICE NAME) in the tnsnames.ora file on the OFSAA server
	Installation Directory	<p>A directory where the installation files will be installed.</p> <p>User permission is set to 755 on the installation directory.</p>
	Download Directory	<p>A directory where the product installer file will be downloaded/ copied.</p> <p>Ensure user permission is set to 755 on the Download directory.</p>
	OS Locale	<ul style="list-style-type: none"> ■ Linux: en_US.utf8 <p>To check the locale installed, execute the following command:</p> <pre>locale -a grep -i 'en_US.utf'</pre>
Web Application Server	Tomcat	Apache Tomcat version must be 8.0 or above.

Obtaining the Software

The 8.0.5.0.0 release of the CCMS Application can be downloaded from the Oracle Software Delivery Cloud (<https://edelivery.oracle.com>). You must have a valid Oracle account to download the software.

Performing Common Pre-Installation Tasks

The common pre-installation activities that you must carry out before installing the CCMS application are:

- [Identifying the Installation, Download and Metadata Repository Directories](#)
- [Downloading and Copying CCMS Application Installer](#)
- [Extracting the Software](#)

Identifying the Installation, Download and Metadata Repository Directories

To install the CCMS Application Pack, create the following directory which is typically the user home directory:

- **CCMS Download Directory (Optional):** Create a download directory and copy the CCMS Application Installer File (archive). This is the directory where the downloaded installer/patches can be copied.

Downloading and Copying CCMS Application Installer

To download and copy the CCMS Application Installer, follow these steps:

1. Login to the Oracle Software Delivery Cloud (<https://edelivery.oracle.com>) with a valid Oracle account.
2. Download the installer archive OFS_FCCM_STUDIO_8.0.5.0.0.zip file to the download directory (in Binary Mode) on the setup identified for CCMS installation.

Extracting the Software

Note:

You must be logged in to the UNIX operating system as a non-root user.

1. Download the unzip utility (OS specific) `unzip_<os>.Z` and copy it in Binary mode to the directory where you want to install the application. If you already have the unzip utility to extract the contents of the downloaded archive, skip to Step 4.
2. Uncompress the unzip installer file with the following command:

```
uncompress unzip_<os>.Z
```

Note:

In the error message, "uncompress: not found [No such file or directory]" is displayed, contact your UNIX administrator.

3. Assign EXECUTE permission to the file with the following command:

```
chmod 751 unzip_<OS>
```

For example, `chmod 751 unzip_sparc`

4. Extract the contents of the Oracle Financial Services CCMS Application 8.0.5.0.0 installer archive file in the download directory with the following command:

```
unzip OFS_FCCM_STUDIO_8.0.5.0.0.zip
```

Note

Do not rename the Application installer folder name on extraction from the archive.

5. Navigate to the download directory where the installer archive is extracted and assign execute permission to the installer directory with the following command:

```
chmod -R 750 OFS_FCCM_STUDIO_PACK
```

Installing the CCMS Application

This chapter provides the instructions to install the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application.

This chapter includes the following topics:

- [Installing the CCMS Application](#)
- [Verifying Installation](#)

Installing the CCMS Application

This section provides instructions to install the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application.

This topic includes the following sections:

- [Configuring InstallConfig.xml](#)
- [Running the Installer](#)
- [Completing the Installation](#)

Configuring InstallConfig.xml

To configure the `InstallConfig.xml` file, follow below steps:

1. Log in to the system as non-root user.
2. Navigate to the `OFS_FCCM_STUDIO_PACK/OFS_FCCM_STUDIO/conf/InstallConfig.xml` file
3. Configure the `InstallConfig.xml` file as mentioned in [Table 3-1](#).

You must manually set the `InteractionVariable` parameter values as mentioned in the [Table 3-1](#). If a value is not applicable, enter NA and ensure that the value is not entered as NULL.

Table 3–1 InstallConfig.xml Parameters

InteractionVariable Name	Significance	Mandatory
##PGX_REQD##	Indicates whether PGX must be installed along with the installer. Example: "true" The value true indicates that PGX must be installed with the installer. The value false indicates that PGX must not be installed with the installer.	Yes
##PGX_INSTALLATION_PATH##	Indicates the installation path of the PGX server. Example: <OFSCCMS_Installed_Path>/studio	Yes
##PGX_PGB_PATH##	Indicates the PGB file path on HDFS. Example: hdfs:/user/ofsaa	Yes
##PGX_SERVER_URL##	Indicates the URL of the PGX server. Example: http://<HOSTName>:<PortNo>/ The value for the PortNo must be 7007.	Yes
##SQOOP_PARAMFILE_PATH##	Indicates the path of the SQOOP property file. The path should point to the datamovement_properties file, which will be made available in the <CCMS Installation Home>/studio path after completion of the installation. Example: <OFSCCMS_Installed_Path>/datamovement_properties/	Yes
##OFSAA_SERVICE_URL##	Indicates the URL of the OFSAA instance. Do not enter '/' at the end of the URL. Example: https://<HOSTName>:<PortNo>/<ContextName>	Yes
##DATABASE_URL##	Indicates the JDBC URL of the OFSAA instance. Example: jdbc:oracle:thin:@<HOSTName>:<DBPort>/<DBName>	Yes
##SSH_ALIAS_CREDENTIAL##	Indicates the alias name for the SSH connection created in AAL. The name can be an arbitrary value, which will be used to create SSH connection. Example: SSH_Studio For information to create SSH connection, see Oracle Financial Services Crime and Compliance Management Studio Administration and Configuration Guide .	Yes
##SQOOP_TRG_HOSTNAME##	Indicates the host name of the SQOOP web server. Example: <HOSTName>	Yes
##META_SERVICE_URL##	Indicates the metaservice URL which will get activated after deployment of the .war file in TOMCAT. The format for the metaservice URL is as follows: http://<HOSTName>:<PortNo>/metaservice	Yes

Table 3–1 (Cont.) InstallConfig.xml Parameters

InteractionVariable Name	Significance	Mandatory
##DATA_STUDIO_INSTALLATION_PATH##	Indicates the path where CCMS is to be installed.	Yes
##SQOOP_WORKDIR_HDFS##	Indicates the SQOOP working directory in HDFS.	Yes
##SQOOP_PARTITION_COL##	Indicates the column in which the HIVE table is partitioned. The value must be SNAPSHOT_DT	Yes
##LIVY_HOST_URL##	Indicates the URL of the Livy application. The format for the URL is as follows: http://<HOSTName>:<PortNo>	Yes
##OFSAA_GLOBAGRAPH_CODE##	Indicates the global graph code value.	Yes
##HIVE_SCHEMA##	Indicates to create schema in HIVE.	Yes
##FSINFODOM##	Indicates the name of the OFSAA or BD Infodom.	Yes
##FSSEGMENT##	Indicates the name of the OFSAA or BD segment.	Yes
##JDBC_DRIVER##	Indicates the Oracle database driver. This must be a unique value.	Yes
##BASE_VERSION##	Indicates the BD base version.	Yes
##SRC_DB_PASSWORD##	Indicates the atomic schema password of the OFSAA or BD instance.	Yes
##SRC_DB_USRNAME##	Indicates the atomic schema username of the OFSAA or BD instance.	Yes
##SRC_DB_CONFIG_USRNAME##	Indicates the config schema username of the OFSAA or BD instance.	Yes
##SRC_DB_CONFIG_PASSWORD##	Indicates the config schema password of the OFSAA or BD instance.	Yes

Running the Installer

To run the installer, follow these steps:

1. Navigate to the OFS_FCCM_STUDIO_PACK/OFS_FCCM_STUDIO/bin directory.
2. Execute the following command in the console:

```
./setup.sh
```

Completing the Installation

A confirmation message is displayed to indicate the completion of the installation. On launching the installer, the environment check utility is executed. [Figure 3–1](#) shows the success message displayed after successful installation.

Figure 3–1 Installation Complete

```
-bash-4.1$ ./setup.sh
PGX_REQD
1
File is created!
Preparing to install...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...

=====
SolutionSetup                               (created with InstallAnywhere)
-----

=====
Installing...
-----

[=====|=====|=====|=====]
[-----|-----|-----|-----]

Installation Complete.
```

Verifying Installation

To verify the installation, verify the following log files:

See the `OFS_CCMS_LOG.log` file located in the `/OFS_FCCM_STUDIO_PACK/OFS_FCCM_STUDIO/logs` directory.

Note: Any errors encountered in the process is displayed with an appropriate error code. Do not proceed with further installation and contact Oracle Support along with log files.

Post Installation Configurations

On successful installation of the Oracle Financial Services Crime and Compliance Management Studio (CCMS) Application, follow these post installation steps:

This chapter includes the following sections:

- [Configuring Resource Reference](#)
- [Deploying the Application Pack Web Archive](#)
- [Configurations to Enable Data Movement from Oracle to Hive](#)
- [Configuring PGX](#)
- [Starting Studio Services](#)

Note: Ensure to clear the application cache prior to the deployment of Applications Pack Web Archive. This is applicable for all Web Servers (Weblogic and Tomcat). For more information on clearing application cache, see [Appendix E, "Clearing Application Cache"](#).

Configuring Resource Reference

Configure the resource reference in the Web Application Server (Weblogic and Tomcat) configured for the CCMS Application. For details on configuring the resource reference in WebLogic and Tomcat Application Servers, see [Appendix A, "Configuring Resource Reference in Web Application Servers"](#).

Deploying the Application Pack Web Archive

On successful installation of the CCMS Application, the Studio metaservice application pack web archive is automatically generated. However you must deploy the generated Studio metaservice application pack web archive on the web application server (Weblogic and Tomcat).

To deploy the Studio metaservice application pack web archive, follow these steps:

1. Navigate to the `<OFSCCMS_Installed_Path>/datastudio_metaservice` directory.
2. Deploy the generated metaservice EAR/WAR file on to the web application server (Weblogic and Tomcat). For detailed information, see [Appendix B, "Deploying EAR/ WAR File"](#).

Configurations to Enable Data Movement from Oracle to Hive

To configure date movement from Oracle to Hive, follow these steps:

1. Copy the `fcc_ds_datamovement.jar` file located in the `<OFSCCMS_Installed_Path>/ficdb/fccm_studio_DM_lib` path to the `<OFSAA_FIC_HOME_PATH>/ficdb/lib` path.
2. Create a Hive Schema with the name given in the `HIVE_SCHEMA` parameter in the `InstallConfig.xml` file.

For information on `InstallConfig.xml` file, see [Configuring InstallConfig.xml](#).

3. Create tables in the Hive Schema by executing the below script in the newly created Hive Schema:

```
<OFSCCMS_Installed_Path>/SQLScripts/<BASE_VERSION>/Hive_Schema/FCCM_
DATASTUDIO_HIVETABLES_CREATION.SQL
```

Here `<BASE_VERSION>` refers to the value given for the `##BASE_VERSION##` parameter in the `InstallConfig.xml` file. For more information on `InstallConfig.xml`, see [Configuring InstallConfig.xml](#).

This creates tables in the Hive Schema.

4. Execute the below script in the AAI Atomic schema:

```
<OFSCCMS_Installed_Path>/SQLScripts/8.0.5/Atomic_Schema/FCCM_
DATASTUDIO_ALTERTABLE.sql
```

```
<OFSCCMS_Installed_Path>/SQLScripts/<AAI_VERSION>/Atomic_Schema/FCCM_
DATASTUDIO_VIEW_CREATION.SQL
```

Configuring PGX

To configure PGX, follow below steps:

1. Navigate to the `<OFSCCMS_Installed_Path>/pgx/pgx-2.6.0-server/pgx-2.6.0/conf/server.conf` file.
2. Set the values for the `enable_tls` and `enable_client_authentication` parameters in the `server.conf` file as follows:

```
enable_tls=false
```

```
enable_client_authentication=false
```

3. Copy the `pgx-2.6.0-java-client` directory from the `<OFSCCMS_Installed_Path>/pgx` path to any location inside the node servers.

This is performed to copy the PGX Client to all the nodes in the cluster.

4. Set the values for the `SPARK_CLASSPATH` and `JAVA_HOME` parameters in the `spark-env.sh` file as follows:

```
export SPARK_CLASSPATH=<OFSCCMS_Installed_Path>/pgx/pgx-2.6.0-java-client/pgx-2.6.0/lib/*:$HADOOP_CONF_DIR
```

```
export JAVA_HOME=<JAVA_INSTALLED_PATH>/jdk1.8.0_101
```

5. Place the `ojdbc7.jar` file in the `<Cloudera_Installation_Path>/sqoop/jars` path.

Starting Studio Services

Start the Studio services in the order mentioned in [Appendix C, "Starting/Stopping Infrastructure Services"](#).

You can now view the CCMS interface. You can access the CCMS application from the URL as follows:

`http://<HOST>:7008`

Configuring Resource Reference in Web Application Servers

This section covers the following topics:

- [Configuring Resource Reference in Weblogic Application Server](#)
- [Configuring Resource Reference in Tomcat Application Server](#)

Configuring Resource Reference in Weblogic Application Server

This section is applicable only when the Web Application Server type is WebLogic.

This section includes the following topics:

- [Creating Data Source](#)
- [Creating GridLink Data Source](#)
- [Configuring Multi Data Sources](#)
- [Configuring Advanced Settings for Data Source](#)
- [Defining JDBC Connection Pooling](#)

In WebLogic, you can create "Data Source" in the following ways:

- For a Non RAC Database instance, Generic Data Source has to be created. See [Creating Data Source](#).
- For a RAC Database instance, Gridlink Data Source has to be created. See [Creating GridLink Data Source](#).
- When Load Balancing/Fail over is required, Multi Data Source has to be created. See [Configuring Multi Data Sources](#).

Creating Data Source

The following steps are applicable for both config and atomic data source creation.

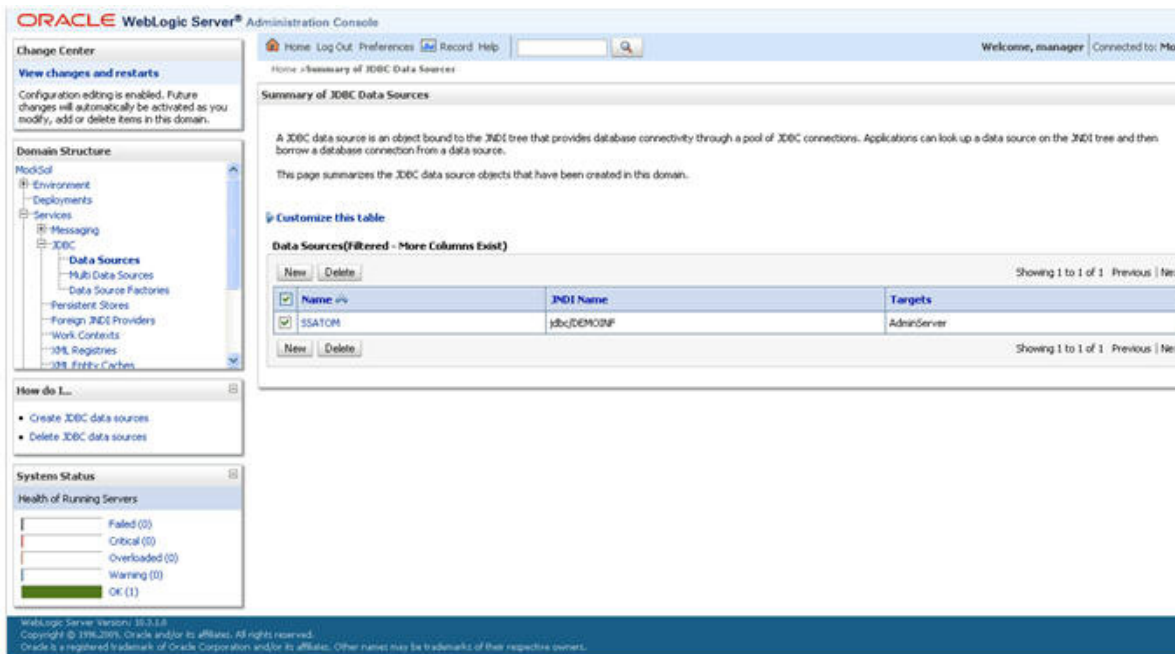
1. Open the following URL in the browser window:
`http://<ipaddress>:<administrative console port>/console`. (https if SSL is enabled). The *Welcome* window is displayed.
2. Log in with the Administrator **Username** and **Password**.

Figure A-1 Welcome



- From the LHS menu (Domain Structure), click **Services > Data Sources**. The *Summary of JDBC Data Sources* window is displayed.

Figure A-2 Summary of JDBC Data Sources



- Click **New** and select **Generic Data Source** option. The *Create a New JDBC Data Source* window is displayed.

You can also select **GridLink Data Source** or **Multi Data Source** while creating a Data Source. For more information, see [Creating Data Source](#) or [Configuring Multi Data Sources](#).

Figure 4–1 Create a New JDBC Data Source

5. Enter JDBC data source **Name**, **JNDI Name**, and select the **Database Type** from the drop-down list. Click **Next**.

Ensure the following:

- The JNDI Name field should be in the format "jdbc/FCCM_ATOMIC"
- Same steps needs to be followed to create a mandatory data source pointing to the "configuration schema" of infrastructure with jdbc/FCCM_CONFIG as JNDI name.
- JNDI Name is the same as mentioned in web.xml file of OFSAAI Application.
- Required "Database Type" and "Database Driver" should be selected.

Figure A–3 JDBC Data Source Properties

6. Select the **Database Driver** from the drop-down list. You need to select the Database Driver depending on database setup, that is, with or without RAC. Click **Next**.

Figure A–4 Transaction Options

Create a New JDBC Data Source

Back Next Finish Cancel

Transaction Options

You have selected non-XA JDBC driver to create database connection in your new data source.

Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.

Supports Global Transactions

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the *Logging Last Resource (LRR)* transaction optimization. Recommended in place of Emulate Two-Phase Commit.

Logging Last Resource

Select this option if you want to enable non-XA JDBC connections from the data source to emulate participation in global transactions using JTA. Select this option only if your application can tolerate heuristic conditions.

Emulate Two-Phase Commit

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the one-phase commit transaction processing. With this option, no other resources can participate in the global transaction.

One-Phase Commit

Back Next Finish Cancel

7. Select the **Supports Global Transactions** check box and the **One-Phase Commit** option.
8. Click **Next**. The *Connection Properties* window is displayed.

Figure A-5 Connection Properties

The screenshot shows a web-based wizard titled "Create a New JDBC Data Source". At the top, there are four buttons: "Back", "Next", "Finish", and "Cancel". Below this is the "Connection Properties" section, which includes the instruction "Define Connection Properties." and a question: "What is the name of the database you would like to connect to?". The "Database Name:" field contains the text "fsgbu". The next question is "What is the name or IP address of the database server?", with the "Host Name:" field containing "10.184.74.80". The third question is "What is the port on the database server used to connect to the database?", with the "Port:" field containing "1521". The fourth question is "What database account user name do you want to use to create database connections?", with the "Database User Name:" field containing "ssatom". The fifth question is "What is the database account password to use to create database connections?", with the "Password:" field containing six dots. Below the password field is a "Confirm Password:" field, also containing six dots. At the bottom of the form, there are four buttons: "Back", "Next", "Finish", and "Cancel".

9. Enter the required details such as the Database Name, Host Name, Port, Oracle User Name, and Password.
10. Click **Next**. The *Test Database Connection* window is displayed.

Figure A-6 Test Database Connection

Create a New JDBC Data Source

Test Configuration | Back | Next | Finish | Cancel

Test Database Connection
Test the database availability and the connection properties you provided.

What is the full package name of JDBC driver class used to create database connections in the connection pool?
(Note that this driver class must be in the classpath of any server to which it is deployed.)

Driver Class Name: oracle.jdbc.OracleDriver

What is the URL of the database to connect to? The format of the URL varies by JDBC driver.

URL: jdbc:oracle:thin:@10.184.

What database account user name do you want to use to create database connections?

Database User Name: ssatom

What is the database account password to use to create database connections?
(Note: for secure password management, enter the password in the Password field instead of the Properties field below)

Password: [REDACTED]

Confirm Password: [REDACTED]

What are the properties to pass to the JDBC driver when creating database connections?

Properties: usez=ssatom

The set of driver properties whose values are derived at runtime from the named system property.

System Properties:

What table name or SQL statement would you like to use to test database connections?

Test Table Name: SQL SELECT 1 FROM DUAL

Test Configuration | Back | Next | Finish | Cancel

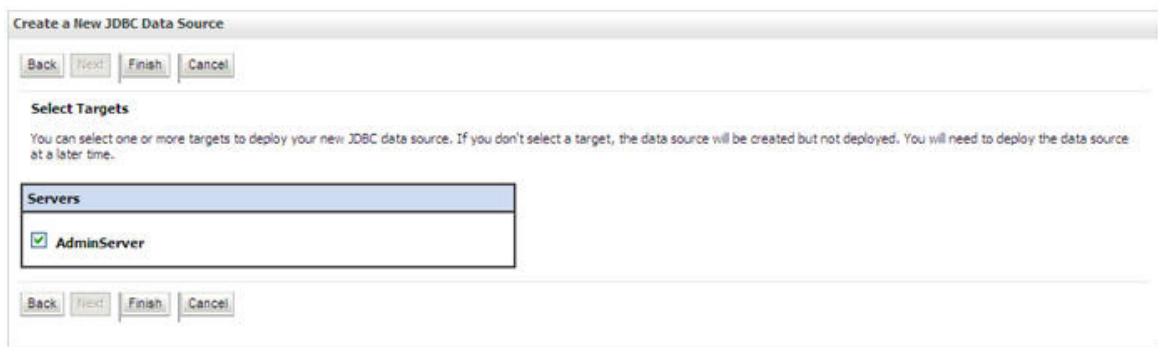
11. Verify the details and click **Test Configuration** and test the configuration settings. A confirmation message is displayed stating "Connection test succeeded."
12. Click **Finish**. The created "Data Source" is displayed in the list of Data Sources.

Note:

- "User ID" is the Oracle user ID that is created for the respective "Information Domain".
 - "User ID" to be specified for data source with "FCCM_CONFIG" as "JNDI" name should be the Oracle user ID created for the "configuration schema".
-

13. Select the new Data Source and click the *Targets* tab.

Figure A-7 *Select Targets*



14. Select the **AdminServer** option and click **Finish**.

Creating GridLink Data Source

If you have selected the option, **New > GridLink Data Source** while creating the "Data Source", you can directly specify the JDBC URL as indicated.

Figure A-8 Create a New JDBC GridLinkData Source

The screenshot shows the 'Create a New JDBC GridLink Data Source' wizard in the 'Connection Properties' step. The title bar reads 'Create a New JDBC GridLink Data Source'. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. Below the title, the text says 'Define Connection Properties.' and 'Enter Complete JDBC URL for GridLink database.' The main section is titled 'Complete JDBC URL:' and contains a large empty text area. Below this, it asks 'What database account user name do you want to use to create database connections?' with a 'Database User Name:' label and an empty text box. The next question is 'What is the database account password to use to create database connections?' with a 'Password:' label and an empty text box. Below that is a 'Confirm Password:' label and another empty text box. At the bottom, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

1. Enter Data Source **Name**, and **JNDI Name**.

Ensure that the "JNDI Name" field is specified in the format "jdbc/FCCM_ATOMIC" and the **XA Driver** check box is not selected. Click **Next**.

Figure A-9 JDBC GridLinkData Source- Connection Properties

The screenshot shows the 'Create a New JDBC GridLink Data Source' wizard in the 'JDBC GridLink Data Source Properties' step. The title bar reads 'Create a New JDBC GridLink Data Source'. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. Below the title, the text says 'JDBC GridLink Data Source Properties' and 'The following properties will be used to identify your new JDBC GridLink data source.' Below this, it says '* Indicates required fields'. The main section asks 'What would you like to name your new JDBC GridLink data source?' with a 'Name:' label, a small icon, and a text box containing 'xyz'. The next question is 'What JNDI name would you like to assign to your new JDBC GridLink data source?' with a 'JNDI Name:' label, a small icon, and a text box containing 'jdbc/xyz'. Below this, it asks 'What database type would you like to select?' with a 'Database Type:' label and a dropdown menu showing 'Oracle'. The next question is 'Is this XA driver?' with an 'XA Driver' label and an unchecked checkbox. At the bottom, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

- Specify **Complete JDBC URL, Database User Name, and Password**. Click **Finish**. The created "Data Source" is displayed in the list of Data Sources.

Configuring Multi Data Sources

A JDBC multi data source is an abstraction around a group of data sources that provides load balancing and fail over between data sources. As with data sources, multi data sources are also bound to the JNDI tree. Applications can look up a multi data source on the JNDI tree and then reserve a database connection from a data source. The multi data source determines from which data source to provide the connection.

When the database used is **Oracle RAC (Real Application Clusters)** which allows Oracle Database to run across a set of clustered servers, then group of data sources can be created for instances running on a set of clustered servers and a JDBC multi data source can be created so that applications can look up a multi data source on the JNDI tree to reserve database connection. If a clustered server fails, Oracle continues running on the remaining servers.

- Open WebLogic Admin Console in the browser window:
`http://<ipaddress>:<administrative console port>/console`. (https if SSL is enabled). The *Login* window is displayed.
- Log in with the "User ID" that has admin rights.
- In the LHS menu (Domain Structure), select **Services > JDBC > Multi Data Sources**. The *Summary of JDBC Multi Data Sources* window is displayed.

Figure A-10 Summary of JDBC Multi Data Sources

Summary of JDBC Multi Data Sources

A JDBC multi data source is an abstraction around a group of data sources that provides load balancing and failover between data sources. As with data sources, multi data sources are also bound to the JNDI tree. Applications can look up a multi data source on the JNDI tree and then reserve a database connection from a data source. The multi data source determines from which data source to provide the connection.

Use this page to create or view multi data sources in your domain.

Customize this table

Multi Data Sources (Filtered - More Columns Exist)

New Delete Showing 1 to 2 of 2 Previous | Next

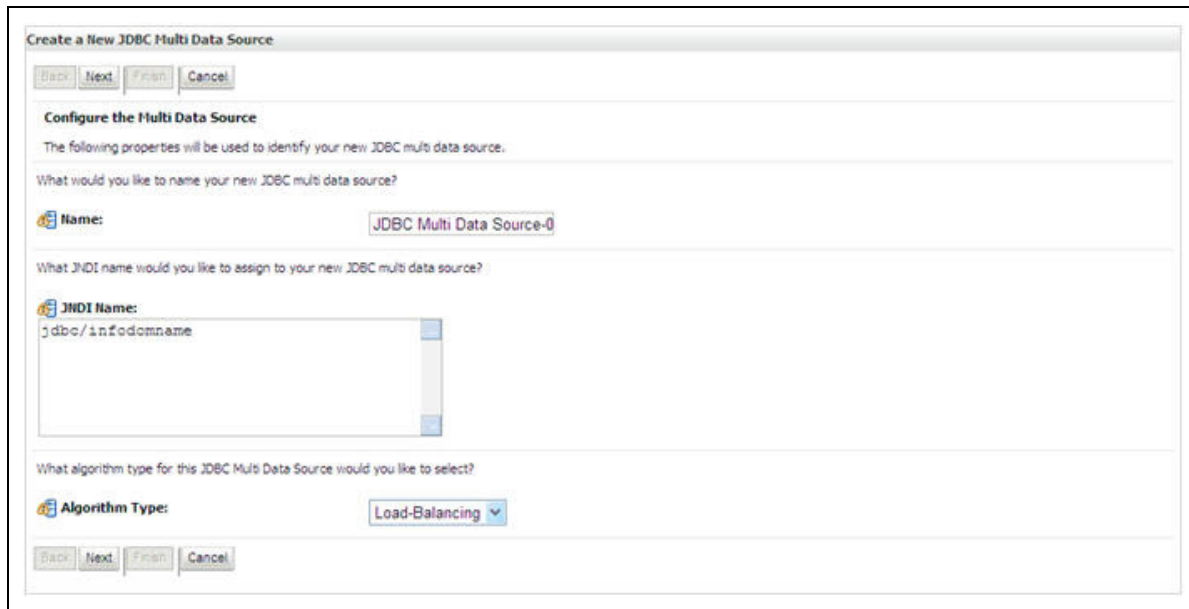
<input type="checkbox"/>	Name	JNDI Name	Algorithm Type	Targets
<input type="checkbox"/>	FUSIONDS	jdbc/FUSIONRHEL	Load-Balancing	AdminServer
<input type="checkbox"/>	RORDS	jdbc/RORRHELQT	Load-Balancing	AdminServer

New Delete Showing 1 to 2 of 2 Previous | Next

- Click **New**. The *New JDBC Multi Data Source* window is displayed.

Note: Ensure that the Data Sources which needs to be added to new JDBC Multi Data Source has been created.

Figure A-11 Configure the Multi Data Source



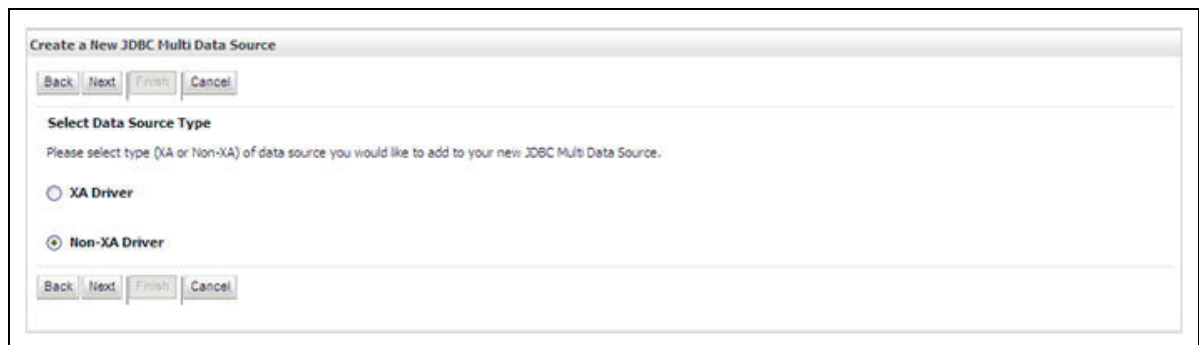
5. Enter the JDBC Source **Name**, **JNDI name**, and select the **Algorithm Type** from the drop-down list. Click **Next**.

Note:

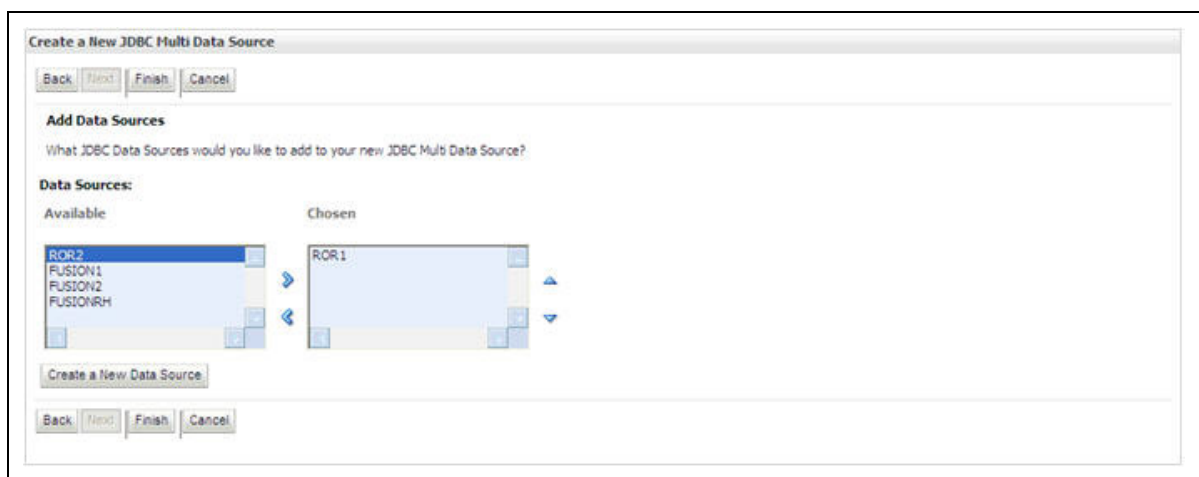
- The JNDI Name has to be specified in the format `jdbc/FCCM_`
`ATOMIC`.
 - JNDI Name of the Data Sources that will be added to new JDBC Multi data source should be different from the JNDI name specified during Multi Data Source.
 - Same steps needs to be followed to create a mandatory data source pointing to the "configuration schema" of infrastructure with `jdbc/FCCM_CONFIG` as JNDI name for Data Source.
 - JNDI Name provided in multi data source should be the same name that will be mentioned in the `web.xml` file of OFSAAI Application.
 - You can select the **Algorithm Type** as **Load-Balancing**.
-
-

Figure A-12 Select Targets

6. Select the **AdminServer** check box and click **Next**.

Figure A-13 Select Data Source Type

7. Select the type of data source which will be added to new JDBC Multi Data Source. Click **Next**.

Figure A-14 Add Data Sources

8. Map the required Data Source from the Available Data Sources. Click **Finish**. The New JDBC Multi Data Source is created with added data sources.

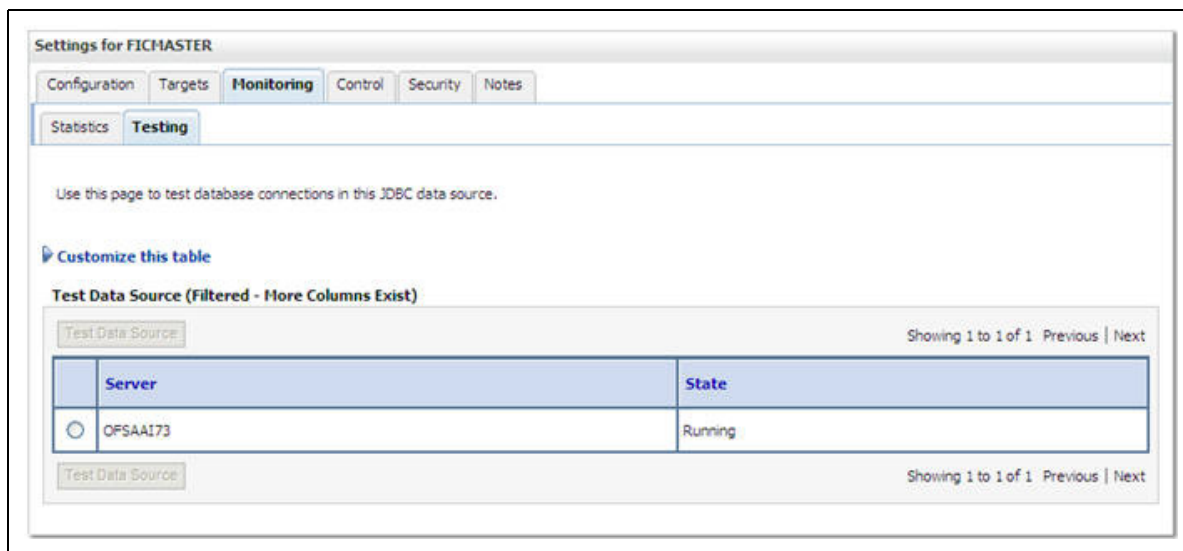
Configuring Advanced Settings for Data Source

Perform the following steps for advanced settings for Data Source:

1. Click the new Data Source from the Summary of JDBC Data Sources window. The *Settings for <Data Source Name>* window is displayed.
2. Select the **Connection Pooling** tab given under Configuration.
3. Go to the **Advanced** option at the bottom of the window, and check the **Test Connection of Reserve** check box (Enables Weblogic Server to test a connection before giving it to a client).

To verify if the data source is valid, select "Data Source name". For example, FCCM_CONFIG.

Figure A-15 Settings for <Data Source Name>



4. Select the server and click **Test Data Source**.
A message is displayed indicating that the test was successful.
5. Once the "Data Source" is created successfully, the following messages are displayed:
 - All changes have been activated. No restart is necessary.
 - Settings updated successfully.
 If not, follow the preceding steps to recreate the data source.

Defining JDBC Connection Pooling

To define the JDBC connection pooling, ensure that you have created JDBC Provider and Data source to access the data from the database.

1. Click the newly created Data Source \$DATA_SOURCE\$ and navigate to the path *Home >Summary of Services: JDBC >Summary of JDBC Data Sources >JDBC Data Source-FCCM_ATOMIC*
2. Set the values for **Initial Capacity** to 10, **Maximum Capacity** to 100, **Capacity Increment** by 1, **Statement Cache Type** to LRU, and **Statement Cache Size** to 10.

3. Click **Save**.

Configuring Resource Reference in Tomcat Application Server

To configure the resource reference in Web Application Servers, refer the following sections:

- [Creating Data Source](#)
- [Configuring Class Loader for Apache Tomcat](#)

Copy the Oracle JDBC driver file, "ojdbc<version>.jar" from <Oracle Home>/jdbc/lib and place it in <Tomcat Home>/lib.

Note: Refer [Appendix D, "JDBC Jar Files"](#) for identifying the correct ojdbc<version>.jar version to be copied.

Creating Data Source

To create "data source" for metaservice of Studio application, follow these steps:

1. Navigate to <Tomcat Home>/conf and edit the server.xml file by replacing the actual values with the following block of text:

Note: The User-IDs for configuration/ atomic schemas have the prefix of setupinfo depending on the value set for PREFIX_SCHEMA_NAME in <<APP Pack>>_SCHEMA_IN.XML file of Schema Creator Utility.

For example: if the value set for PREFIX_SCHEMA_NAME is OFS and the schema name was mentioned as ofsaconf, then the actual schema created in the database would be OFS_ofsaconf.

```
<Context path ="/<context name>" docBase="<Tomcat Installation
Directory>/webapps/<context name>" debug="0" reloadable="true"
crossContext="true">
<Resource auth="Container"
name="jdbc/FCCM_CONFIG"
type="javax.sql.DataSource"
driverClassName="oracle.jdbc.driver.OracleDriver"
username="<user id for the configuration schema>"
password="<password for the above user id>"
url="jdbc:oracle:thin:@<DB engine IP address>:<DB Port>:<SID>"
maxActive="100"
maxIdle="30"
maxWait="10000"/>
<Resource auth="Container"
name="jdbc/FCCM_ATOMIC"
```

```
type="javax.sql.DataSource"
driverClassName="oracle.jdbc.driver.OracleDriver"
username="<user id for the atomic schema>"
password="<password for the above user id>"
url="jdbc:oracle:thin:@<DB engine IP address>:<DB Port>:<SID>"
maxActive="100"
maxIdle="30"
maxWait="10000"/>
</Context>
```

Note:

- The <Resource> tag must be repeated for each Information Domain created.
 - After the above configuration, the "WAR" file has to be created and deployed in Tomcat.
-
-

Configuring Class Loader for Apache Tomcat

To configure Class Loader for Apache Tomcat, follow these steps:

1. Edit the `server.xml` available in `$TOMCAT_HOME/conf/` folder.
2. Add tag `<Loader delegate="true" />` within the `<Context>` tag, above the `<Resource>` tag.

This is applicable only when the web application server is Apache Tomcat 8.

Note: This configuration is required if Apache Tomcat version is 8.

Deploying EAR/ WAR File

This section covers the following topics:

- [Deploying EAR/WAR Files on WebLogic](#)
- [Deploying EAR/WAR Files on Tomcat](#)

Deploying EAR/WAR Files on WebLogic

Following are the steps for deploying Infrastructure application that would be created during installation:

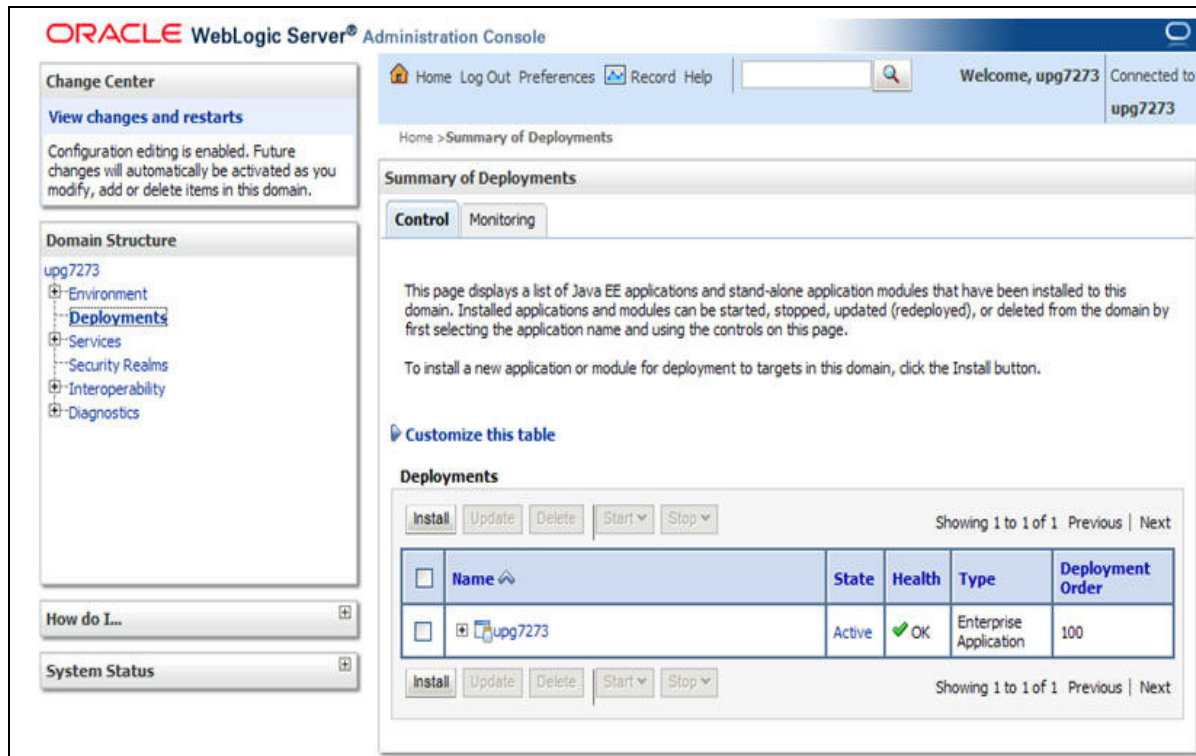
1. Navigate to the path `<WebLogic Installation directory>/user_projects/domains/<domain name>/bin` in the machine in which WebLogic is installed.
2. Start WebLogic by executing the following command:

```
./startWebLogic.sh -d64 file
```
3. Open the following URL in the browser window:
`http://<ipaddress>:<admin server port>/console` (https if SSL is enabled). The *Sign in* window of the WebLogic Server Administration Console is displayed.

Note: Ensure that you have started Infrastructure Server by executing `./startofsaai.sh` as mentioned in [Appendix C, "Starting/Stopping Infrastructure Services"](#) section.

4. Log on to the WebLogic Server by entering the user credentials having privileges to deploy the EAR file.
5. From the **Domain Structure** LHS menu, click **Deployments**. The *Summary of Deployments* window is displayed.

Figure B–1 Summary of Deployments



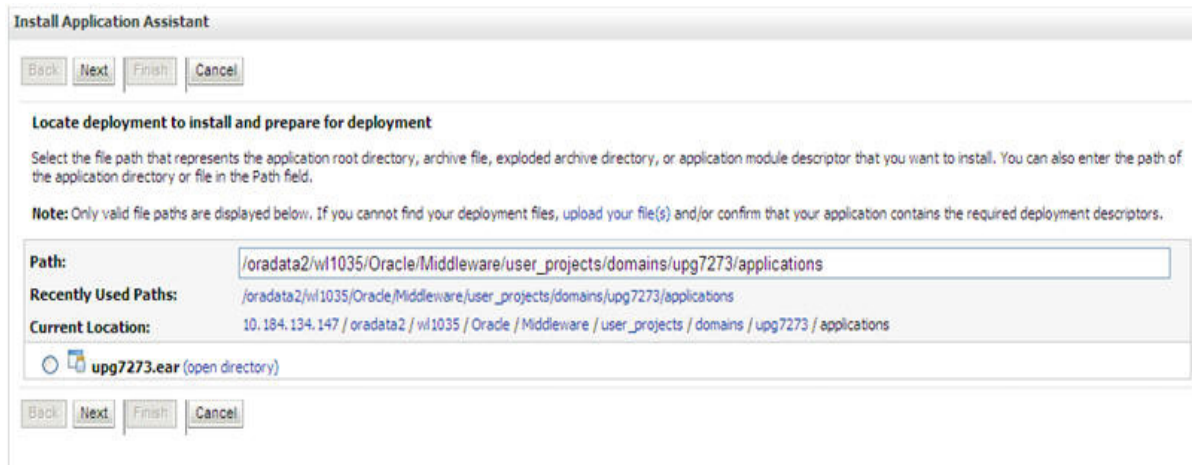
6. Click **Install**. The *Install Application Assistant* window is displayed.
7. Select the Exploded EAR directory after browsing to the directory where it is saved and click **Next**.

Installing Application

To install Application, follow these steps:

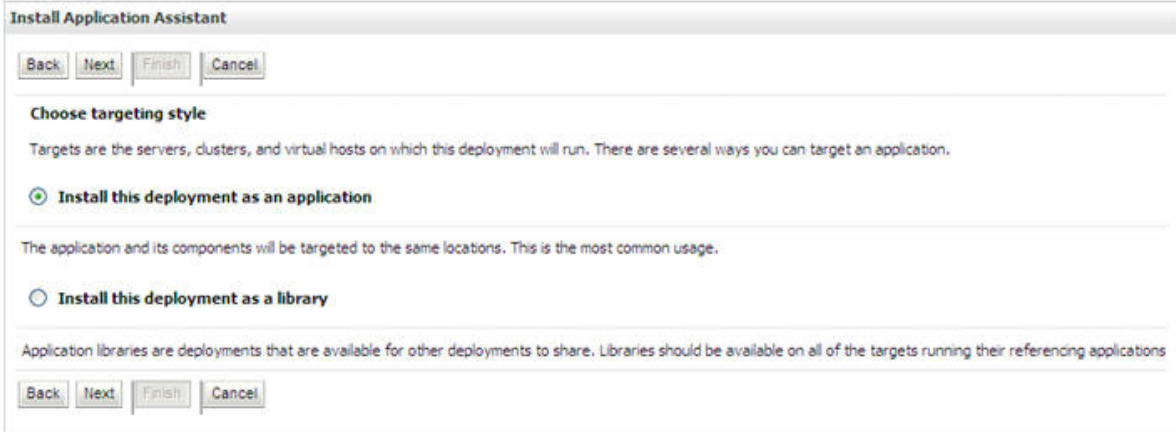
1. Open the Install Application Assistant.

Figure B–2 Install Application Assistant



2. Click **Next**.

Figure B-3 *Install Application Assistant*



The screenshot shows a dialog box titled "Install Application Assistant". At the top, there are four buttons: "Back", "Next", "Finish", and "Cancel". Below the buttons is a section titled "Choose targeting style". Under this title, there is a paragraph of text: "Targets are the servers, clusters, and virtual hosts on which this deployment will run. There are several ways you can target an application." Below this text are two radio button options. The first option is "Install this deployment as an application", which is selected with a filled radio button. The second option is "Install this deployment as a library", which is unselected with an empty radio button. Below the radio buttons is another paragraph of text: "The application and its components will be targeted to the same locations. This is the most common usage." Below this text is a third paragraph: "Application libraries are deployments that are available for other deployments to share. Libraries should be available on all of the targets running their referencing applications". At the bottom of the dialog box, there are four buttons: "Back", "Next", "Finish", and "Cancel".

3. From the Choose targeting style section, select the **Install this deployment as an application** option and click **Next**.

The *Optional Settings* window is displayed.

Figure B–4 Optional Settings

Install Application Assistant

Back Next Finish Cancel

Optional Settings

You can modify these settings or accept the defaults

General

What do you want to name this deployment?

Name:

Security

What security model do you want to use with this application?

DD Only: Use only roles and policies that are defined in the deployment descriptors.

Custom Roles: Use roles that are defined in the Administration Console; use policies that are defined in the deployment descriptor.

Custom Roles and Policies: Use only roles and policies that are defined in the Administration Console.

Advanced: Use a custom model that you have configured on the realm's configuration page.

Source accessibility

How should the source files be made accessible?

Use the defaults defined by the deployment's targets

Recommended selection:

Copy this application onto every target for me

During deployment, the files will be copied automatically to the managed servers to which the application is targeted.

I will make the deployment accessible from the following location

Location:

Provide the location from where all targets will access this application's files. This is often a shared directory. You must ensure the application files exist in this location and that each target can reach the location.

Back Next Finish Cancel

4. Enter a **Name** for the deployment if required.
5. Under the Security section, select the **DD only** option to specify that only roles and policies that are defined in the deployment descriptors should be used.
6. Select the **I will make the deployment available from the following location** option under the Source accessibility section.
7. Click **Next** to continue.

The *Deployment Summary* window is displayed.

Figure B-5 Deployment Summary

Install Application Assistant

Back Next Finish Cancel

Review your choices and click Finish

Click Finish to complete the deployment. This may take a few moments to complete.

Additional configuration

In order to work successfully, this application may require additional configuration. Do you want to review this application's configuration after completing this assistant?

Yes, take me to the deployment's configuration screen.

No, I will review the configuration later.

Summary

Deployment: /oradata2/wl1035/Oracle/Middleware/user_projects/domains/upg7273/applications/upg7273.ear

Name: upg72733

Staging mode: Use the defaults defined by the chosen targets

Security Model: DDOnly: Use only roles and policies that are defined in the deployment descriptors.

Target Summary

Components	Targets
upg7273.ear	AdminServer

Back Next Finish Cancel

8. Select the **Yes, take me to the deployment's configuration screen** option and click **Finish**.

The *Settings for <Deployment Name>* window is displayed.

Figure B-6 Settings for <Deployment Name>

Settings for upg7273

Overview | Deployment Plan | Configuration | Security | Targets | Control | Testing | Monitoring | Notes

Save

Use this page to view the general configuration of an Enterprise application, such as its name, the physical path to the application files, the associated deployment plan, and so on. The table at the end of the page lists the modules (such as Web applications and EJBs) that are contained in the Enterprise application. Click on the name of the module to view and update its configuration.

Name: upg7273 The name of this Enterprise Application. [More Info...](#)

Path: /oradata2/wl1035/Oracle/Middleware/user_projects/domains/upg7273/applications/upg7273.ear The path to the source of the deployable unit on the Administration Server. [More Info...](#)

Deployment Plan: (no plan specified) The path to the deployment plan document on Administration Server. [More Info...](#)

Staging Mode: (not specified) The mode that specifies whether a deployment's files are copied from a source on the Administration Server to the Managed Server's staging area during application preparation. [More Info...](#)

Security Model: DDOnly The security model that is used to secure a deployed module. [More Info...](#)

Deployment Order: An integer value that indicates when this unit is deployed, relative to other deployable units on a server, during startup. [More Info...](#)

Deployment Principal Name: A string value that indicates what principal should be used when deploying the file or archive during startup and shutdown. This principal will be used to set the current subject when calling out into application code for interfaces such as ApplicationLifecycleListener. If no principal name is specified, then the anonymous principal will be used. [More Info...](#)

Save

Modules and Components

Showing 1 to 1 of 1 Previous | Next

Name	Type
[-] upg7273	Enterprise Application
[-] EJBs	
[-] StatelessCacheBeanBean	EJB
[-] Modules	
[-] /upg7273	Web Application
[-] beancache.jar	EJB Module
[-] Web Services	
None to display	

Showing 1 to 1 of 1 Previous | Next

9. Review the general configuration details of the deployment. You can also update the configuration of the deployment in this window. In the *Overview* tab, you can view the complete deployment configuration.
10. Click **Save** to update the changes, if any.
11. From the LHS menu, click **Deployments**.
The *Summary of Deployments* window is displayed.

Figure B-7 Summary of Deployments

Summary of Deployments

Control Monitoring

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

Customize this table

Deployments

Install Update Delete Start Stop Showing 1 to 1 of 1 Previous Next

<input checked="" type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input checked="" type="checkbox"/>	upg7273	Active	OK	Enterprise Application	100

Install Update Delete Start Stop Showing 1 to 1 of 1 Previous Next

12. Select the newly deployed Infrastructure application and click **Start > Servicing all requests**. Ensure that the Infrastructure server is up and running.

Figure B-8 Summary of Deployments

Messages

Start requests have been sent to the selected Deployments.

Summary of Deployments

Control Monitoring

This page displays a list of Java EE applications and stand-alone application modules that have been installed to this domain. Installed applications and modules can be started, stopped, updated (redeployed), or deleted from the domain by first selecting the application name and using the controls on this page.

To install a new application or module for deployment to targets in this domain, click the Install button.

Customize this table

Deployments

Install Update Delete Start Stop Showing 1 to 1 of 1 Previous Next

<input type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input type="checkbox"/>	upg7273	Active	OK	Enterprise Application	100

Install Update Delete Start Stop Showing 1 to 1 of 1 Previous Next

13. The **State** of the deployed application will be displayed as **Active** if started successfully.

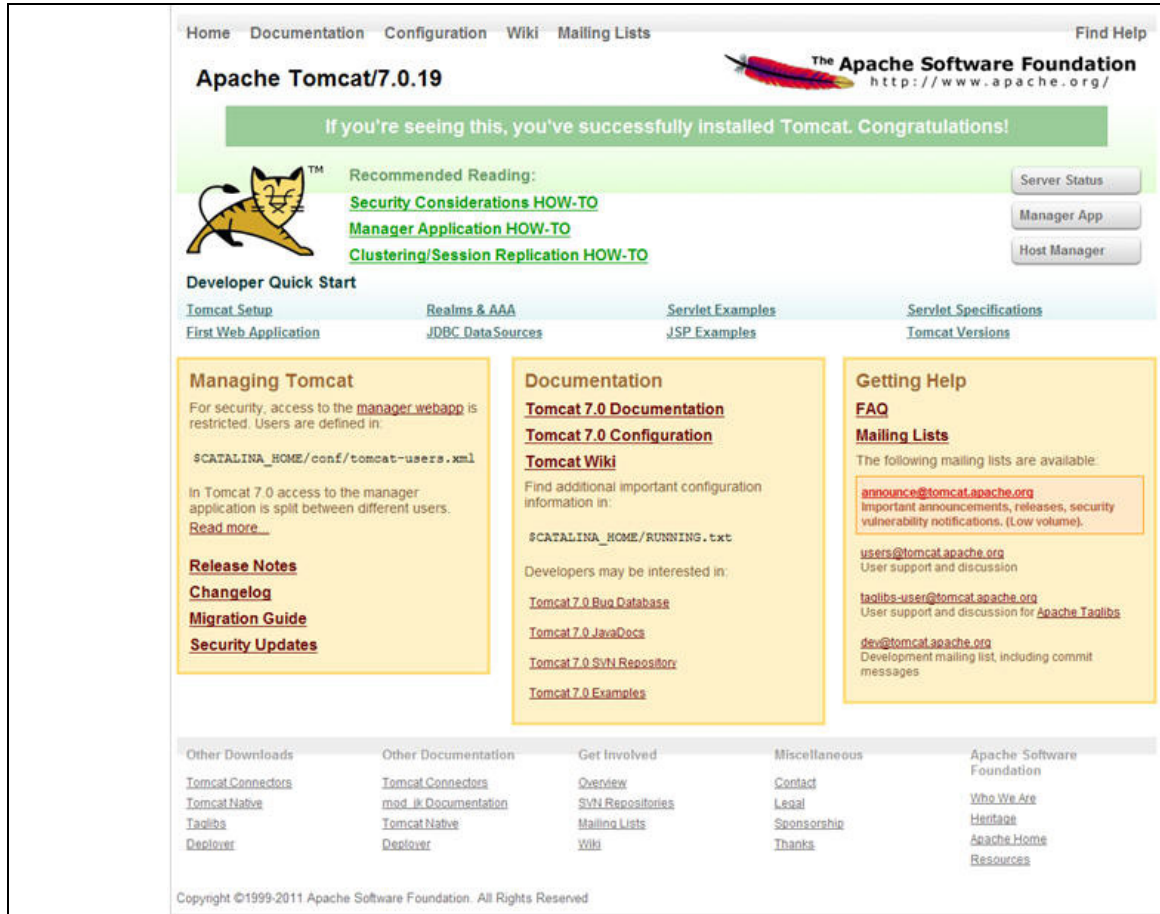
Deploying EAR/WAR Files on Tomcat

Before deploying the WAR files, ensure that the previously deployed applications of Infrastructure are uninstalled.

On the machine that hosts Tomcat, follow these steps to deploy Infrastructure application:

1. Copy the <context-name>.war from <OFSCCMS_Installed_Path>/datastudio_metaservice/<metaservice.war> to <Tomcat Installation Directory>/webapps/ directory.

Figure B-9 Tomcat Home Page



2. Click **Manager App**. The Connect to dialog box is displayed.
3. Enter the **User Id** and **Password** that has admin rights and click **OK**. The Tomcat Web Application Manager window is displayed with the list of all the applications deployed.

Figure B-10 Tomcat Web Application Manager

docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Deploy

Deploy directory or WAR file located on server

Context Path (required):

XML Configuration file URL:

WAR or Directory URL:

WAR file to deploy

Select WAR file to upload

Diagnostics

Check to see if a web application has caused a memory leak on stop, reload or undeploy

This diagnostic check will trigger a full garbage collection. Use it with extreme caution on production systems.

Server Information

Tomcat Version	JVM Version	JVM Vendor	OS Name	OS Version	OS Architecture	Hostname	IP Address
Apache Tomcat/7.0.57	1.6.0_45-b06	Sun Microsystems Inc.	Linux	2.6.39-400.211.1.el6uek.x86_64	amd64	ofs220354.in.oracle.com	10.184.132.10

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4. In the *Deploy* section, enter the **Context Path** provided during the installation as `"/<context-name>".`
5. Enter the path where the `<context-name>.war` file resides (by default `<OFSCCMS_Installed_Path>/datastudio_metaservice/<metaservice.war>`) in the **WAR or Directory URL** field and click **Deploy**.
6. On successful application deployment, a confirmation message is displayed. Start the Tomcat server.

Starting/Stopping Infrastructure Services

This section details about how to start and stop the infrastructure services needed for Oracle Financial Services Crime and Compliance Management Studio (CCMS).

This section covers the following topics:

- [Starting/Stopping Livy Service](#)
- [Starting/Stopping PGX Service](#)
- [Starting/Stopping Data Studio Service](#)
- [Starting/Stopping MetaService Service](#)

Starting/Stopping Livy Service

The Livy service is installed with Cloudera.

To start the Livy service, navigate to the path where Livy service is installed and run the following:

```
./livy-server start
```

To stop the Livy service, navigate to the path where Livy service is installed and run the following:

```
./livy-server stop
```

Starting/Stopping PGX Service

To start the PGX service, navigate to the path where PGX service is installed and run the following:

```
./start-server
```

The start service for PGX will be located in the path as follows:

```
##PGX_INSTALLATION_PATH##/pgx/pgx-2.6.0-server/pgx-2.6.0/bin
```

To stop the PGX service, kill the process.

Starting/Stopping Data Studio Service

To start the Data Studio service, navigate to the path where CCMS is installed and run the following:

```
./datastudio --external
```

The start service for Data Studio will be located in the path as follows:

```
##DATA_STUDIO_INSTALLATION_PATH##/datastudio/bin
```

To stop the service, kill the process.

Starting/Stopping MetaService Service

To start the Metaservice service, navigate to path where Metaservice service is installed and run the following:

```
./startup.sh
```

The start service for Metaservice service will be located in the path as follows:

```
<Metaservice Deployed Area>/bin
```

To stop the service, navigate to the path where Metaservice service is installed and run the following:

```
./shutdown.sh
```

Once all the Services are up and running, CCMS Application can be accessed with the following URL:

```
http://<HOST>:<7008>
```

D

JDBC Jar Files

The `ojdbc<version>.jar` file should be copied based on the Oracle Database version and the supported Java (JDK/JRE) version. See the following table for details:

Table D-1 *JDBC Jar files version details*

Oracle Database Version	JDK/JRE Version Supported	JDBC Jar files specific to the release
12.1 or 12cR1	JDK 8 and JDK 7	<code>ojdbc7.jar</code> for JDK 7 and JDK 8

Clearing Application Cache

Clearing application cache is applicable to all Web Servers (WebLogic and Tomcat).

Prior to the deployment of Infrastructure or Application Service Packs/One-off patches, navigate to the following path depending on the WebServer configured and clear the cache:

- **WebLogic:** <Weblogic installation location>/domains/<Domain name>/servers/<Server name>/tmp/_WL_user/<Application name>/qaelce/jsp_servlet
- **Tomcat:** <Tomcat installation folder>/work/Catalina/localhost/<Application name>/org/apache/jsp