

**Oracle® Financial Services Compliance
Regulatory Reporting Applications Pack**

Installation Guide

Release 8.0.0.0.0

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Preface

This Preface provides supporting information for the Oracle Financial Services Compliance Regulatory Reporting Pack (OFS CRR) Installation Guide and includes the following topics:

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

Summary

You can find the latest copy of this document in Oracle Technology Network (OTN) library which includes all the recent additions/revisions (if any) done till date.

Before you begin the installation, ensure that you have an access to the Oracle Support Portal with the required login credentials to quickly notify us of any issues at any stage. You can obtain the login credentials by contacting Oracle Support.

Audience

Oracle Financial Services Compliance Regulatory Reporting Pack Installation Guide is intended for installers, administrators, and implementation consultants who are responsible for installing and maintaining the Applications Pack components.

Prerequisites for the Audience

Following are the expected preparations from the administrator before starting the actual installation:

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

- Oracle Financial Services Compliance Regulatory Reporting pack components
- OFSAA Architecture
- UNIX Commands
- Database Concepts
- Web Server/Web Application Server

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>

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Related Documents

This section identifies additional documents related to OFS CRR. You can access Oracle documentation online from Documentation Library for Oracle Financial Services Compliance Regulatory Reporting (OTN).

OFSAA Related Documents

- *Oracle Financial Services Advanced Analytical Applications Infrastructure Applications Pack Installation and Configuration Guide*
- *Oracle Financial Services Analytical Applications Infrastructure Environment Check Utility Guide*
- *Oracle Financial Services Analytical Applications Infrastructure Administration Guide*
- *Oracle Financial Services Analytical Applications Infrastructure User Guide*

OFS CRR Application Related Documents

- *Oracle Financial Services Compliance Regulatory Reporting Administration Guide*
- *Oracle Financial Services Compliance Regulatory Reporting User Guide*
- *Oracle Financial Services Compliance Regulatory Reporting Web Service Guide*
- *Oracle Financial Services Compliance Regulatory Reporting Release Notes*

The following documents are available in My Oracle Support (MOS) and you should have SSO credentials to access MOS.

- *Oracle Financial Services Analytical Applications Infrastructure Security Guide*
- *Oracle Financial Services Compliance Regulatory Reporting Data Model Reference Guide*

Conventions

The following text conventions are used in this document:

Table 0–1

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.

Table 0–1

Convention	Meaning
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
CRR	Compliance Regulatory Reporting
GUI	Graphical User Interface
HTTPS	Hypertext Transfer Protocol Secure
J2C	J2EE Connector
J2EE	Java 2 Enterprise Edition
JDBC	Java Database Connectivity
LDAP	Lightweight Directory Access Protocol
LHS	Left Hand Side
MOS	My Oracle Support
OTN	Oracle Technology Network
OFSA	Oracle Financial Services Analytical Application
OFSAI	Oracle Financial Services Analytical Application Infrastructure
OLAP	On-Line Analytical Processing
OS	Operating System
SFTP	Secure File Transfer Protocol
URL	Uniform Resource Locator
Web Archive	WAR
XML	Extensible Markup Language

About OFS CRR Applications Pack

This chapter provides complete details about Compliance Regulatory Reporting (CRR) Applications Pack.

This chapter includes the following topics:

- [About Oracle Financial Services Analytical Applications \(OFSAA\)](#)
- [About Oracle Financial Services Applications \(OFSAA\) Application Packs](#)
- [Introduction to Oracle Financial Services Compliance Regulatory Reporting \(OFS CRR\) Application](#)
- [About Oracle Financial Services Analytical Applications Infrastructure \(OFSAAI\)](#)

About Oracle Financial Services Analytical Applications (OFSAA)

In today's turbulent markets, financial institutions require a better understanding of their risk-return, while strengthening competitive advantage and enhancing long-term customer value. Oracle Financial Services Analytical Applications (OFSAA) enable financial institutions to measure and meet risk adjusted performance objectives, cultivate a risk management culture through transparency, lower the costs of compliance and regulation, and improve insight into customer behavior.

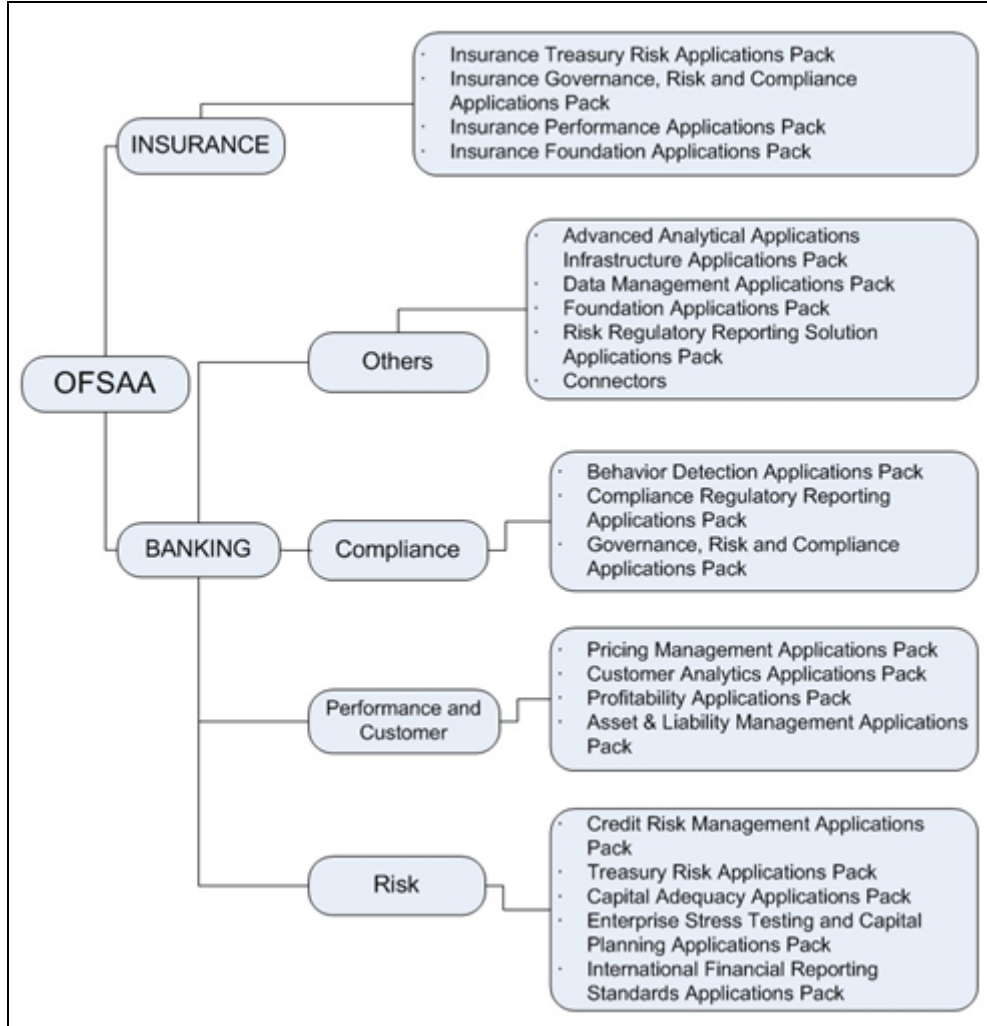
OFSAA uses industry-leading analytical methods, shared data model and applications architecture to enable integrated risk management, performance management, customer insight, and compliance management. OFSAA actively incorporates risk into decision making, enables to achieve a consistent view of performance, promote a transparent risk management culture, and provide pervasive intelligence.

With the help of OFSAA, the financial services organizations can achieve, management excellence with a lower total cost of ownership, due to our integrated, architecture, combining performance and risk applications into a single, seamlessly integrated framework.

OFSAA delivers a comprehensive and integrated suite of financial services analytical applications for both banking and insurance domain.

About Oracle Financial Services Applications (OFSAA) Application Packs

The following figure depicts the various Applications Pack that are available across the OFSAA Banking and Insurance domains:

Figure 1–1 OFSAA Applications Packs

Introduction to Oracle Financial Services Compliance Regulatory Reporting (OFS CRR) Application

OFS CRR Application assists financial institutions in information gathering, and generating and filing of Suspicious Activity Report (SAR) reports with regulatory bodies as part of an integrated financial crime and compliance management program.

OFS CRR application provides a single, global regulatory reporting approach to address suspicious activity reporting requirements across different countries and jurisdictions. As part of this coverage, the OFS CRR supports the following:

- Pre-Defined Mapping of business information and investigation information to the applicable jurisdiction-specific regulatory reporting format.
- Different Report Formats for generating a suspicious activity report as mandated by local regulatory bodies. Some examples are PDF, XML, MS Excel, and so on.
- Pre-Configured Controls for supporting guidelines and specifications defined by the local regulatory body. This ensures compliance with SAR reporting mandates and ensures error-free report submission to regulators.

OFS Compliance Regulatory Reporting Applications Pack includes the following applications:

- **Financial Services Analytical Applications Infrastructure:** This application streamlines analysis using a set of tools for data management and security administration and creates a single, consistent, enterprise-wide source of all relevant customer and financial data.
- **Financial Services Compliance Regulatory Reporting:** This application enables financial institutions to meet their regulatory reporting requirements as part of integrated financial crime and compliance management approach and helps reduce compliance costs and manage potential exposures.

About Oracle Financial Services Analytical Applications Infrastructure (OFSAAI)

Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) powers the Oracle Financial Services Analytical Applications family of products to perform the processing, categorizing, selection and manipulation of data and information needed to analyze, understand and report on specific performance, risk, compliance and customer insight issues by providing a strong foundation for the entire family of Oracle Financial Services Analytical Applications across the domains of Risk, Performance, Compliance, and Customer Insight.

Components of OFSAAI

The OFSAA Infrastructure is comprised of a set of frameworks that operates on and with the Oracle Financial Services Analytical Applications Data Model and form the array of components within the Infrastructure.

The OFSAA Infrastructure components/frameworks are installed in two layers: primarily the metadata server and Infrastructure services run on one layer, and the UI and presentation logic runs on the other. The UI and presentation layer is deployed on any of the supported J2EE Servers.

The following figure depicts the various frameworks and capabilities that make up the OFSAA Infrastructure:

Figure 1–2 Components of OFSAAI



OFSAI Infrastructure High Availability

The current release of the OFSAI Infrastructure supports only "Single Instance" installation for the Infrastructure components. However, the High Availability (HA) for the Database Server and/or the Web Application Server clustering and deployment are supported in this release.

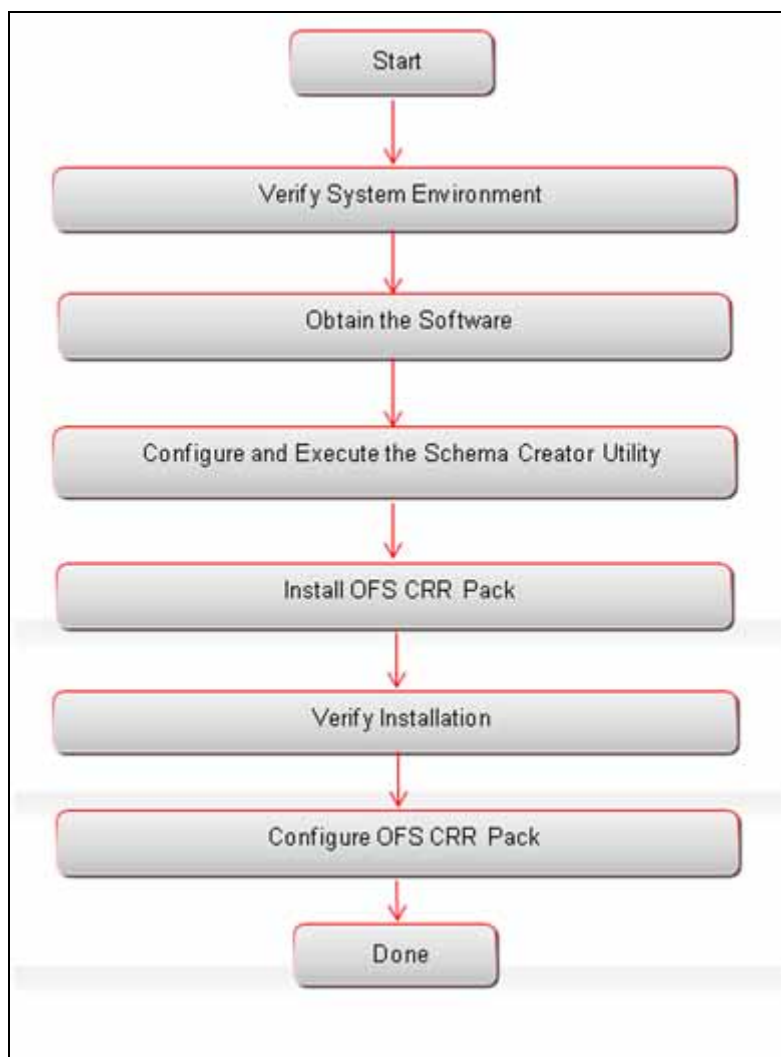
Understanding OFS CRR Pack Installation

This chapter includes the following topics:

- [Installation Overview](#)
- [Logical Deployment Architecture](#)
- [Hardware and Software Requirements](#)
- [Verifying the System Environment](#)
- [Understanding the Installation Mode](#)

Installation Overview

This section gives an overview of the OFS CRR Pack Installation. [Figure 2-1](#) shows the order of procedures you will need to follow:

Figure 2–1 Installation Overview

The following lists provide additional information and links to specific documentation for each task in the flowchart.

- **Verify System Environment:** This section provides details to verify that your system meets the minimum necessary requirements for installing and hosting the OFS CRR Applications Pack. For more information, see [Hardware and Software Requirements](#) and [Verifying the System Environment](#).
- **Obtain the Software:** This section provides details about obtaining the software. For more information, see [Obtaining the software](#).
- **Configure and Execute the Schema Creator Utility:** This section provides details about configuring and executing the schema creator utility. For more information, see [Configuring and Executing the Schema Creator Utility](#).
- **Install OFS CRR Pack:** This section provides details about installing the OFS CRR Pack Installer. For more information, see [Installing the OFS CRR Applications Pack](#).
- **Verify Installation:** This section provides details about verifying the installation. For more information, see [Verifying the Installation](#).

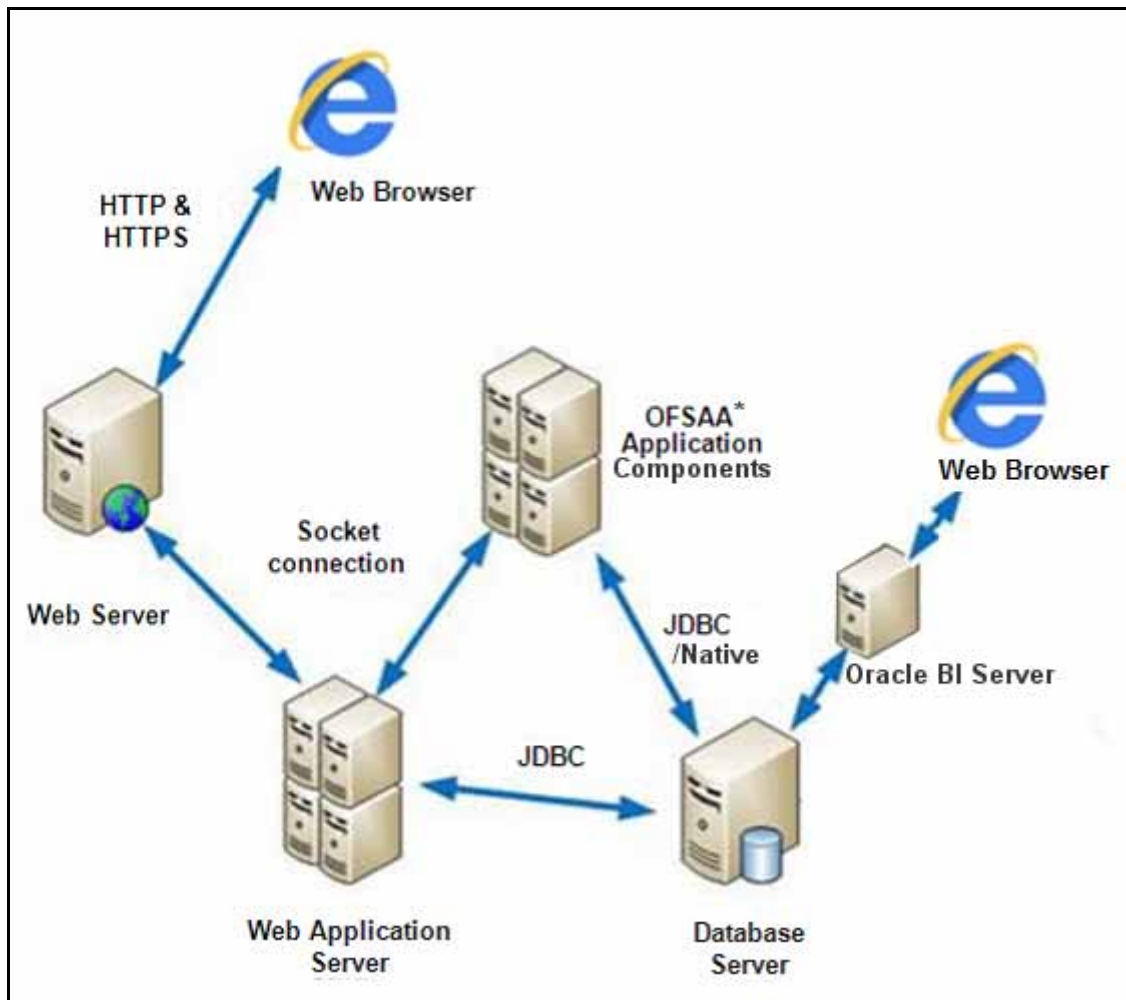
- **Configure OFS CRR Pack:** This section provides details about post installation configuration. For more information, see [Post Installation Configuration](#).

Logical Deployment Architecture

The deployment architecture depicts the mapping of a logical architecture to a physical environment.

The physical environment includes the computing nodes in an intranet or Internet environment, CPUs, memory, storage devices, and other hardware and network devices.

Figure 2–2 Logical Deployment Architecture



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 OFS CRR Applications Pack has been qualified.

Note:

OFS CRR Applications Pack installation can be performed on both Virtual and Physical servers.

Configurations supported for Java 7

The following table shows the minimum hardware and software requirements for installing OFS CRR Application Pack (Java 7).

Table 2–1 Configurations Supported for Java 7

Operating System	
Oracle Linux / Red Hat Enterprise Linux (x86-64)	<ul style="list-style-type: none"> ▪ Oracle Linux Server release 5.3 up to 5.10 - 64 bit ▪ Oracle Linux Server release 6.0 and above - 64 bit <p>Note: Same versions of RHEL is supported</p>
Oracle Solaris(SPARC)/ Solaris x86	<ul style="list-style-type: none"> ▪ Oracle Solaris v5.10 Update 11 and above - 64 bit ▪ Oracle Solaris v5.11 update 1 and above - 64 bit
IBM AIX (POWERPC)	<ul style="list-style-type: none"> ▪ AIX 6.1 (TL 09 and above) - 64 bit
Shell	<ul style="list-style-type: none"> ▪ KORN Shell (KSH)
Note :	
<ul style="list-style-type: none"> ▪ If the OS is IBM AIX 6.1, configure the size parameter setting for "Large File Support". Refer link http://www-01.ibm.com/support/docview.wss?uid=isg3T1000290 for more details. ▪ If the operating system is RHEL, install the package <code>lsb_release</code> using one of the following commands by logging in as root user: <ul style="list-style-type: none"> ▪ <code>yum install redhat-lsb-core</code> ▪ <code>yum install redhat-lsb</code> 	
Java Runtime Environment	
Oracle Linux / Red Hat Enterprise Linux Oracle Solaris	<ul style="list-style-type: none"> ▪ Oracle Java Runtime Environment (JRE) 1.7.x - 64 bit
IBM AIX	<ul style="list-style-type: none"> ▪ IBM AIX Runtime, Java Technology JRE 1.7.x - 64 bit
Oracle Database Server and Client	
<ul style="list-style-type: none"> ▪ Oracle Database Server Enterprise Edition 11g Release 2 (11.2.0.3.0 +) - 64 bit RAC/ Non-RAC with/ without partitioning option ▪ Oracle Database Server Enterprise Edition 12c Release 1 (12.1.0.1.0 +)- 64 bit RAC/ Non-RAC with/ without partitioning option ▪ Oracle Client 11g Release 2 (11.2.0.3.0+) - 64 bit ▪ Oracle Client 12c Release 1 (12.1.0.1.0+) - 64 bit ▪ Oracle 11g Release 2 (11.2.0.3+) JDBC driver (Oracle thin driver) ▪ Oracle 12C Release 1 (12.1.0.1+) JDBC driver (Oracle thin driver) ▪ Oracle Distribution of R version 2.15.1, 2.15.2 or 2.15.3.(Optional) ▪ Oracle R Enterprise (Server) version 1.4. (Optional) 	

Table 2–1 (Cont.) Configurations Supported for Java 7

Note:	
Ensure that the following patches are applied:	
<ul style="list-style-type: none"> ▪ Oracle Server 12c, v12.1.0.1 – 17082699 ▪ Oracle Server 12c, v12.1.0.2 - 19392604, 19649591 ▪ Also for latest information, refer http://support.oracle.com/ , 12.1.0.2 Bundle Patches for Engineered Systems and DB In-Memory - List of Fixes in each Bundle (Doc ID 1937782.1) 	
OLAP	
Oracle Hyperion Essbase	<ul style="list-style-type: none"> ▪ V 11.1.2.1+ (Server and Client) with Oracle 11g Database ▪ V 11.1.2.3+ (Server and Client) with Oracle 12c Database
Oracle OLAP	<ul style="list-style-type: none"> ▪ V 11.2.0.3+ with Oracle 11g Database ▪ V 12.1.0.1+ with Oracle 12c Database
Note:	
<ul style="list-style-type: none"> ▪ Oracle Hyperion Essbase & Oracle OLAP is required only if you are using the OLAP feature of OFSAAI. For Oracle OLAP, ensure that you have configured the Oracle Database server with OLAP option. 	
Web Server/ Web Application Server	
Oracle Linux / Red Hat Enterprise Linux Oracle Solaris	<p>Oracle HTTP Server 11.1.1.1/ Apache HTTP Server 2.2.x/ IBM HTTP Server</p> <p>Oracle 11g Database:</p> <ul style="list-style-type: none"> ▪ Oracle WebLogic Server 12.1.2+ (64 bit) ▪ IBM WebSphere Application Server 8.5+ with bundled IBM Java Runtime (64 bit) ▪ Apache Tomcat 8.0.x (64 bit) <p>Oracle 12c Database:</p> <ul style="list-style-type: none"> ▪ Oracle WebLogic Server 12.1.2+ (64 bit) ▪ IBM WebSphere Application Server 8.5+ with IBM Java Runtime (64 bit) ▪ Apache Tomcat 8.0.x (64 bit)
Note:	
<ul style="list-style-type: none"> ▪ OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported. 	
Desktop Requirements	
Operating System	MS Windows 7/ Windows 8/ Windows 8.1
Browser	<ul style="list-style-type: none"> ▪ MS Internet Explorer 9 , 10(Compatibility Mode) and 11 (Compatibility Mode) <p>Oracle Java plug-in 1.7.0+* (64-bit)</p> <p>Turn on Pop-up blocker settings. For more information, see Internet Explorer Settings</p>
Office Tools	<ul style="list-style-type: none"> ▪ MS Office 2007/2010/2013 ▪ Adobe Acrobat Reader 10 and 11
Screen Resolution	1024*768 or 1280*1024
Other Software	
Directory Services	OFSAAI is qualified on both OPEN LDAP 2.2.29+ and Oracle Internet Directory v 11.1.1.3.0. However, it can be integrated with other directory services software like MS Active Directory.

Table 2–1 (Cont.) Configurations Supported for Java 7

Note:	
■	Configuration of Directory services software for OFSAAI installation is optional. For more information on configuration, see Appendix D .
■	Open LDAP needs to be installed on MS Windows Server machine only.

Configurations supported for Java 8

Table 2–2 Configurations Supported for Java 8

Operating System	
Oracle Linux / Red Hat Enterprise Linux (x86-64)	<ul style="list-style-type: none"> ■ Oracle Linux Server release 5.3 up to 5.10 - 64 bit ■ Oracle Linux Server release 6.0 and above - 64 bit <p>Note: Same versions of RHEL is supported</p>
Oracle Solaris(SPARC)/Solaris x86	<ul style="list-style-type: none"> ■ Oracle Solaris v5.10 Update 11 and above - 64 bit ■ Oracle Solaris v5.11 update 1 and above - 64 bit
IBM AIX (POWERPC)	<ul style="list-style-type: none"> ■ AIX 6.1 (TL 09 and above) - 64 bit
Shell	<ul style="list-style-type: none"> ■ KORN Shell (KSH)
Note :	
<ul style="list-style-type: none"> ■ If the OS is IBM AIX 6.1, configure the size parameter setting for "Large File Support". Refer link http://www-01.ibm.com/support/docview.wss?uid=isg3T1000290 for more details. ■ If the operating system is RHEL, install the package lsb_release using one of the following commands by logging in as root user: <ul style="list-style-type: none"> ■ <code>yum install redhat-lsb-core</code> ■ <code>yum install redhat-lsb</code> 	
Java Runtime Environment	
Oracle Linux / Red Hat Enterprise Linux Oracle Solaris	<ul style="list-style-type: none"> ■ Oracle Java Runtime Environment (JRE) 1.8.x - 64 bit
IBM AIX	<ul style="list-style-type: none"> ■ IBM AIX Runtime, Java Technology JRE 1.8.x - 64 bit
Oracle Database Server and Client	
<ul style="list-style-type: none"> ■ Oracle Database Server Enterprise Edition 11g Release 2 (11.2.0.3.0+) - 64 bit RAC/ Non-RAC with/ without partitioning option ■ Oracle Database Server Enterprise Edition 12c Release 1 (12.1.0.1.0+) - 64 bit RAC/ Non-RAC with/ without partitioning option ■ Oracle Client 11g Release 2 (11.2.0.3.0+) - 64 bit ■ Oracle Client 12c Release 1 (12.1.0.1.0+) - 64 bit ■ Oracle 11g Release 2 (11.2.0.3+) JDBC driver (Oracle thin driver) ■ Oracle 12C Release 1 (12.1.0.1+) JDBC driver (Oracle thin driver) ■ Oracle Distribution of R version 2.15.1, 2.15.2 or 2.15.3.(Optional) ■ Oracle R Enterprise (Server) version 1.4. (Optional) 	

Table 2–2 (Cont.) Configurations Supported for Java 8

Note:	
Ensure that the following patches are applied:	
<ul style="list-style-type: none"> ▪ Oracle Server 12c, v12.1.0.1 – 17082699 ▪ Oracle Server 12c, v12.1.0.2 - 19392604, 19649591 ▪ Also for latest information, refer http://support.oracle.com/ , 12.1.0.2 Bundle Patches for Engineered Systems and DB In-Memory - List of Fixes in each Bundle (Doc ID 1937782.1) 	
OLAP	
Oracle Hyperion Essbase	<ul style="list-style-type: none"> ▪ V 11.1.2.1+ (Server and Client) with Oracle 11g Database ▪ V 11.1.2.3+ (Server and Client) with Oracle 12c Database
Oracle OLAP	<ul style="list-style-type: none"> ▪ V 11.2.0.3+ with Oracle 11g Database ▪ V 12.1.0.1+ with Oracle 12c Database
Note:	
<ul style="list-style-type: none"> ▪ Oracle Hyperion Essbase & Oracle OLAP is required only if you are using the OLAP feature of OFSAAI. For Oracle OLAP, ensure that you have configured the Oracle Database server with OLAP option. 	
Web Server/ Web Application Server	
Oracle Linux / Red Hat Enterprise Linux / IBM AIX Oracle Solaris	Oracle HTTP Server 11.1.1.1/ Apache HTTP Server 2.2.x/ IBM HTTP Server <ul style="list-style-type: none"> ▪ Oracle WebLogic Server 12.1.3+ (64 bit) ▪ Apache Tomcat 8.0.x (64 bit) Note: IBM WebSphere 8.5.x (Full Profile) on Java 8 is not available.
Note:	
<ul style="list-style-type: none"> ▪ OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported. ▪ For deployment on Oracle WebLogic Server 12.1.3+ (64 bit) with Java 8, download and install patch 18729264 from http://support.oracle.com/. 	
Desktop Requirements	
Operating System	MS Windows 7/ Windows 8/ Windows 8.1
Browser	<ul style="list-style-type: none"> ▪ MS Internet Explorer 9 , 10(Compatibility Mode) and 11 (Compatibility Mode) ▪ Oracle Java plug-in 1.7.0+*(64-bit) Turn on Pop-up blocker settings. For more information, see Internet Explorer Settings
Office Tools	<ul style="list-style-type: none"> ▪ MS Office 2007/2010/2013 ▪ Adobe Acrobat Reader 8 or above
Screen Resolution	1024*768 or 1280*1024
Other Software	
Directory Services	OFSAAI is qualified on both OPEN LDAP 2.2.29+ and Oracle Internet Directory v 11.1.1.3.0. However, it can be integrated with other directory services software like MS Active Directory.

Table 2–2 (Cont.) Configurations Supported for Java 8

<p>Note:</p> <ul style="list-style-type: none"> ■ Configuration of Directory services software for OFSAAI installation is optional. For more information on configuration, see Appendix D. ■ Open LDAP needs to be installed on MS Windows Server machine only.
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Note: If you want to upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8, see [Appendix L](#).

OFS CRR Application Pack recommends the following software combinations for deployment:

Table 2–3 Recommended Software Combinations

Operating System	Database	Web Application Server	Web Server
Oracle Linux 5.3 up to 5.10/ 6.0 and above	Oracle Database	Oracle WebLogic Server /Apache Tomcat Server	Oracle HTTP Server / Apache HTTP Server
Oracle Solaris 5.10/ 5.11	Oracle Database	Oracle WebLogic Server /Apache Tomcat Server	Oracle HTTP Server / Apache HTTP Server
IBM AIX 6.1	Oracle Database	IBM WebSphere Application Server /Apache Tomcat Server	IBM HTTP Server / Apache HTTP Server

Verifying the System Environment

To verify that your system environment meets the minimum requirements for the installation, a Pre-Install Check utility is available within the Install Kit archive file. This utility can also be obtained separately by contacting Oracle Support.

Though the system environment verification is an integral and automated part of the installation of this software product, Oracle strongly recommends running this utility prior to beginning the installation as part of your organization's "Installation Readiness Verification Process".

Note:

For more details on download and usage of this utility, see Oracle Financial Services Analytical Applications Infrastructure Environment Check Utility Guide.

Understanding the Installation Mode

The following modes of installation are available for the OFS CRR Applications Pack.

- [GUI Mode](#)
- [Silent Mode](#)

GUI Mode

This mode launches the product installation in a **Graphical User Interface (GUI)** Mode. Users need to enter the required information on various panels within the UI in a user interaction format at various stages.

Silent Mode

This mode mandates updating the installation configuration files with required details and performs installation in a "Silent" non user interactive format.

Preparing for Installation

This chapter provides necessary information to review before installing the Oracle Financial Services Compliance Regulatory Reporting (OFS CRR) Pack v8.0.0.0.0.

This chapter includes the following topics:

- [Installer and Installation Prerequisites](#)
- [Obtaining the software](#)
- [Common Installation Tasks](#)

Installer and Installation Prerequisites

[Table 3-1](#) mentions the list of prerequisites required before beginning the installation for OFS CRR application. The Pre-Install Check utility notifies you if any requirements are not met.

Table 3–1 Prerequisite Information

Category	Sub-Category	Expected Value
Environment Settings	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 version (java 6, java 7 or java 8) based on the configuration. <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/jre1.6/bin:\$ORACLE_HOME/bin:\$PATH <p>Ensure no SYMBOLIC links to JAVA installation is being set in the PATH variable.</p>
	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
	Oracle Essbase Settings	<ul style="list-style-type: none"> ■ ARBORPATH, ESSBASEPATH, HYPERION_HOME to be set in the .profile pointing to an appropriate Oracle Essbase Client installation. <p>Note:</p> <p>These settings are required only if you want to use Oracle Hyperion Essbase OLAP features.</p>
OS/File System Settings	File Descriptor Settings	Greater than 15000
	Total Number of Process Settings	Greater than 4096
	Port Settings	Default port numbers to be enabled on the system are 6500, 6501, 6505, 6507, 6509, 6510, 6666, 9999, and 10101.
	.profile permissions	User to have 755 permission on the .profile file.
	Staging Area/Metadata Repository	<ul style="list-style-type: none"> ■ A directory to hold the application metadata artifacts and additionally act as staging area for flat files. ■ The directory should exist on the same system as the OFSAA Installation. This directory can be configured on different mount or under a different user profile. ■ Set 777 permission on this directory.
	Installation Directory	<ul style="list-style-type: none"> ■ A directory where the installation files will be installed. ■ Set 755 permission on this directory. ■ This directory needs to be set as FIC_HOME.
	Download Directory	<ul style="list-style-type: none"> ■ A directory where the product installer files will be downloaded/ copied. ■ Set 755 permission on this directory.

Table 3–1 (Cont.) Prerequisite Information

Category	Sub-Category	Expected Value
Database Settings	Database Instance Settings	<ul style="list-style-type: none"> ▪ NLS_CHARACTERSET to be AL32UTF8 ▪ NLS_LENGTH_SEMANTICS to be BYTE ▪ Available OPEN CURSORS limit to be greater than 1000
Web Application Server	WebSphere/ WebLogic/ Tomcat	<p>Web Application Server should be installed and profile/domain created.</p> <p>You will be prompted to enter the WebSphere Profile path or WebLogic Domain path or Tomcat Deployment path during OFSAI installation.</p> <p>Note: Refer Appendix D for WebSphere Profile Creation and WebLogic Domain Creation.</p> <p>On Weblogic 12.1.3, installing OFSCRR on OFSBD is not supported currently. This will be supported in future releases.</p>
Web Server	Apache HTTP Server/ Oracle HTTP Server/ IBM HTTP Server	<p>This is an optional requirement. HTTP Server Installation to be present. You will be required to enter the Web Server IP/Hostname and Port details during installation.</p> <p>Note: Refer Appendix A for Web Server installation.</p>

Note: Ensure that the tablespace(s) used for the database user(s) is set to AUTOEXTEND ON.

Obtaining the software

This release of OFS CRR Applications Pack v8.0.0.0.0 can be downloaded from the Oracle Software Delivery Cloud (<https://edelivery.oracle.com>). You need to have a valid Oracle account in order to download the software.

Common Installation Tasks

The following are the common pre-installation activities that you need to carry out before installing the OFS CRR Applications Pack.

This section includes the following topics:

- [Identifying the Installation Directory](#)
- [Configuration for GUI Mode Installation](#)
- [Copying and Extracting the Software](#)
- [Setting Up the Web Application Server](#)

Identifying the Installation Directory

This would typically be the User home directory and requires you to copy the following files:

- **OFS CRR Download Directory** (Optional) - Create a download directory and copy the OFSAA Applications Pack Installer File (Archive). This is the directory where the downloaded installer/patches can be copied.

- **OFS CRR Installation Directory (Mandatory)** - Create an installation directory. This is the directory where the installer would install/ copy the product files. `FIC_HOME` variable to be set in the `.profile` pointing to this OFSAA Installation Directory.
- **OFS CRR Staging/Metadata Directory (Mandatory)** - Create a Staging/Metadata Directory. This is also referred as "FTP SHARE".

Note:

Ensure the user permission is set to 755 on the Installation and Download Directory.

Ensure the user permission is set to 777 on the Staging Directory.

Download and copy the OFS CRR Applications Pack Installer

To download and copy the OFS CRR Applications Pack Installer, follow these steps:

- To download the OFS CRR Applications Pack, you need to login to the Oracle Software Delivery Cloud (<https://edelivery.oracle.com>). You need to have a valid Oracle account in order to download the software.
- Copy the downloaded installer archive to the Download Directory (in Binary Mode) on the setup identified for OFS CRR installation.

Configuration for GUI Mode Installation

To install OFS CRR Applications Pack in GUI mode, you need to ensure the below software and configurations are available:

- Install and configure any PC X Server software such as Open Text Exceed (formerly Hummingbird Exceed) on the user desktop system from which the installation is triggered.
- Configure the **DISPLAY** variable.

Ensure to set the `DISPLAY` variable on the system on which the OFS CRR will be installed, to point to the user desktop system where the PC X Server software has been installed.

Syntax:

```
export DISPLAY=hostname:n.n1
```

where `hostname` is the IP Address/Host Name of the user desktop system and `n` is the sequence number (usually 0).

For example, `10.11.12.13:0.0` or `myhostname:0.0`

Copying and Extracting the Software

Once you obtain the installer, copy the installer (in BINARY mode) to the system on which the OFSAA Infrastructure components will be installed.

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` from the location <https://updates.oracle.com/unzips/unzips.html>, and copy it in Binary mode to the directory that is included in your PATH variable. If you already have the unzip utility to extract the contents of the downloaded archive, skip to the next step.

2. Uncompress the unzip installer file using the command:

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

Note

In case you notice an error message "uncompress: not found [No such file or directory]" when the package is not installed, contact your UNIX administrator.

3. Give EXECUTE permission to the file using the command:

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

For example, `chmod 751 unzip_sparc`

4. Extract the contents of the Oracle Financial Services Compliance Regulatory Reporting Applications Pack 8.0.0.0 in Download Directory installer archive file using the following command:

```
unzip OFS_CRR_PACK.zip
```

Note

DO NOT rename the Application Pack installer folder name on extraction from the archive.

5. Navigate to the directory where the installer kit is extracted.

```
chmod -R 755 OFS_CRR_PACK
```

Setting Up the Web Application Server

For setting up the environment based on your selected Web Application Server, refer to [Configuring Web Application Servers](#).

Installing OFS CRR Pack

This chapter describes the steps to be followed to install the OFS CRR pack depending on the offline and online modes of installation.

This chapter includes the following sections:

- [Schema creator utility](#)
- [Configuring and Executing the Schema Creator Utility](#)
- [Installing the OFS CRR Applications Pack](#)

Schema creator utility

Creating database users/schemas is one of the primary steps in the complete OFS CRR installation. This release of OFSAA provides a utility to quickly get started with the OFSAA 8.0 installation by allowing easier and faster creation of database User(s)/ Schema(s), assign the necessary GRANT(s), and so on. Additionally, it also creates the required entities in these schemas.

The different types of schemas available for configuration in the OFSAA instance and their use is mentioned as follows:

- **CONFIG** - This schema denotes the unique OFSAA setup configuration schema and holds entities and other objects required to hold the unique OFSAA setup information.

Note: There can be only one CONFIG schema per OFSAA instance.

- **ATOMIC** - This schema denotes the schema that holds the data model entities. One ATOMIC schema is attached to one Information Domain.

Note: There can be multiple ATOMIC schemas per OFSAA Instance and an Information Domain can have only one ATOMIC schema.

Schema creator utility supports two modes of execution:

- **Online Mode:** In this mode, the utility connects to the database and executes the DDLs for User, Entities, and Grants.

Note: To execute the utility in Online mode, you need to connect as "<User> AS SYSDBA".

- **Offline Mode:** In this mode, the utility generates a SQL script with all the required DDLs for User, Entities and Grants. This script needs to be executed by the DBA on the appropriate database identified for OFSAA usage.

Note: For running the sql script generated in offline mode, the script should reside in the same directory where the 'SQLScripts' directory is available.

Note :

1. To execute the utility in Offline mode, you need to connect as any user with the following grants (alternatively, you can also connect as a user with SYSDBA privileges):
 - SELECT ON DBA_ROLES
 - SELECT ON DBA_USERS
 - SELECT ON DBA_DIRECTORIES
 - SELECT ON DBA_TABLESPACES
 - CREATE SESSION
2. If there are any errors during the script execution, reconfigure the OFS_CRR_SCHEMA_IN.XML file and execute the utility. This regenerates the scripts with corrected information.

Note:

Do not modify the OFS_CRR_SCHEMA_OUT.XML file generated after the execution of this utility.

Note:

If this release of the OFS CRR Application Pack version 8.0.0.0.0 is installed on an OFSAA setup where the underlying OFSAA Infrastructure (OFSAAI) version is upgraded to version 8.0.1.0.0+, download and install the patch for schema creator utility (Bug 20912588) by following the instructions in the Readme.txt packaged in it prior to executing the utility.

Configuring and Executing the Schema Creator Utility

This section includes the following topics:

- [Prerequisites](#)
- [Configuring the Schema Creator Utility](#)

- [Executing the Schema Creator Utility](#)
- [Verifying the Log File](#)

Prerequisites

The following prerequisites must be satisfied before configuring the Schema Creator Utility:

- You must have the Oracle User ID/Password with SYSDBA privileges.
- You must have the JDBC Connection URL for RAC/Non RAC database.
- The HOSTNAME/IP of the server on which OFSAA is getting installed.

Configuring the Schema Creator Utility

This section explains the steps to configure the Schema Creator Utility.

To configure the Schema Creator Utility, follow these steps:

1. Log in to the system as non-root user.
2. Navigate to the following path: `OFS_CRR_PACK/schema_creator/conf` folder.
3. Edit the `OFS_CRR_SCHEMA_IN.xml` file in a text editor.
4. Configure the following elements as described in the table:

Table 4–1 Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
APP_PACK_ID	Applications Pack ID as per Product Management	-	Mandatory This value should not be edited.
<JDBC_URL>	Enter the JDBC URL. Note: You can enter RAC and NON-RAC enabled database connectivity URL.	Example, jdbc:oracle:thin:@<HOST/IP>:<PORT>:<SID>	Mandatory
<JDBC_DRIVER>	By default this driver is seeded. Note: Do not edit this attribute value.	Example, oracle.jdbc.driver.OracleDriver	Mandatory
<HOST>	Enter the Hostname or the IP Address of the system on which you are installing the OFSAA components.	Host Name/IP Address	Mandatory

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<SETUPINFO>/ NAME	<p>Enter the acronym for the type of implementation. This information will be displayed in the OFSAA Home Page.</p> <p>Note: On executing the schema creator utility, this value will be prefixed with each schema name. For example: dev_ofsaaconf, uat_ofsaaatm.</p>	<p>Accepts strings with a minimum length of two and maximum of four.</p> <p>Example, DEV, SIT, PROD</p>	Mandatory
<PASSWORD>/A PPLYSAMEFORA LL	<p>Enter as Y if you want to apply the password specified in DEFAULT attribute for all the schemas.</p> <p>If you enter as N, then you need to provide individual passwords for all schemas.</p> <p>Note: In case you have entered Y in APPLYSAMEFOR ALL attribute and also have specified individual passwords for all the schemas, then the specified individual passwords will take precedence.</p>	Y/N	<p>Mandatory</p> <p>Note: Setting this attribute value is mandatory, If DEFAULT attribute is set.</p>

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<PASSWORD>/ DEFAULT*	<p>Enter the password if you want to set a default for all schemas.</p> <p>Note: You also need to set APPLYSAMEFORALL attribute as Y to apply the default password for all the schemas.</p>	-	Optional
<SCHEMA>TYPE	<p>The different types of schemas that are supported in this release are ATOMIC, CONFIG, and SANDBOX.</p> <p>By default, the schemas types are seeded based on the Applications Pack.</p> <p>Note: Do not edit this attribute value.</p>	ATOMIC/CONFIG/SANDBOX/ADDON	Mandatory

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<SCHEMA> NAME	<p>By default, the schemas names are seeded based on the Applications Pack. You can edit the schema names if required.</p> <ul style="list-style-type: none"> ▪ The Schema Name will have a prefix of the SETUPINFO/NAME attribute. ▪ The permissible length for schema name is 15 characters. ▪ If RR is installed on BD pack, provide the same config schema name which is used during the installation of BD. 	<p>The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore '_'.</p>	<p>To identify which schema is associated to this Application. Cannot be blank</p>

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<SCHEMA>/ PASSWORD*	Enter the password of the schema to be created. Note: <ul style="list-style-type: none"> ▪ If this attribute is left blank, then the password specified in the <PASSWORD>/DEFAULT attribute is applied as the Schema Password. ▪ The permissible length and allowed characters for schema password as defined by Oracle Database User naming convention 	-	Optional Note: You need to mandatorily enter the password if you have set the <PASSWORD>/APPLYSAMEFORALL attribute as N.
<SCHEMA>/ APP_ID	By default, the Application ID is seeded based on the Applications Pack. Note: Do not edit this attribute value.	-	Mandatory
<SCHEMA>/ DEFAULTTABLESPACE	Enter the available default tablespace for DB User. Note: If this attribute is left blank, then USERS is set as the default tablespace.	-	Optional
<SCHEMA>/ TEMPTABLESPACE	Enter the available temporary tablespace for the DB User. Note: If this attribute is left blank, then TEMP is set as the default tablespace.	-	Optional

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<SCHEMA>/QUOTA	Enter the quota to be set on DEFAULTTABLESPACE attribute for the schema/user. By default, the quota size is set to 10G.	Minimum: 500M or Unlimited on default Tablespace. For example, <ul style="list-style-type: none"> ▪ 600M/m ▪ 20G/g ▪ UNLIMITED/unlimited 	Optional
<TABLESPACE>VALUE attribute	As per naming conventions, User can modify the default values provided under the VALUE attribute	For example, RRS_DATA_TABLE_SPACE and RRS_INDEX_TABLE_SPACE	Mandatory
<TABLESPACE>DATAFILE attribute	Update <CHANGE_ME> place holder with the actual DATAFILE creation path	Example: /scratch/oracle/app/oracle/oradata/	Mandatory
<SCHEMA>/INFODOM	Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based on the Applications Pack if no value is specified for this attribute. Note: Entering information domain is required only for SILENT mode of installation.	Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.	Mandatory for Silent Installation

Executing the Schema Creator Utility

You can execute the schema creator utility either in Online Mode or Offline Mode. This section includes the following topics:

- [Executing the Schema Creator Utility in Online Mode](#)
- [Executing the Schema Creator Utility in Offline Mode](#)
- [Executing the Schema Creator Utility in Silent Mode](#)

- [Executing the Schema Creator Utility while Installing Subsequent Applications Pack](#)

Executing the Schema Creator Utility in Online Mode

In Online Mode, the Schema Creator Utility will create all the Schemas, Schema Objects, and Grants in the database during the execution process.

To execute the schema creator utility while creating the schemas for the first Applications Pack, follow these steps:

1. Log in to the system as non-root user.
2. Navigate to the following folder path: `OFS_CRR_Pack/schema_creator/bin/`
3. Execute the `osc.sh` file using the following command:
`./osc.sh`
4. The following message is displayed: *You have chosen ONLINE mode.*
5. Enter the DB Username with SYSDBA Privileges. For example: SYS as SYSDBA.
6. Enter the User Password.

Figure 4–1 Schema Creation

```

$ ./osc.sh
=====
You have chosen ONLINE mode
=====
Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n):
y
=====
Java Validation Started ...
Java found in : /scratch/ofsaajdk1.6.0_25/jre/bin
JAVA Version found : 1.6.0_25
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
Enter the User Password:
Oracle Client version : 11.2.0.3.0. Status : SUCCESS
Oracle Server version Current value : 11.2.0.3.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=====

```

Figure 4–2 Schema Creation

```

$ ./osc.sh
=====
You have chosen ONLINE mode
=====
Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. D
Y
=====
Java Validation Started ...
Java found in : /scratch/ofsaajdk1.6.0_25/jre/bin
JAVA Version found : 1.6.0_25
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
Enter the User Password:
Oracle Client version : 11.2.0.3.0. Status : SUCCESS
Oracle Server version Current value : 11.2.0.3.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=====

```

Note: On successful execution of schema creator utility, the console displays the following status message:

Schema Creator executed successfully. Please proceed with the installation.

Refer log file in `OFS_CRR_PACK/schema_creator/logs` folder for execution status. In case of any errors, contact Oracle Support.

Executing the Schema Creator Utility in Offline Mode

In Offline Mode, the Schema Creator Utility creates an output in SQL file format. This script has to be executed manually by logging as database user with SYSDBA privileges. The SQL file will contain the creation of Schemas, Schema Objects, and Roles.

Prerequisites:

- DBA_ROLES
- DBA_USERS
- DBA_DIRECTORIES
- DBA_TABLESPACES
- CREATE SESSION

Note: Explicit Grants to the user are required. Grants assigned through Roles are not supported

To execute the schema creator utility in the offline mode, follow these steps:

1. Navigate to the following folder path: `OFS_CRR_Pack/schema_creator/bin`
2. Execute the `osc.sh` file using the following command:
`./osc.sh -o`
3. The following message is displayed: *You have chosen OFFLINE mode.*
4. Enter the DB Username with SELECT privileges.
5. Enter the User Password.

```

$ ./osc.sh -o
=====
You have chosen OFFLINE mode
=====
Triggering the utility in OFFLINE mode will generate the script. Do you wish to proceed? (Y/y or N/n):
y
=====
Java Validation Started ...
Java found in : /scratch/ofsaa/jdk1.6.0_25/bin
JAVA Version found : 1.6.0_25
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
Enter the DB User Name with the following privileges:
1. CREATE SESSION
2. SELECT on DBA_ROLES
3. SELECT on DBA_USERS
4. SELECT on DBA_DIRECTORIES
5. SELECT on DBA_TABLESPACES
Enter the User Name:
sys as sysdba
Enter the User Password:
Oracle Client version : 11.2.0.3.0. Status : SUCCESS
Oracle Server version Current value : 11.2.0.3.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS

```

```

=====
Generating Schema Creation Scripts Started
=====
Checking OFSAA installation...
Found OFSAA installation at /scratch/ofsadb/OFSAAI
Validating the dat file OFS_AAAI_CFG.dat started...
Successfully validated OFS_AAAI_CFG.dat file
Parsing /scratch/ofsadb/OFSAAI/conf/DynamicServices.xml
Successfully connected to User - dev_conf1 URL - jdbc:oracle:thin:@ofss220623:1521:MEDIADB
Validating the input XML file.../scratch/ofsadb/OFS_AAAI_PACK/schema_creator/conf/OFS_AAAI_SCHEMA_IN.xml
Input XML file validated successfully.
=====
Validating Connection URL ...jdbc:oracle:thin:@ofss220623:1521:MEDIADB
Successfully connected to User - sample URL - jdbc:oracle:thin:@ofss220623:1521:
MEDIADB
Connection URL successfully validated...
You have chosen to install this Application Pack on "uat_atm_anurag" ATOMIC sche
ma. Do you want to proceed? (Y/N)
y
You have chosen to install this Application Pack on INFODOM "ofsaaaiinfol". Do y
ou want to proceed? (Y/N)
y
=====

```

```

====
Generating TableSpace creation Scripts started...
Generating TableSpace creation Scripts completed...
====

Generating Schema creation scripts started...
CONFIG User uat_conf_anurag creation script generated successfully on Default Ta
bleSpace : USERS on Temp TableSpace : TEMP
Generation of grants creation scripts started...
Generation of grants creation scripts completed...
Scripts Generation for CONFIG schema started ...
Scripts Generation for CONFIG schema completed ...
User uat_conf_anurag details updated into the dbmaster table
User uat_atm_anurag details updated into the dbmaster table
User uat_atm_anurag creation script generated successfully on Default TableSpace
 : USERS on Temp TableSpace : TEMP
User uat_atm_anurag creation is skipping as the user is already created.
Generating Schema creation scripts completed...
====

Generating Roles creation Scripts started...
Generating Roles creation Scripts completed...
====

Generating Grants creation scripts started...
Generating Grants creation scripts completed...
====

Generating Schema Creation Scripts Completed
====

Schema Creator executed Successfully.Please execute /scratch/ofsaapp/OFS_AAAI_P
ACK/schema_creator/sysdba_output_scripts.sql before proceeding with the installa
tion.

```

Note: On successful execution of schema creator utility, the console displays the following status message:

Success. *Please execute* OFS_CRR_Pack/schema_creator/sysdba_output_scripts.sql *before proceeding with the installation.*

6. Navigate to the directory: OFS_CRR_Pack/schema_creator.
7. Login to SQLPLUS with a user having SYSDBA Privileges.

```

/scratch/ofsaapp/OFS_AAAI_PACK/schema_creator/bin>cd ..
/scratch/ofsaapp/OFS_AAAI_PACK/schema_creator>acle@mediadb as sysdba <

SQL*Plus: Release 11.2.0.3.0 Production on Tue Jan 13 11:01:55 2015

Copyright (c) 1982, 2011, Oracle. All rights reserved.

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> @/scratch/ofsaapp/OFS_AAAI_PACK/schema_creator/sysdba_output_scripts.sql
Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64
bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

```

8. Execute the sysdba_output_scripts.sql file using the following command:
SQL>@sysdba_output_scripts.sql

Alternatively, you can copy the `sysdba_output_scripts.sql` file and SQLScripts folder to a remote server and execute `sysdba_output_scripts.sql` file.

Note: Refer log `sysdba_output_scripts.log` file for execution status. In case of any errors, contact Oracle Support.

Executing the Schema Creator Utility in Silent Mode

If you want to run the OFSAA Applications Pack Installer in SILENT mode, it is mandatory to execute the schema creator utility with `-s` option.

To execute the utility with `-s` option, follow these steps:

1. Edit the file `OFS_CRR_PACK/schema_creator/conf/OFS_CRR_SCHEMA_IN.xml` in text editor.
2. Set the value for attribute "INFODOM" of <SCHEMA> tag(s) to specify a specific Information Domain name. By default, the value is empty and the utility will derive the Information Domain name. If the attribute value is set, the utility/installer will configure the Information Domain against this <SCHEMA>.
3. Execute the utility with `-s` option.

For Example `./osc.sh -s`

Note: If the utility is executed without the `-s` option, it is mandatory to launch the OFSAA Applications Pack Installer in GUI mode.

Note: To execute the utility in OFFLINE mode with SILENT option, type `./osc.sh -o -s`

Executing the Schema Creator Utility while Installing Subsequent Applications Pack

While executing the schema creator utility for subsequent Applications Pack, you can choose to install the pack either on the same Information Domain/Atomic Schema or on a new Information Domain/Atomic Schema. You can execute the Schema Creator Utility either in Online or Offline Mode.

Note: OFS CRR Pack need to be installed on a separate information domain.

To execute the schema creator utility while installing OFS CRR Pack over an existing Applications Pack, follow these steps:

1. Perform the steps 1 to 5 from the [Executing the Schema Creator Utility](#) section.

Note: On successful execution of schema creator utility, the console displays the following status message:

Success. Please proceed with the installation.

Refer log file in OFS_CRR_PACK/schema_creator/logs folder for execution status, if scripts are executed in online mode.

Refer log sysdba_output_scripts.log file for execution status, if executed in offline mode.

In case of any errors, contact Oracle Support.

Verifying the Log File

You can verify the log files for any errors faced during the schema creation process in the following location: OFS_CRR_PACK/schema_creator/logs.

Installing the OFS CRR Applications Pack

Follow the instructions in this section to install the OFS CRR Applications Pack depending on the mode of installation.

- [Silent Mode Installation](#)
- [GUI Mode Installation](#)

Silent Mode Installation

In the Silent Mode Installation you must configure the product xml files and follow the instructions in command prompt.

Configuring OFSAAI_InstallConfig.xml

Follow these instructions to configure OFSAAI_InstallConfig.xml file:

1. Log in to the system as non-root user.
2. Identify a directory for installation and set the same in the user .profile file as the following:

```
FIC_HOME=< OFSAAI Installation Directory >
export FIC_HOME
```

3. Execute the user .profile.
4. Navigate to the file: OFS_CRR_PACK/OFS_AAI/conf/OFSAAI_InstallConfig.xml
5. Configure the OFSAAI_InstallConfig.xml as mentioned in the following table:

Table 4–2 Prerequisite Information

InteractionVariableName	Significance and Expected Value	Mandatory
<Layer name="GENERAL">		

Table 4–2 (Cont.) Prerequisite Information

InteractionVariableName	Significance and Expected Value	Mandatory
WEBAPPSERVERTYPE	<p>Identifies the web application server on which the OFSAA Infrastructure web components would be deployed.</p> <p>The below numeric value should be set depending on the type:</p> <p>Apache Tomcat = 1</p> <p>IBM WebSphere Application Server = 2</p> <p>Oracle WebLogic Server = 3</p> <p>For example, <InteractionVariable name="WEBAPPSERVERTYPE">3</InteractionVariable></p>	<ul style="list-style-type: none"> ■ Yes
DBSERVER_IP	<p>Identifies the hostname or IP address of the system on which the Database Engine is hosted.</p> <p>Note: For RAC Database , the value should be NA.</p> <p>For example, <InteractionVariable name="DBSERVER_IP">14.15.16.17</InteractionVariable> or</p> <p><InteractionVariable name="DBSERVER_IP">dbhost.server.com</InteractionVariable></p>	Yes
ORACLE_SID/SERVICE_NAME	<p>Identifies the Oracle DB Instance SID or SERVICE_NAME</p> <p>Note: The Oracle_SID value should be exactly the same as it is mentioned in JDBC_URL.</p> <p>For example, <InteractionVariable name="ORACLE_SID/SERVICE_NAME">ofsaser</InteractionVariable></p>	Yes
ABS_DRIVER_PATH	<p>Identifies the directory where the JDBC driver (ojdbc<version>.jar) exists. This would typically be the \$ORACLE_HOME/jdbc/lib</p> <p>For example, <InteractionVariable name="ABS_DRIVER_PATH">"/oradata6/revwb7/oracle</InteractionVariable></p>	Yes

Table 4-2 (Cont.) Prerequisite Information

InteractionVariableName	Significance and Expected Value	Mandatory
OLAP_SERVER_IMPLEMENTATION	Identifies if the OFSAA Infrastructure OLAP component needs to be configured depending on whether you intend to use the OLAP feature. The following numeric value should be set depending on the choice: <ul style="list-style-type: none"> ▪ NO - 0 	Yes. The permissible value is 0.
Note: If value for OLAP_SERVER_IMPLEMENTATION is set to 1, it checks for following environment variables are set in .profile:		
SFTP_ENABLE	Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The below numeric value should be set depending on the choice: <ul style="list-style-type: none"> ▪ SFTP - 1 ▪ FTP - 0 	Yes
Note: The default value set is 1 as this release of the OFSAA Infrastructure mandates the SFTP service be up and running on the system where OFSAA Infrastructure would be installed. For example, <InteractionVariable name="SFTP_ENABLE">0</InteractionVariable>		
FILE_TRANSFER_PORT	Identifies the port used for the file transfer service. The default value specified is 22 (SFTP). Specify value as 21 or any other PORT value if value for SFTP_ENABLE is 0. For example, <InteractionVariable name="FILE_TRANSFER_PORT">21</InteractionVariable>	Yes
LOCALE	Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English. For example, <InteractionVariable name="LOCALE">en_US</InteractionVariable>	Yes
Note: The following ports are used internally by the various OFSAA Infrastructure services. The default values mentioned below are set in the installation. If you intend to specify a different value, update the parameter value accordingly and ensure this port value is in the range of 1025 to 65535 and the respective port is enabled.		
JAVAPORT	9999	Yes
NATIVEPORT	6666	Yes
AGENTPORT	6510	Yes
ICCPOR	6507	Yes
ICCNATIVEPORT	6509	Yes
OLAPPORT	10101	Yes
MSGPORT	6501	Yes
ROUTERPORT	6500	Yes

Table 4–2 (Cont.) Prerequisite Information

InteractionVariableName	Significance and Expected Value	Mandatory
AMPORT	6505	Yes
<Layer name="OFSAAI_WEB_LAYER">		
HTTPS_ENABLE	Identifies if the UI should be accessed using HTTP or HTTPS scheme. The default value set is 0. The following numeric value should be set depending on the choice: <ul style="list-style-type: none"> ■ Yes - 1 ■ No - 0 	Yes
WEB_SERVER_IP	Identifies the HTTP Server IP/ Hostname or Web Application Server IP/ Hostname, to be used for accessing the UI. This IP would typically be the HTTP Server IP. If no separate HTTP Server is available, the value should be Web Application Server IP/Hostname. For example, <InteractionVariable name="WEB_SERVER_IP">10.11.12.13</InteractionVariable> or <InteractionVariable name="WEB_SERVER_IP">myweb.server.com</InteractionVariable>	No
WEB_SERVER_PORT	Identifies the Web Server Port. This would typically be 80 for non SSL and 443 for SSL. If no separate HTTP Server exists, the value should be the port configured for Web Server. Note: The port value will not be accepted as 80 if HTTPS_ENABLE is 1 and as 443, if HTTPS_ENABLE is 0. For example, <InteractionVariable name="WEB_SERVER_PORT">80</InteractionVariable>	No

Table 4–2 (Cont.) Prerequisite Information

InteractionVariableName	Significance and Expected Value	Mandatory
CONTEXT_NAME	<p>Identifies the web application context name which will be used to built the URL to access the OFSAA applications. The context name can be identified from a URL as below:</p> <p><scheme>://<host>:<port>/<context-name>/login.jsp</p> <p>Sample URL:</p> <p>https://myweb:443/ofsaadev/login.jsp</p> <p>For example, <InteractionVariable name="CONTEXT_NAME">ofsaadev</InteractionVariable></p>	Yes
WEBAPP_CONTEXT_PATH	<p>Identifies the absolute path of the exploded .ear file on the web application server.</p> <p>For Tomcat, specify the Tomcat directory path till /webapps, such as /oradata6/revwb7/tomcat/webapps/.</p> <p>For WebSphere, enter the WebSphere path as <WebSphere profile directory>/installedApps/<NodeCellName>. For example, /data2/test//WebSphere/AppServer/profiles/<Profile_Name>/installedApps/aix-imfNode01Cell. Where aix-imf is Host name.</p> <p>For WebLogic, provide the WebLogic home directory path as /<WebLogic home directory path>/bea/wlserver_10.3</p>	Yes
WEB_LOCAL_PATH	<p>Identifies the absolute path to any directory on the web application server that can hold temporary files being uploaded as part of the applications usage.</p> <p>Note: In case of a clustered deployment, ensure this path and directory is same on all the nodes.</p>	Yes

Table 4–2 (Cont.) Prerequisite Information

InteractionVariableName	Significance and Expected Value	Mandatory
WEBLOGIC_DOMAIN_HOME	Identifies the WebLogic Domain Home. Specify the value only if WEBSERVERTYPE is set as 3 (WebLogic). For example, <InteractionVariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bean_projects/domains/mydomain</InteractionVariable>	No
OFSAAI_FTPSHARE_PATH	Identifies the absolute path to the directory identified as file system stage area. Note: 1.The directory should exist on the same system on which the OFSAA Infrastructure is being installed (can be on a separate mount). 2.The user mentioned in APP_SFTP_USER_ID parameter below should have RWX permission on the directory. For example, <InteractionVariable name="APP_FTPSHARE_PATH">"/oradata6/revwb7/ftpshare</InteractionVariable>	Yes
OFSAAI_SFTP_USER_ID	Identifies the user who has RWX permissions on the directory identified under parameter APP_FTPSHARE_PATH above.	Yes

6. Navigate to the file: `OFS_CRR_PACK/conf/OFS_CRR_Pack.xml` and select the applications to be enabled.

Note: Enter **YES** in ENABLE tag to enable application.

For example: In the `OFS_CRR_PACK.xml` file, provide `-s` option to
`<APP_ID PREREQ="OFS_AAI" ENABLE="YES">OFS_RRS</APP_ID>`

Running the installer in Silent Mode

To install the OFSAA Infrastructure in Silent mode, execute the following command:

```
./setup.sh SILENT
```

in the console.

Completing the installation in Silent Mode

On launching the installer in silent mode, the environment check utility is executed. Enter the required information to execute the utility as explained:

```

[oracle@o112011-mesh.com:~]$ cd /scratch/ofsasweb/BDRR00/CP2_CRR_PACK/bin
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
Grants creation scripts execution started...
Grants creation scripts execution completed...
-----
                Schema Creation Completed
-----
Schema Creator executed Successfully.Please proceed with the installation.
$
$
$
$
$ clear
$ cd /scratch/ofsasweb/BDRR00/CP2_CRR_PACK/bin
$ ls
install.jar OFSAAI.jar pack_install.bin pack_installer.bin setup.sh
$ ./setup.sh SILENT
$ cd /scratch/ofsasweb/BDRR00/BDRR04
Environment check utility started...
-----
Java Validation Started ...
Java found in : /scratch/oracle/jre1.6up37/jre1.6.0_37/bin
JAVA Version found : 1.6.0_37
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
-----
Environment Variables Validation Started ...
ORACLE_HOME : /scratch/oracle/app/oracle/product/11.2.0/client_1
TMP_ADMIN : /scratch/oracle/app/oracle/product/11.2.0/client_1/network/admin
Environment Variables Validation Completed. Status : SUCCESS
-----
OS specific Validation Started ...
Unix shell found : /bin/ksh, Status : SUCCESS
Total file descriptors : 10000, Status : SUCCESS
Total number of process : 4096, Status : SUCCESS
OS version : 5, Status : SUCCESS
OS specific Validation Completed. Status : SUCCESS
-----
DB specific Validation Started ...
Oracle Client version : 11.2.0.3.0, Status : SUCCESS
CREATE SESSION has been granted to user, Status : SUCCESS
CREATE PROCEDURE has been granted to user, Status : SUCCESS
CREATE VIEW has been granted to user, Status : SUCCESS
CREATE TRIGGER has been granted to user, Status : SUCCESS
CREATE MATERIALIZED VIEW has been granted to user, Status : SUCCESS
CREATE TABLE has been granted to user, Status : SUCCESS
CREATE SEQUENCE has been granted to user, Status : SUCCESS
SELECT privilege is granted for V_fais parameters view, Current value : SELECT, Status : SUCCESS
NLS_LENGTH SEMANTICS : BYTE, Current value : BYTE, Status : SUCCESS
NLS_CHARACTERSET : AL32UTF8, Current value : AL32UTF8, Status : SUCCESS
SELECT privilege is granted for V_fparameter view, Current value : SELECT, Status : SUCCESS
Open cursor value is greater than 1000, Current value : 4096, Status : SUCCESS
SELECT privilege is granted for USER_TABLES view, Current value : SELECT, Status : SUCCESS
Schema is granted with at least 500 MB table space, Current value : 10239.6011332539043 MB, Status : SUCCESS
Oracle Server version Current value : 11.2.0.3.0, Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
-----
Environment check utility Status : SUCCESS

```

Table 4-3 Prompts at installation

Console Prompts	User Inputs
Enter Infrastructure FTP/SFTP password	Enter the password to access Product Staging/Metadata repository directory in the application server.

1. The OFSAAI License Agreement is displayed as shown in the figure:

Figure 4–3 OFSAAI License Agreement Page



2. Accept the License Agreement.

Table 4–4 Prompts at installation

Console Prompts	User Inputs
Are you accepting the terms and conditions mentioned above? [Y/N]	Enter Y if you accept the license agreement and want to proceed with installation.
Enter password for default Infrastructure administrator user SYSADMN	Enter the password for the System Administrator.
Re-enter password for default Infrastructure administrator user SYSADMN	Enter the same password again to confirm its validity.
Enter password for default Infrastructure authorizer user SYSAUTH	Enter the password for the System Authorizer.
Enter password for default Infrastructure authorizer user SYSAUTH	Enter the same password again to confirm its validity.

Note: SYSADMN and SYSAUTH are the two default OFSAAI administrative users created.

Figure 4–4 Initialization Window



Figure 4–5 License Agreement



7. Select **I accept the terms if the License Agreement** option.
8. Click **Next**.

The Financial Services Compliance Regulatory Reporting Applications Pack details are displayed.

Figure 4–6 Applications Pack Details



9. Select the product to enable for which you have already obtained license.
10. Click **Next**. The License Agreement page is displayed.

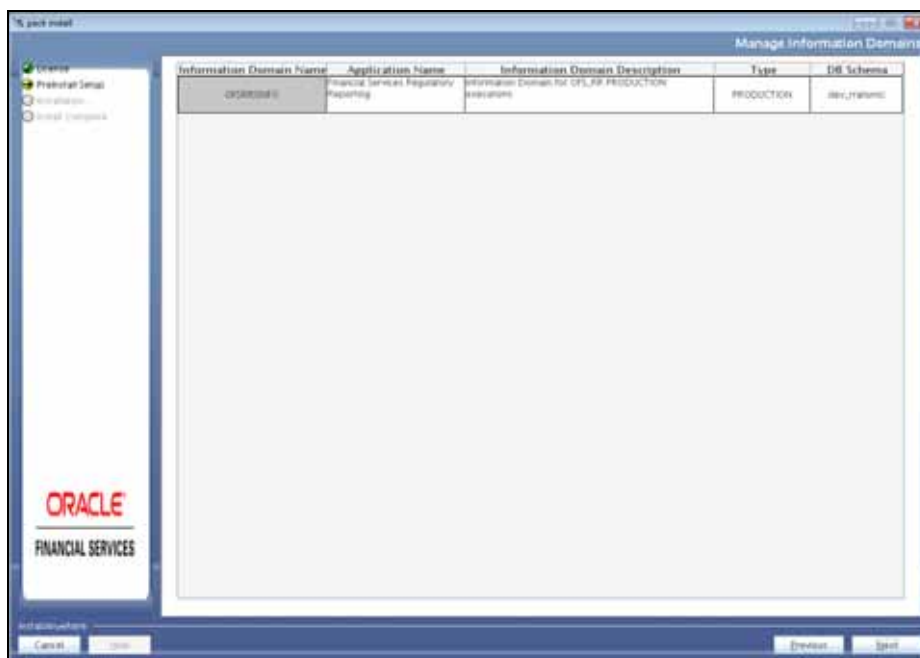
Figure 4–7 License Agreement page



11. Select **I accept the terms of the License Agreement** option.
12. Click **Next**.

The Manage Information Domain page is displayed.

Figure 4–8 Manage Information Domain page



13. Edit the Information Domain Name if it is a new Information domain or if you want to change the name of the information domain name.

Note: In case of subsequent Applications Pack installation on the same Information Domain, you cannot edit the name. Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.

14. Click **Next**. The License Agreement window is displayed.

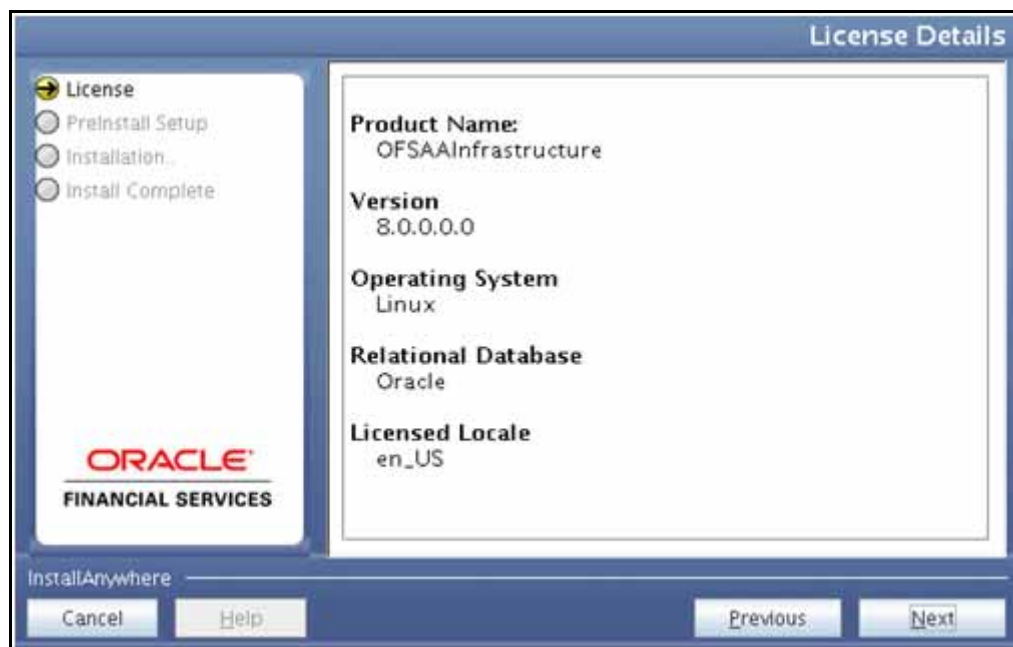
Figure 4–9 License Agreement Window



15. Select **I accept the terms of the License Agreement** option.

16. Click **Next**. The License Details page is displayed.

Figure 4–10 License Details Page



17. Click **Next**. The User Installation Directory window is displayed.

Figure 4–11 User Installation Directory



Note: The User Installation Directory path is auto-populated from the path you have set in the user .profile file in step 2.

18. Click **Next**. The OFSAA Infrastructure Server Details window is displayed.

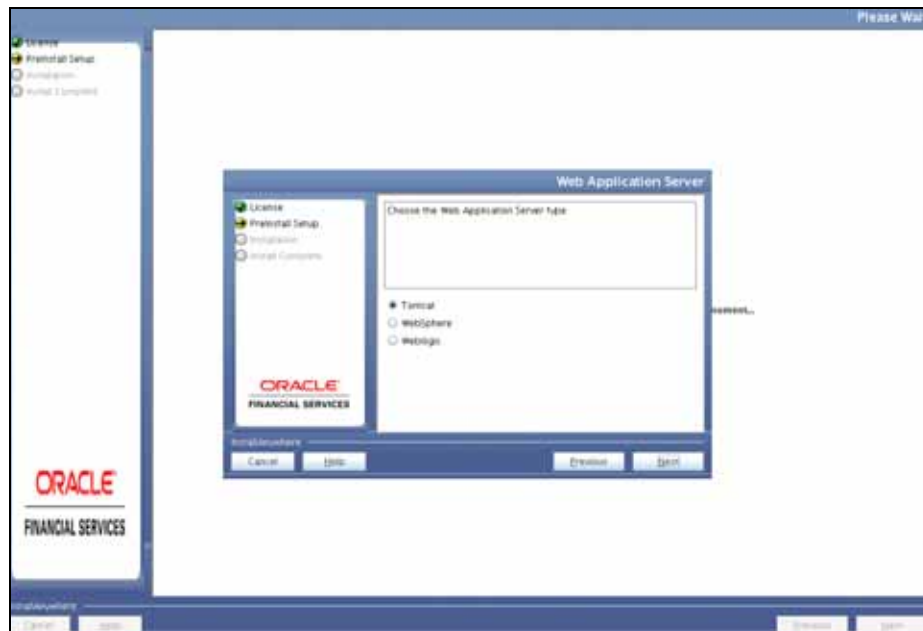
Figure 4–12 OFSAA Infrastructure Server Details



19. Enter the IP address or hostname of the OFSAAI server and Database server.

20. Click **Next**. The *Web Application Server* window is displayed.

Figure 4–13 *Web Application Server*



21. Select the appropriate Web Application server type. The options are Tomcat, WebSphere, and WebLogic.

22. Click **Next**. Based on the selection, corresponding screens are displayed.

For WebSphere: The WebSphere Setup Details window is displayed.

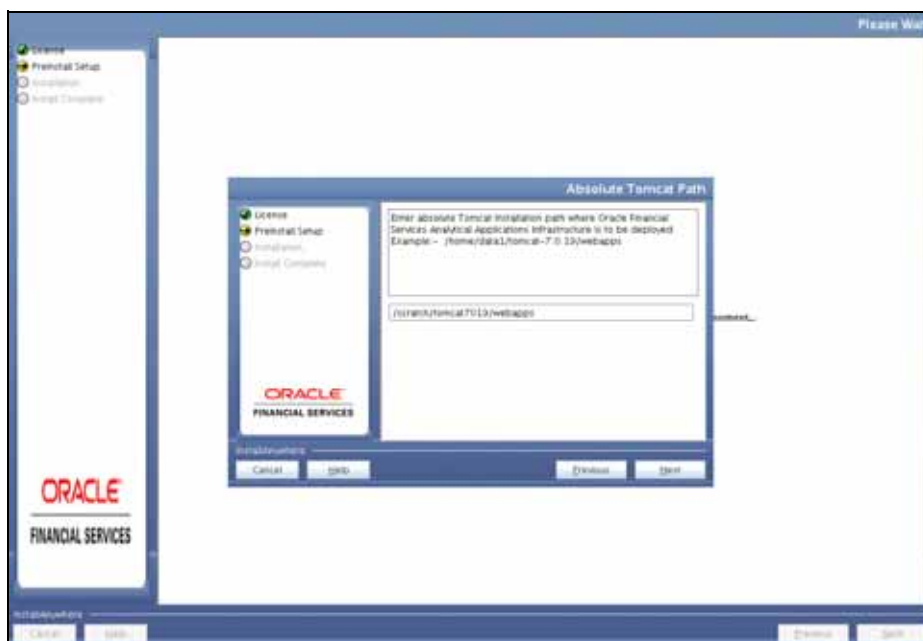
Figure 4–14 *WebSphere Setup Details*



23. Enter the installation path (up to the host name directory) of the WebSphere. The format is WebSphere path <WebSphere profile directory>/installedApps/<NodeCellName>.

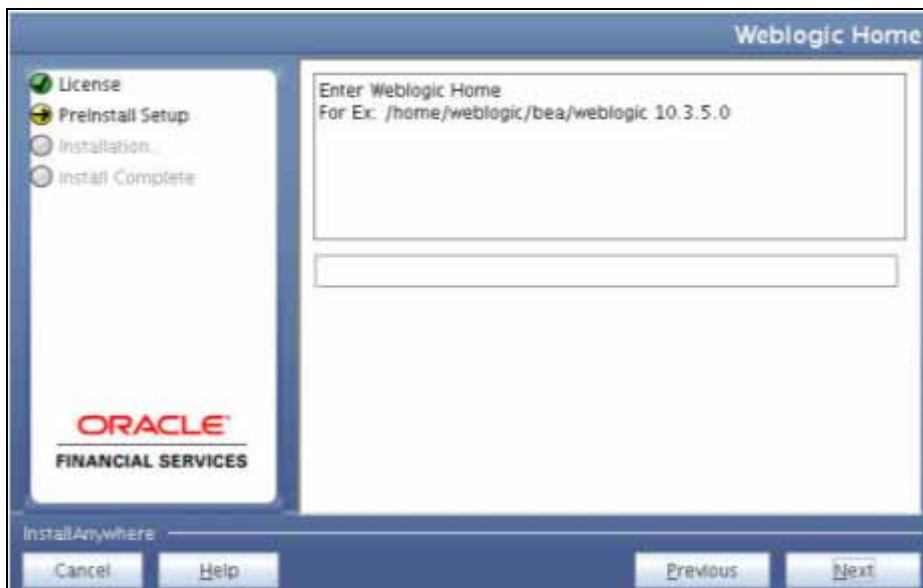
For Tomcat: The Absolute Tomcat Path window is displayed.

Figure 4–15 Absolute Tomcat Path



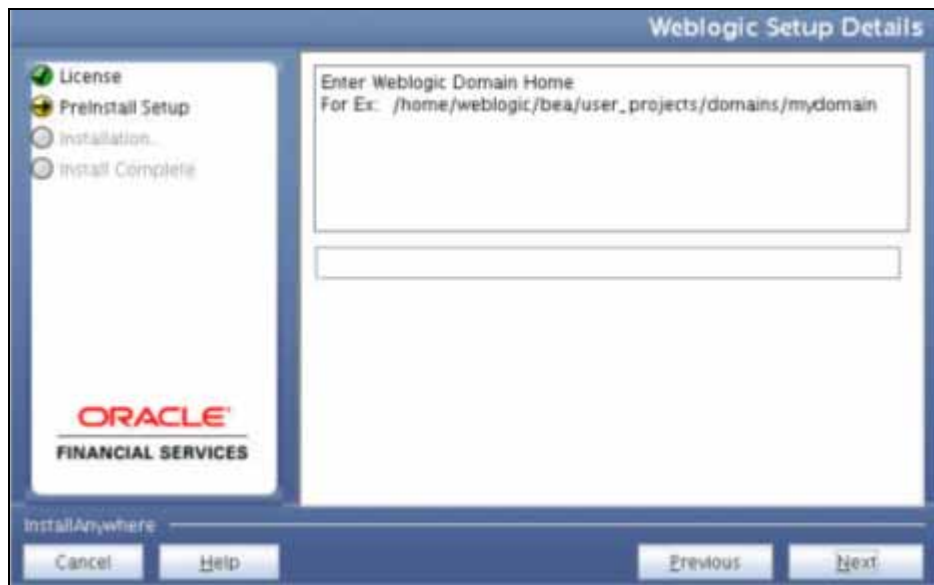
- 24. Enter the Tomcat installation path (till/webapps) where OFSAAI will be deployed.
For WebLogic: The Weblogic Home window is displayed.

Figure 4–16 Weblogic Home



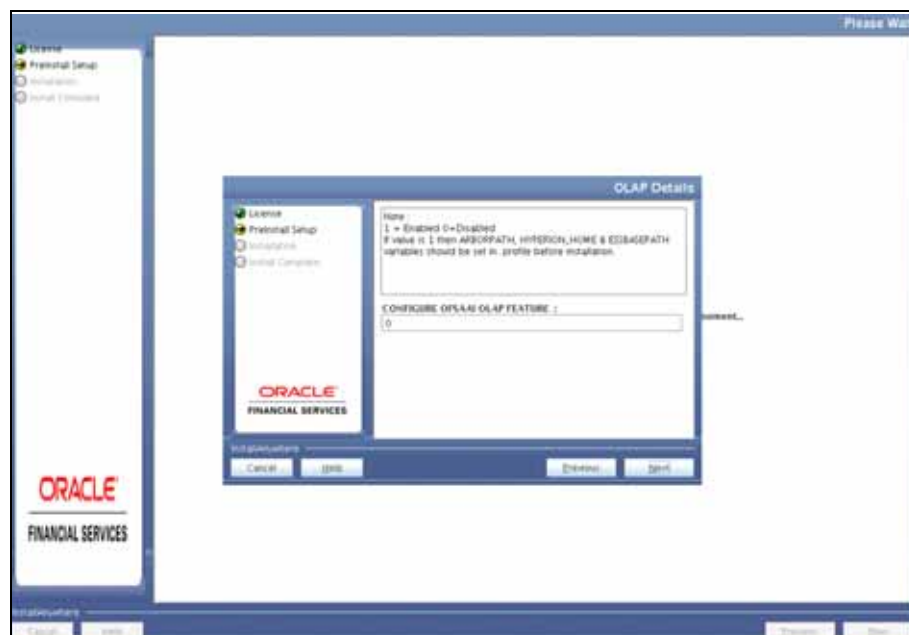
- 25. Enter the WebLogic home directory path.

Figure 4–17 Weblogic Setup Details



26. Enter the path of the Weblogic domain home directory and click **Next**. The OLAP Details window is displayed.

Figure 4–18 OLAP Details

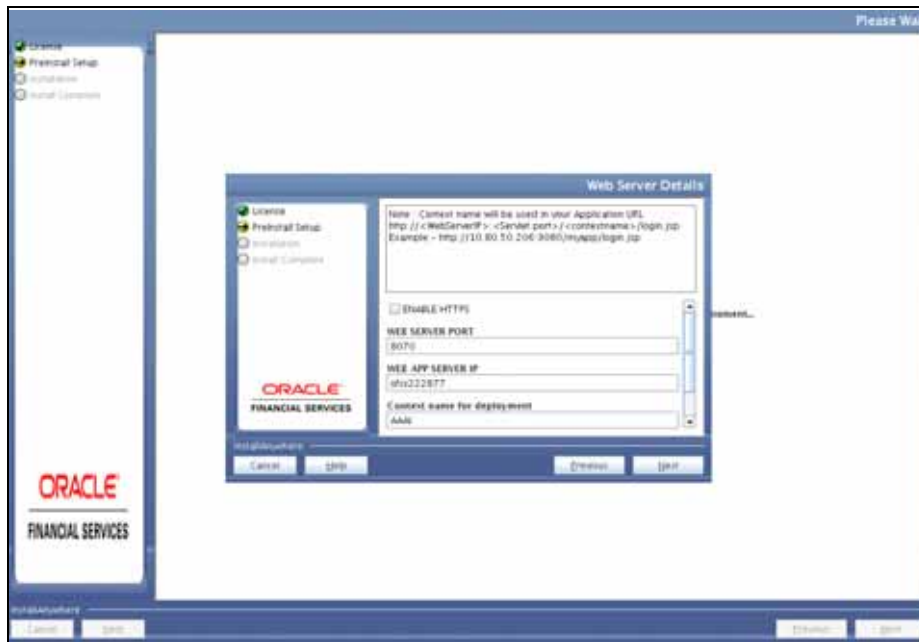


27. Enter 1 if you want to configure OFSAAI OLAP feature. By default, 0 is displayed.

Note: OLAP feature is not supported for CRR pack.

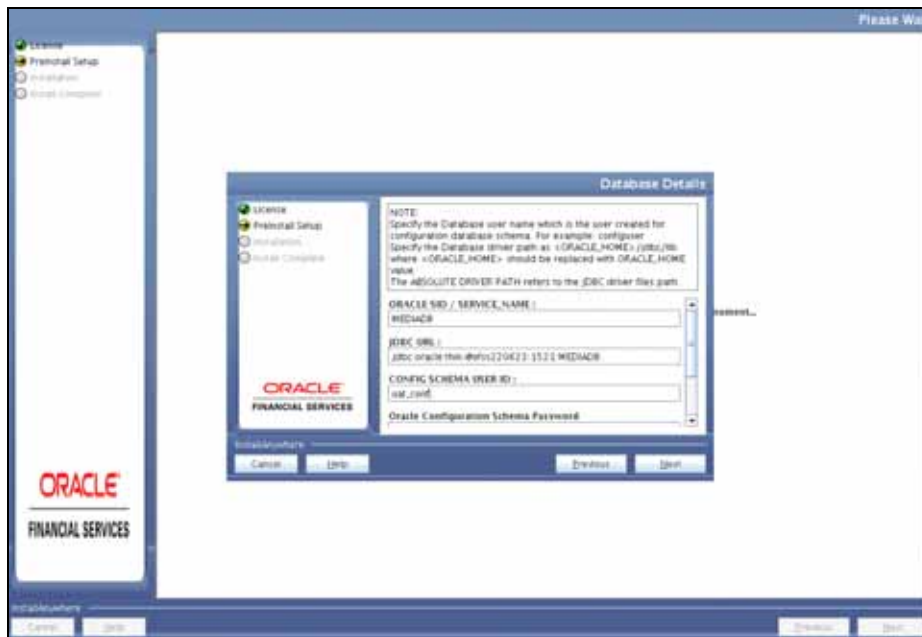
28. Click **Next**. The Web Server Details window is displayed.

Figure 4–19 Web Server Details



29. Select **Enable HTTPS** checkbox to configure HTTPS, if required, and enter the Web Server (HTTP Server) Port, Context name for deployment, and Local path to any folder on the Web Application Server (Tomcat/Websphere/Weblogic).
30. Click **Next**. The Database Details window is displayed.

Figure 4–20 Database Details



31. Enter Oracle SID/Service Name.

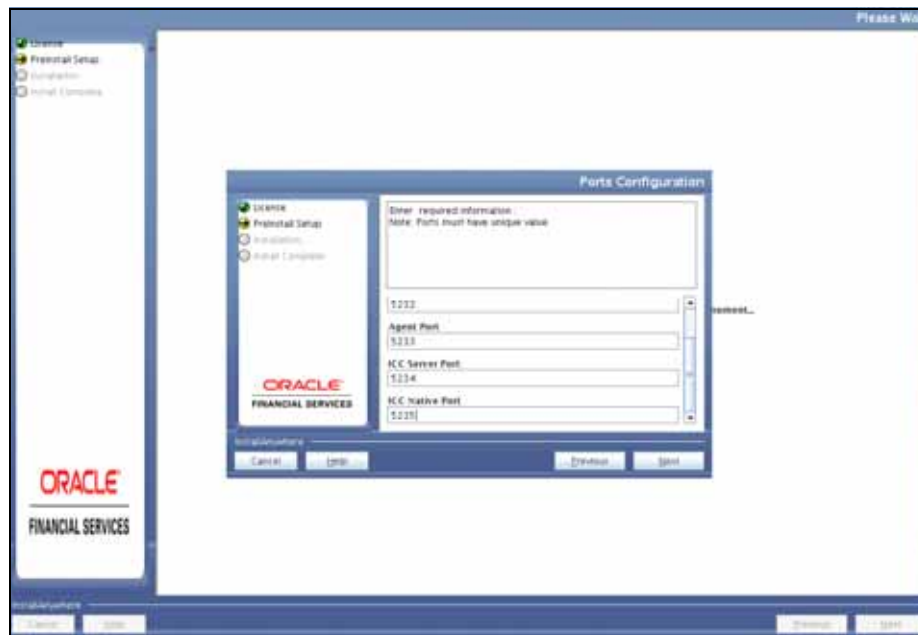
Note:

The JDBC URL, Configuration Schema User ID, Oracle Configuration Schema Password, and Absolute Driver Path are auto-populated.

Absolute Driver Path can be the path where Oracle DB client is installed or JDBC driver is installed. For example,
`/scratch/oracle/app/oracle/product/11.2.0/client_1/jdbc/lib`

32. Click **Next**. The Ports Configuration window is displayed.

Figure 4–21 Ports Configuration



Note: The Java Port, Native Port, Agent Port, ICC Server Port, and ICC Native Ports are auto-populated. You can also configure the Ports settings.

33. Click **Next**. The Ports Configuration window is displayed.

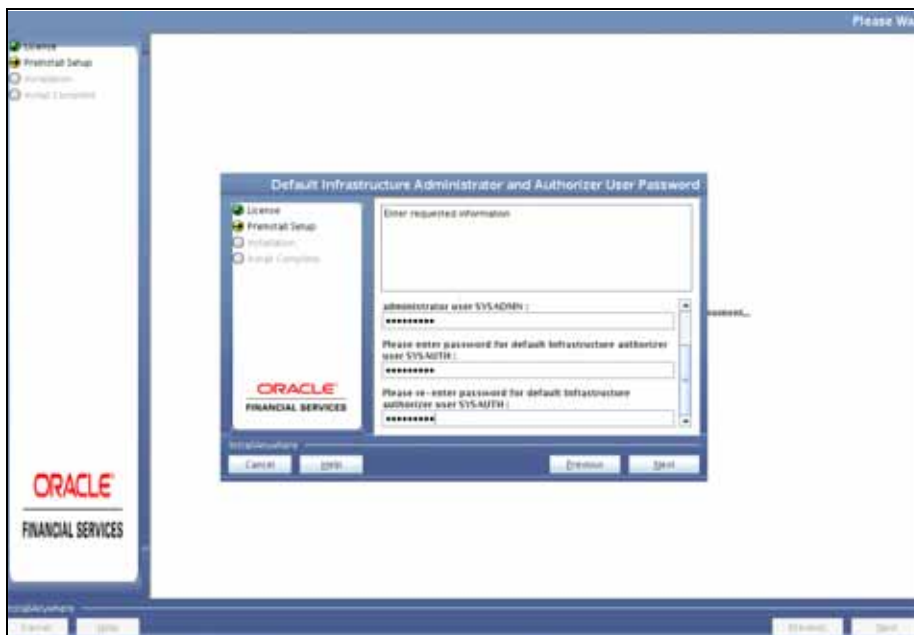
Figure 4–22 Ports Configuration



Note: The OLAP Port, Message Server Port, Router Port, and AM Port details are auto-populated. You can also configure the Ports settings.

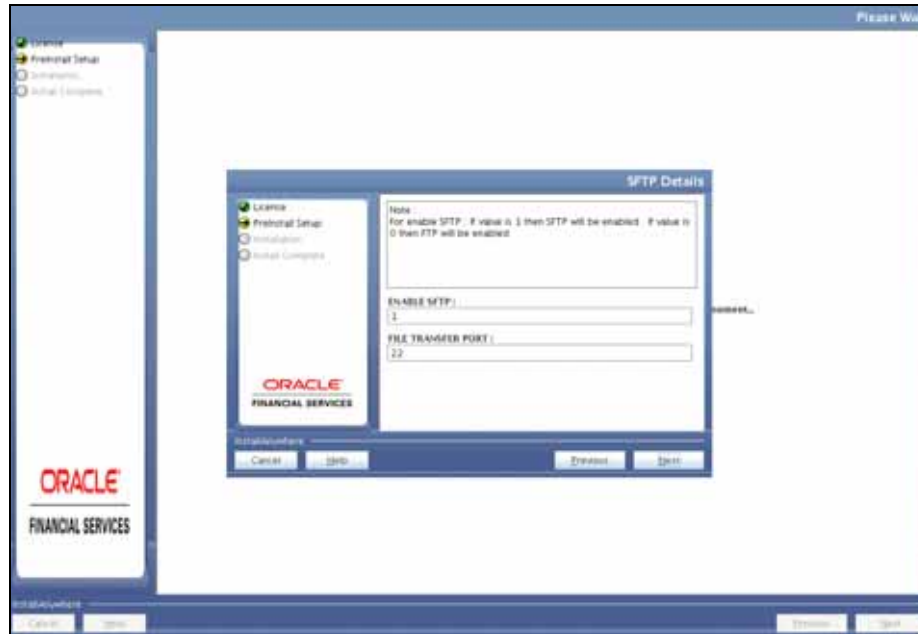
34. Click **Next**. The Default Infrastructure Administrator and Authorizer User Password window is displayed.

Figure 4–23 Default Infrastructure Administrator and Authorizer User Password



35. Enter the passwords for default System Administrator and System Authorizer users.
36. Click **Next**. The SFTP Details window is displayed.

Figure 4–24 SFTP Details

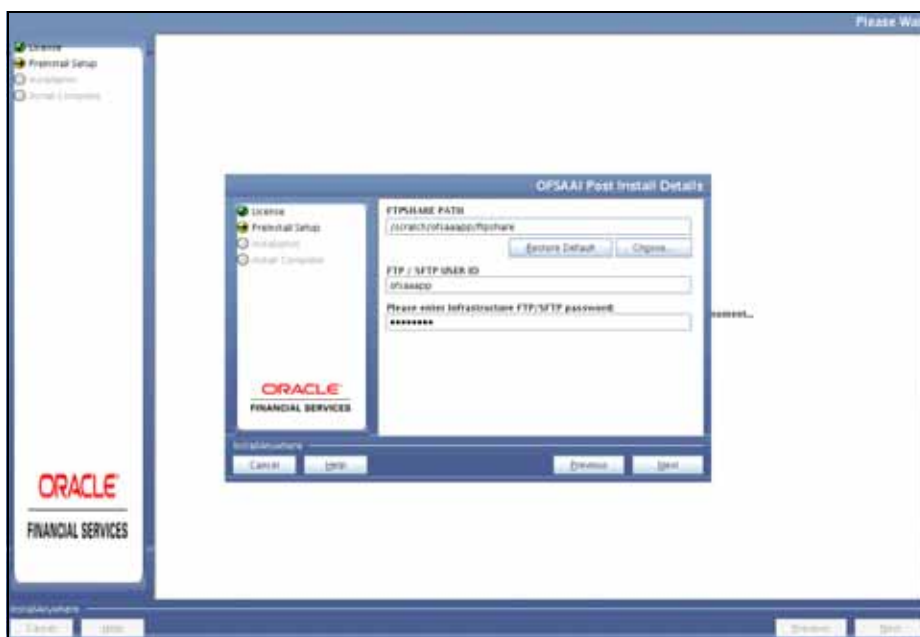


Note:

- Enable SFTP and File Transfer Port details are auto-populated.
 - Ensure that the system, on which the OFSAA Infrastructure is being installed, has either FTP/SFTP enabled.
-
-

37. Click **Next**. The OFSAAI Post Install Details window is displayed.

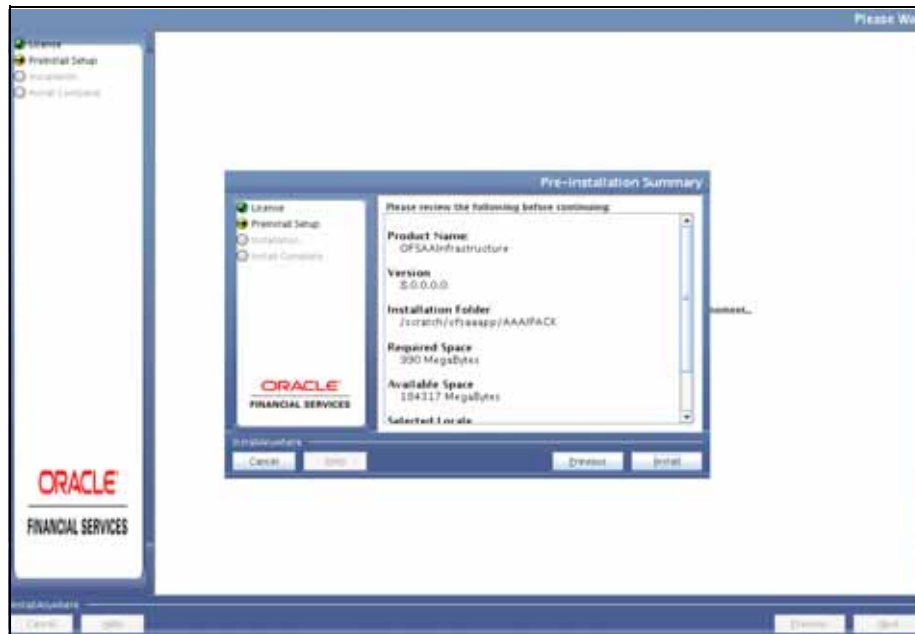
Figure 4–25 OFSAAI Post Install Details



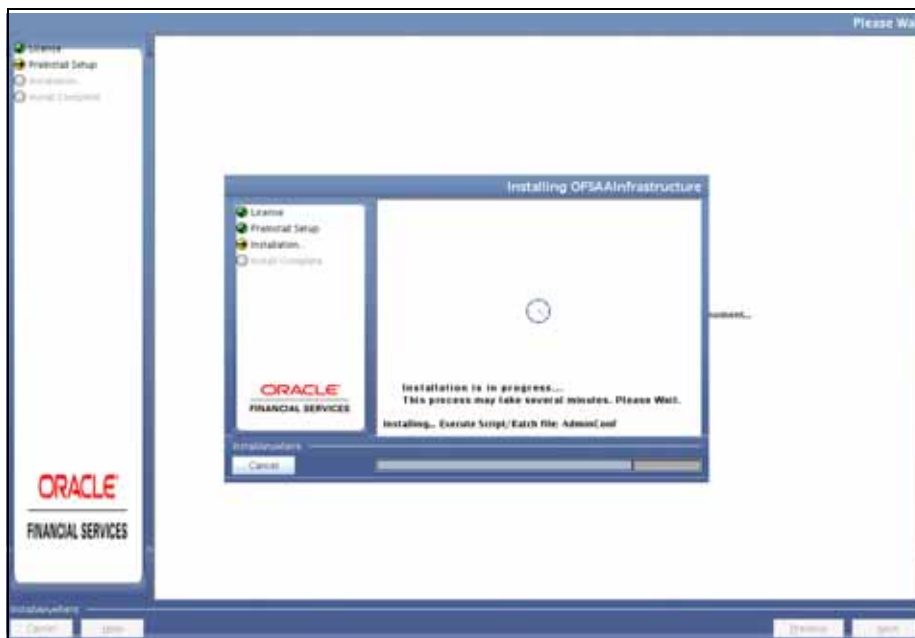
38. Enter the FTPSHARE Path. This is same as the OFSAA Staging/ Metadata Repository Directory.
39. Enter the FTP/SFTP User ID and Password for FTPSHARE Directory access.

Note: The transfer of data (files) between the OFSAAI Server and the Web Application Server happens over FTP/SFTP. Ensure the necessary host configurations are made for a successful handshake.

40. Click **Next**. The Pre Installation Summary window is displayed.

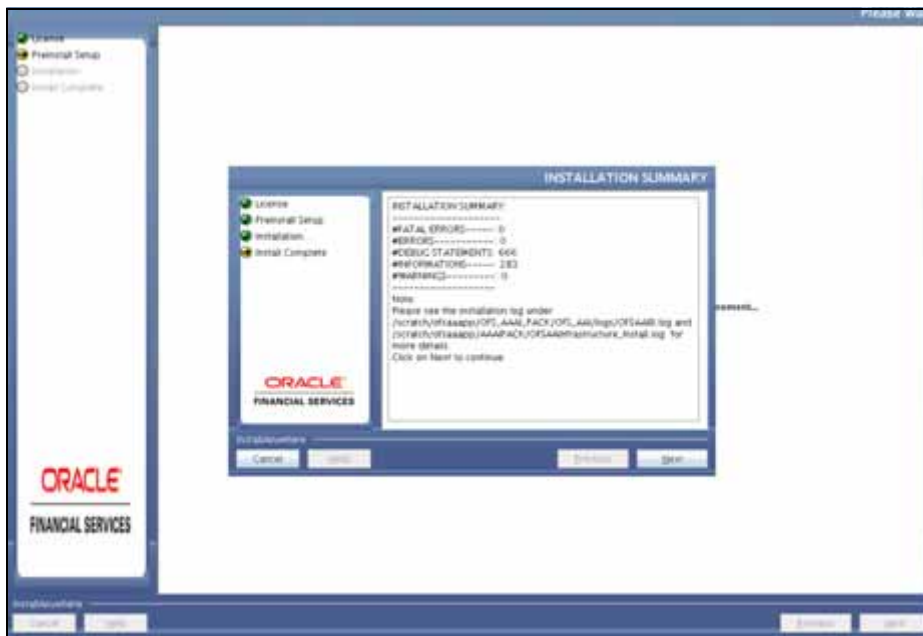
Figure 4–26 Pre Installation Summary

41. Click **Install**. The Installing OFSAA Infrastructure window is displayed.

Figure 4–27 Installing OFSAA Infrastructure

Anytime during the installation you can click **Cancel** to stop the installation. Once completed, the Installation Summary window is displayed.

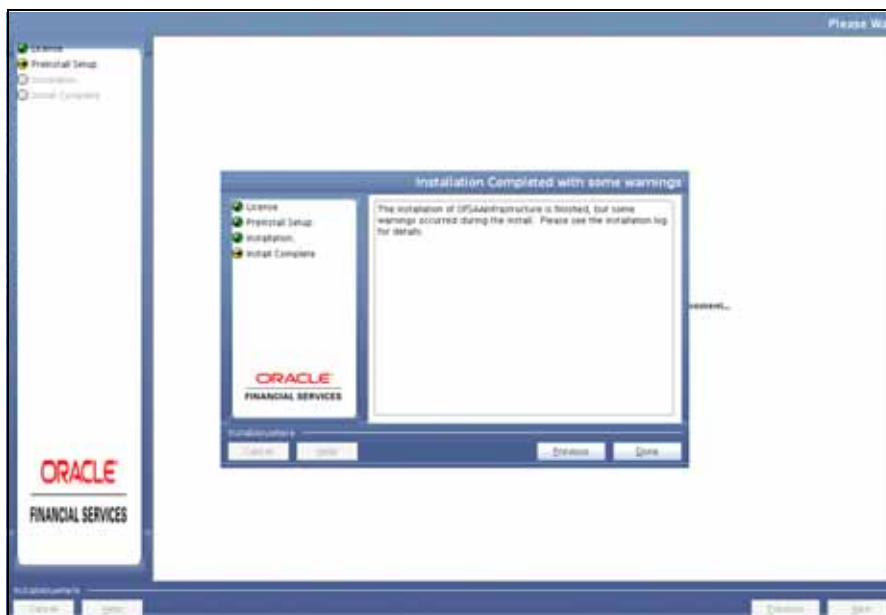
Figure 4–28 Installation Summary



The Summary window displays the number of Fatal Errors, Errors, Debug Statements, Informations, and Warnings along with the location of log files.

42. Click **Next**. The Installation Complete window is displayed.

Figure 4–29 Installation Complete



Note: If the installation is successful with some warnings, you can navigate to the installation log for more details and address them.

43. Click **Done**. The following message is displayed: *Please wait, pack_install is being configured for your system. This may take a moment.*

Figure 4–30 Checking OFSAI Services

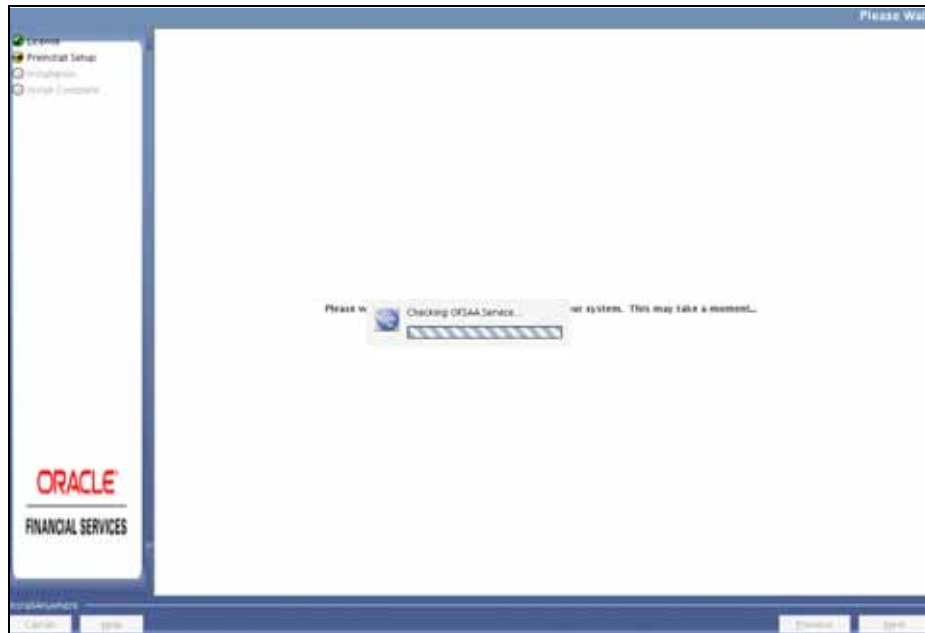
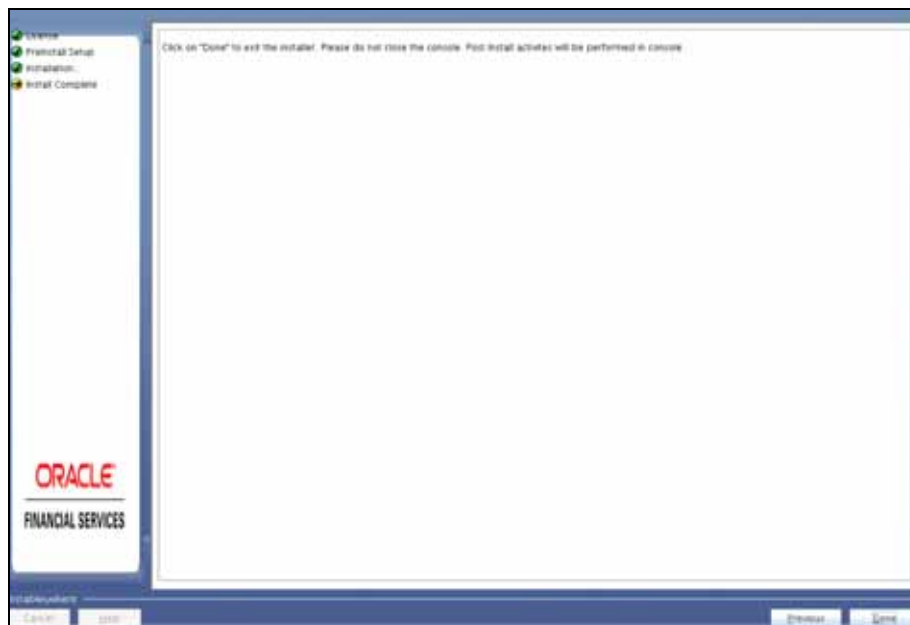


Figure 4–31 Installation Complete



44. Click **Done**.

Post Install Health checks are displayed:

Figure 4–32 Installation Complete

```

[-----|-----|-----|-----]
[-----|-----|-----|-----]
Installation Complete.
*****
CTRL characters removal started ...
CTRL characters removal over ...
We are now in /export/home/mock73web ...
*****
OFSAAI App Layer Post-Install Health Check validation started...
OFSAAI App Layer File Checksum validation started...
OFSAAI App Layer File Checksum validation Status: SUCCESSFUL.
OFSAAI App Layer File Services start-up check started...
Starting reveleusstartup service...
Sending output to nohup.out
Starting icc service...
Sending output to nohup.out
Shutting down icc service...
Sending output to nohup.out
Shutting down reveleusstartup service...
Sending output to nohup.out
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI App Layer Post-Install Health Check validation Status: SUCCESSFUL.
OFSAAI Web Layer Post-Install Health Check validation started...
OFSAAI Web Layer File Checksum validation started...
OFSAAI Web Layer File Checksum validation Status: SUCCESSFUL.
OFSAAI Web Layer Post-Install Health Check validation Status: SUCCESSFUL.
OFSAAI DB Layer Post-Install Health Check validation started...
OFSAAI DB Layer File Checksum validation started...
OFSAAI DB Layer File Checksum validation Status: SUCCESSFUL.
OFSAAI DB Layer File Services check started...
checking Router service...
checking AM service...
Checking MessageServer service...
DEBUG: main started.
DEBUG: TraceFileName = /export/home/mock73web/OFSAAI/ficdb/log/msg_trace_file.log
DEBUG: OpenFiles done.
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
OFSAAI DB Layer Post-Install Health Check validation Status: SUCCESSFUL.
OFSAAI Post-Install Health Check validation Status: SUCCESSFUL.
Installation completed...
*****
$

```

Note: ■ The installation process continues on the console. Do not close the console until the installation process is complete.

- Execute the .profile after installation is completed in the console.
-

Note: Download and install patch for Bug 21160684 if installing this release of the OFS AAI Application Pack version 8.0.0.0.0 on Java

Verifying the Installation

- Verify the Pack.install.log file in the folder: /<download directory>/OFS_CRR_PACK/logs
- Verify the OFSAA logs under /<download directory>/OFS_CRR_PACK/OFS_AAI/logs
- Verify the CRR log files located in the folder: /<download directory>/OFS_CRR_PACK/OFS_CRR/logs

Note: If there are any errors, do not proceed with further installation and contact Oracle Support.

Post Installation Configuration

On successful installation of the Oracle Financial Services Compliance Regulatory Reporting Pack Applications Pack, refer the following post installation sections:

This chapter includes the following sections:

- [Configuring Resource Reference](#)
- [Configuring Web Application Server](#)
- [Creating and Deploying the Applications Pack Web Archive](#)
- [Configurations for Java 8](#)

Note: Ensure to clear the application cache prior to the deployment of Applications Pack Web Archive. This is applicable to all Web Servers (WebSphere, WebLogic, and Tomcat). For more information, refer [Clearing Application Cache](#) section.

Configuring Resource Reference

This section describes the details for configuring the resource reference in WebSphere, Weblogic, and Tomcat Application Servers. For detailed information, refer to [Configuring Resource Reference](#).

Configuring Web Application Server

This section describes the details to configure the different web application servers for OFSAA Infrastructure deployment namely, IBM Websphere, Oracle Weblogic, and Apache Tomcat Servers. For detailed information, refer to [Configuring Web Application Servers](#).

Creating and Deploying the Applications Pack Web Archive

To create and deploy the Applications Pack web archive, follow these steps:

1. Navigate to the `$FIC_WEB_HOME` directory.
2. Execute the command:

```
./ant.sh
```
3. This will trigger the creation of EAR/WAR file - `<contextname>.<extn>`. Here `<contextname>` is the context name given during installation.

Note: Creating ear/war files are done by the installer automatically. If the files are not created, user can execute these steps.

4. On completion of the EAR/WAR files creation, the "BUILD SUCCESSFUL" and "Time Taken" message is displayed and you are returned to the prompt.
5. The EAR/WAR file - <contextname>.<extn> - is created under "\$FIC_WEB_HOME" directory.

Note: This process overwrites any existing version of EAR/WAR file in the path. If the web application server is Apache Tomcat, the file created would be <contextname>.war.

6. Deploy the generated EAR/WAR file on to the web application server. For detailed information, refer [Deploying EAR/WAR File](#).

Configurations for Java 8

Refer to the following instructions to extract and apply the patch.

1. Copy the downloaded patch file (**21160684**) to your OFSAA server in Binary mode.

For more information on downloading the patch files, refer [Prerequisite Information](#) section >> Category - Others >> Sub-Category - OFSAA.

2. Follow the instructions given in the Readme to apply the patch.
3. If the Oracle Database version is 12c, copy ojdbc7.jar from \$ORACLE_HOME/jdbc/lib to the following locations:
 - \$FIC_HOME/utility/OFSAGenerateRepository/lib/
 - \$FIC_HOME/realtime_processing/WebContent/WEB-INF/lib/
 - \$FIC_HOME/ficdb/lib/
 - \$FIC_HOME/ficapp/icc/lib/
 - \$FIC_HOME/ficapp/common/FICServer/lib/
 - \$FIC_HOME/FMStandalone/FormsManager/WEB-INF/lib/
 - \$FIC_HOME/ficweb/webroot/WEB-INF/lib/
 - \$FIC_HOME/ficdb/etl/classes/
4. If the Oracle Database version is 11g, copy ojdbc6.jar from \$ORACLE_HOME/jdbc/lib to the following locations:
 - \$FIC_HOME/utility/OFSAGenerateRepository/lib/
 - \$FIC_HOME/realtime_processing/WebContent/WEB-INF/lib/
 - \$FIC_HOME/ficdb/lib/
 - \$FIC_HOME/ficapp/icc/lib/
 - \$FIC_HOME/ficapp/common/FICServer/lib/
 - \$FIC_HOME/FMStandalone/FormsManager/WEB-INF/lib/

- `$FIC_HOME/ficweb/webroot/WEB-INF/lib/`
- `$FIC_HOME/ficdb/etl/classes/`

Start And Stop of Services

This chapter details about how to start and stop Infrastructure services. This chapter includes the following topics:

- [Starting Infrastructure Services](#)
- [Stopping Infrastructure Services](#)

Starting Infrastructure Services

Once the installation of Infrastructure has been completed successfully and the post-installation steps are completed, the servers must be started. Log on to each machine and run the `.profile` file. All servers mentioned must be started from the same shell encoding. The servers mentioned below are dependent on each other. It is mandatory to maintain the order in which the servers are started. Allow each of the servers to initialize completely before starting the next server.

1. On the machine in which Infrastructure Application components have been installed, navigate to `$FIC_APP_HOME/common/FICServer/bin` and execute the following command to start the Infrastructure Server.

```
./startofsaai.sh
```

Note: You can also start the Infrastructure Server by executing the command `"nohup ./ startofsaai.sh &"`. Starting the process using "nohup" and "&" will return the command prompt without having to wait till the process completes. However, this command cannot be used when you are starting the server for the first time or starting after changing user password in the configuration database schema. You can also start the Infrastructure Server by executing the command `"nohup ./ startofsaai.sh &"`. Starting the process using "nohup" and "&" will return the command prompt without having to wait till the process completes. However, this command cannot be used when you are starting the server for the first time or starting after changing user password in the configuration database schema.

2. Select the required webserver start up option from the following table:

Table 6–1 Webserver start up options

Start up Option	Description
Starting WebSphere profile	On the machine in which Web sphere is installed, navigate to [Webshpere_Install_Directory] /AppServer/<profiles>/<profile name>/bin and execute the command: ./startServer.sh server1
Starting WebLogic Domain	On the machine in which WebLogic is installed, navigate to <WebLogic Installation directory>/user_projects/domains/<domain name>/bin and execute the command: startWebLogic.sh -d64 Note: If WebLogic is already running, access the <i>WebLogic Admin Console</i> . Stop and start the application <context name>.ear
Starting Tomcat Application	On the machine in which Tomcat is installed, navigate to <Tomcat_Install_ Directory>/bin and execute the command: ./catalina.sh run

3. Start ICC server:

- a. On the machine in which Infrastructure default Application components have been installed, navigate to \$FIC_HOME/ficapp/icc/bin and execute the command:

```
./icccserver.sh
```

Note: Only Infrastructure Default Application Server would hold ICC component.

4. To start Back-end Services:

- a. On the machine on which Infrastructure Database components have been installed, navigate to \$FIC_DB_HOME/bin and execute the command to start "Agent server":

```
./agentstartup.sh
```

Or

Start Back-end services using the command:

```
nohup./agentstartup.sh &
```

Note: This agent internally starts the Router, Message Server, OLAP data server, and AM services.

Stopping Infrastructure Services

To stop Infrastructure services, follow these steps:

1. On the machine in which Infrastructure Application components have been installed, navigate to \$FIC_APP_HOME/common/FICServer/bin and execute the command:.

```
./stopofsaai.sh
```

2. To stop ICC server, on the machine in which Infrastructure default Application components have been installed, navigate to `$FIC_HOME/ficapp/icc/bin` and execute the command:

```
./iccserversshutdown.sh
```

Note: Only Infrastructure Default Application Server would hold ICC component.

3. To stop Back-end server, on the machine in which Infrastructure database components have been installed, navigate to `$FIC_DB_HOME/bin` and execute the command:

```
./agentsshutdown.sh
```

Post Deployment Configuration

This chapter includes the following topics:

- [Logging as System Administrator](#)
- [Creating Users, Load Reference Data, and Other Related Activities](#)
- [Integrating with OFSBD/Oracle Mantas 5.x](#)
- [Accessing OFS CRR](#)
- [Mapping the User to User Group](#)

Logging as System Administrator

This section explains steps to login as system administrator and perform the required administrative functions.

Creating Users, Load Reference Data, and Other Related Activities

Refer to the steps given in the *Oracle Financial Services Regulatory Reporting Administration Guide* for the respective reports.

Integrating with OFSBD/Oracle Mantas 5.x

Refer to the steps given in the *Oracle Financial Services Regulatory Reporting Administration Guide* for the respective reports.

Accessing OFS CRR

Following are the steps to access OFS CRR:

1. Access the Stand alone OFS CRR application by logging as OFS CRR user using the following URL:

```
https://<Web application server name>:<port>/<context>
```

If you are integrating OFS CRR with OFSBD, then login with OFSBD user using above URL and click the **Compliance Regulatory Reporting Pack** link in Left Hand Side menu.

2. Use the following references to determine the correct URL:
 - Web application Server: Refer to the WEBSERVER variable mentioned during the OFS CRR application installation.

- Port: Refer to the `SERVLETPORT` variable mentioned during the OFS CRR application installation.
- Context: Refer to the `CONTEXT_PATH` variable mentioned during the OFS CRRAP installation.

For more details about OFS CRR user interface workflows, refer to the *Oracle Financial Services Regulatory Reporting User Guide*.

3. Verify the memory settings for the Web Application Server. Set the minimum heap size as 512 MB and the maximum heap size as 3072 MB

Mapping the User to User Group

This section explains steps to map user to user group. For more information, refer to the mapping user creation section from the *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

This chapter covers the following topics:

- [Configuring Web Server](#)
- [Configuring Web Application Servers](#)

Configuring Web Server

The Web Server (HTTP Server) supported in this release of OFSAA are Oracle HTTP Server, Apache HTTP Server, and IBM HTTP Server.

Refer the product specific installation guide to install and configure the Web Server. If an installation already exists, skip and proceed to the next step.

Note: Make a note of the IP Address/Hostname and Port of the web server. This information is required during the installation process.

Note: Refer OFSAA Secure Configuration Guide/Security Guide for additional information on securely configuring your Web Server.

Configuring Web Application Servers

You can deploy multiple OFSAA applications on different profiles of a WebSphere application server. To create multiple WebSphere "Profiles", use the command line option as explained below. A profile is the set of files that define the runtime environment. At least one profile must exist to run WebSphere Application Server.

This section includes the following topics:

- [Configuring WebSphere for Application Deployment](#)
- [Configuring WebLogic for Application Deployment](#)
- [Configuring Apache Tomcat Server for Application Deployment](#)

Note: Refer OFSAA Secure Configuration Guide/Security Guide for additional information on securely configuring your Web Application Server.

Configuring WebSphere for Application Deployment

Applicable only if the web container is WebSphere.

You can deploy multiple Infrastructure applications on different profiles of a stand-alone WebSphere application server. To create multiple WebSphere "Profiles" in a stand-alone server, use the command line option as explained below. A profile is the set of files that define the runtime environment. At least one profile must exist to run WebSphere Application Server.

This section covers the following topics:

- [Creation of New Profile in WebSphere](#)
- [Manage Applications in WebSphere](#)
- [Delete WebSphere Profiles](#)
- [WebSphere HTTPS Configuration](#)
- [WebSphere Memory Settings](#)

Creation of New Profile in WebSphere

The Profile is created in WebSphere through command line using the **manageprofiles.sh** which resides in *<WebSphere Install directory>/AppServer/bin*.

The command to create a profile **without admin** security through command line is as follows:

```
"manageprofiles.sh -create -profileName <profile> -profilePath <profile_path> -templatePath <template_path> -nodeName <node_name> -cellName <cell_name> -hostName <host_name>"
```

Example:

```
$usr/home>./manageprofiles.sh -create -profileName mockaix  
-profilePath/websphere/webs64/Appserver/profiles/mockaix  
-templatePath/websphere/webs64/Appserver/profileTemplates/default  
-nodeName ipa020dorNode04 - cellName ipa020dorNode04Cell -hostName  
ipa020dor
```

The command to create a profile **with admin** security through command line is as follows:

```
"manageprofiles.sh -create -profileName <profile> -profilePath <profile_path> -templatePath <template_path> -nodeName <node_name> -cellName <cell_name> -hostName <host_name> -enableAdminSecurity true -adminUserName <Admin User Name> -adminPassword < Admin User Password> -samplespassword <sample User Password>"
```

Example:

```
$usr/home>./manageprofiles.sh -create -profileName mockaix  
-profilePath/websphere/webs64/Appserver/profiles/mockaix  
-templatePath/websphere/webs64/Appserver/profileTemplates/default  
-nodeName ipa020dorNode04 -cellName ipa020dorNode04Cell -hostName  
ipa020dor -enableAdminSecurity true -adminUserName ofsaai -adminPassword  
ofsaai -samplespassword ofsaai"
```

Note: While using the `manageprofiles.sh` command to create a New Profile in WebSphere, you can also use `"-validatePorts"` to validate if the specified ports are not reserved or in use. Additionally, you can specify new ports with `"-startingPort <base port>"` which specifies the starting port number to generate and assign all ports for the profile. For more information on using these ports, refer [WebSphere manageprofiles command](#).

Manage Applications in WebSphere

To manage the installed applications in WebSphere, do the following:

1. Open the administrator console using the following URL:

`http://<ipaddress>:<Administrative Console Port>/ibm/console`

Example: `http://10.111.222.333:9003/ibm/console` (https if SSL is enabled)

Note: Administrative Console Port value is available in `serverindex.xml` file within `<WebSphere Profile Directory>/config/cells/<Node Cell>/nodes/<Node Name>` directory.

The *Integrated Solutions Console Login* window is displayed.

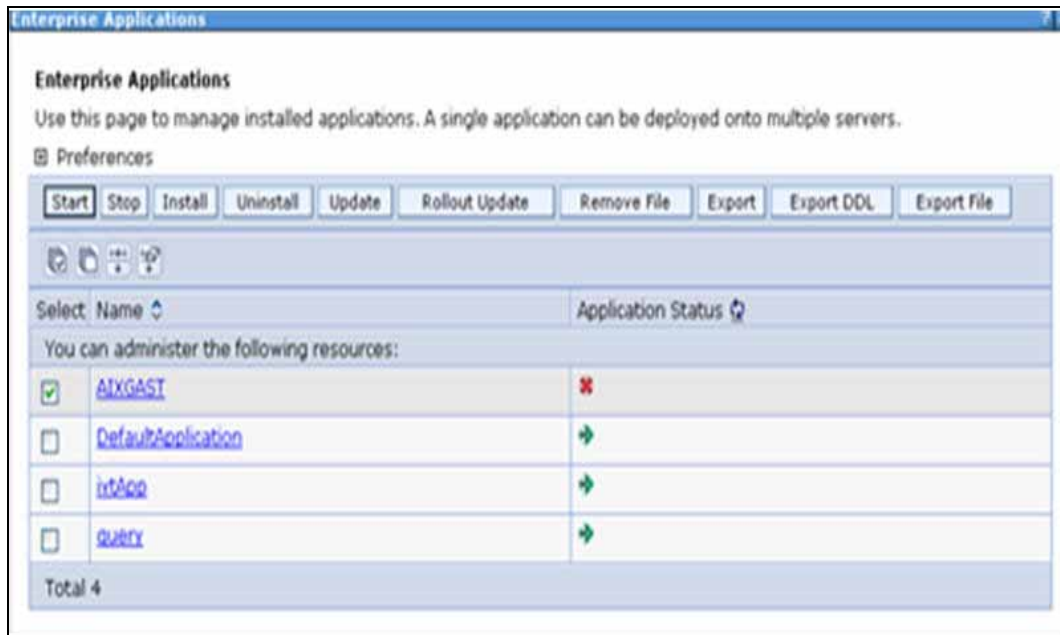
Figure 7–1 Integrated Solutions Console Login



2. Log on with the **User ID** provided with the admin rights.
3. From the LHS menu, expand the **Applications > Application Type > WebSphere Enterprise Applications**.

The *Enterprise Applications* screen is displayed.

Figure 7–2 Enterprise Applications



This Enterprise Applications screen helps you to:

- Install new application
- Uninstall existing applications
- Start or Stop the installed applications

Delete WebSphere Profiles

To delete a WebSphere profile, do the following:

1. Select the checkbox adjacent to the required application and click **Stop**.
2. **Stop** the WebSphere profile to be deleted.
3. Navigate to WebSphere directory:

```
<WebSphere_Installation_Directory>/AppServer/bin/
```

4. Execute the command:

```
manageprofiles.sh -delete -profileName <profile_name>
```

5. Delete profile folder.

Example: <WebSphere_Installation_Directory>/AppServer/profiles/<profile_name>

6. Execute the command:

```
manageprofiles.sh -validateAndUpdateRegistry
```

WebSphere HTTPS Configuration

Following are the steps for configuring an HTTPS Transport on WebSphere:

1. Create a profile using the Profile Creation Wizard in WebSphere.

Note: Note down the https port specified during this process and use the same as servlet port or web server port during OFSAAI installation.

2. To enable https configuration on Infrastructure, assign value 1 to "HTTPS_ENABLE" in OFSAAI_InstallConfig.xml for Silent mode OFSAAI installation.

WebSphere Memory Settings

To configure the WebSphere Memory Settings:

1. Navigate to Websphere applications server > Application servers > server1 > Process definition > Java Virtual Machine.
2. Change the memory setting for Java Heap:
Initial heap size = 512
Maximum heap size = 3072

Configuring WebLogic for Application Deployment

Applicable only if the web container is WebLogic.

You can deploy multiple Infrastructure applications on different domains of a stand-alone weblogic application server. To create multiple WebLogic "Domains" in a stand-alone server you can use the Domain Creation wizard. A domain is the set of files that define the runtime environment. At least one domain must exist to run WebLogic Application Server.

Note: For deployment on Oracle WebLogic Server 12.1.2+ (64 bit) with Java 8, download and install patch 18729264.

This section covers the following topics:

- [Creating Domain in WebLogic Server](#)
- [Delete Domain in WebLogic](#)
- [WebLogic Memory Settings](#)

Creating Domain in WebLogic Server

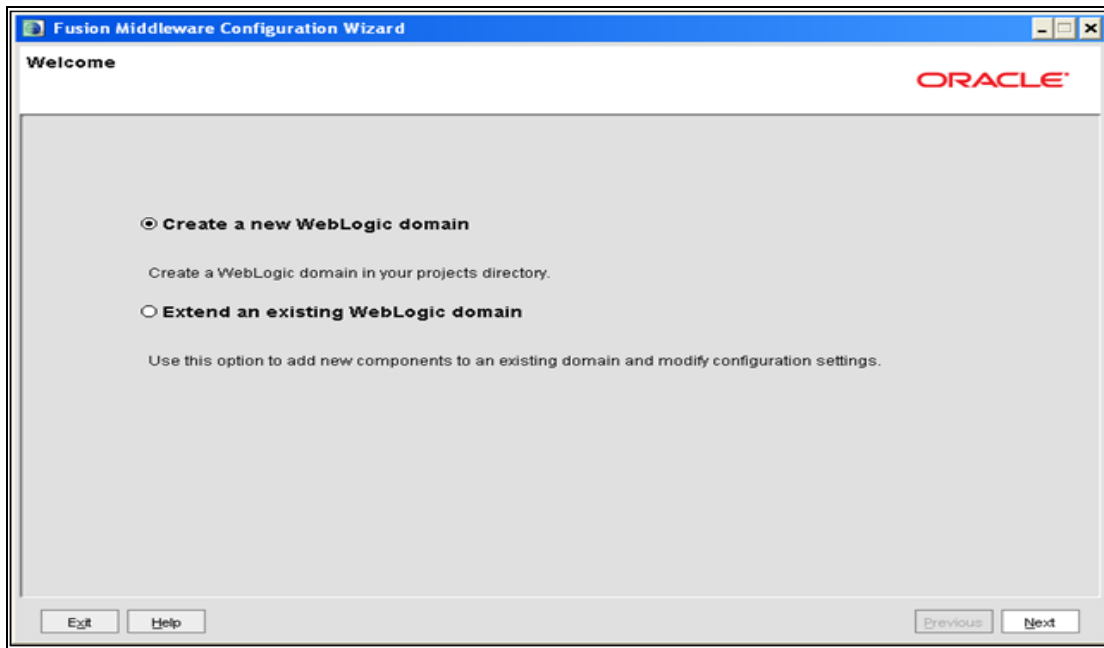
To create a new domain using Configuration Wizard in WebLogic, do the following:

1. Navigate to the directory <weblogic_Home Directory>/wlserver_10.3/common/bin and execute the command:

```
.\config.sh
```

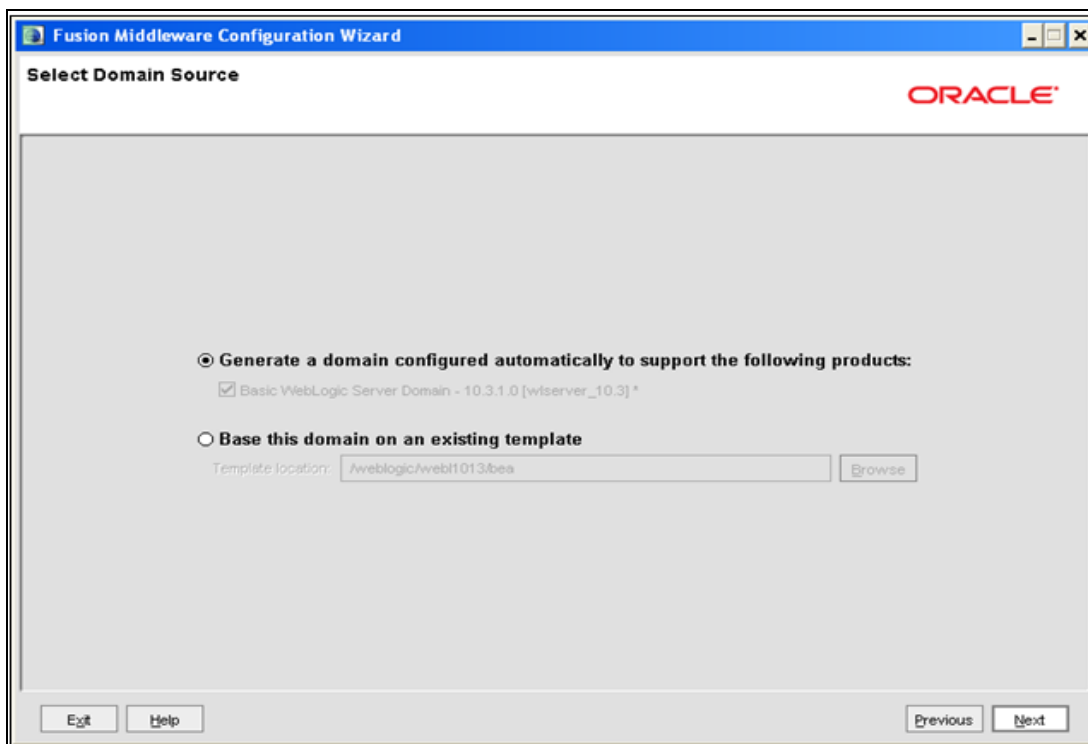
The Welcome window of the Configuration Wizard is displayed.

Figure 7–3 Welcome



2. Select **Create a new WebLogic domain** option and click **Next**.
The *Select Domain Source* window is displayed.

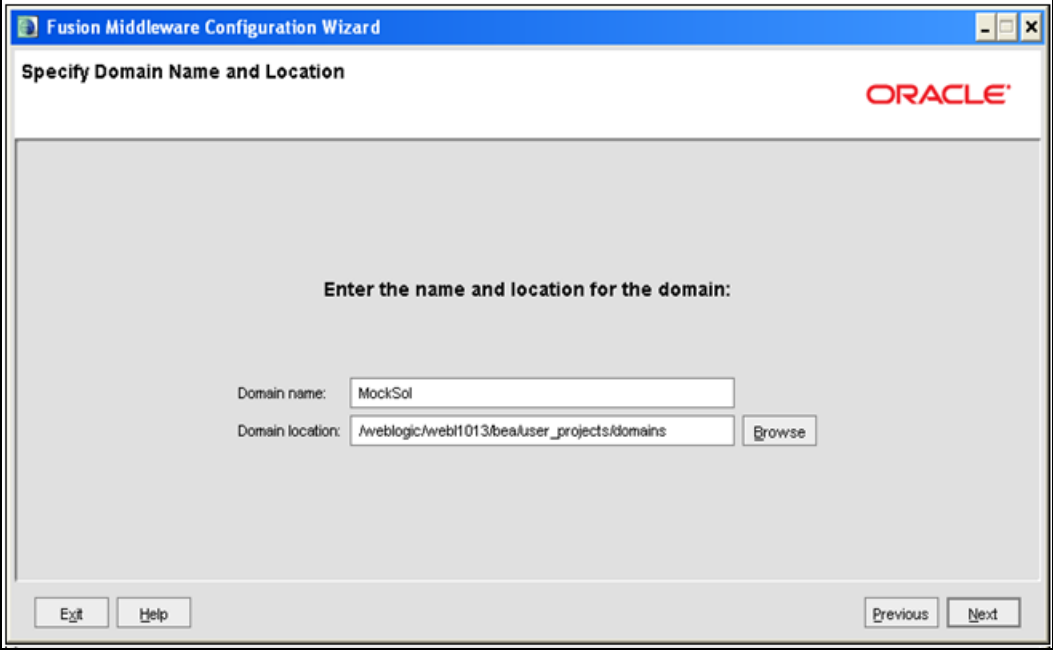
Figure 7–4 Select Domain Source



3. Select the **Generate a domain configured automatically to support the following products** option and click **Next**.

The *Specify Domain Name and Location* window is displayed.

Figure 7–5 *Specify Domain Name and Location*

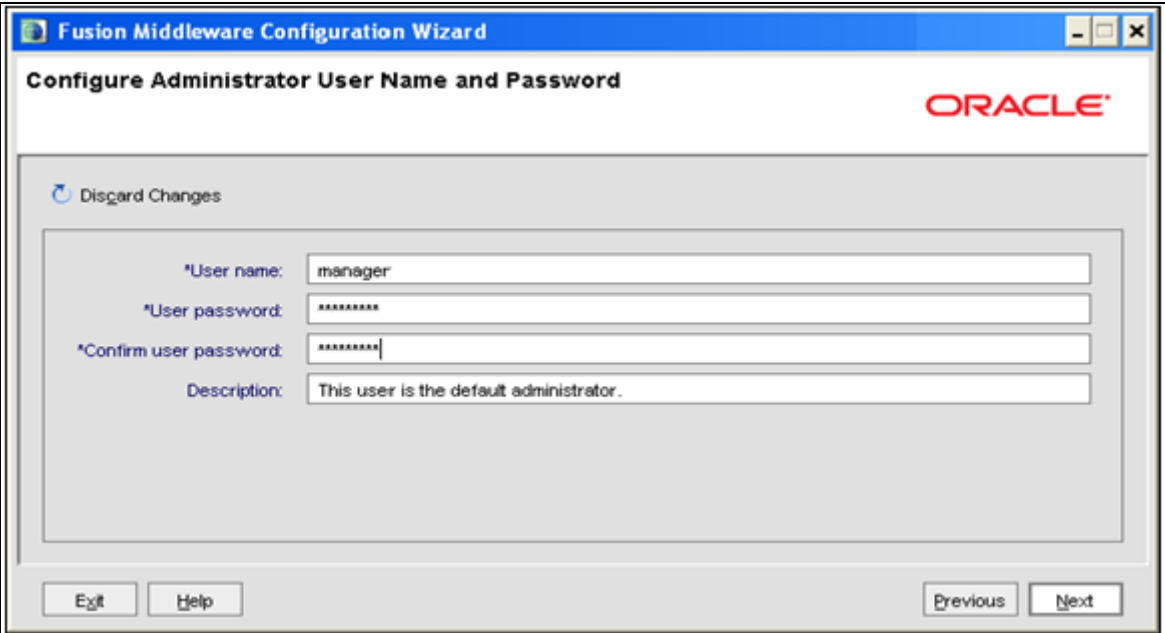


The screenshot shows a window titled "Fusion Middleware Configuration Wizard" with the subtitle "Specify Domain Name and Location". The Oracle logo is in the top right corner. The main area contains the instruction "Enter the name and location for the domain:". Below this, there are two input fields: "Domain name:" with the text "MockSol" and "Domain location:" with the text "/weblogic/web1013/beealuser_projects/domains". A "Browse" button is to the right of the domain location field. At the bottom, there are "Exit", "Help", "Previous", and "Next" buttons.

4. Enter the **Domain Name** and **Location**. Click **Browse** to navigate and specify the location. Click **Next**.

The *Configure Administrator Username and Password* window is displayed.

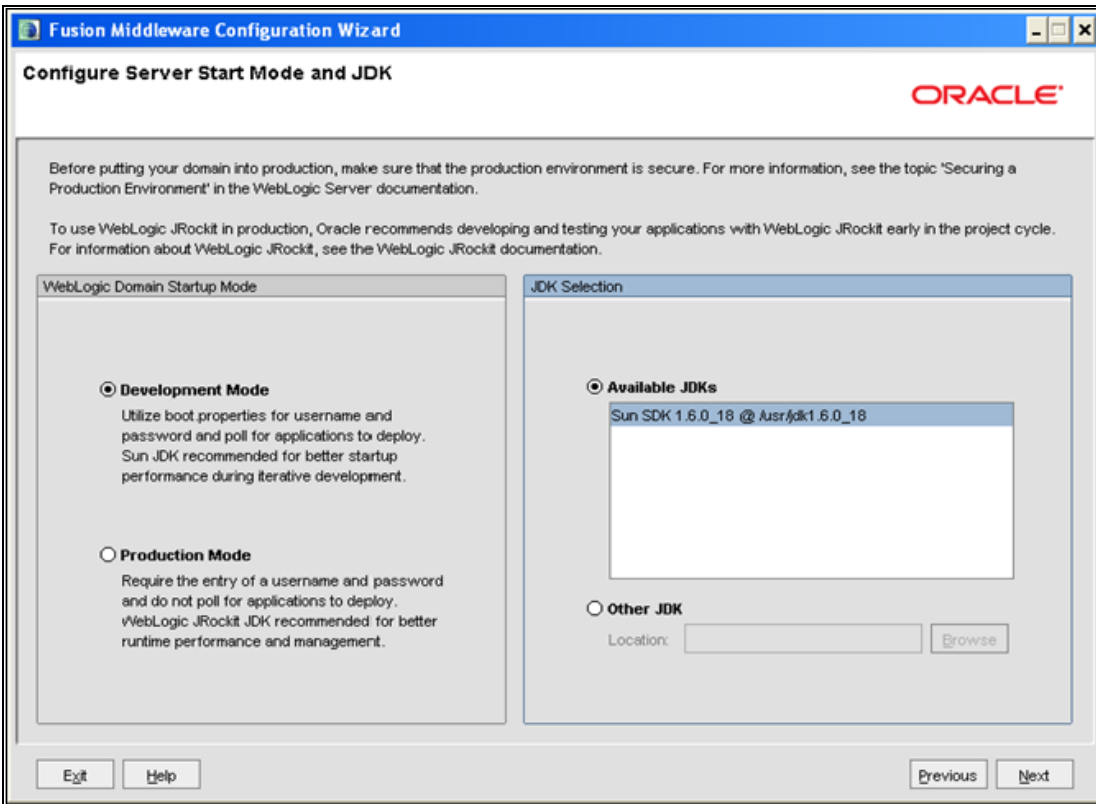
Figure 7–6 *Configure Administrator Username and Password*



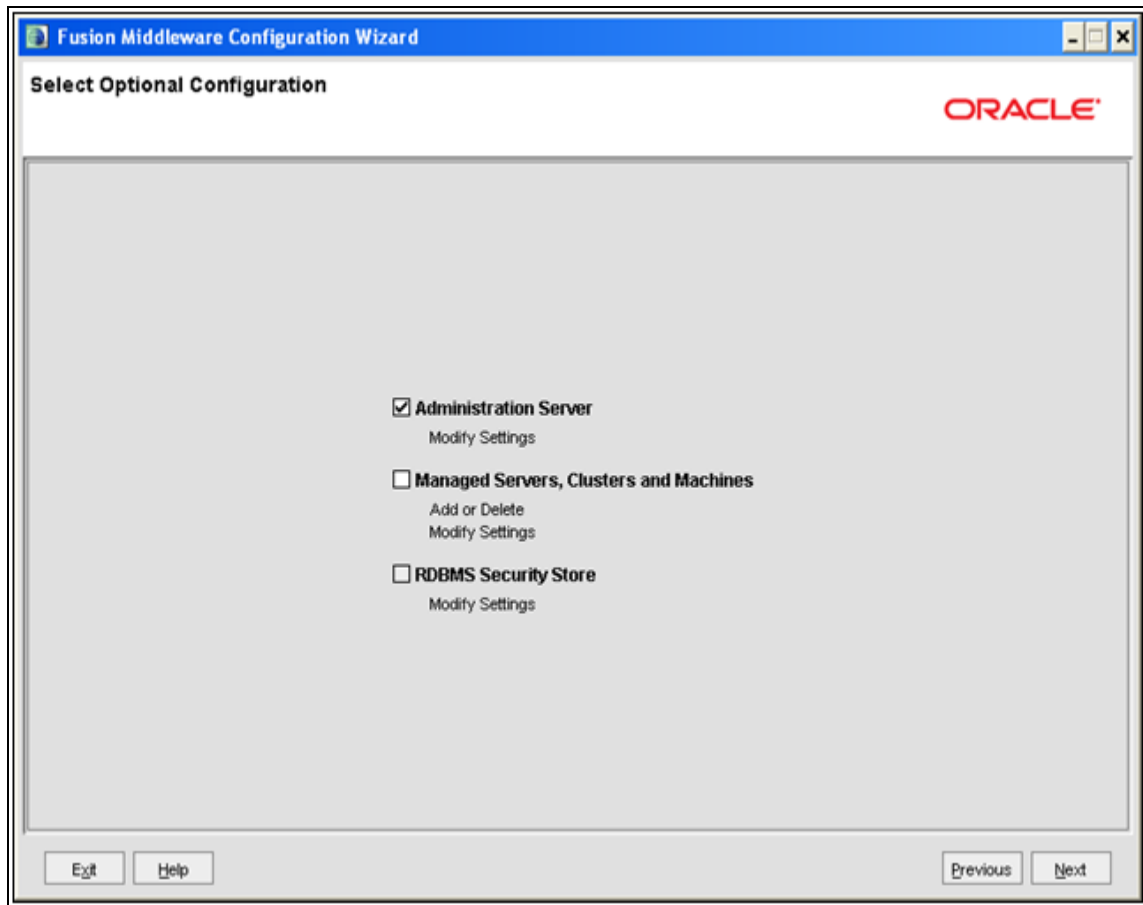
The screenshot shows a window titled "Fusion Middleware Configuration Wizard" with the subtitle "Configure Administrator User Name and Password". The Oracle logo is in the top right corner. There is a "Discard Changes" button with a circular arrow icon. Below this, there are four input fields: "*User name:" with the text "manager", "*User password:" with masked characters "*****", "*Confirm user password:" with masked characters "*****", and "Description:" with the text "This user is the default administrator.". At the bottom, there are "Exit", "Help", "Previous", and "Next" buttons.

5. Enter the **User name** and **User password** to be assigned to the Administrator. Ensure that the password is of minimum 8 characters in length.
6. Re-enter the password for confirmation and add a brief **Description**. Click **Next**. The *Configure Server Start Mode and JDK* window is displayed.

Figure 7–7 *Configure Server Start Mode and JDK*



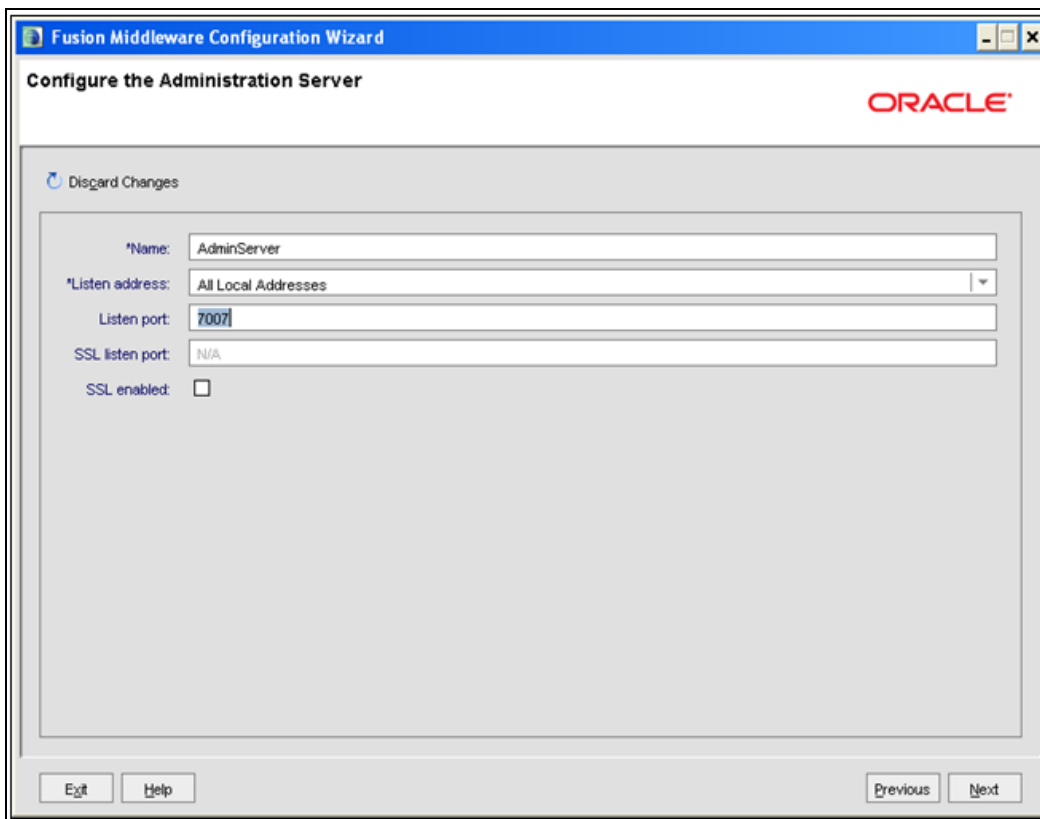
7. Select the following options:
 - In the WebLogic Domain Startup Mode section, select the required mode (Development Mode or Production Mode).
 - In the JDK Selection section, select **Other JDK**. Click **Browse** and navigate to the JDK location. Click **Next**.
 The Select Optional Configuration window is displayed.

Figure 7–8 Select Optional Configuration

8. Select **Administration Server**. A WebLogic Server domain must have an Administration Server. You can also select Managed Servers, Clusters and Machines and RDBMS Security Store if required. Click **Next**.

The Configure the Administration Server window is displayed.

Figure 7–9 Configure the Administration Server

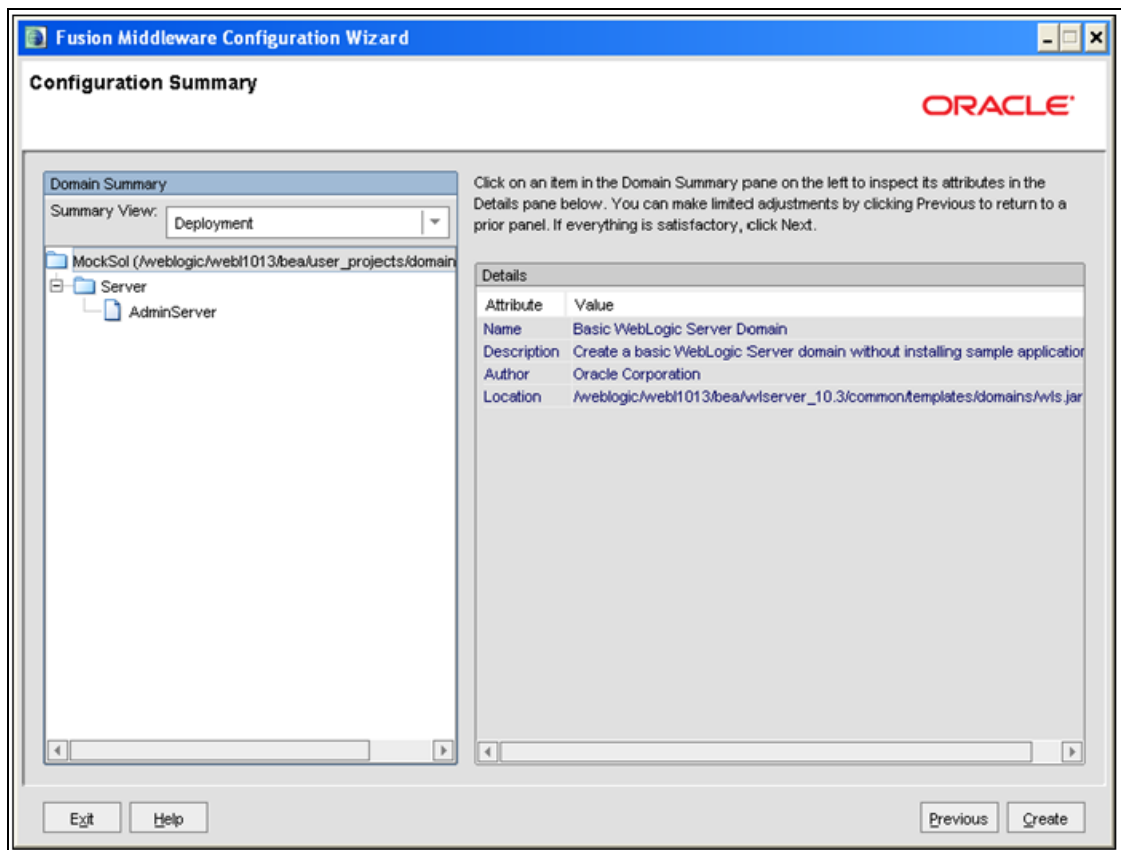


9. Enter Administration Server details such as the Name, Listen address, Listen Port, SSL listen port, and SSL enabled (for secure login using https) check box. Click **Next**.

The Configuration Summary window is displayed.

Note: Make a note of the Listen Port or SSL Listen Port value (ex: 7007), since the same has to be re-entered in the Servlet port field during Infrastructure installation.

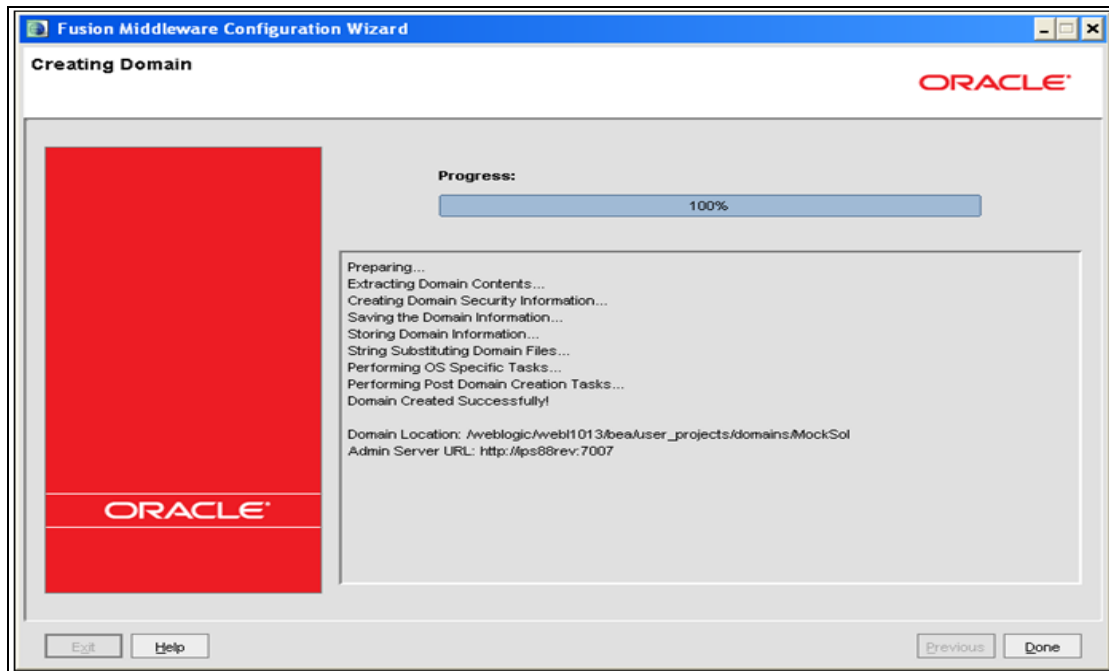
Figure 7–10 Configure Server Start Mode and JDK



10. Verify the configuration details of the WebLogic domain and click **Create**.

The Creating Domain window is displayed with the status indication of the domain creation process.

Figure 7–11 Configure Server Start Mode and JDK



11. Click **Done** when complete. The domain server is created enabling the deployment of multiple Infrastructure applications on a single WebLogic.

Delete Domain in WebLogic

1. Navigate to the following directory:

```
<WebLogic Installation directory>/user_projects/domains/<domain name>/bin
```

2. Execute **stopWebLogic.sh** to stop the Weblogic domain.
3. Delete the Weblogic domain.

WebLogic Memory Settings

To configure the WebLogic Memory Settings:

1. Change the memory setting for Java Heap to `-Xms512m -Xmx3072m` in `setDomainEnv.sh` file, which resides in the folder `<DOMAIN_HOME>/bin` and in `CommEnv.sh` file which resides in the folder `common/bin`.
2. Edit this file for customizing memory settings and garbage collector settings depending on the available hardware configuration.

Example 1:

```
if [ "${JAVA_VENDOR}" = "Sun" ] ; then
    WLS_MEM_ARGS_64BIT="-Xms512m -Xmx1024m"
    export WLS_MEM_ARGS_64BIT
    WLS_MEM_ARGS_32BIT="-Xms512m -Xmx1024m"
    export WLS_MEM_ARGS_32BIT
else
```

```

WLS_MEM_ARGS_64BIT="-Xms512m -Xmx1024m"
export WLS_MEM_ARGS_64BIT
WLS_MEM_ARGS_32BIT="-Xms512m -Xmx1024m"
export WLS_MEM_ARGS_32BIT

```

Example 2:

```

JAVA_VM=
MEM_ARGS="-Xms256m -Xmx1024m"

```

Configuring Apache Tomcat Server for Application Deployment

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

This section covers the following topics:

- [Tomcat User Administration](#)
- [Configure Tomcat to use JAVA 64 bit Executables](#)
- [Configure Servlet Port](#)
- [Create Tomcat WAR Files](#)
- [SSL Port Configuration](#)
- [Apache Tomcat Memory Settings](#)

Tomcat User Administration

The Tomcat administration and manager application does not provide a default login. You are required to edit "\$CATALINA_HOME/conf/tomcat-users.xml" as instructed below.

This file contains an XML <user> for each individual user, which will display the username and password used by admin to log on to Tomcat, and the role names to which the admin user is associated with. For example, <user name="admin" password="admin" roles="standard,manager" />

1. Add the manager role to any one of the existing username/password combination as shown in the example above.
2. Use the same username/password to which the manager role has been assigned to access the Tomcat Application Manager.
3. If the Tomcat server is already running, it requires a re-start after the above configuration is done.

Configure Tomcat to use JAVA 64 bit Executables

1. Navigate to the "\$CATALINA_HOME/bin" folder.
2. Edit the setclasspath.sh as explained below:
3. Under 'Set standard commands for invoking Java', change "\$JAVA_HOME"/bin to "\$JAVA_BIN".

Example:

Edit the following block of text:

```

# Set standard commands for invoking Java.
_RUNJAVA="$JAVA_HOME"/bin/java

```

```
if [ "$os400" != "true" ]; then
  _RUNJDB="$JAVA_HOME"/bin/jdb
```

Change it to:

```
# Set standard commands for invoking Java.
_RUNJAVA="$JAVA_BIN"/java
if [ "$os400" != "true" ]; then
  _RUNJDB="$JAVA_BIN"/jdb
```

If the Tomcat server is already running, it requires a re-start after the above configuration is done.

Configure Servlet Port

The Servlet Port specified during the Infrastructure installation process must be configured if your Web Application Server is Tomcat. If you are using the default port (8080), then you are not required to configure the same, since it is already configured.

If you are using a different port number, you must first configure the port in the "server.xml" in the "conf" directory of Tomcat Installation directory. The following steps guide you through the configuration process:

1. Navigate to \$CATALINA_HOME/conf. Open server.xml and locate the tag:
"Define a non-SSL HTTP/1.1 Connector on port 8080 "
2. Against this tag, a parameter is specified 'Connector port = "8080" '. Edit this value to the new port number that was used during the Infrastructure installation process.
3. Save your changes in "server.xml".

Create Tomcat WAR Files

The WAR files are required to assemble servlets, .jsp files, web pages, and other static content into a deployable unit.

The following steps will guide you through the WAR files creation process:

1. On the machine in which Infrastructure Web components have been installed, navigate to the path \$FIC_WEB_HOME.
2. Execute the command:

```
./ant.sh
```

This will trigger the creation of WAR file - <contextname>.war. The <contextname> is the name given during installation.
3. On completion of the WAR files creation, a confirmation message will be displayed and you will be returned to the prompt.
4. The WAR file - <contextname>.war- is created on the machine on which Infrastructure Web components are installed under \$FIC_WEB_HOME directory.

Note the following:

- This process will not overwrite any existing version of WAR file that exists in the path. Rename/delete any existing war file.
- Proceed with the Tomcat WAR Files Deployment.
- Log on to the server in which Tomcat is installed.

SSL Port Configuration

Ensure that the following connect tag under "Define a SSL HTTP/1/1 Connector on port 8443" in "<Tomcat_installation_folder>/conf/server.xml" file is uncommented for SSL Configuration. (By default, it is commented).

```
<Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true"
maxThreads="150" scheme="https" secure="true"
clientAuth="false" sslProtocol="TLS"
```

Note: The port mentioned as connector port is the Web Application Server port or servlet port in Infrastructure.

For more information related to SSL Configuration on Tomcat, refer to <http://tomcat.apache.org/>.

Apache Tomcat Memory Settings

To configure the Apache Tomcat Memory Settings, follow these steps:

1. Locate the file `catalina.sh` which resides in the folder `<CATALINA_HOME>/bin`
2. Edit this file for customizing the memory settings and garbage collector settings depending on the available hardware configuration.
3. Add the memory setting for Java Heap to `-Xms512m -Xmx1024m`.

4. For example:

```
if [ -z "$LOGGING_MANAGER" ]; then
  JAVA_OPTS="$JAVA_OPTS -Xms512m -Xmx1024m
-Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager"
else
  JAVA_OPTS="$JAVA_OPTS -Xms512m -Xmx1024m $LOGGING_MANAGER"
fi
```


Configuring Resource Reference in Web Application Server

This section covers the following topics:

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

Configuring Resource Reference in WebSphere Application Server

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

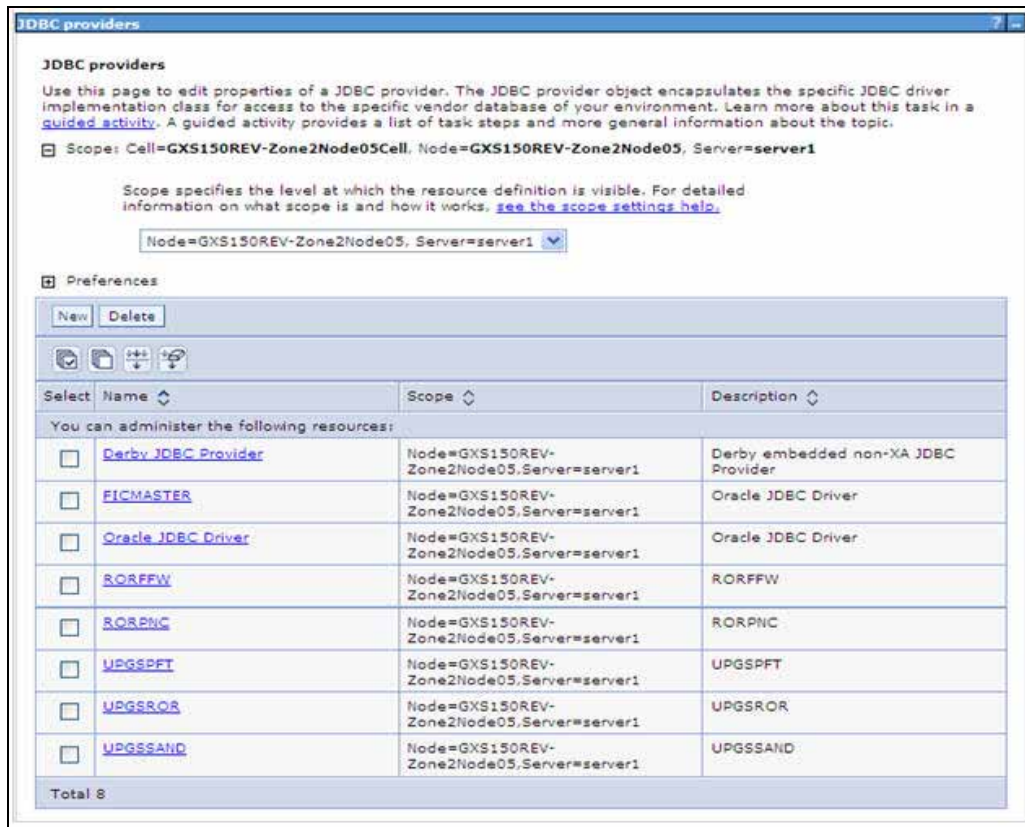
This section covers the following topics:

- [Creating JDBC Provider](#)
- [Creating Data Source](#)
- [J2C Authentication Details](#)
- [JDBC Connection Pooling](#)

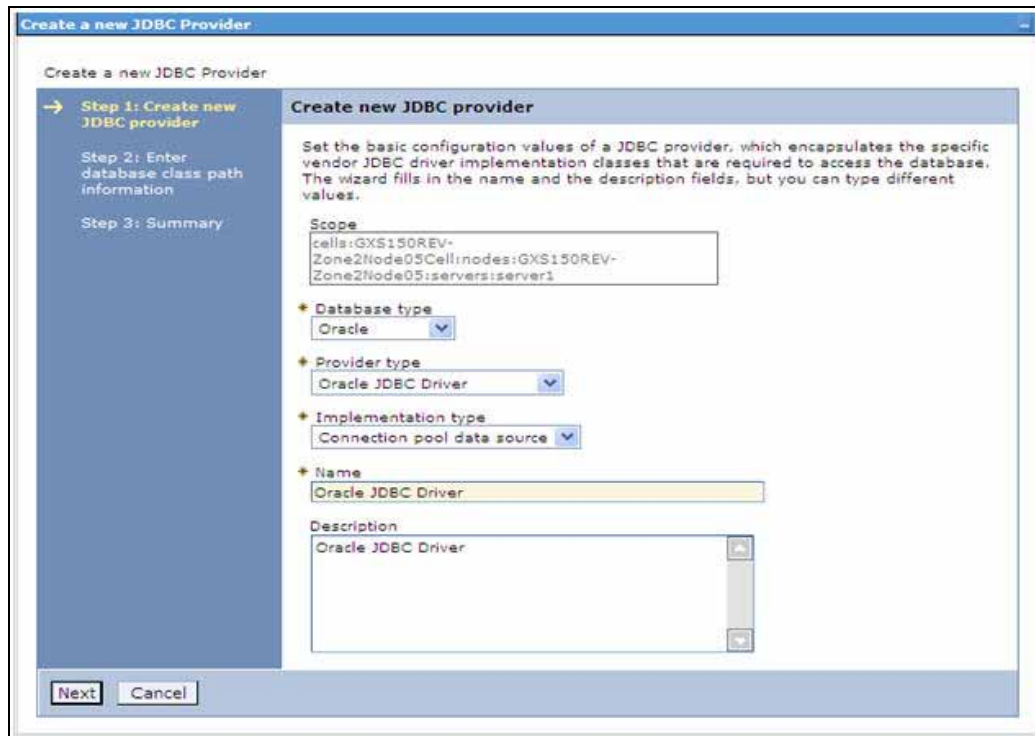
Creating JDBC Provider

1. Open the WebSphere admin console in the browser window:
`http://<ipaddress>:<administrative console port>/ibm/console`. (https if SSL is enabled). The *Login* window is displayed.
2. Login with the user id that has admin rights.
3. Expand the **Resources** option in the LHS menu and click **JDBC > JDBC Providers**. The JDBC Providers window is displayed.

Figure 7–12 JDBC Providers



4. Select the **Scope** from the drop-down list. Scope specifies the level at which the resource definition is visible.
5. Click **New** to add new JDBC Provider under the *Preferences* section. The Create new JDBC provider window is displayed.

Figure 7–13 Create a new JDBC Provider

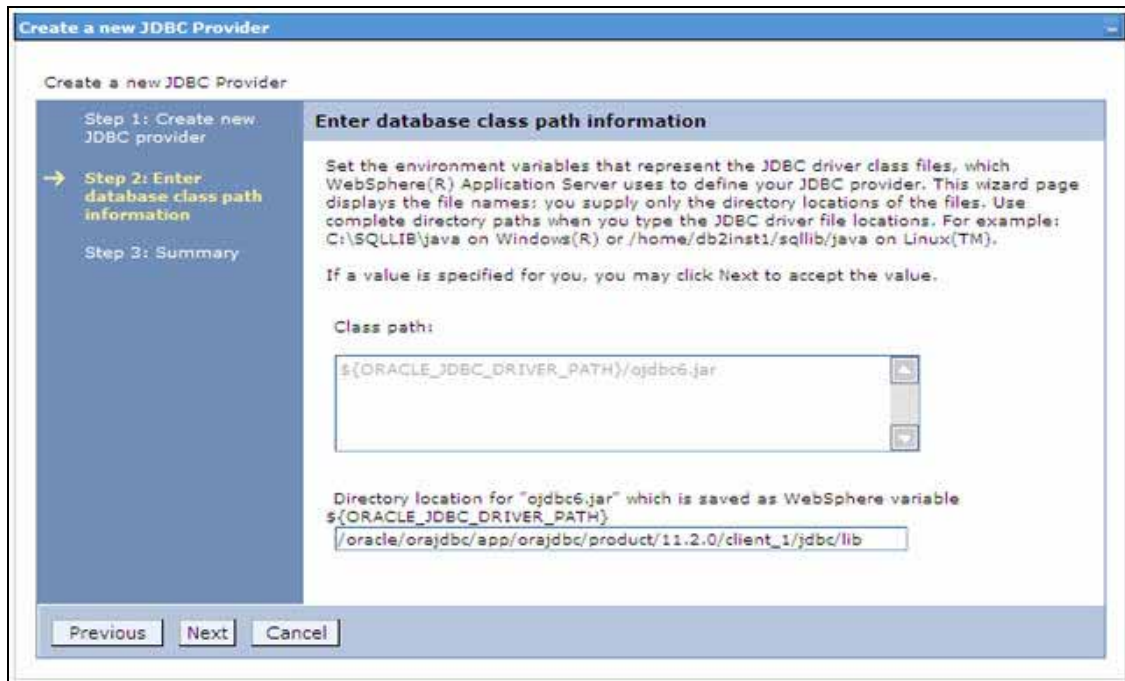
6. Enter the following details:

Table B–1 Fields and their description

Field	Description
Database Type	Oracle
Provider Type	Oracle JDBC Driver
Implementation Type	Connection pool data source
Name	The required display name for the resource
Description	The optional description for the resource

7. Click **Next**.

Figure 7–14 Enter database class path information



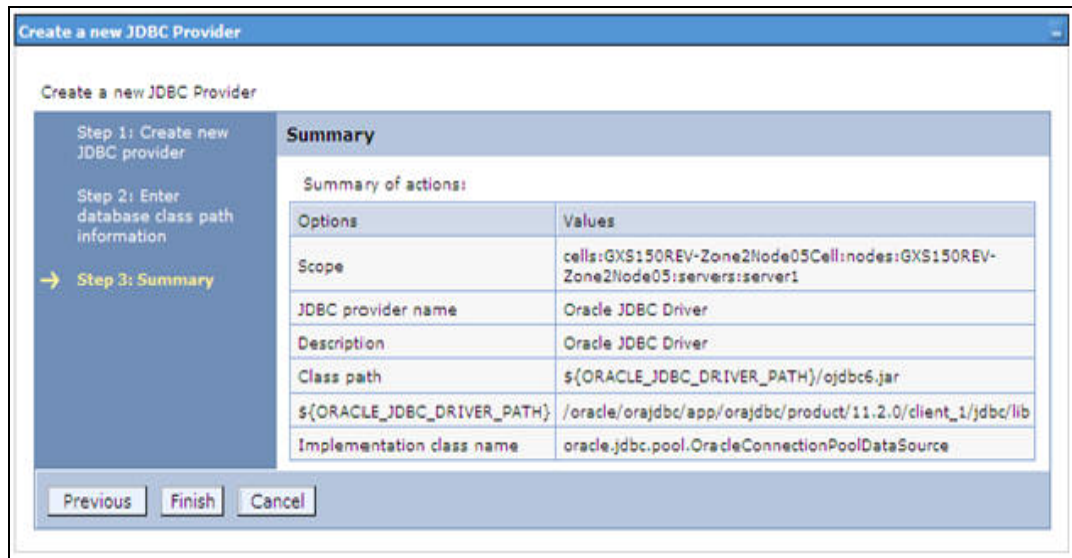
8. Specify the directory location for "ojdbc<version>.jar" file. Ensure that you do not use the trailing slash file separators.

The Oracle JDBC driver (Download "ojdbc<version>.jar") file corresponding to the required version of Oracle Client can be downloaded from [Oracle Download site](#).

Once downloaded, you need to place the file in the required folder in your system. While creating the JDBC Provider, ensure that the path to the jar file in the folder is specified in the **Class path** field in the previous window.

9. Click **Next**. The Summary window is displayed.

Figure 7–15 Summary



10. Verify the details and click **Finish** to create the JDBC Provider.

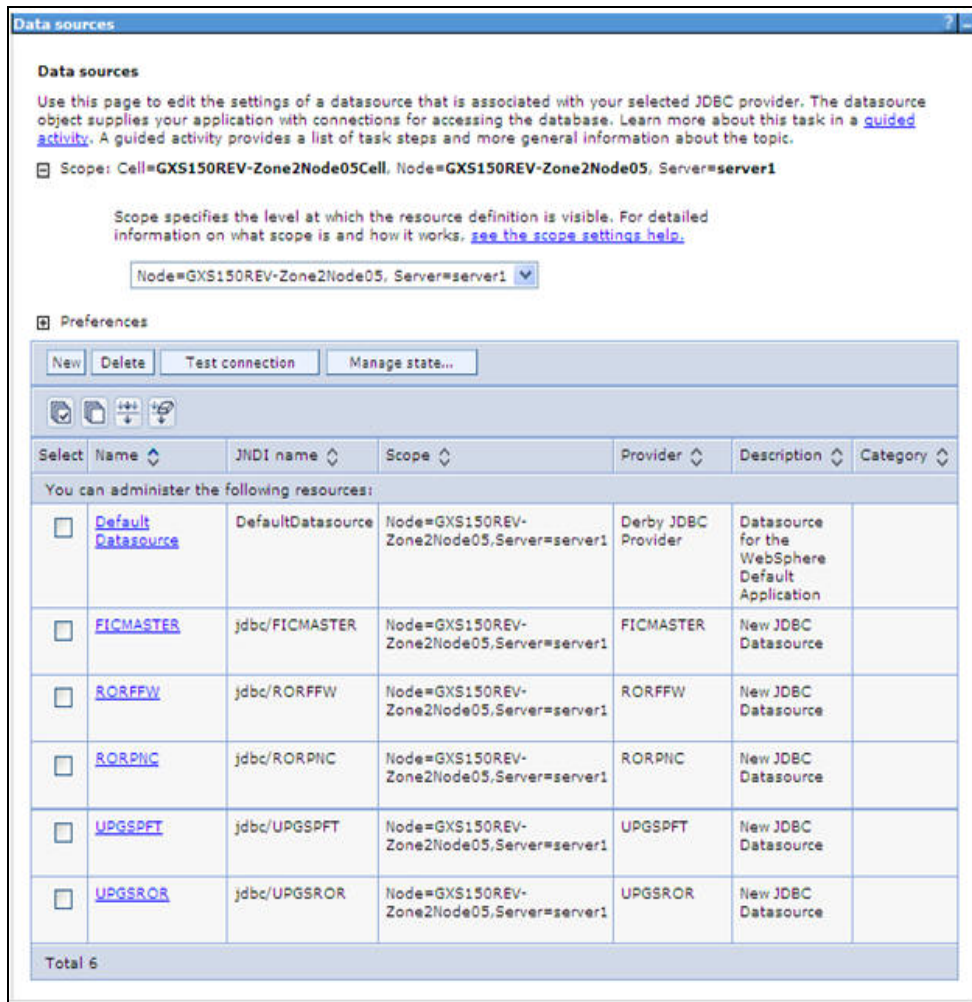
11. The options to **Save** and **Review** are displayed. Click **Save**.

Creating Data Source

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

1. Open this URL in the browser window: `http://<ipaddress>:<administrative console port>/ibm/console`. (https if SSL is enabled). The *Login* window is displayed.
2. Login with the user id that has admin rights.
3. Expand the **Resources** option in the LHS menu and click **JDBC > Data sources** option. The Data sources page is displayed.

Figure 7–16 Data Sources



4. Select the **Scope** from the drop down list. Scope specifies the level at which the resource definition is visible.
5. Click **New**. The Create a Data Source window is displayed.

Figure 7–17 Create a data source

The screenshot shows the 'Create a data source' wizard. On the left, a navigation pane lists five steps: Step 1 (selected), Step 2, Step 3, Step 4, and Step 5. The main area is titled 'Enter basic data source information' and contains the following text: 'Set the basic configuration values of a datasource for association with your JDBC provider. A datasource supplies the physical connections between the application server and the database. Requirement: Use the Datasources (WebSphere(R) Application Server V4) console pages if your applications are based on the Enterprise JavaBeans(TM) (EJB) 1.0 specification or the Java(TM) Servlet 2.2 specification.' Below this text are three input fields: 'Scope' (containing 'cells:GXS150REV-Zone2Node05Cell:nodes:GXS150REV-Zone2Node05:servers:server1'), 'Data source name' (containing 'AtomT'), and 'JNDI name' (containing 'jdbc/DRYMOCK'). At the bottom are 'Next' and 'Cancel' buttons.

- Specify the **Data Source name** and **JNDI name** for the new "Data Source".

The **JNDI** and **Data Source** name are case sensitive and ensure that JNDI name is same as the "Information Domain" name.

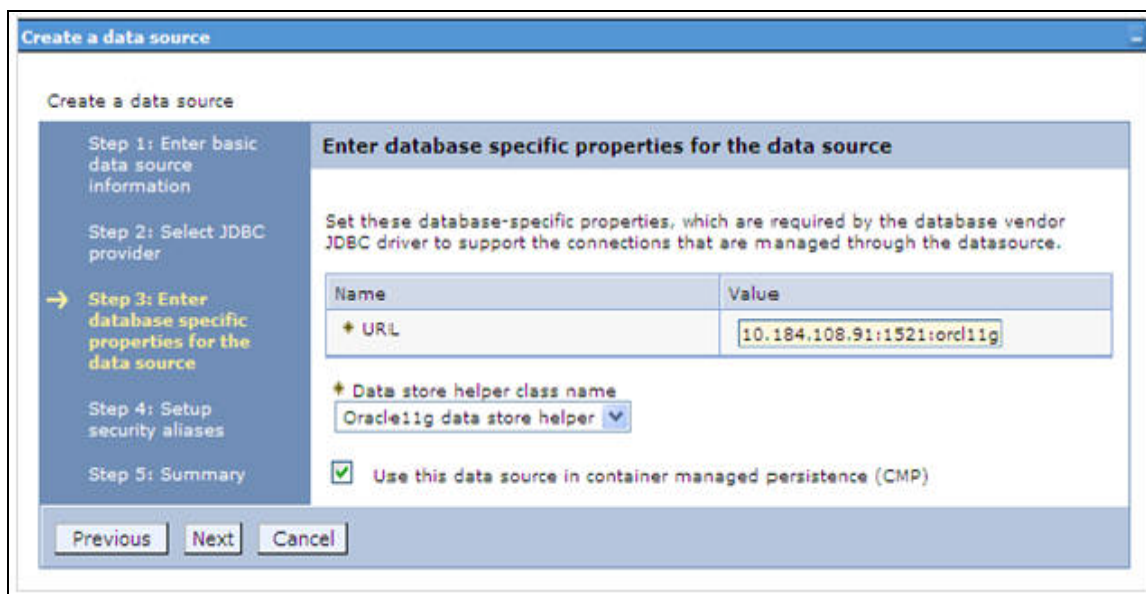
- Click **Next**. The Select JDBC provider window is displayed.

Figure 7–18 Select JDBC provider

The screenshot shows the 'Create a data source' wizard at Step 2: 'Select JDBC provider'. The navigation pane on the left shows Step 2 is selected. The main area is titled 'Select JDBC provider' and contains the text: 'Specify a JDBC provider to support the datasource. If you choose to create a new JDBC provider, it will be created at the same scope as the datasource. If you are selecting an existing JDBC provider, only those providers at the current scope are available from the list.' There are two radio button options: 'Create new JDBC provider' (unselected) and 'Select an existing JDBC provider' (selected). Below the radio buttons is a drop-down menu showing 'Oracle JDBC Driver'. At the bottom are 'Previous', 'Next', and 'Cancel' buttons.

- Select the option **Select an Existing JDBC Provider** and select the required JDBC provider from the drop-down list. Click **Next**.

Figure 7–19 Enter database specific properties



9. Specify the database connection URL.

For example: `jdbc:oracle:thin:@<DB_SERVER_IP>:<DB_SERVER_PORT>:<SID>`

10. Select **Data Store Helper Class Name** from the drop-down list and ensure that the checkbox **Use this data source in container managed persistence (CMP)** is selected.

Note: For RAC configuration, provide the RAC url specified during installation.

Example: `jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=10.11.12.13)(port=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=10.11.12.14)(PORT=1521))(LOAD_BALANCE=no)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=pqadb))`

11. Click **Next**.

Figure 7–20 Setup security aliases

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

Step 3: Enter database specific properties for the data source

→ Step 4: Setup security aliases

Step 5: Summary

Setup security aliases

Select the authentication values for this resource.

Component-managed authentication alias
(none)

Mapping-configuration alias
(none)

Container-managed authentication alias
(none)

Note: You can create a new J2C authentication alias by accessing one of the following links. Clicking on a link will cancel the wizard and your current wizard selections will be lost.

[Global J2C authentication alias](#)
[Security domains](#)

Previous Next Cancel

- Map the J2C authentication alias, if already created. If not, you can create a new J2C authentication alias by accessing the link given (**Global J2C authentication alias**) or you can continue with the data source creation by clicking **Next** and then **Finish**.

Figure 7–21 Summary

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

Step 3: Enter database specific properties for the data source

Step 4: Setup security aliases

→ Step 5: Summary

Summary

Summary of actions:

Options	Values
Scope	cells:GXS150REV-Zone2Node05Cell:nodes:GXS150REV-Zone2Node05:servers:server1
Data source name	AtomT
JNDI name	jdbc/DRYMOCK
Select an existing JDBC provider	Oracle JDBC Driver
Implementation class name	oracle.jdbc.pool.OracleConnectionPoolDataSource
URL	jdbc:oracle:thin:@10.184.108.91:1521:orcl11gr2
Data store helper class name	com.ibm.websphere.rsadapter.Oracle10gDataStoreHelper
Use this data source in container managed persistence (CMP)	true
Component-managed authentication alias	(none)
Mapping-configuration alias	(none)
Container-managed authentication alias	(none)

Previous Finish Cancel

You can also create and map J2C authentication alias after creating the data source.

13. You must create another Data source by following the above procedure with jdbc/FICMASTER as JNDI name pointing to the "configuration schema" of Infrastructure.

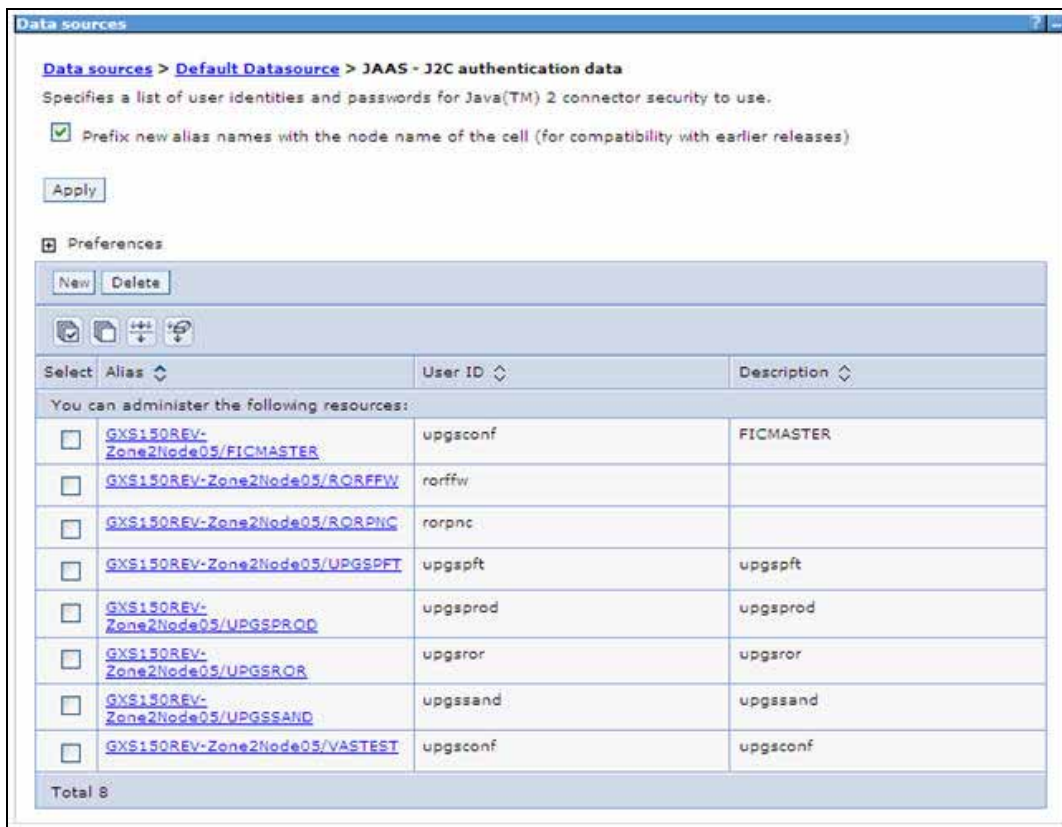
J2C Authentication Details

The steps given below are applicable for creating both config and atomic J2C Authentication.

To create J2C Authentication details:

1. Select the newly created Data Source and click **JAAS - J2C authentication data** link under **Related Items**.

JAAS- J2C authentication data



2. Click **New** under the Preferences section.

Figure 7-22 JAAS- J2C authentication data- New

Data sources > Default Datasource > JAAS - J2C authentication data > New

Specifies a list of user identities and passwords for Java(TM) 2 connector security to use.

General Properties

Alias
Atm

User ID
upgs73

Password

Description
Atomic Instance

Apply OK Reset Cancel

3. Enter the **Alias**, **User ID**, **Password**, and **Description**. Ensure the following:
 - User ID is the Oracle user ID created for the respective CONFIG and ATOMIC Schema for the "Information Domain".
 - Specify the CONFIG database user ID and password information for the jdbc/FICMASTER data source, and specify the ATOMIC database user ID and password information for the ATOMIC schema data source that you created earlier.
4. Click **Apply** and save the details.

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. Expand the **Resources** option in the LHS menu and click **JDBC > Data sources** option. The Data sources page is displayed.
2. Click the newly created Data Source \$DATA_SOURCE\$ and navigate to the path Data sources>\$DATA_SOURCE\$>Connection pools.

Figure B–1 Connection pools

Data sources > **GAFUSION DATA SOURCE** > **Connection pools**

Use this page to set properties that impact the timing of connection management tasks, which can affect the performance of your application. Consider the default values carefully; your application requirements might warrant changing these values.

Configuration

General Properties	Additional Properties
Scope cells:ipa26dorNode01Cell:nodes:ipa26dorNode01:servers:server1	<ul style="list-style-type: none"> Advanced connection pool properties Connection pool custom properties
* Connection timeout 0 seconds	
* Maximum connections 100 connections	
* Minimum connections 10 connections	
* Reap time 180 seconds	
* Unused timeout 1800 seconds	
* Aged timeout 0 seconds	
Purge policy EntirePool	

Apply OK Reset Cancel

- Set the values for **Connection timeout** to 0 seconds, **Maximum connections** to 100 connections, and **Minimum connections** to 10 connections as shown in the above figure. You can also define **Reap Time**, **Unused Timeout**, and **Aged Timeout** as required.

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:

- [Create Data Source](#)
- [Create GridLink Data Source](#)
- [Configure Multi Data Sources](#)
- [Advanced Settings for Data Source](#)
- [JDBC Connection Pooling](#)
 - For a Non RAC Database instance, Generic Data Source can be created. See [Creating Data Source](#).
 - For a RAC Database instance, Gridlink Data Source has to be created. See [Create GridLink Data Source](#).
 - When Load Balancing/Fail over is required, Multi Data Source has to be created. See [Configure Multi Data Sources](#).

Create Data Source

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

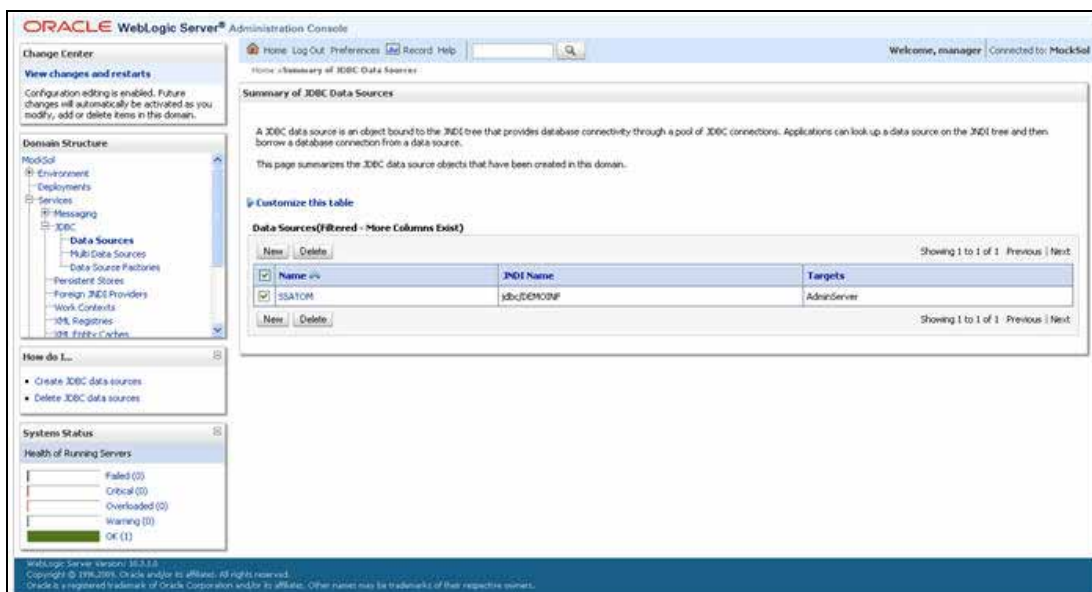
1. Open the following URL in the browser window:
<http://<ipaddress>:<administrative console port>/console>. (https if SSL is enabled). The Welcome window is displayed.
2. Log in with the Administrator Username and Password.

Figure 7–23 Welcome



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

Figure 7–24 Summary of JDBC Data Sources



4. 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 [Configure Multi Data Sources](#).

Figure 7–25 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/informationdomain"
- Same steps needs to be followed to create a mandatory data source pointing to the "configuration schema" of infrastructure with jdbc/FICMASTER 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 7–26 JDBC Data Source Properties

The screenshot shows the 'Create a New JDBC Data Source' wizard at the 'JDBC Data Source Properties' step. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. Below this, the title 'JDBC Data Source Properties' is followed by the instruction: 'The following properties will be used to identify your new JDBC data source.' The 'Database Type' is set to 'Oracle'. A note asks: 'What database driver would you like to use to create database connections? Note: * indicates that the driver is explicitly supported by Oracle WebLogic Server.' The 'Database Driver' dropdown menu is open, showing the selected option: '*Oracle's Driver (Thin XA) for Instance connections; Versions: 9.0.1 and later'. At the bottom, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

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 7–27 Transaction Options

The screenshot shows the 'Create a New JDBC Data Source' wizard at the 'Transaction Options' step. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. Below this, the title 'Transaction Options' is followed by the instruction: 'You have selected non-XA JDBC driver to create database connection in your new data source.' A question asks: 'Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.' There are four radio button options:

- 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 (LLR)* transaction optimization. Recommended in place of Emulate Two-Phase Commit.
- Logging Last Resource**
- Emulate Two-Phase Commit**: 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**
- One-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.

 At the bottom, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

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

Figure 7–28 Connection Properties

The screenshot shows a web-based wizard titled "Create a New JDBC Data Source". At the top, there are navigation buttons: "Back", "Next", "Finish", and "Cancel". The main section is titled "Connection Properties" and contains the instruction "Define Connection Properties." Below this, there are several questions and input fields:

- Question: "What is the name of the database you would like to connect to?"
Field: "Database Name" with the value "fsgbu".
- Question: "What is the name or IP address of the database server?"
Field: "Host Name" with the value "10.184.74.80".
- Question: "What is the port on the database server used to connect to the database?"
Field: "Port" with the value "1521".
- Question: "What database account user name do you want to use to create database connections?"
Field: "Database User Name" with the value "ssatom".
- Question: "What is the database account password to use to create database connections?"
Field: "Password" with masked characters "*****".
- Field: "Confirm Password" with masked characters "*****".

At the bottom of the form, there are navigation 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 7–29 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:
user=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?

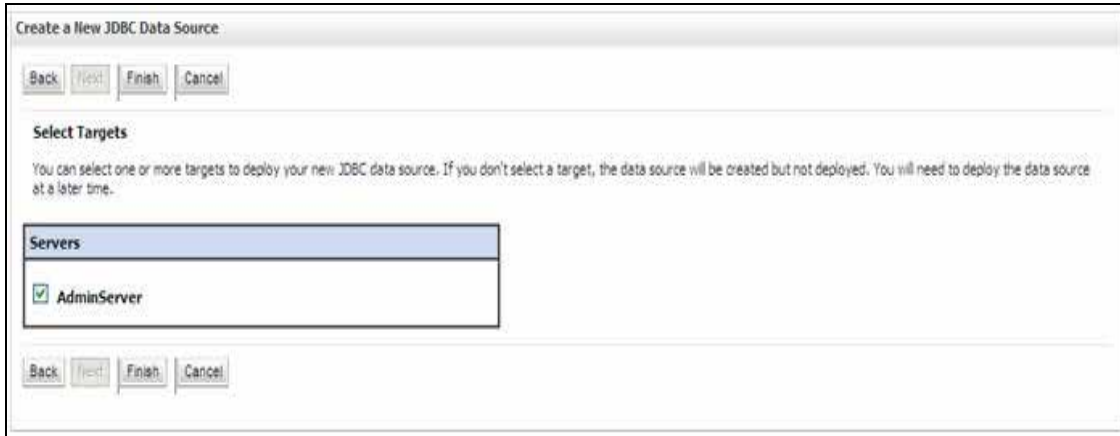
Test Table Name:
SQL SELECT 1 FROM DUAL

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 the following:
- "User ID" is the Oracle user ID that is created for the respective "Information Domain".

- "User ID" to be specified for data source with "FICMASTER" 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 7–30 Select Targets

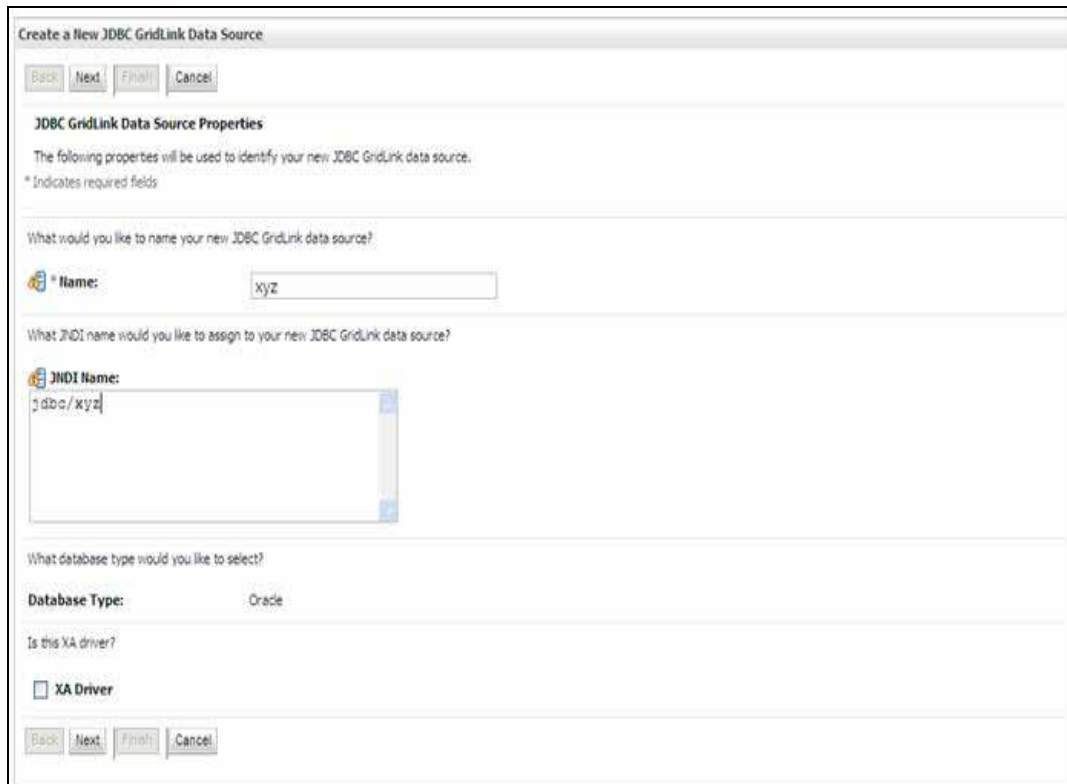


14. Select the **AdminServer** option and click **Finish**.

Create 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 7–31 Create a New JDBC GridLinkData Source



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

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

Figure 7–32 JDBC GridLinkData Source- Connection Properties

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

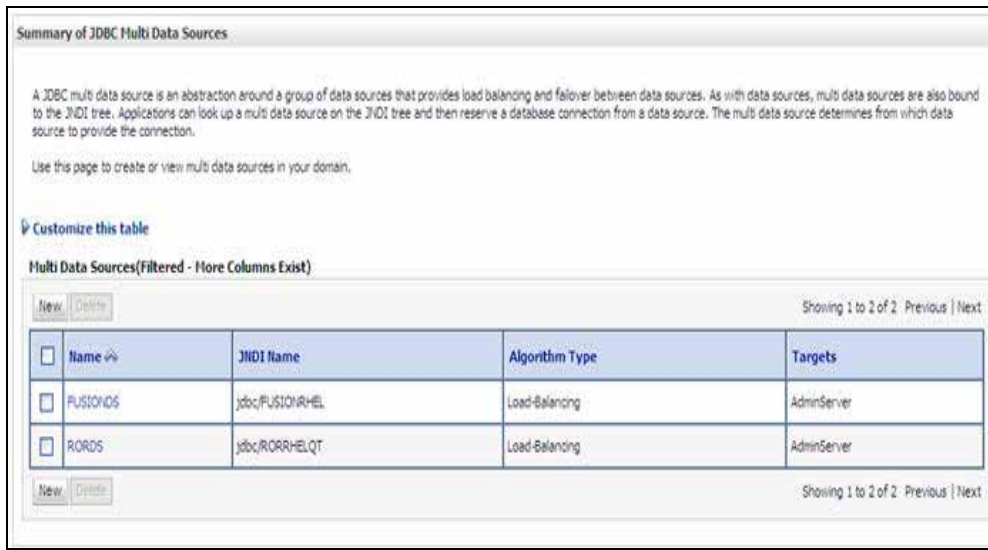
Configure Multi Data Sources

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.

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.

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

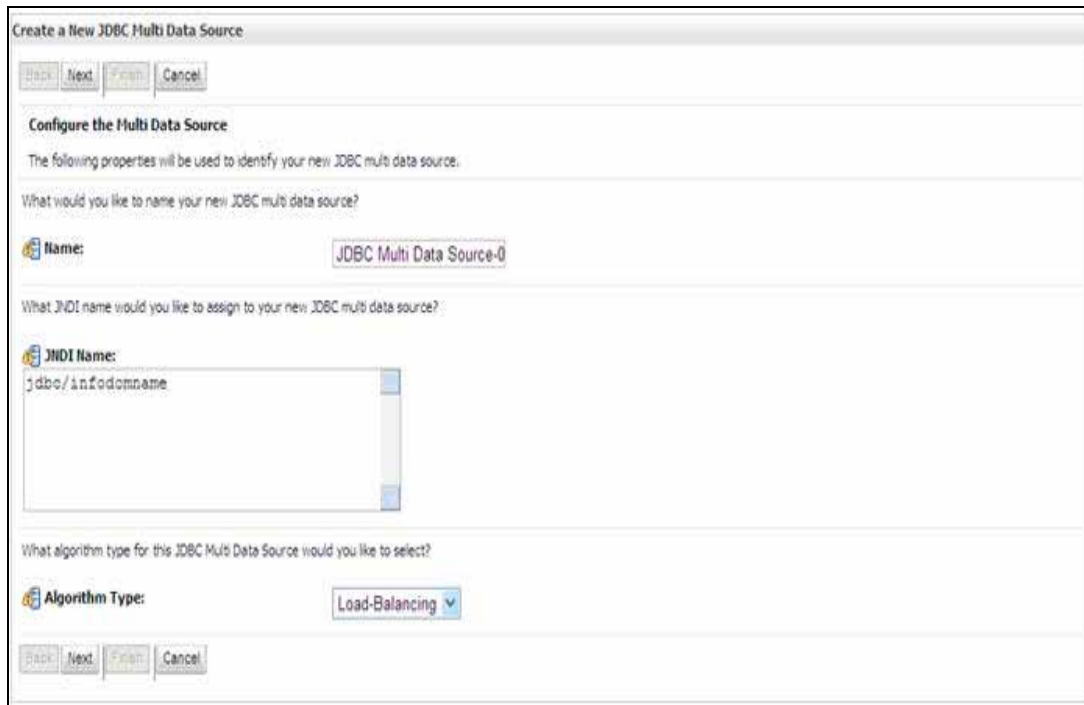
Figure 7–33 Summary of JDBC Multi Data Sources



4. Click **New**. The New JDBC Multi Data Source screen is displayed.

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

Figure 7–34 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 following:

- The JNDI Name has to be specified in the format `jdbc/infodomain`.
- 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/FICMASTER` 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 7–35 Select Targets



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

Figure 7–36 Select Data Source Type



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

Figure 7–37 Add Data Sources



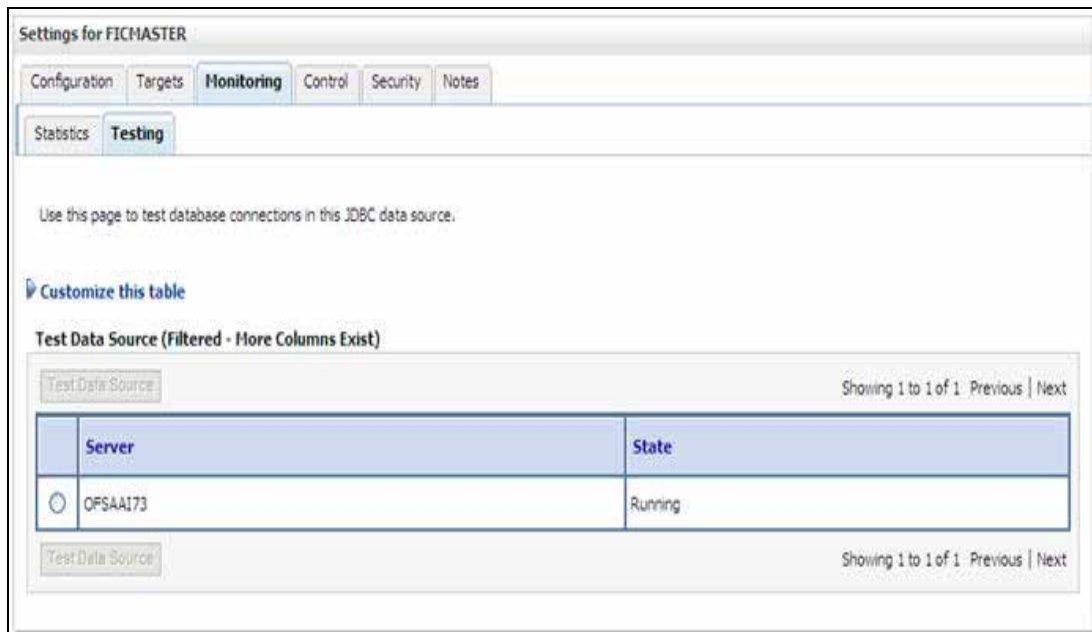
8. Map the required Data Source from the Available Data Sources. Click **Finish**.
The New JDBC Multi Data Source is created with added data sources.

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 page, and check the **Test Connection of Reserve** checkbox (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, FICMASTER.

Figure 7-38 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 steps given above to recreate the data source.

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-<INFODDOM_NAME>*
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

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

Copy the JDBC driver file depending on your Oracle database version. As OFSAAI is certified on Oracle 11gR2, copy the Oracle JDBC driver file, "ojdbc6.jar" from <Oracle Home>/jdbc/lib and place it in <Tomcat Home>/lib.

This section covers the following topics:

- [Create Data Source](#)

- **JDBC Connection Pooling**

Create Data Source

To create "data source" for Infrastructure application, navigate to <Tomcat Home>/conf and edit the following block of text by replacing the actual values in server.xml.

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 DEV and the schema name was mentioned as ofsaconf, then the actual schema created in the database would be DEV_ofsaconf.

```
<Context path ="/<context name>" docBase="<Tomcat Installation
Directory>/webapps/<context name>" debug="0" reloadable="true"
crossContext="true">
<Resource auth="Container"
    name="jdbc/FICMASTER"
    type="javax.sql.DataSource"
    driverClassName="oracle.jdbc.driver.OracleDriver"
    username="<user id for the configuration schema database>"
    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/< INFORMATION DOMAIN NAME >"
type="javax.sql.DataSource"
    driverClassName="oracle.jdbc.driver.OracleDriver"
    username="<user id for the database>"
    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 following:

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.

JDBC Connection Pooling

To define the JDBC connection pooling, do the following:

1. Copy `$ORACLE_HOME/jdbc/lib/ojdbc<version>.jar` to the path `$TOMCAT_DIRECTORY/lib/`.
2. Edit the `server.xml` present under the path `$TOMCAT_DIRECTORY/conf/` with the below changes, which is required for connection pooling.

```
<Context path="/" $CONTEXTNAME$ " docBase=" $APP_DEPLOYED_PATH$ " debug="0"
reloadable="true" crossContext="true">
```

```
  <Resource auth="Container"
    name="jdbc/ $INFODOM_NAME$"
    type="javax.sql.DataSource"
    driverClassName="oracle.jdbc.driver.OracleDriver"
    username=" $ATOMICSCHEMA_USERNAME$"
    password=" $ATOMICSCHEMA_PASSWORD$"
    url=" $JDBC_CONNECTION_URL"
    maxActive="100"
    maxIdle="30"
    maxWait="10000"
    removeAbandoned="true" removeAbandonedTimeout="60"
    logAbandoned="true" />
```

```
</Context>
```

Note the following:

Note:

- \$APP_DEPLOYED_PATH\$ should be replaced by OFSAAI application deployed path.
- \$INFODOM_NAME\$ should be replaced by Infodom Name.
- \$ATOMICSCHEMA_USERNAME\$ should be replaced by Atomic schema database user name.
- \$ATOMICSCHEMA_PASSWORD\$ should be replaced by Atomic schema database password.
- \$JDBC_CONNECTION_URL should be replaced by JDBC connection string jdbc:Oracle:thin:<IP>:<PORT>:<SID>. For example, jdbc:oracle:thin 10.80.50.53:1521:soluint
- 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 DEV and the schema name was mentioned as ofsaconf, then the actual schema created in the database would be DEV_ofsaconf.

■ **Class Loader Configuration for Apache Tomcat**

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.

This appendix covers the following topics:

- [Creating EAR/WAR File](#)
- [Deploying EAR/WAR File](#)

Creating EAR/WAR File

This section includes the following topics:

- [Creating WebSphere EAR/WAR File](#)
- [Creating WebLogic EAR/WAR File](#)
- [Creating Tomcat EAR/WAR File](#)

Creating WebSphere EAR/WAR File

The EAR files are required to assemble servlets, .jsp files, web pages, and other static content into a deployable unit. The EAR file is created to reflect the changes made to the **web.xml** file.

To create WebSphere EAR/WAR File, follow these steps:

1. Navigate to the "\$FIC_WEB_HOME" directory on the machine in which Infrastructure Web components have been installed and execute the command:

```
./ant.sh
```
2. This triggers the creation of EAR file -<contextname>.ear. The <contextname> is the name given during installation.
3. On completion of the EAR files creation, the "BUILD SUCCESSFUL" and "Time taken" message is displayed and you will be returned to the prompt.
4. The EAR file - <contextname>.ear - is created on the machine on which Infrastructure Web components are installed under \$FIC_WEB_HOME directory.

Note: This process overwrites any existing version of EAR file that exists in the path.

Creating WebLogic EAR/WAR File

The EAR files are required to assemble servlets, .jsp files, web pages and other static content into a deployable unit. This EAR file creation is required to reflect the changes made to the **web.xml** file.

To create WebLogic EAR/WAR File, follow these steps:

1. Navigate to the path "`<WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/bin/`".
2. Start WebLogic Domain by executing the command:

```
./startWeblogic.sh -d64
```
3. Navigate to the "`$FIC_WEB_HOME`" directory in the machine in which Infrastructure Web components have been installed.
4. Execute the command:

```
./ant.sh
```

This will trigger the creation of EAR file - `<contextname>.ear`. Here `<contextname>` is the context name given during installation.
5. On completion of the EAR files creation, the "BUILD SUCCESSFUL" and "Time Taken" message is displayed and you will be returned to the prompt.
6. The EAR file - `<contextname>.ear` - is created on the machine on which Infrastructure Web components are installed under "`$FIC_WEB_HOME`" directory.

Note: This process overwrites any existing version of EAR file in the path.

Creating Tomcat EAR/WAR File

The WAR files are required to assemble servlets, .jsp files, web pages, and other static content into a deployable unit.

To create Tomcat EAR/WAR File, follow these steps:

1. On the machine in which Infrastructure Web components have been installed, navigate to the path `$FIC_WEB_HOME`.
2. Execute the command:

```
./ant.sh
```

This will trigger the creation of WAR file - `<contextname>.war`. The `<contextname>` is the name given during installation.
3. On completion of the WAR files creation, a confirmation message will be displayed and you will be returned to the prompt.
4. The WAR file - `<contextname>.war` - is created on the machine on which Infrastructure Web components are installed under `$FIC_WEB_HOME` directory.

Note the following:

- This process will not overwrite any existing version of WAR file that exists in the path. Rename/delete any existing war file.
- Proceed with the Tomcat WAR Files Deployment.

- Log on to the server in which Tomcat is installed.

Deploying EAR/WAR File

This section covers the following topics:

- [Deploy WebSphere EAR Files](#)
- [Deploy EAR/WAR file for WebLogic](#)
- [Deploy Tomcat WAR Files](#)

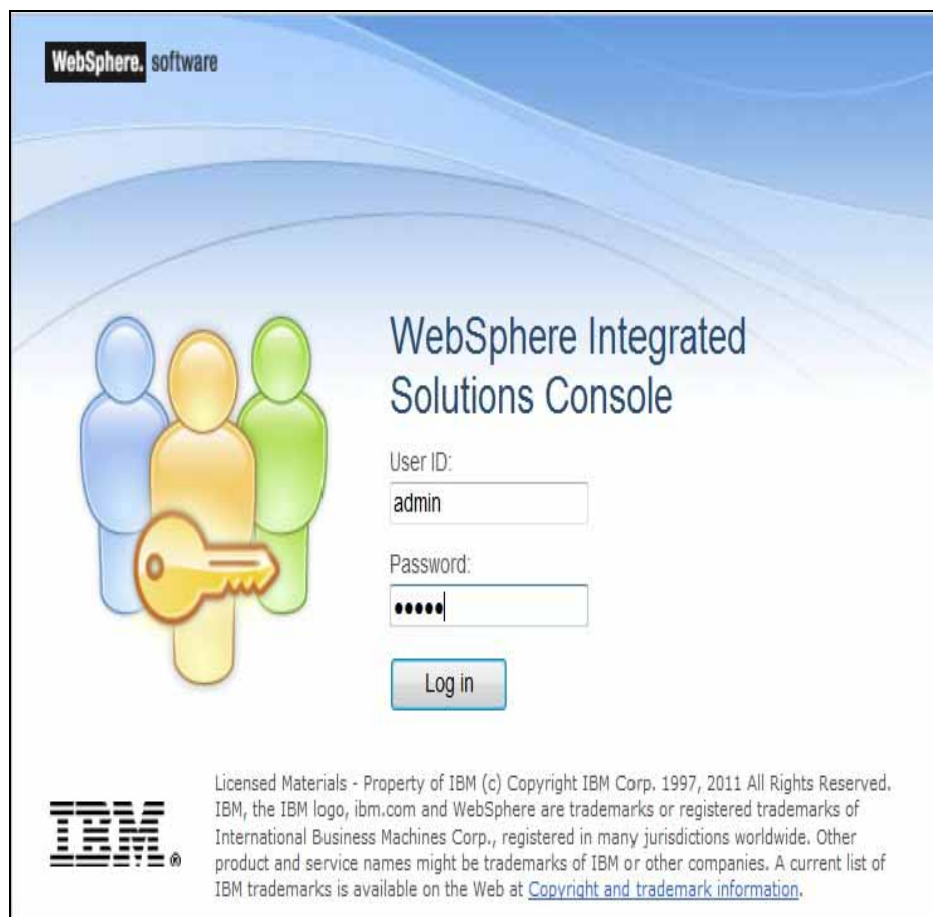
Deploy WebSphere EAR Files

To deploy Infrastructure application in WebSphere:

1. Start WebSphere Profile by navigating to the path "`<Websphere_Installation_Directory>/IBM/WebSphere/AppServer/profiles/<Profile_Name>/bin/`" and execute the command:

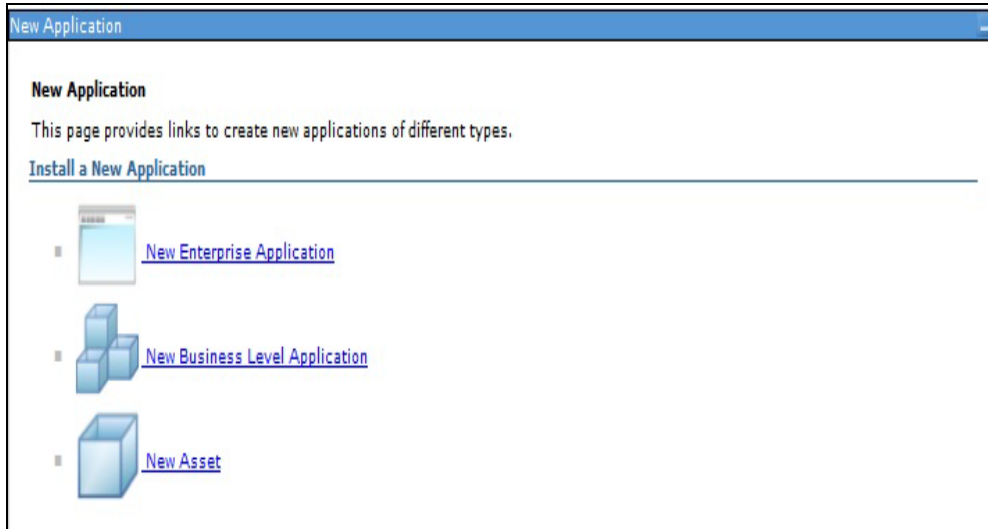
```
./startServer.sh server1
```
2. Open the following URL in the browser: `http://<ipaddress>:<Administrative Console Port>/ibm/console`. (https if SSL is enabled). The login screen is displayed.

Figure 7–39 Login Window



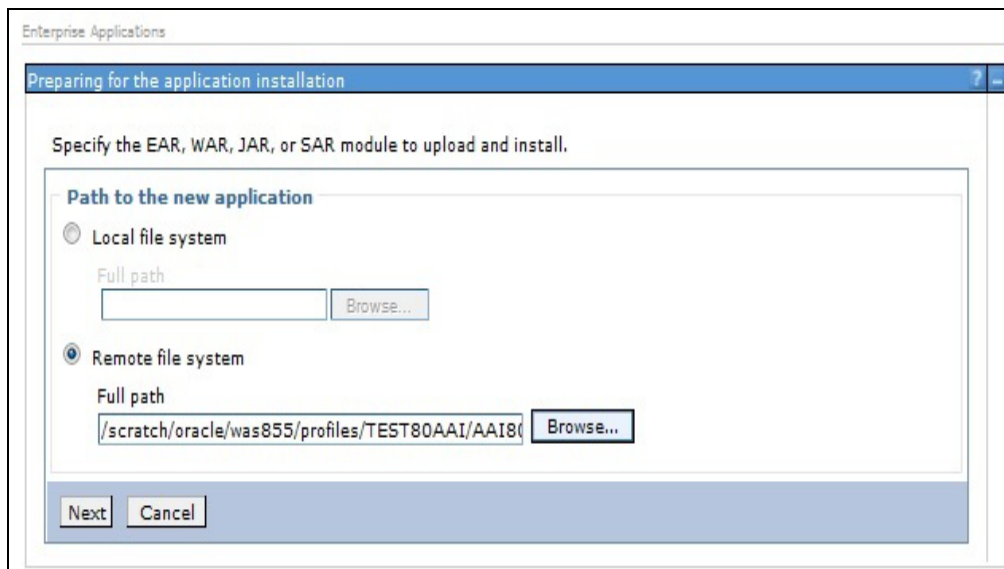
3. Enter the user credentials which has administrator rights and click **Log In**.
4. From the LHS menu, select **Applications** and click **New Application**. The New Application window is displayed.

Figure 7-40 New Application

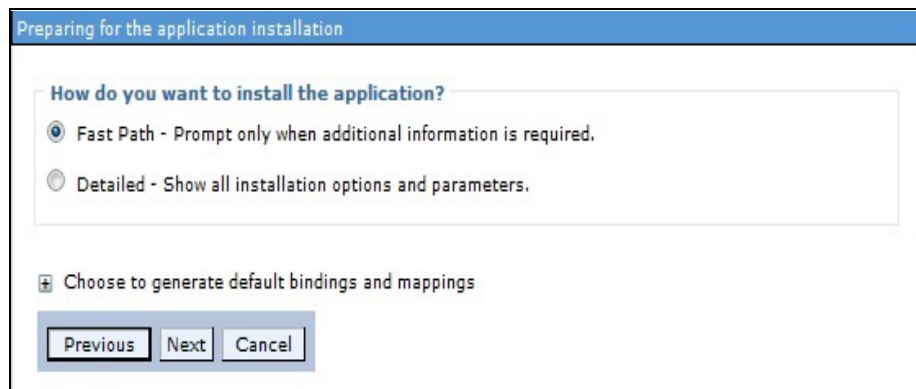


5. Click **New Enterprise Application**. The Preparing for the application installation window is displayed.

Figure 7-41 Preparing for the application installation



6. Select **Remote File System** and click **Browse**. Select the EAR file generated for OFSAAI to upload and install. Click **Next**.

Figure 7-42 Installation Options

7. Select the **Fast Path** option and click **Next**. The Install New Application window is displayed.

Figure 7-43 Install New Application

Install New Application

Specify options for installing enterprise applications and modules.

→ **Step 1: Select installation options**

[Step 2: Map modules to servers](#)

[Step 3: Summary](#)

Select installation options

Specify the various options that are available for your application.

Precompile JavaServer Pages files

Directory to install application

Distribute application

Use Binary Configuration

Deploy enterprise beans

Application name

Create MBeans for resources

Override class reloading settings for Web and EJB modules

Reload interval in seconds

Deploy Web services

Validate Input off/warn/fail

Process embedded configuration

File Permission

Allow all files to be read but not written to
 Allow executables to execute
 Allow HTML and image files to be read by everyone

Application Build ID

Allow dispatching includes to remote resources

Allow servicing includes from remote resources

Business level application name

Asynchronous Request Dispatch Type

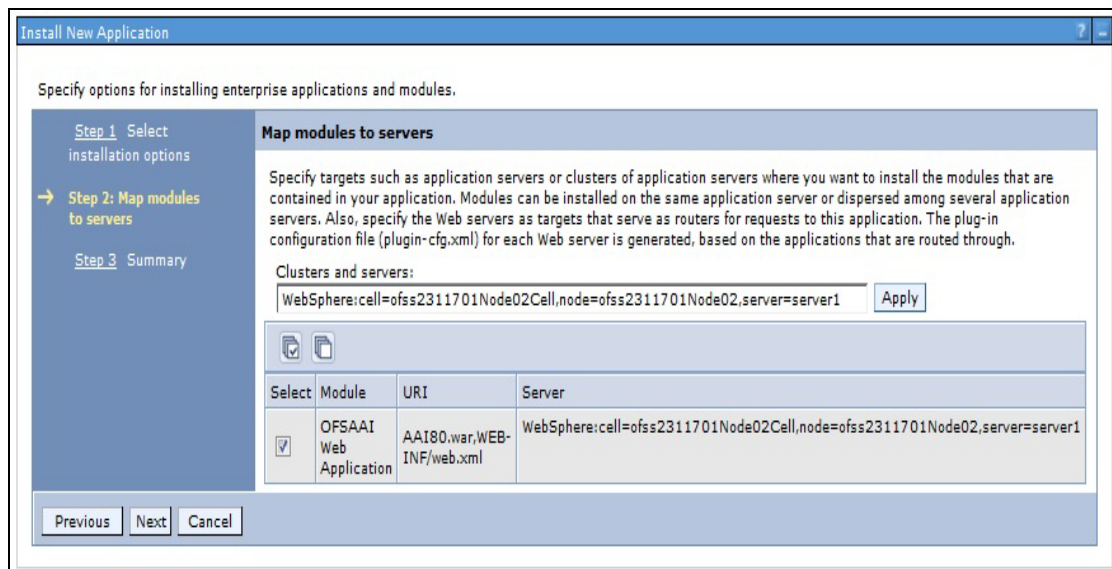
Allow EJB reference targets to resolve automatically

Deploy client modules

Client deployment mode

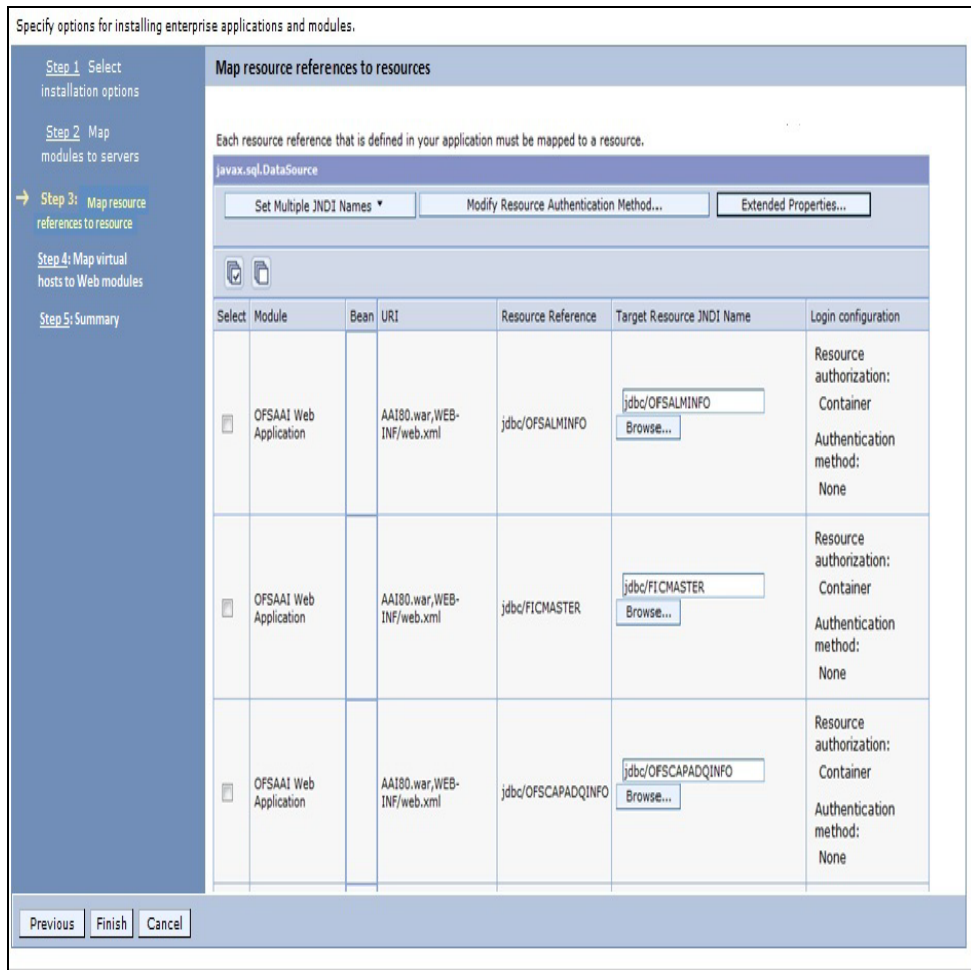
Validate schema

8. Enter the required information and click **Next**. The Map Modules to Servers window is displayed.

Figure 7-44 Map Modules to Servers

9. Select the **Web Application** and click **Next**. The Map Resource References to Resources window is displayed.

Figure 7–45 Map Resource References to Resources

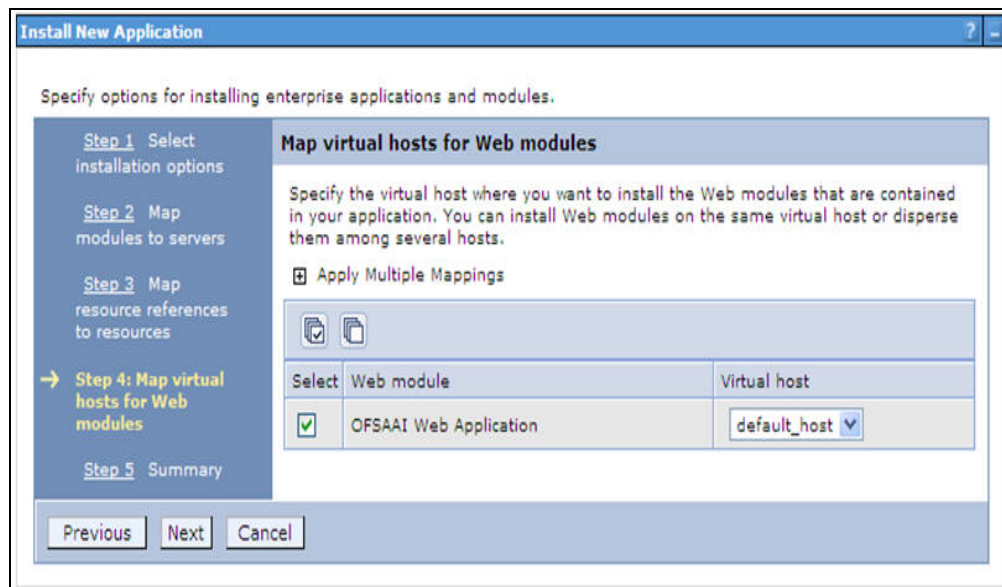


10. Map each resource defined in the application to a resource JNDI name defined earlier.

11. Click **Modify Resource Authentication Method** and specify the authentication method created earlier.

You can specify "config" for FICMASTER resource or "atomic" for atomic resource as the authentication method.

12. Select the **OFSAAI Web Application** check box and click **Next**. The Map Virtual hosts for Web Modules window is displayed.

Figure 7–46 Map Virtual host for Web Modules

13. Select the **Web Application** check box and click **Next**. The Summary page is displayed.

Figure 7-47 Summary

Specify options for installing enterprise applications and modules.

[Step 1](#) Select installation options

[Step 2](#) Map modules to servers

[Step 3](#) Map resource references to resources

[Step 4](#) Map virtual hosts for Web modules

→ **Step 5: Summary**

Summary

Summary of installation options

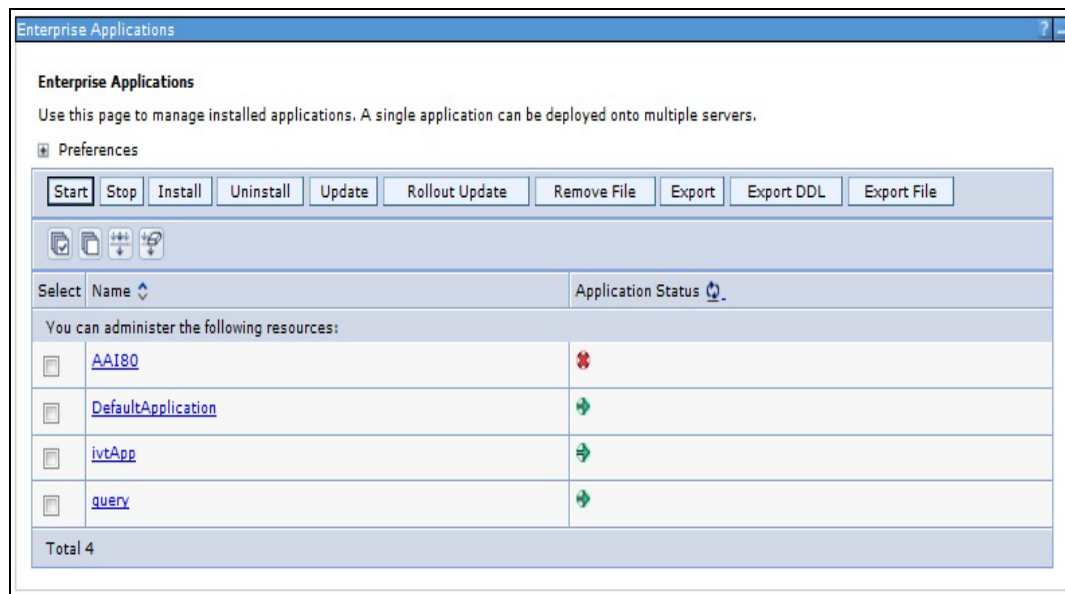
Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	AA180
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dll=755#.*\,so=755#.*\,a=755#.*\,s =755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here

Previous Finish Cancel

14. Click **Finish** and deploy the Infrastructure Application on WebSphere.
15. On successful installation, a message is displayed. Click **Save** and save the master file configuration. The details are displayed in the Master File Configuration window.

To start the application:

1. Expand **Applications > Application Type > WebSphere enterprise applications**. The Enterprise Applications window is displayed.

Figure 7–48 Enterprise Applications

2. Select the installed application and click **Start**.

Note:

- <profile name> is the profile name given while creating the WebSphere profile.
- <cell name > is the cell name given during profile creation
- <contextname> is the context name given during installation.

WebSphere HTTPS Configuration

Following are the steps for configuring an HTTPS Transport on WebSphere:

1. Create a profile using the Profile Creation Wizard in WebSphere.
2. Note down the https port specified during this process and use the same as servlet port or web server port during OFSAAI installation.
3. To enable https configuration on Infrastructure, assign value 1 to "HTTPS_ENABLE" in OFSAAI_InstallConfig.xml for Silent mode OFSAAI installation.

Deploy EAR/WAR file for 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 command:

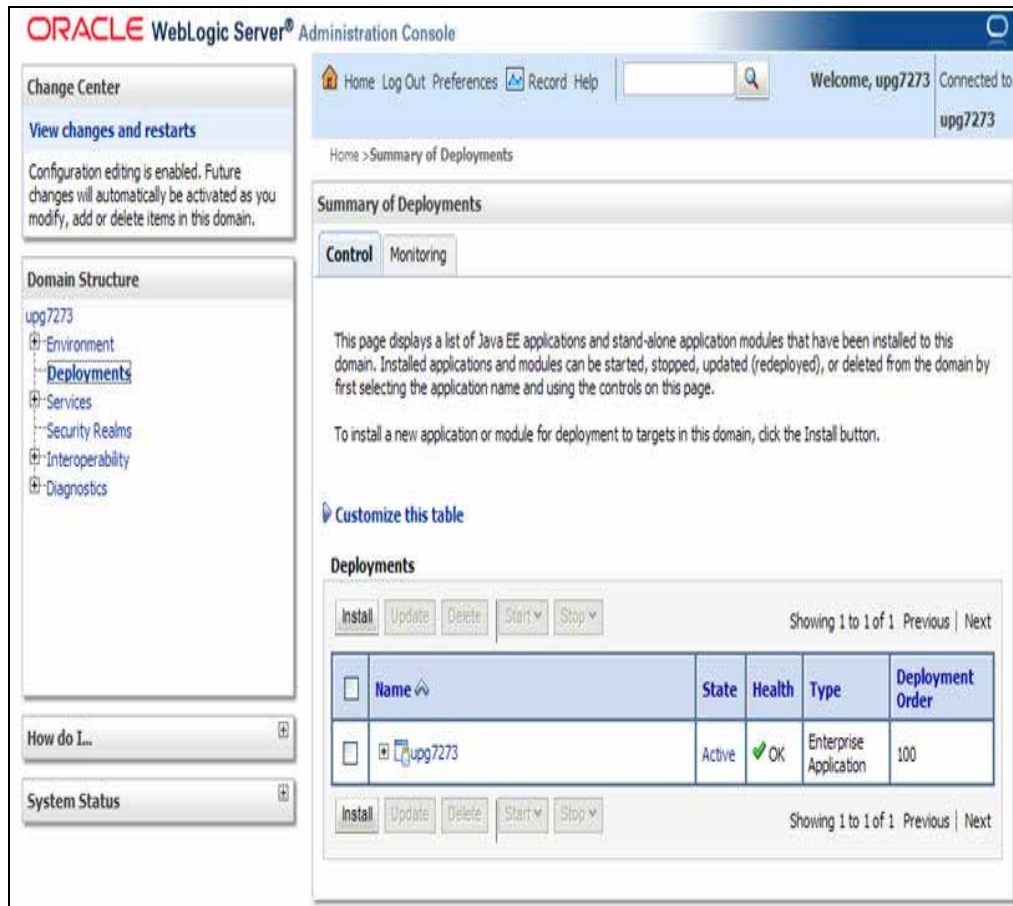
```
./startWebLogic.sh -d64 file
```

3. Open the 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 `./reveleusstartup.sh` as mentioned in [Starting 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 7-49 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**.

Explode EAR

To explode EAR, follow the below steps:

1. Create the "applications" folder under domain name. For example, `"/Bea/user_projects/domains/ <Domain _name>/applications"`.

2. **Create <context_name>.ear folder under "applications" folder.**
3. **Copy the <\$FIC_WEB_HOME/<context_name>.ear file to <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/.**
4. **Explode the <context_name>.ear file by executing the command:**

```
jar -xvf <context_name>.ear
```
5. **Delete the <context>.ear and < context >.war file (recently created).**
6. **Create a directory <context_name>.war under <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications.**
7. **Copy <\$FIC_WEB_HOME/<context_name>.war file to <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear/.**
8. **Explode the <context_name>.war file by executing the following command to get the directory structure:**

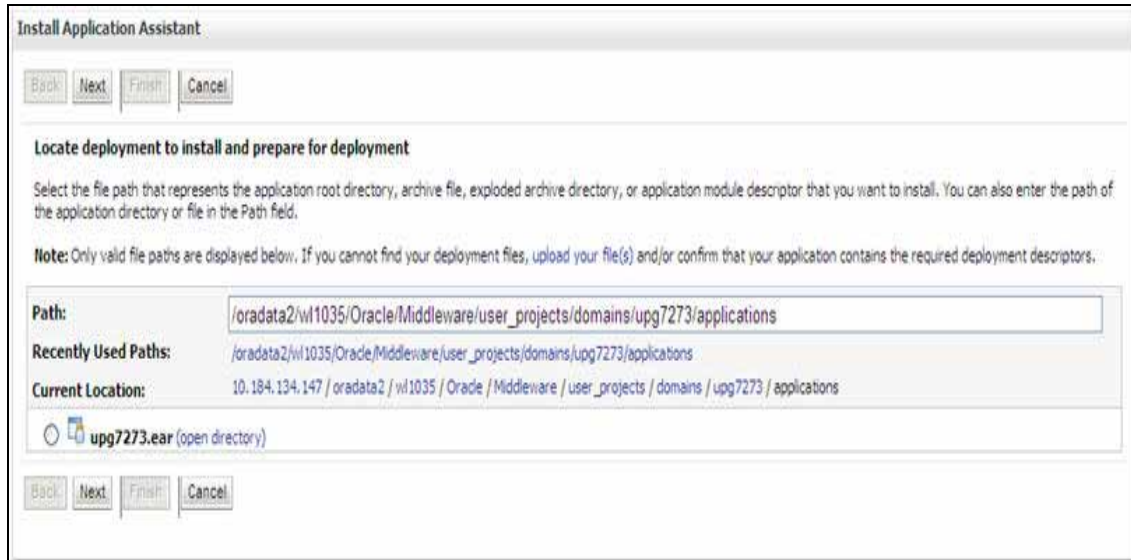
```
jar -xvf <context_name>.war
```

Install Application

To install Application:

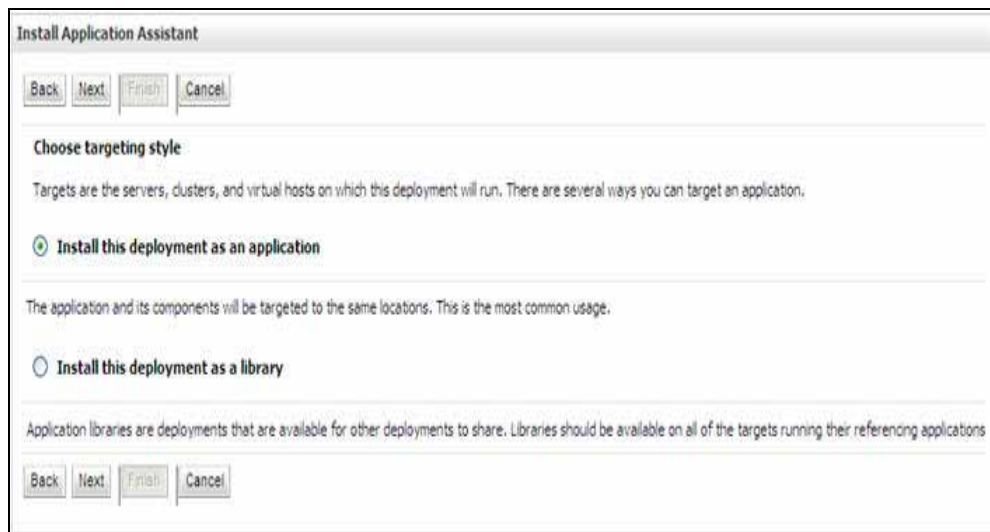
1. Open the Install Application Assistant.

Figure 7–50 Install Application Assistant



2. Click Next.

Figure 7–51 Install Application Assistant



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 7–52 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 7–53 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: DOOnly: 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 7-54 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:	/oradata2/111035/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:	<input type="text" value="100"/>	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:	<input type="text"/>	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](#)

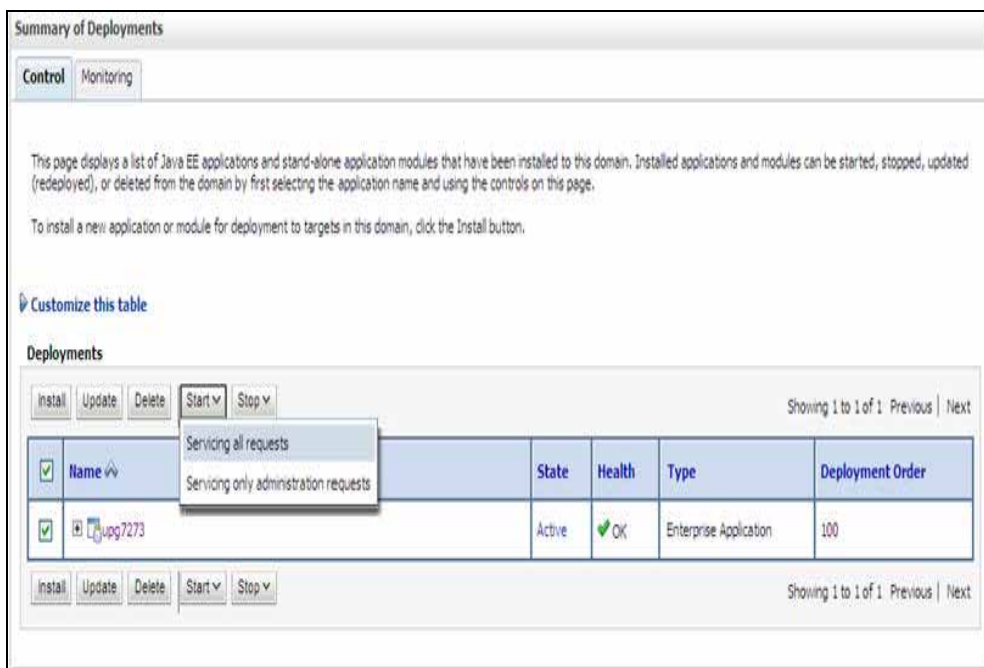
Name ↕	Type
[-] upg7273	Enterprise Application
[-] EJBs	
[-] StatelessCacheBeanBean	EJB
[-] Modules	
[-] upg7273	Web Application
[-] beancache.jar	EJB Module
[-] Web Services	
None to display	

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.

- From the LHS menu, click **Deployments**. The Summary of Deployments window is displayed.

Figure 7-55 Summary of Deployments



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

Figure 7–56 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

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

Deploy Tomcat WAR Files

Before deploying the WAR files, ensure that the previously deployed applications of Infrastructure are uninstalled. See *Uninstalling Previously Deployed WAR Files in Tomcat* for the procedure to uninstall the previously deployed Infrastructure war files.

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

1. Open the URL in Browser window: `http://<IP address>:<Tomcat server port>`. (https if SSL is enabled). The Tomcat home window is displayed.


Figure 7-57 Tomcat home

Home Documentation Configuration Wiki Mailing Lists Find Help

Apache Tomcat/7.0.19

The Apache Software Foundation
http://www.apache.org/

If you're seeing this, you've successfully installed Tomcat. Congratulations!

 Recommended Reading:

- [Security Considerations HOW-TO](#)
- [Manager Application HOW-TO](#)
- [Clustering/Session Replication HOW-TO](#)

Server Status
Manager App
Host Manager

Developer Quick Start

- [Tomcat Setup](#)
- [Realms & AAA](#)
- [Servlet Examples](#)
- [Servlet Specifications](#)
- [First Web Application](#)
- [JDBC Data Sources](#)
- [JSP Examples](#)
- [Tomcat Versions](#)

Managing Tomcat

For security, access to the `manager.webapp` is restricted. Users are defined in:

```
$CATALINA_HOME/conf/tomcat-users.xml
```

In Tomcat 7.0 access to the manager application is split between different users.
[Read more...](#)

- [Release Notes](#)
- [Changelog](#)
- [Migration Guide](#)
- [Security Updates](#)

Documentation

- [Tomcat 7.0 Documentation](#)
- [Tomcat 7.0 Configuration](#)
- [Tomcat Wiki](#)

Find additional important configuration information in:

```
$CATALINA_HOME/RUNNING.txt
```

Developers may be interested in:

- [Tomcat 7.0 Bug Database](#)
- [Tomcat 7.0 JavaDocs](#)
- [Tomcat 7.0 SVN Repository](#)
- [Tomcat 7.0 Examples](#)

Getting Help

FAQ

Mailing Lists

The following mailing lists are available:

- announce@tomcat.apache.org
Important announcements, releases, security vulnerability notifications. (Low volume).
- users@tomcat.apache.org
User support and discussion
- taglibs-user@tomcat.apache.org
User support and discussion for [Apache Taglibs](#)
- dev@tomcat.apache.org
Development mailing list, including commit messages

Other Downloads	Other Documentation	Get Involved	Miscellaneous	Apache Software Foundation
Tomcat Connectors	Tomcat Connectors	Overview	Contact	
Tomcat Native	mod_ik Documentation	SVN Repositories	Legal	Who We Are
Taglibs	Tomcat Native	Mailing Lists	Sponsorship	Heritage
Deployer	Deployer	Wiki	Thanks	Apache Home
				Resources

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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**. (For user creation in tomcat, see "[Tomcat User Administration](#)". The Tomcat Web Application Manager window is displayed with the list of all the applications deployed.

Figure 7-58 Tomcat Web Application Manager

Context Path	Application Name	Enabled	State	Operations
/host-manager	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/ofsa73st	OFSAAI Web Application	true	0	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/7.0.19	1.6.0_25-b06	Sun Microsystems Inc.	Linux	2.6.18-194.el5xen	amd64	ICLV86DOR	10.184.134.146

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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 `"$FIC_WEB_HOME/<context-name>.war"`) in the **WAR or Directory URL** field and click **Deploy**.

On successful application deployment, a confirmation message is displayed.

- For information on starting the Tomcat server, see [Starting Infrastructure Services](#).

This appendix includes the following sections:

- [Additional Configurations](#)
- [OFSAA Landing Page](#)
- [Cleaning up the environment](#)

Additional Configurations

Refer to the following sections for detailed module specific post installation configurations.

This section covers the following topics:

- [FTP/SFTP Configuration for Excel/Document Upload](#)
- [Configuration for Dimension and Hierarchy Management](#)
- [Configure Infrastructure Server Memory](#)
- [Internet Explorer Settings](#)
- [Retrieve Patch Information](#)
- [OLAP Data Server Configuration](#)
- [Configure Infrastructure Ports](#)
- [Configure OFSAAI Web Services](#)
- [Configure OFSAAI Web Services](#)
- [Deploy OFSAAI Web Services](#)
- [Configuration to Enable Parallel Execution of DML statements](#)
- [Configure Message Details in Forms Designer](#)
- [Clearing Application Cache](#)
- [Changing the CONFIG/ ATOMIC Schema passwords](#)
- [Configure Java Virtual Machine](#)
- [Configure Internal Service \(Document Upload/Download\)](#)

FTP/SFTP Configuration for Excel/Document Upload

In OFSAA, certain modules require transfer of files from the web application server to the OFSAA server over SSH. Follow these steps to ensure the OFSAA server recognizes the web application server during file transfers.

1. Login to the web application server.
 Example: <App Layer path>scp nohup.out <user>@<Web Server path>:/export/home/<user>
2. Type sftp <user>@<OFSAA Server>
3. Specify Yes when prompted for permission. Are you sure you want to continue connecting (Yes/No)?
4. This will add an entry into the "known_hosts" file.
5. A confirmation message is displayed: Permanently added <OFSAA Server> RSA) to the list of known hosts..

Configuration for Dimension and Hierarchy Management

These configuration changes are applicable when Dimension Management features provided in OFSAAI are used. You can open `AMHMConfig.properties` file present in the `$FIC_WEB_HOME/webroot/conf` directory to set the properties for the following:

- [Configure Member Deletion](#)
- [Configure Attribute Default Date Format](#)
- [Configure Members Reverse Population](#)
- [Configure Members Reverse Population](#)
- [Configure Maximum Levels allowed in Hierarchies](#)
- [Configure Node Limit for a Hierarchy Tree](#)

Configuration for Dimension and Hierarchy Management has to be done only after the application/solution installation is done. The properties specific to Information Domain are:

- `$INFODOM$=<Name of the Information Domain>`
- `$DIMENSION_ID$=<Dimension ID for which the property to be set>`

Configure Member Deletion

This property should be set to allow the user to delete the Members for the Dimension.

Table D-1 Member Deletion Configuration

Value	Code	Example
# Member Deletion Configuration - VALUE-Y/N	MEMBER_DEL-\$INFODOM\$-\$DIME NSION_ID\$=\$VALUES	MEMBER_DEL-ORAFUSION-1=Y

Configure Attribute Default Date Format

This property should be set to display the Default Date Format for Date type Attribute in *Attributes* window.

Table D-2 Attribute Default Date Format

Value	Code	Example
# Attribute Default Date Format - DB_DATE_ FORMAT:DD-MON-YYYY	ATTR_DEF_DATE_ FORMAT-\$INFODOMS=\$ DB_DATE_FORMATS	ATTR_DEF_DATE_ FORMAT-ORAFUSION=D D/MON/YYYY

Configure Members Reverse Population

This property should be set for reverse population of Members for the Dimensions in required Information Domains.

Table D-3 Members Reverse population

Value	Code	Example
# Members Reverse population - VALUE- Y/N	MEMBER_REVERSE_ POP-\$INFODOMS-\$DIME NSION_IDS=\$VALUES	MEMBER_REVERSE_ POP-ORAFUSION-1=Y

Configure Hierarchy Reverse Population

This property should be set for reverse population of Hierarchies for the Dimensions in required Information Domains.

Table D-4 Hierarchy Reverse population

Value	Code	Example
#Hierarchy Reverse population - VALUE- Y/N	HIERARCHY_REVERSE_ POP-\$INFODOMS-\$DIME NSION_IDS=\$VALUES	HIERARCHY_REVERSE_ POP-ORAFUSION-1=Y

Configure Maximum Levels allowed in Hierarchies

This property is required to set the maximum levels allowed to build the Hierarchies tree structure.

Table D-5 Hierarchy Maximum level allowed

Value	Code	Example
#Hierarchy Maximum level allowed for the hierarchy in particular Information Domain - VALUE - Integer number	MAX_ DEPTH-\$INFODOMS=\$VA LUES	MAX_DEPTH-FUSION=15

The Maximum Levels allowed in the hierarchies is less than or equal to 15. If the Hierarchy Reverse population is set as "Y" and more than 15 levels are created. Then an alert is displayed as "*The number of levels exceeding the limit*".

If the maximum level allowed is set as more than 15 and hierarchy reverse population is set as "Y" then an error is displayed as "*Error occurred in Reverse populating the hierarchy*".

Configure Node Limit for a Hierarchy Tree

This property is required to display the Hierarchy as a small or a large hierarchy. If the tree node limit exceeds the set limit, the Hierarchies are treated as large Hierarchy.

Table D–6 Hierarchy Tree node limit

Value	Code	Example
#Tree node limit for the hierarchy - Values is Integer number	TREE_NODE_LIMIT=\$VALUES	TREE_NODE_LIMIT=30

Configure Infrastructure Server Memory

The memory settings for Infrastructure Application Server, Tomcat, WebSphere, and WebLogic can be edited for customizing memory settings and garbage collector settings depending on the available hardware configuration as explained below. These settings are base minimum and has to be incremented considering the deployment metrics into account. The increments are usually handled in multiples of 128mb for heap and 64mb for stack.

Infrastructure Application Server Memory Settings

You can configure the Infrastructure Application Memory settings as follows:

1. Locate `.profile` file.
2. Edit `X_ARGS` field in this file for customizing memory settings and garbage collector settings depends on the hardware configuration.

This has a default value `X_ARGS="-Xms200m"`

```
X_ARGS=" "$X_ARGS" $DELIM -Xmx2048m"
```

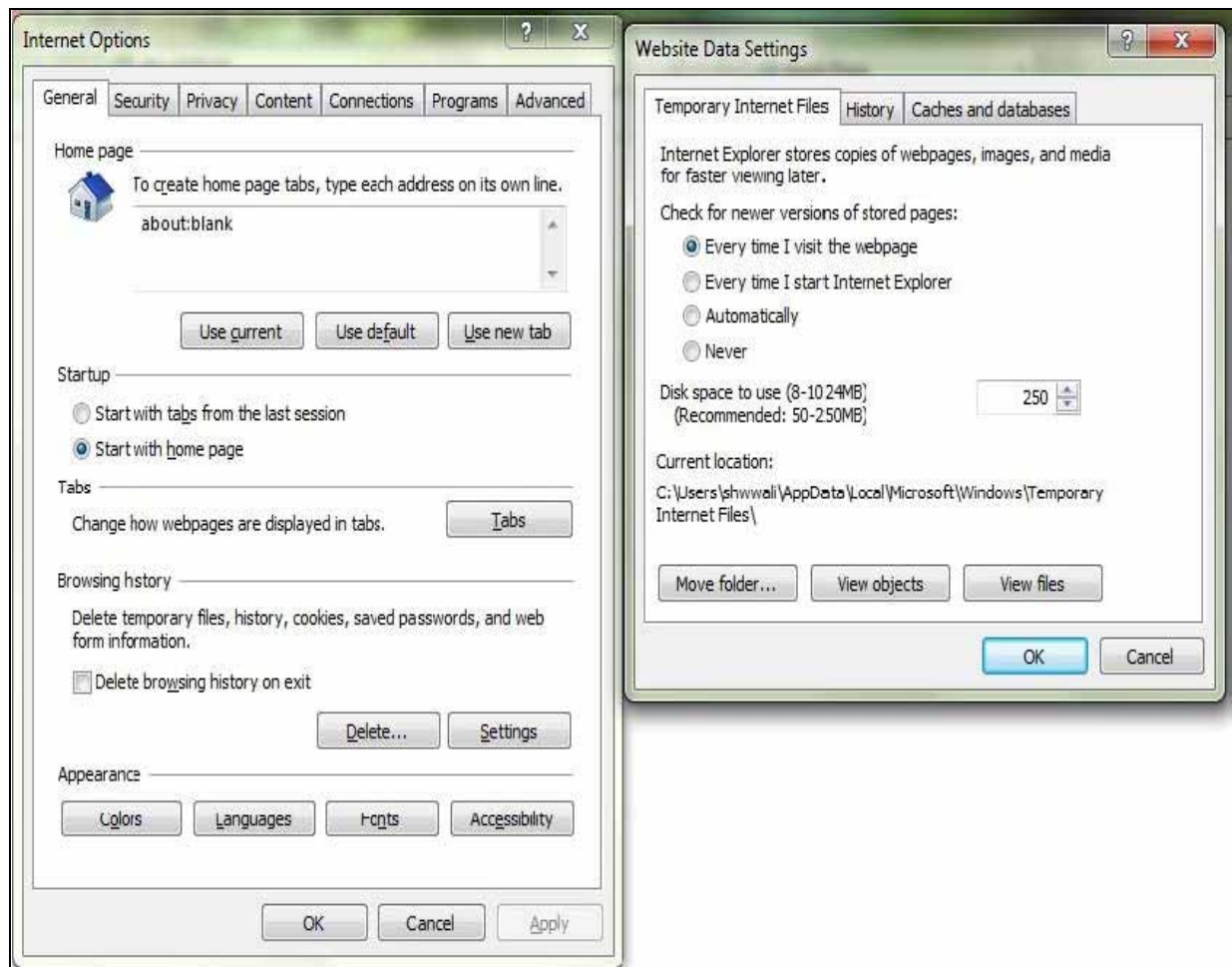
Note: This parameter is modified in 7.3.2 IR and you need to modify `X_ARGS_APP` variable in the `.profile` file to customize Java Memory Settings for Model Upload based on the Data Model size.

Internet Explorer Settings

Note: OFSAAI supports only default zoom setting in Internet Explorer, that is, 100%.
Cookies should be enabled.

The following browser settings have to be specified at every client machine prior to accessing the Infrastructure application.

1. Open **Internet Explorer**. Select **Tools > Internet Options**. The *Internet Options* window is displayed.
2. Click the **Settings** button. The *Settings* window is displayed.
3. Select the option **Everytime I Visit the webpage** and click **OK**.

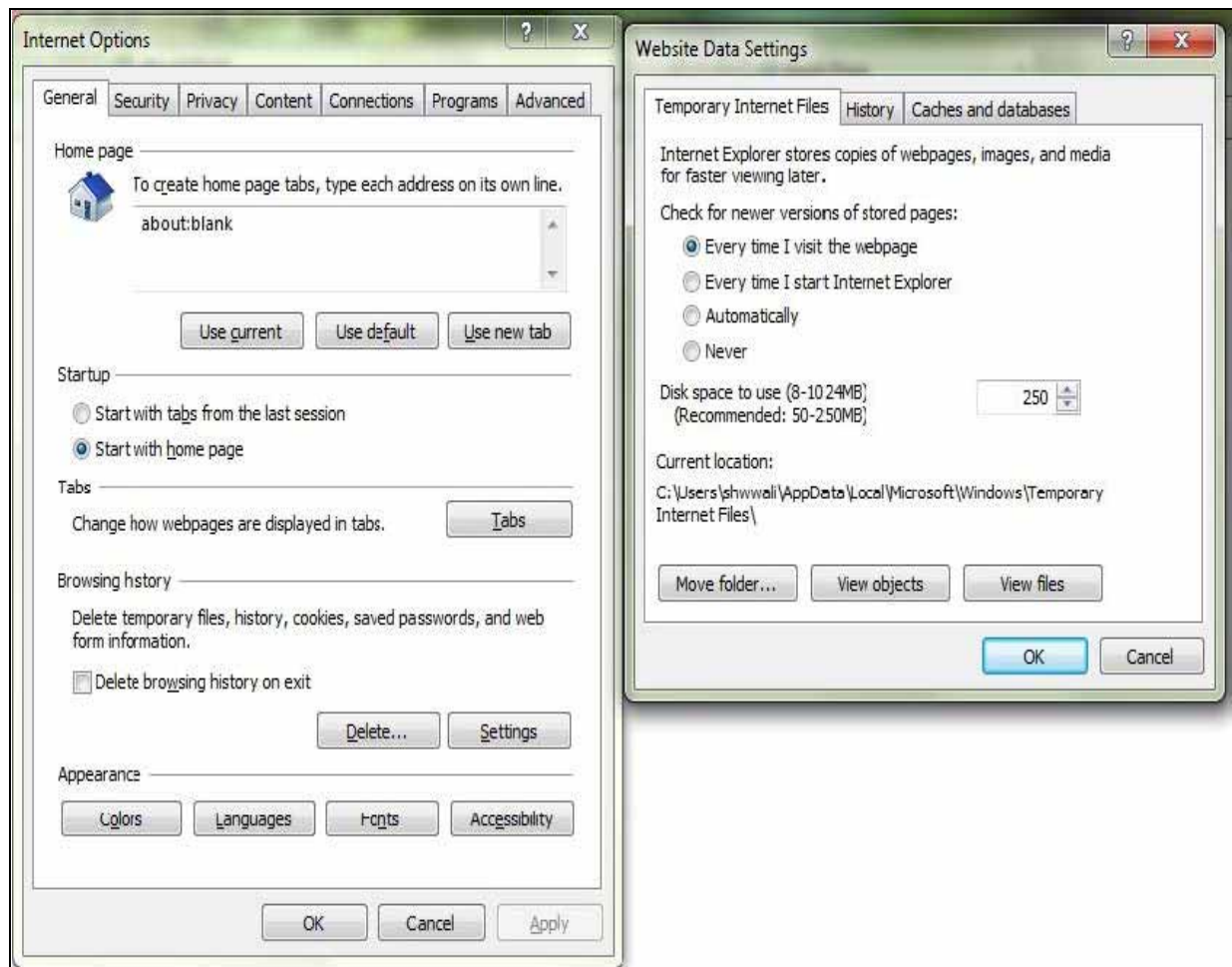
Figure D-1 Internet Options

4. In the *Internet Options* window, select the **Security** tab and select the **Internet** option under **Select a zone to view or change the security settings**.
5. Click **Default Level** under **Security level for this zone**.

Figure D-2 Internet Options



6. Click **OK** to save.
7. Click **Internet Explorer >> Tools >> Compatibility View Settings**.
8. Enter the OFSAA setup URL in the **Add this website** field.
9. Click **Add**.
10. Ensure the URL is listed under **Websites you've added to Compatibility View**.
11. In the *Internet Options* window, select the **Privacy** tab and select the **Turn on Pop-up Blocker** option under **Pop-up Blocker** settings.

Figure D-3 Internet Options- Popup Blocker Settings

12. Click **Settings**. The *Pop-up Blocker Settings* window is displayed.
13. Enter the URL of the OFSAA Application in the **Address of Website to Allow** field.
14. Click **Add**. The OFSAA URL is displayed in the Allowed Sites section.
15. Click **Close**.
16. Click **OK** in the *Internet Options* window.

Retrieve Patch Information

To identify the list of patches installed on your OFSAA setup, follow these steps:

1. Login to the OFSAA application as a user with Object AdminAdvanced Role.
2. Navigate to Object Administration tab.
3. Click **System Utilities**.
4. Click **Patch Information**.
5. The page displays the list of patches installed on the OFSAA setup across Applications/Platform.

OLAP Data Server Configuration

This section is applicable if you are using the OLAP feature of OFSAAI.

The following parameters must be set to ensure that the system limitations are not exceeded at any stage. The values for these OS parameters should be specified based on the expected load at each implementation site.

Example:

Process Memory Limit

Max Thread Stack Size

Max Number of Threads per Process

- **Sort Buffer settings:** This must be set at the Essbase application level appropriate to the anticipated load.
- **Shutdown and Restart:** During shutdown of OFSAAI Server that has an instance of Data Services that is communicating with an OLAP Data Server, it is imperative to ensure that the cleanup of the old instance is completed on the OLAP Data Server before restarting the OFSAAI Server. Pause for a period of time based on the load the system was subjected to, before restarting the Data Services subsystem.

Configure Infrastructure Ports

This step is applicable only in the event you wish to change any of the ports used by Infrastructure services after the installation process. The ports that are used by the Infrastructure application are distributed across the machines on which Infrastructure Web; Application, and Database components have been installed. Therefore you must perform the port changes on all the machines on which Infrastructure components have been installed.

"PortC.jar" can be executed in the following two modes.

- GUI
- CMD

To execute "PortC.jar" in GUI mode, ensure that the "Hummingbird Exceed" to be running and do the following:

1. Navigate to the path `$FIC_HOME` in each machine.
2. Enter the command

```
java -jar PortC.jar GUI
```

The *OFSAA Infrastructure Port Changer* window is displayed.

Figure 7–59 OFSAA Infrastructure Port Changer

Configure port numbers used by OFSAAInfrastructure.

OFSAAInfrastructure install directory:
/home/serupctg/ofsaif2g/rc

Application Layer
Database Layer
Web Layer

Infrastructure Java Port	3425
ICC Server Port	9815
ICC Native Port	9817
Infrastructure Native Port	8721
Infrastructure Agent Port	9812
OLAP Data Server Port	10101
Message Server Port	4376
Router Port	4379
AM Port	6702
Web Server Port	12123

Enter Database Details

Select your Database: Oracle

IP Address: 10.189.62.236

Port Number: 1521

SID: serupctg

Config schema username: nathiker

Config schema password: *****

Buttons: Cancel, Change

The OFSAA Infrastructure Port Changer window displays the following:

- The path in which Infrastructure components have been installed.
- The check-boxes corresponding to Application Layer, Database Layer, or Web Layer are enabled based on:
 - In the event you have performed a single-tier installation on the current machine, the check-boxes for all three components will be enabled.

If you have installed more than one category of components on the current machine, the corresponding checkboxes for the respective components you have installed will be enabled.

To edit the port value, enter the new port value. User has the option to change the required ports and leave the other ports unchanged. Only the ports for which values are modified will change and the ports that are unchanged will retain its default value.

Note: All ports on a machine must be unique. The range of port numbers that are given should preferably be between 1025 and 65535. The Servlet port can have 80 or 443 as port numbers if Default HTTP/HTTPS ports are being used.

- Select the **Database Type** as **Oracle** from the drop-down list.
- The **IP / Host Address** of the machine on which the corresponding database is installed will be populated.
- The **Port Number** on which the database is listening is displayed.
- The **SID** details are displayed.
- The **Configuration Schema username** is displayed.
- Enter the **Configuration schema password**.
- Click **Change** to initiate the port changes.

To execute `PortC.jar` in CMD mode:

1. Navigate to the path `$FIC_HOME`.
2. Enter the command:

```
java -jar PortC.jar CMD
```

Then enter the requested information to change the ports. Once the port numbers are changed in the Infrastructure configuration, a message will be displayed confirming the changes. The log "`Portchanger.log`" in the Infrastructure installation path provides the status of port changes performed.

For above port changes to take effect, a re-start of all Infrastructure servers is required.

Note: Do not execute the "`PortC.jar`" with CMD option in the "`nohup`" mode. The port changes are done only on Infrastructure web components where EAR/WAR files are deployed. After the port changes are done, you need to re-create the EAR/WAR files and re-deploy these files.

OFSAAI Setup Information Fetching Tool

Executing the `SetupInfo.jar` file available in the `FIC_HOME` path will help you retrieve the related information about the OFSAAI Set up such as Operating System Name and version, Database Type and Version, OFSAAI architecture, Log file locations and so on.

To execute "`SetupInfo.jar`" in console:

1. Navigate to the path `$FIC_HOME`.
2. Enter the command:

```
java -jar SetupInfo.jar
```

After execution, the output file location is displayed in the console.

Encryption Changer

This utility helps you to regenerate the new `AESCryptKey.ext` file and encrypt all the encrypted values of the OFSAAI setup according to the new key.

To execute `EncryptC.jar` in console:

1. Navigate to the path `$FIC_HOME`.
2. Enter the command:

```
java -jar EncryptC.jar
```

A confirmation message is displayed after execution.

Once executed, you need to create and deploy the EAR / WAR file depending on the configured Web Application Server. For more information, see [Configuring Web Application Servers](#).

Infrastructure LDAP Configuration

This provides you with the option of using LDAP (Lightweight Directory Access Protocol) authentication or Infrastructure SMS authentication for logging on to Infrastructure.

If you are using the Infrastructure authentication, the user and user group details, profile creation, function and role maintenance and other mappings can be done through the Infrastructure Administration module under Security Management. The data in this case, will be updated in the CSSMS table.

However, if you wish to use LDAP for user authentication, then you have to ensure that the LDAP server is installed and configured. Also make sure that OPEN LDAP 2.2.29+ is installed and configured in Windows machine. Before doing the following configuration, it is required to select the "Authentication type" as LDAP in the *Configuration* screen of Infrastructure. This screen can be accessed by selecting *System Configuration > Configuration* in the LHS menu of Infrastructure. In the Windows machine in which LDAP Server is installed, go to the OpenLDAP installation directory through the command prompt and execute the command "slapd -d 1" to start the LDAP server.

Configure Infrastructure "Configuration Schema"

In the Infrastructure "configuration schema", ensure the following entries in Configuration Table.

Table D-7 Configuration Schema

PARAMNAME	Description	PARAM Value Example
AUTHENTICATIONTYPE	Authentication type	2 - AUTHENTICATIONTYPE value must be 2 for LDAP
ROOTCONTEXT	The Root Context for the LDAP Directory	dc=<Reveleus>, dc=<com>
ROOTDN	The Root dn for LDAP directory	cn=<Manager>, dc=<Reveleus>, dc=<com>
ROOTPASS	Password for the Root	<secret>
LDAPURL	LDAP URL	<ldap://10.11.12.13.1234/>
LDAP_SSL_MODE	LDAP in SSL Mode	N for non - SSL and Y for SSL

Table D-7 (Cont.) Configuration Schema

PARAMNAME	Description	PARAM Value Example
HASSPASS	Should the user password be Hashed	FALSE or TRUE . When HASSPASS is set as FALSE , we need to have the ROOTDN value as "uid=ORCLADMIN, ou =Users, dc=OFSAAI, dc=com". ORCLADMIN is a dummy user, it will be replaced dynamically with the logged in user. When HASSPASS is set as TRUE , we need to have the ROOTDN value as "cn=orcladmin, cn=Users, dc=i-flex,dc=com" and proper oracladmin LDAP password as ROOTPASS. First OFSAAI connects to LDAP directory using orcladmin user and fetches the login user details and verifies the entered password.
RETRIEVE_DN	To retrieve Distinguished Name	TRUE

Note: ROOTCONTEXT, ROOTDN, and ROOTPASS entries should be same as in the slapd.conf file.

Configure OpenLDAP Files

1. Copy the reveleusSchema.schema from <Infrastructure Installation Directory> /ficapp/common/FICServer/conf/LDAP_LDIF folder to LDAPServer Schema folder.
2. Copy the Domains.ldif and Reveleus.ldif files from <Infrastructure Installation Directory>/ficapp/common/FICServer/conf/LDAP_LDIF folder to OpenLDAPServer folder.

Note: Make sure that the ROOTCONTEXT in the Domains.ldif and Reveleus.ldif files are the same as slapd.conf file.

3. Provide the appropriate entries for ROOTDN, ROOTPASS, and ROOTCONTEXT in slapd.conf file in the OpenLDAPServer folder.
4. Add the text "include schema/reveleusSchema.schema" as the first line of the slapd.conf file

Note: The above steps of the configuration are for OpenLDAP Server only. If you need to configure Infrastructure for any other LDAP Server, you will have to make the changes appropriately.

5. In the command prompt, navigate to the LDAP installation directory and execute the command "ldapadd -D"ROOTDN" -w ROOTPASS -f/data/Reveleus.ldif"

This is for creating the entries for Users, User Groups, Functions, Profiles, Segments, Domains, Roles, and HolidayMaster in the Data information Tree of LDAP.

6. Make an entry in the `Domains.ldif` file for each Information Domain that is created through the Infrastructure UI.

To add an entry corresponding to the new Information Domain to the `Domains.ldif` file, add the following block of text with the appropriate values:

Note: DSNID refers to Information Domain name.

```
dn: DSNID=<DSN ID>,ou=Domains,@LDAP_DIRECTORY_ROOTCONTEXT@
changetype: add
mappedsegments: <Mapped segments/~>
dsnid: <DSN ID>
infodomname: < Information Domain Name>
objectClass: Infodom
objectClass: top
infodomdescription: < Information Domain Description>
```

Example:

```
dn: DSNID=FUSIONMOCK, ou=Domains, dc=FTP1,dc=com
mappedsegments: ~
dsnid: FUSIONMOCK
infodomname: FUSIONMOCK
objectClass: Infodom
objectClass: top
infodomdescription: FUSIONMOCK
```

Then, navigate to LDAP installation directory and execute the command "D"ROOTDN"
-w ROOTPASS -f/data/Domains.ldif"

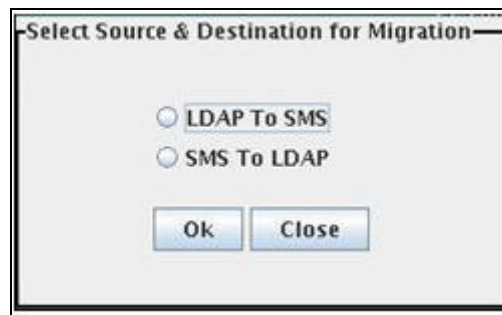
Note: You can add entries for multiple Information Domains at the same time.

Migrate Data from CSSMS tables to LDAP server

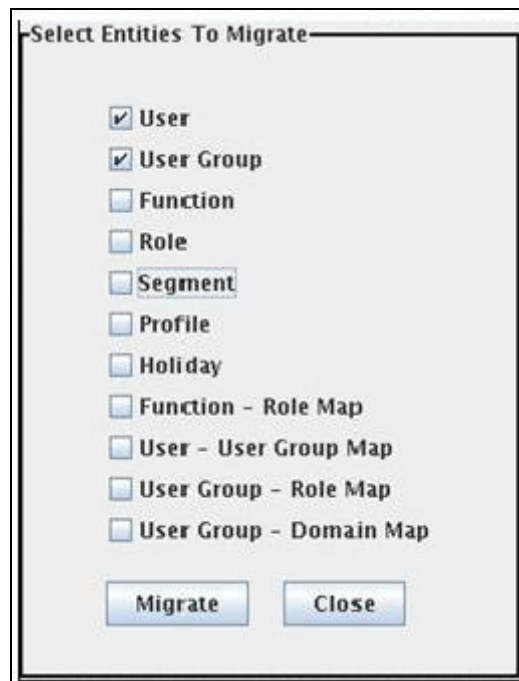
If you are using LDAP authentication, it is required to migrate all the details from the CSSMS table, which contains the information entered using the Infrastructure Administration module under Security Management to the LDAP Server.

To migrate data from CSSMS tables to LDAP server:

1. Invoke the `LDAP_Migration.sh` file in `$FIC_HOME/MigrationUtilities/Migration_LDAP/ bin` folder. The *Select Source & Destination for Migration* window is displayed with the option to migrate the data from SMS to LDAP or vice versa.

Figure 7–60 Select Source & Destination for Migration

2. Select the **SMS to LDAP** option and click **OK**. The *Select Entities to Migrate* window is displayed.

Figure 7–61 Select Entities to Migrate

You can select the data that you wish to migrate such as Users, User Groups, Functions, Roles, Segment, Profiles, Holiday Master, Function Role Maps, User - User Group Maps, User Group Role Map, and User Group- Domain Map.

3. Select the entities that you wish to migrate and click **Migrate**. The data is migrated and a confirmation dialog is displayed.

You can verify the data migrated to LDAP server through the LDAP Browser.

Note: You should also enter the passwords for all the users as passwords are not migrated in migration process.

Configure OFSAAI Web Services

Web Services in OFSAAI is meant for exposing a web service to "asynchronously" or "synchronously" execute requested tasks offered by OFSAAI. The configuration steps given below are to be done only if you are using the Web Services feature of OFSAAI.

Configure DynamicWSConfig.xml File

For each third party web service that needs to be accessed using the OFSAAI Web services framework and the operations to be invoked, corresponding entries are to be made in the `DynamicWSConfig.xml` template file.

The variable `<WebServer>` denotes any one of the application server, i.e. WebSphere, WebLogic, or Tomcat.

The `DynamicWSConfig.xml` file will be available in the `<OFSAAI Installation Directory>/EXEWebService/ <WebServer>/ROOT/conf` directory. This file can be placed in any directory that is accessible by the application and this location must be specified in the `web.xml` file, as `WSCONFIGFILE` parameter.

The `DynamicWSConfig.xml` template file will be in `<WebServer Deployment Path>/EXEWebService.ear/EXEWebService.war/conf` directory

This template is given below:

```
<XML>
<WEBSERVICES>
<WEBSERVICE CODE= "$CODE"
ENDPOINT= "$ENDPOINT" TARGETNAMESPACE= "$TARGETNAMESPACE"
XMLNS_XSD= "$XMLNS_XSD" ENCODINGSTYLE= "$ENCODINGSTYLE"
SERVICENAME= "$SERVICENAME" PORTTYPE= "$PORTTYPE"
SESSION_MAINTAIN_PROPERTY= "$SESSION_MAINTAIN_PROPERTY"
USERNAME= "$USERNAME"
PASSWORD= "$PASSWORD" STYLE= "$WEBSERVICESTYLE"
STUBIMPLEMENTATION= "$STUBIMPLEMENTATION" >
<OPERATION CODE= "$CODE"
NAME= "$NAME"
SOAPACTION= "$SOAPACTION"
STYLE= "$STYLE"
PACKAGENAME= "$PACKAGENAME" >
<INPUT ORDER= "$ORDER"
PARAMNAME= "$PARAMNAME"
ARGTYPE= "$ARGTYPE"
CLASSNAME= "$CLASSNAME" />
<OUTPUT PARAMNAME= "$PARAMNAME"
RETURNRTYPE= "$RETURNRTYPE"
CLASSNAME= "$CLASSNAME" />
</OPERATION>
```

```

</WEBSERVICE>
</WEBSERVICES>
</XML>

```

The `DynamicWSConfig.xml` has the placeholders as tabulated below. These have to be updated depending on the web service chosen and the mode of accessing it. For each Web service to be accessed, the entire `webservice` tag in the `DynamicWSConfig.xml` file must be repeated. The placeholders tabulated below should be set in accordance to the parameters published in the third party `wsdl` files (webservises) to be accessed. The stub class specified must implement the "com.iflex.Oracle Reveleus.execution.webservice.EXEWebIF" interface.

Attributes for WEBSERVICE tag

Table D–8 WEBSERVICE tag

Placeholder	Description
\$CODE	Unique number within the xml file and cannot be 999 or 0.
\$ENDPOINT	soap: address location in the wsdl: service name tag of the wsdl file.
\$TARGETNAMESPACE	The attribute value for the targetNamespace of the wsdl: definitions tag.
\$XMLNS_XSD	The attribute value for the xmlns:s of the wsdl:definitions tag
\$ENCODINGSTYLE	The attribute value for the xmlns:soapenc of the wsdl:definitions tag.
\$SERVICENAME	Name of the service found under the wsdl:service name tag of the wsdl file.
\$PORTTYPE	wsdl port type name as mentioned in the wsdl file.
\$SESSION_MAINTAIN_PROPERTY	This could be given as "" also.
\$USERNAME	User name to access the web services. Enter "" if no user name is required.
\$PASSWORD	Password to access the web services. Enter "" if no password is required.
\$WEBSERVICESTYLE	This can take either "rpc" in case of DII mode of invoking web services or "stub" in case of static mode. This is a mandatory parameter.
\$STUBIMPLEMENTATION	Fully qualified class name (package name.classname).

Attributes for OPERATION tag

Ensure that the "operation tag attributes" are repeated for each of the operation tags.

Table D–9 OPERATION tag

Placeholder	Description
\$CODE	Should be unique within the Webservice tag.
\$NAME	The name of the Function that is to be called by the wsdl file.
\$SOAPACTION	The URL for the Operation to access. This is associated with the Operation tag of the wsdl file.

Table D–9 (Cont.) OPERSTION tag

Placeholder	Description
\$STYLE	This can take "rpc" if the web services invoking is in DII mode or "stub" if it is in static mode. This is a mandatory parameter.
\$PACKAGENAME	Represents the JAXB package of input object.

Attributes for INPUT tag**Table D–10 INPUT tag**

Placeholder	Description
\$ORDER	The sequential number of the INPUT tag. Should start from 0. This is in line with the input order of the arguments that the API accepts which is called by this operation.
\$PARAMNAME	Input parameter name to be called by the wsdl file.
\$ARGTYPE	Input Parameter Data Type. If the input argument type is complex object, specify \$ARGTYPE as "xmlstring".
\$CLASSNAME	Represents class name of input object parameter.

Attributes for OUTPUT tag**Table D–11 OUTPUT tag**

Placeholder	Description
\$PARAMNAME	Output parameter name to be returned by the web service.
\$RETURNNTYPE	Output parameter Data Type. If the web service response is a complex object, then specify \$RETURNNTYPE as "object".
\$CLASSNAME	Represents class name of output object parameter.

web.xml Entries

1. This step is optional and required only if the web application server used is Tomcat. In case of any other application server, skip and proceed with next step.

Navigate to \$FIC_HOME/webroot/WEB-INF/ and edit the web.xml file. Set parameter value DOCSERVICEAPP to EXEWebServiceAXIS.

2. Navigate to <OFSAAI Installation Directory>/EXEWebService/<WebServer>/ROOT/WEB-INF/ and edit the web.xml file as explained below.

Note: In case of Java 7 when WebLogic is used as web application server replace following line of <OFSAAI Installation Directory>/EXEWebService/Weblogic/ROOT/WEB-INF/web.xml file that is

```
<?xml version='1.0' encoding='UTF-8'?>
<web-app id="WebApp_ID" version="3.0"
xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd"
metadata-complete="true">
```

with

```
<?xml version='1.0' encoding='UTF-8'?>
<web-app xmlns="http://java.sun.com/xml/ns/j2ee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

Entry for WsConfig File

The WSCONFIG file (DynamicWsConfig.xml) is available in the <WebServer Deployment Path>/ EXEWebService.ear/EXEWebService.war/conf directory. This file can be placed in any directory that is accessible by the application.

The path where the WSCONFIG file is placed must be specified in place of \$WSCONFIGFILELOCATION\$ in the below block of text in web.xml.

```
<context-param>
<description>WebServices Configuration File</description>
<param-name>WSCONFIGFILE</param-name>
<param-value>$WSCONFIGFILELOCATION$</param-value>
<!--Specify the Location of DynamicWsConFig.xml-->
</context-param>
```

Proxy Settings

The following block of text in web.xml file, replace the <param-value> given in bold below with appropriate values.

If no values are required, leave the <param-value> blank.

```
<context-param>
<description>http Proxy Host</description>
<param-name>http.proxyHost</param-name>
<param-value>$PROXYHOST$</param-value>
<!-- Specify the IP address or hostname of the http proxy server-->
</context-param>
<context-param>
```

```

    <description>http Proxy Port</description>
    <param-name>http.proxyPort</param-name>
    <param-value>$PROXYPORT$</param-value>
    <!--Port Number for the Proxy Server-->
</context-param>
<context-param>
    <description>http proxy UserName</description>
    <param-name>http.proxyUserName</param-name>
    <param-value>$PROXYUSERNAME$</param-value>
    <!-- User ID To get authenticated by proxy server-->
</context-param>
<context-param>
    <description>http proxy Password</description>
    <param-name>http.proxyPassword</param-name>
    <param-value>$PROXYPASSWORD$</param-value>
    <!-- User Password To get authenticated by proxy server-->
</context-param>
<context-param>
    <description>http non-ProxyHosts</description>
    <param-name>http.nonProxyHosts</param-name>
    <param-value>$NONPROXYHOST$</param-value>
    <!--Hosts for which the proxy settings should get by-passed (Note:
    Separate them by "|" symbol) -->
</context-param>

```

OFSAAI Home Entry

This entry should point to the Application layer / Web layer of the OFSAAI installation and should be accessible.

Replace **\$FIC_HOME\$** in the following block of text in web.xml with `<WebServer Deployment Path>/EXEWebService.ear/EXEWebService.war.`

```

<context-param>
    <description>OFSAAI Web Home</description>
    <param-name>FIC_HOME</param-name>
    <param-value>$FIC_HOME$</param-value>
    <!--OFSAAI Installation Folder-->
</context-param>
<context-param>
    <description>OFSAAI Web Home</description>
    <param-name>FIC_PHYSICAL_HOME</param-name>

```

```
<param-value>$FIC_HOME$</param-value>
<!--OFSAAI Installation Folder-->
</context-param>
```

DynamicWSConfig.xml

For each third party web service that needs to be accessed using the OFSAAI Web services framework, and the operation to be invoked, make corresponding entries into this file. This file is to be placed in the location that is specified in the `web.xml`, as `WSCONFIGFILE` parameter.

Deploy OFSAAI Web Services

You can deploy OFSAAI Web Services separately if you had not configured OFSAAI Web Services as part of the installation.

1. Complete the manual configuration of OFSAAI Web Services.
2. Navigate to `<OFSAAI Installation Directory>/EXEWebService/<WebServer>` and execute the command:

```
./ant.sh
```

This will trigger the EAR/WAR file creation, which is required for the deployment.

3. Deploy the generated `EXEWebService.EAR/EXEWebService.WAR` file into the WebServer.

If you have already configured OFSAAI Web Services as part of the installation, deploy the generated `EXEWebService.EAR/ EXEWebService.WAR` file into the OFSAAI Deployment area in WebServer profile.

Configuration to Enable Parallel Execution of DML statements

A configuration file, `OracleDB.conf` has been introduced to accommodate any configurable parameter related to operations on oracle database. If you do not want to set a parameter to a specific value, then the respective parameter entry can be removed/commented off from the `OracleDB.conf` file which resides in the path `$FIC_DB_HOME/conf`.

As of now, the `OracleDB.conf` file has only one parameter namely `CNF_DEGREE_OF_PARALLELISM`. This parameter indicates the degree of parallelism to be used for a DML operation if parallel DML is explicitly enabled in the session with the `ENABLE PARALLEL DML` clause of the `ALTER SESSION` statement. The default mode of a session is `DISABLE PARALLEL DML`. If `CNF_DEGREE_OF_PARALLELISM` is not set, then the default degree, as decided by Oracle will be used.

Configure Message Details in Forms Designer

You can configure the Message Details in Forms Designer under Data Entry Forms and Queries module by updating the details of mail server in the "NotificationConfig.cfg" file which resides in the path `$FIC_APP_HOME/common/FICServer/conf`.

Ensure that the "authorized User details" for whom you need to configure the Message details are included in *Administration > Security Management > User Administrator > User Maintenance* window.

Update the following parameters in the "NotificationConfig.cfg" file:

Table D–12 NotificationConfig.cfg File

Parameter	Description
SMTP_SERVER_IP	Specify the hostname or IP address of SMTP Server.
SMTP_DEBUG_MODE	To run SMTP service in Debug mode, set value to 'true', otherwise set value to 'false'.
SMTP_AUTHORIZATION	Set to 'true' if SMTP server requires the client to be authenticated, otherwise set to 'false'.
SMTP_USERNAME	Username required for logging into SMTP server, if authentication is not required use a dummy value.
SMTP_PASSWORD	Password required for logging into SMTP server, if authentication is not required use a dummy value.
SMTP_MAILID	If the Messages has to go from a Particular ID that ID need to be added. Exchange server forces you set a valid ID that is there in the exchange server. (Based on Security settings)

Ensure that the authorized User details are included in *Administration > Security Management > User Administrator > User Maintenance* window.

Clearing Application Cache

This is applicable to all Web Servers (that is, WebSphere, 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:

- **Tomcat:** <Tomcat installation folder>/work/Catalina/localhost/<Application name>/org/apache/jsp
- **WebLogic:** <Weblogic installation location>/domains/<Domain name>/servers/<Server name>/tmp/_WL_user/<Application name>/qaelce/jsp_servlet
- **WebSphere:** <Websphere installation directory>/AppServer/profiles/<Profile name>/temp/<Node name>/server1/<Application name>/<.war file name>

Changing the CONFIG/ ATOMIC Schema passwords

This section explains about how to modify the OFSAA Infrastructure Config Schema and Atomic Schema passwords.

OFSAA Infrastructure Config Schema password modification

To change the Config Schema password, perform the following steps:

1. Change the Config schema User Password in the database.
2. Delete the \$FIC_HOME/conf/Reveleus.SEC file.
3. Shutdown the OFSAAI App service:

```
cd $FIC_APP_HOME/common/FICServer/bin
./reveleusshutdown.sh
```

4. Start the Infrastructure Server in foreground directly on the server or through X-Windows software using the command:

```
./reveusstartup.sh
```
5. At the prompt, enter System Password. Enter the "new Config schema" password. The service will start and initialize itself if it is able to successfully connect to the DB.
6. Post successful startup of the service, if required, the Infrastructure server may be shut down and restarted in the background using nohup mode.

OFSAA Infrastructure Atomic Schema password modification

To change the Atomic Schema password, perform the following steps:

1. Change the Atomic schema User Password in the database.
2. Login to the application from the browser using SYSADMN account or any user id, which has System Administrator role mapped.
3. Navigate to *System Configuration > Database Details* window. Select the appropriate connection and edit the password.
4. Navigate to *Unified Metadata Manager > Technical Metadata > Data Integrator > Define Sources* window. Update the appropriate Source details.
5. If you are using Apache Tomcat as Web server, update the `<Context>` `->` `Resource` tag details in `Server.xml` file from the `$CATALINA_HOME/conf` folder. (In case of Tomcat only Atomic `<Resource>` will exist).

If you are using WebSphere as Web server:

- a. Login to the WebSphere Administration Console, from the left side menu.
- b. Navigate to *Resources > JDBC > Data Sources*. A list of data sources will be populated on the right side.
- c. Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources will need to be modified).

If you are using WebLogic as Web server:

- a. Login to the WebLogic Administration Console, from the left side menu
- b. Under Domain Structure list box, expand the appropriate Domain and navigate to *Services > JDBC > Data Sources*. A list of data sources will be populated on the right side.
- c. Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources need to be modified).

6. Restart the OFSAAI services.

Configure Java Virtual Machine

While running several database intensive tasks in parallel, fetching the database connection from connection pool may face an error. To ensure no such error is encountered, add the line `securerandom.source=file:/dev/./urandom` in the `java.security` configuration file available in `$JAVA_HOME/jre/lib/security/` path.

This needs to be configured only on the machine where the OFSAAI database components (ficdb layer) are installed.

Configure Internal Service (Document Upload/Download)

This step can be ignored if it has already been configured as part of any previous IR/ML installation. The Document Upload/Download feature has undergone a change and can now be configured to use Internal service for document upload / download instead of the earlier ExeWebService. To facilitate Internal service for document upload / download, perform the following configurations:

1. Create the folders **download**, **upload**, **TempDocument**, and **Temp** in the local path of Web application server and provide **Read/Write** permission.
 - To find the exact location, execute the following query in CONFIG schema:


```
select localpath from web_server_info
```
 - To create folders with Read/Write permission, execute the command:


```
mkdir -m 777 download upload TempDocument Temp
```
2. Create **DocStorage** folder in the FTPSHARE location of APP tier and provide **Read/Write** permission.
 - To find the exact location, execute the query in CONFIG schema:


```
select ftpdrive from app_server_info
```
 - To create folder with **Read/Write** permission, execute the command:


```
mkdir -m 777 DocStorage
```

By default, the parameter **DOCUMENT_SERVICE_TYPE_EXTERNAL** value is set to **FALSE** in the Configuration table in CONFIG schema and hence the application “ExeWebService” will not be used. It is recommended that the value to be set to **FALSE** and use the Internal service for document upload/downloads. If you intend to continue using the External ExeWebService, set the value to **TRUE**.

Navigate to `$FIC_HOME/EXEWebService/<WEBSERVER_TYPE>` directory of WEB tier and type `./ant.sh`. This triggers the creation of EAR/WAR file `EXEWebService.ear/.war`. The EAR/WAR file `EXEWebService.ear/.war` will be created in `$FIC_HOME/EXEWebService/<WEBSERVER_TYPE>` directory of WEB tier. Redeploy the generated EAR/WAR file onto your configured web application server.

OFSAA Landing Page

Depending on the user configuration, user can view the country-specific menus.

Cleaning up the environment

To clean up the environment, follow these steps:

1. Navigate to `$FIC_HOME`.
2. Execute `./Uninstall.sh`.
3. When prompted, enter OFSAI configuration schema password.
4. This will delete `$FIC_HOME` and drop all the objects from configuration schema.
5. Navigate to ftpshare folder.
6. Delete the infodom folders by executing the following command:


```
$ rm -rf <RRINFODOM>
```
7. Drop configuration and atomic schemas from the database.

8. Drop the solution-specific tablespaces which are created.

Note: For tablespaces, refer to `OFS_CRR_SCHEMA_IN.xml`.

9. Under Web Local Path delete the following directories,
STAGE, upload, download, KYC, TempDocument

Configuring OFS_CRR_PACK.xml file

The compliancereporting.xml file holds details on the various OFSAA products that are packaged in a particular Application Pack.

The following table gives details about the various tags/parameters available in the file and the values that need to be updated. Prior to installing the OFSAA Application Pack in SILENT mode, it is mandatory to update this file.

Note: If you are installing in the GUI mode, then this file need not be updated.

Table E-1 OFS_CRR_PACK.XML Parameters

Tag Name/Attribute Name	Description	Mandatory (Y/ N)	Default Value/ Permissible Value	Comments
APP_PACK_ID	Unique Application Pack Identifier	Y	Unique Seeded Value	DO NOT modify this value.
APP_PACK_NAME	Unique Application Pack Name	Y	Unique Seeded Value	DO NOT modify this value.
APP_PACK_DESCRIPTION	Unique Application Pack Description	Y	Unique Seeded Value	DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value	DO NOT modify this value.
APP	Unique Application Entries	Y	Unique Seeded Value	DO NOT remove these tags.
APP_ID	Unique Application Identifier	Y	Unique Seeded Value	DO NOT modify this value.

Table E-1 OFS_CRR_PACK.XML Parameters

APP_ID/ PREREQ	Prerequisite Application/ Product	Y	Unique Seeded Value	For most applications Infrastructure would be the prerequisite set. For certain other applications, an appropriate Application ID would be set. DO NOT modify this value.
APP_ID/ DEF_ SEL_FLAG	Default Selected Flag	Y	Default - YES	In all Application Packs, Infrastructure would have this value set to "YES". DO NOT modify this value.
APP_ID/ ENABLE	Enable Application/ Product	YES if installing in SILENT mode.	Default – YES for Infrastructure NO for Others Permissible - YES or NO	Set this attribute-value to YES against every APP_ID which is licensed and should be enabled for use. Note: Application/ Product once enabled cannot be disabled. However, Application/ Product not enabled during installation can be enabled later through the Administration UI.
APP_NAME	Unique Application/ Product Name	Y	Unique Seeded Value	DO NOT modify this value.
APP_ DESCRIPTION	Unique Application/ Product Name	Y	Unique Seeded Value	DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value	DO NOT modify this value.

OFS_CRR_SCHEMA_IN.xml file

Creating database schemas, object with schemas and assigning appropriate grants are the primary steps in the installation process of OFSAA Applications. The OFS_CRR_SCHEMA_IN.xml file contains details on the various application schemas that should be created prior to the Application Pack installation.

The following table gives details about the various tags/parameters available in the file and the values that need to be updated. Prior to executing the schema creator utility, it is mandatory to update this file.

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
<APP_PACK_ID>	Unique Application Pack Identifier	Mandatory	Unique Seeded Value	DO NOT modify this value.

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

<JDBC_URL>	Enter the JDBC URL. Note: You can enter RAC and NON-RAC enabled database connectivity URL.	Mandatory	Example, jdbc:oracle:thin:@<HOST/IP>:<PORT>:<SID> or jdbc:oracle:thin:@//[HOST][:PORT]/SERVICE or jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=[HOST])(port=[PORT]))(ADDRESS=(PROTOCOL=TCP)(HOST=[HOST])(PORT=[PORT]))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=[SERVICE]))) For example, jdbc:oracle:thin:@//dbhost.server.com:1521/service1 or jdbc:oracle:thin:@//dbshost.server.com:1521/scan-1 or jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost1.server.com)(port=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost2.server.com)(PORT=1521))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=service1)))	
<JDBC_DRIVER>	By default this driver name is seeded. Note: Do not edit this attribute value.	Mandatory	Example, oracle.jdbc.driver.OracleDriver	Only JDBC Thin Driver is supported. DO NOT modify this value.
<HOST>	Enter the Hostname/ IP Address of the system on which you are installing the OFSAA components.	Mandatory	Host Name/ IP Address	

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

<SETUPINFO >/ NAME	Enter the acronym for the type of implementation. This information will be displayed in the OFSAA Home Page. Note: On executing the schema creator utility, this value will be prefixed with each schema name. For example: dev_ofsaaconf, uat_ofsaaatm.	Mandatory	Accepts strings with a minimum length of two and maximum of four. Example, DEV, SIT, PROD	This name would appear in the OFSAA Landing Page as "Connected To: xxxx" The schemas being created would get this prefix. For E.g. dev_ofsaaconf, uat_ofsaaconf etc.
<PASSWORD >/ DEFAULT*	Enter the password if you want to set a default password for all schemas. Note: You also need to set APPLYSAMEF ORALL attribute as Y to apply the default password for all the schemas.	Optional	The maximum length allowed is 30 characters. Special characters are not allowed.	

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

<p><PASSWORD >/ APPLYSAMEF ORALL</p>	<p>Enter as Y if you want to apply the password specified in DEFAULT attribute for all the schemas.</p> <p>If you enter as N, you need to provide individual passwords for all schemas.</p> <p>Note: In case you have entered Y in APPLYSAMEF ORALL attribute and also have specified individual passwords for all the schemas, then the specified individual passwords will take precedence.</p>	<p>Mandatory</p>	<p>Default – N Permissible – Y or N</p>	<p>Note: Setting this attribute value is mandatory. If DEFAULT attribute is set.</p>
--	---	------------------	---	--

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

<SCHEMA>/ TYPE	<p>The different types of schemas that are supported in this release are ATOMIC, CONFIG, SANDBOX, and ADDON.</p> <p>By default, the schemas types are seeded based on the Application Pack.</p> <p>Note: Do not edit this attribute value.</p>	Mandatory	<p>ATOMIC/CONFIG/SANDBOX/ADDON</p> <p>Note: SANDBOX AND ADDON schemas are not applicable for OFS AAI Application Pack.</p>	<p>Only One CONFIG schema can exist in the file. This schema identifies as the CONFIGURATION schema that holds the OFSAA setup details and other metadata information.</p> <p>Multiple ATOMIC/SANDBOX/ADDON schemas can exist in the file.</p> <p>ATOMIC schema refers to the Information Domain schema. SANDBOX schema refers to the SANDBOX schema. ADDON schema refers to other miscellaneous schema (not applicable for this Application Pack).</p>
-------------------	--	-----------	--	---

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

<SCHEMA.>/ NAME	By default, the schemas names are seeded based on the Application Pack. You can edit the schema names if required. Note: The Schema Name will have a prefix of the SETUPINFO/NAME attribute. SCHEMA NAME must be same for all the ATOMIC Schemas of applications within an Application Pack.	Mandatory	The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore '_'.	SETUPINFO/NAME attribute value would be prefixed to the schema name being created. For E.g. if name is set as 'ofsaatm' and setupinfo as 'uat' then schema being created would be 'uat_ofsaatm'. NAME should be same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack).
<SCHEMA.>/ PASSWORD*	Enter the password of the schema to be created. Note: If this attribute is left blank, then the password specified in the <PASSWORD>/DEFAULT attribute is applied as the Schema Password.	Optional	The maximum length allowed is 30 characters. Special characters are not allowed.	Note: You need to mandatorily enter the password if you have set the <PASSWORD>/APPLYSAMEF ORALL attribute as N.
<SCHEMA.>/ APP_ID	By default, the Application ID is seeded based on the Application Pack. Note: Do not edit this attribute value.	Mandatory	Unique Seeded Value	Identifies the Application/Product for which the schema is being created. DO NOT modify this value.

Table F-1 OFS_CRR_SCHEMA_IN.xml parameters

<SCHEMA>/ DEFAULTTAB LESPACE	Enter the available default tablespace for DB User. Note: If this attribute is left blank, then USERS is set as the default tablespace.	Optional	Default – USERS Permissible – Any existing valid tablespace name.	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/ TEMPTABLES PACE	Enter the available temporary tablespace for the DB User. Note: If this attribute is left blank, then TEMP is set as the default tablespace.	Optional	Default – TEMP Permissible – Any existing valid temporary tablespace name.	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/ QUOTA	Enter the quota to be set on DEFAULTTAB LESPAC attribute for the schema/ user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace	Optional	Example, 600M/m 20G/g UNLIMITED/unlimited	Modify this value to grant the specified quota on the mentioned tablespace to the user.
<SCHEMA>/ INFODOM	Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based on the Application Pack if no value is specified for this attribute.	Optional	Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.	

Patching Your OFSAA Infrastructure Installation

Oracle strongly recommends installing the latest available patchset so as to be up to date with the various releases of the OFSAA product.

Refer <http://support.oracle.com> for more information on latest release.

This Appendix discusses the following sections:

- [Grants for Atomic Schema](#)
- [Grants for Config Schema](#)
- [Grants for Config Schema Entities for Atomic Users](#)

Grants for Atomic Schema

Atomic Schema creation requires certain grants for object creation. This can be located in `$FIC_HOME/privileges_atomic_user.sql` file.

The following are the Grants for Atomic Schema:

```
grant create SESSION to &database_username
/

grant create PROCEDURE to &database_username
/

grant create SEQUENCE to &database_username
/

grant create TABLE to &database_username
/

grant create TRIGGER to &database_username
/

grant create VIEW to &database_username
/

grant create MATERIALIZED VIEW to &database_username
/

grant olap_user to &database_username
/

grant select on SYS.V_$PARAMETER to &database_username
/

grant create SYNONYM to &database_username
```

/

Grants for Config Schema

Config Schema creation requires certain grants for object creation. This can be located in `$FIC_HOME/privileges_config_user.sql` file.

The following are the Grants for Config Schema:

```
grant create SESSION to &database_username
/
grant create PROCEDURE to &database_username
/
grant create SEQUENCE to &database_username
/
grant create TABLE to &database_username
/
grant create TRIGGER to &database_username
/
grant create VIEW to &database_username
/
grant create MATERIALIZED VIEW to &database_username
/
grant olap_user to &database_username
/
grant select on SYS.V_$PARAMETER to &database_username
/
grant create SYNONYM to &database_username
/
```

Grants for Config Schema Entities for Atomic Users

Atomic Schema creation requires certain grants for config schema object access. This can be located in `$FIC_HOME/config_table_privileges_for_atomic_user.sql` file.

The following are the Grants for Config Schema entities for Atomic Users:

```
grant select on CSSMS_USR_PROFILE to &database_username
/
grant select on CSSMS_ROLE_MAST to &database_username
/
grant select on CSSMS_GROUP_MAST to &database_username
/
grant select on CSSMS_FUNCTION_MAST to &database_username
```

```
/
grant select on CSSMS_USR_GROUP_MAP to &database_username
/
grant select on CSSMS_USR_GROUP_DSN_SEG_MAP to &database_username
/
grant select on CSSMS_ROLE_FUNCTION_MAP to &database_username
/
grant select on CSSMS_GROUP_ROLE_MAP to &database_username
/
grant select on CSSMS_SEGMENT_MAST to &database_username
/
grant select on CSSMS_USR_DSN_SEG_MAP to &database_username
/
grant select on CSSMS_USR_ROLE_MAP to &database_username
/
grant select on CSSMS_METADATA_SEGMENT_MAP to &database_username
/
grant select on BATCH_RUN to &database_username
/
grant select on PR2_FILTERS to &database_username
/
grant select on PR2_TASK_FILTER to &database_username
/
grant select on PR2_TASK_FILTER_DETAIL to &database_username
/
grant select on ST_STRESS_MASTER to &database_username
/
grant select on ST_SCENARIO_MASTER to &database_username
/
grant select on ST_SHOCK_MASTER to &database_username
/
grant select on BATCH_MASTER to &database_username
/
grant select on ICC_MESSAGELOG to &database_username
/
grant select on PR2_MASTER to &database_username
/
```

```
grant select on PR2_RUN_REQUEST to &database_username
/
grant select on MF_MODEL_SCRIPT_MASTER to &database_username
/
grant select on MF_INPUT_VALUES to &database_username
/
grant select on MF_MODEL_OUTPUT_VALUES to &database_username
/
grant select on DB_MASTER to &database_username
/
grant select on DSNMASTER to &database_username
/
grant select on pr2_rule_map to &database_username
/
grant delete on pr2_rule_map_pr to &database_username
/
grant insert on pr2_rule_map_pr to &database_username
/
grant update on pr2_rule_map_pr to &database_username
/
grant select on pr2_rule_map_pr to &database_username
/
grant delete on pr2_rule_map_pr_tmp to &database_username
/
grant insert on pr2_rule_map_pr_tmp to &database_username
/
grant update on pr2_rule_map_pr_tmp to &database_username
/
grant select on pr2_rule_map_pr_tmp to &database_username
/
grant select on pr2_rule_map_exclude to &database_username
/
grant delete on pr2_rule_map_exclude_pr to &database_username
/
grant insert on pr2_rule_map_exclude_pr to &database_username
/
grant update on pr2_rule_map_exclude_pr to &database_username
```



```
/
grant select on pr2_rule_map_exclude_pr to &database_username
/
grant delete on pr2_rule_map_exclude_pr_tmp to &database_username
/
grant insert on pr2_rule_map_exclude_pr_tmp to &database_username
/
grant update on pr2_rule_map_exclude_pr_tmp to &database_username
/
grant select on pr2_rule_map_exclude_pr_tmp to &database_username
/
grant select on pr2_run_object to &database_username
/
grant select on pr2_run_object_member to &database_username
/
grant select on pr2_run_map to &database_username
/
grant select on pr2_run_execution_b to &database_username
/
grant select on pr2_run_execution_filter to &database_username
/
grant select on pr2_firerun_filter to &database_username
/
grant select on pr2_filters to &database_username
/
grant select on configuration to &database_username
/
grant select on batch_parameter to &database_username
/
grant select on component_master to &database_username
/
grant select on MDB_OBJECT_TYPE_ATT_LAYOUT to &database_username
/
grant select on REV_OBJECT_ATTRIBUTE_DTL to &database_username
/
grant select on FORMS_LOCALE_MASTER to &database_username
/
```

```
grant select on mdb_object_dependencies to &database_username
/
grant select on mdb_execution_details to &database_username
/
grant select on REV_STAT_DATA to &database_username
/
grant select on REV_OBJECT_REPOSITORY_B to &database_username
/
grant select on REV_OBJECT_REPOSITORY_TL to &database_username
/
grant select on REV_OBJECT_ATTRIBUTE_DTL_MLS to &database_username
/
grant select on REV_OBJECT_APPLICATION_MAP to &database_username
/
grant select on MDB_OBJ_EXPR_DETAILS to &database_username
/
grant select on MDB_EXECUTION_DETAILS to &database_username
/
grant select on REV_OBJECT_TYPES_CD to &database_username
/
grant select on REV_OBJECT_TYPES_MLS to &database_username
/
grant select on REV_APPLICATIONS_CD to &database_username
/
grant select on REV_APPLICATIONS_MLS to &database_username
/
grant select on METADATA_BROWSER_LOCALE to &database_username
/
grant select on MDB_STAT_DATA to &database_username
/
grant select on MDB_OBJECT_TYPE_LAYOUT to &database_username
/
grant select on ofsa_md_id_ref to &database_username
/
grant select on MDB_ETL_MAPPING to &database_username
/
grant select on setupinfo to &database_username
```

```
/
grant select on LOCALEREPOSITORY to &database_username
/
grant select on MF_MODEL_MASTER to &database_username
/
grant select on MF_SANDBOX_MASTER to &database_username
/
grant select on MF_VARIABLE_MASTER to &database_username
/
grant select on MF_TECHNIQUE_MASTER to &database_username
/
grant select on MDB_RULE_SOURCE_HEADER to &database_username
/
grant select on MDB_RULE_TARGET_HEADER to &database_username
/
grant select on MDB_RULE_TARGET_MEMBER_HEADER to &database_username
/
grant select on MDB_RULE_GRID_DATA to &database_username
/
grant select on MDB_MODEL_MAPPING to &database_username
/
grant delete on AAI_MAP_MAPPER to &database_username
/
grant insert on AAI_MAP_MAPPER to &database_username
/
grant update on AAI_MAP_MAPPER to &database_username
/
grant select on AAI_MAP_MAPPER to &database_username
/
grant select on RTI_UI_EXCLUDE_PDM_LIST to &database_username
/
grant select on RTI_VIR_PHY_TBL_NAME to &database_username
/
grant select on infodom_patches to &database_username
/
```


This section of the document consists of resolution to the frequently asked questions and error codes noticed during OFSAAI installation.

- [Frequently Asked Questions](#)
- [Error Dictionary](#)

OFSAAI installer performs all the pre-requisite validation check during installation. Any errors encountered in the process is displayed with an appropriate Error Code. You can refer to the Error Dictionary to find the exact cause and resolution to rectify the error.

Frequently Asked Questions

You can refer to the Frequently Asked Questions which has been developed with the interest to help you resolve some of the OFSAAI Installation and configuration issues. This intends to share the knowledge of problem resolution to a few of the known issues. This is not an official support document and just attempts to share the knowledge of problem resolution to a few of the known issues.

- [OFSAAI FAQs](#)
- [Application Pack 8.0.0.0.0 FAQs](#)

OFSAAI FAQs

What are the different components that get installed during OFSAAI?

The different components of OFSAAI are illustrated in [Figure 1-2, "Components of OFSAAI"](#).

If OFS AAI/ AAAI needs to be installed on different versions of an Operating System, which installer needs to be downloaded?

OFS AAI/AAAI installer downloaded for a specific Operating System can be used to install on all its supported versions.

For Solaris OS, only one installer OFSAAI_73300_Solaris is available and it can be used to install OFSAAI on both versions of Solaris, that is, v5.10 or v5.11.

Similarly, the installer OFSAAI_73300_Linux can be used to install OFSAAI on all supported versions of Oracle Linux, that is, v 5.3 up to 5.10 and v6.0 and above.

The installer OFSAAI_73300_AIX can be used to install OFSAAI on all supported versions of AIX, that is, v5.3 and v6.1.

Same is applicable for OFSAAAI installers available for specific Operating Systems.

What are the different modes of OFSAAI installation?

OFSAAI can be installed in two modes, Silent Mode, and GUI mode.

What deployment options does OFSAAI recommend?

OFSAAI recommends to install all OFSAAI components on a single machine Single tier architecture, that is, all the Infrastructure components such as the Application, Web, and Database components are installed on a single machine. This option further has two types:

- Type I: Single Tier Installation with database engine on Remote Machine - where Infrastructure Application, Database, and Web components are on one machine and the Database Engine is pointed to another machine.
- Type II: Single Tier Installation with Web Server on remote Machine - where Infrastructure Application, Database, and Web components are on one machine and Infrastructure Web Application files or EAR/WAR files are deployed on to a the Web server installed on another machine.

What are the other deployment options for OFSAAI?

Multi Tier Installations are possible in OFSAAI , however single tier installation is recommended.

There are four types of Multi Tier Installation option:

Option I: Infrastructure Application, Database, and Web Components are all in different machines.

Option II: Infrastructure Application and Database components in one machine and Web components in another machine.

Option III: Infrastructure Application and Web components in one machine and Database components in another machine.

Option IV: Infrastructure Web and Database components in one machine and Application components in another machine.

Is JDK (Java Development Kit) required during installation of OFSAA? Can it be uninstalled after OFSAA installation?

JDK is not required during installation of OFSAA and only a run time is needed for details. Refer [Table 2-1](#), Java Runtime Enviromen section.

Is JRE required during installation of OFSAA? Can it be uninstalled after OFSAAI installation?

Only JRE (Java Runtime Environment) is required during installation of OFSAA and cannot be uninstalled as the JRE is used by the OFSAA system to work.

How do I know what is the Operating system, web servers and other software versions that OFSAA supports?

Refer to OFSAA Technology Stack Matrices.

What are the different files required to install OFSAAI?

The following files are required:

- setup.sh.
- envCheck.sh
- preinstallcheck.sh
- VerInfo.txt

- OFSAAInfrastructure.bin
- validatedXMLinputs.jar
- MyResources_en_US.properties
- log4j.xml
- OFSAAI_PostInstallConfig.xml
- OFSAAI_InstallConfig.xml
- privileges_config_user.sql
- privileges_atomic_user.sql
- XML_Utility.jar

Is OFSAAI license specific to Applications?

No, OFSAAI license is not specific to any application.

Where can I reach out for the license key for installations?

OFSAAI 7.3.3.0.0 installer does not need a license code or a license file. With the license agreement acceptance, one could proceed with the installation.

During installation, when one gets an error message, "Execute Permission denied", what is to be done?

Please check whether all the files provided for OFSAAI installation has execute permissions.

To give execute permissions,

- Navigate to the path OFSAAI_73300 and execute the command

```
chmod 755
```

"Graphical installers are not.."

If error resembles "Graphical installers are not supported by the VM. The console mode will be used instead..." then check whether any of the X-windows software has been installed.

Example: Hummingbird Exceed is started and configured to Graphical mode installation.

Note: Type 'xclock' from prompt and this should display clock in graphical mode.

"No Java virtual machine could be..."

If the error message reads "No Java virtual machine could be found from your PATH environment variable. You must install a VM prior to running this program", then

- Check whether "java path" is set in PATH variable. See the [Table 3-1, "Prerequisite Information"](#) section in this document.
- Check whether sufficient temporary space is available.
- Ensure that the movement of OFSAAI Installer text files to the target system is done in the Text mode so that `setup.sh` file does not contain control line feed characters (^M).

During the installation, what should one do if the error message shows "OracleDriver Files Not Found, Please Choose the Right Path To Continue"?

Check whether the provided path for Oracle Driver files is correct and whether the user has permissions to access the files.

During installation, what is to be done if the error always reads "User must have CREATE TABLE, CREATE VIEW, CREATE TRIGGER, CREATE INDEX, CREATE SEQUENCE, CREATE PROCEDURE" even though the oracle schema user created has the mentioned privileges?

OFSAAI installer validates the database details provided during installation, so ensure:

- Whether the oracle schema user has the required set of privileges for successful installation.
- Whether the oracle schema user has been created with quota privileges on tablespace to create database objects.

See the [Table 3-1, "Prerequisite Information"](#) section in this document.

Installation of OFSAAI was completed successfully! What next?

Post the successful completion of OFSAAI installation, one has to perform the Post Installation steps. See [Chapter 5, "Post Installation Configuration"](#).

What is to be done when OFSAAI Installation is unsuccessful?

OFSAAI installer generates log file `OFSAAIInfrastructure_Install.log` in the Infrastructure Installation Directory. There is also another log file created in the path configured in `Log4j.xml`. The logs of any of these reported, Warnings/Non Fatal Errors/Fatal Errors/Exceptions should be brought to the notice of the OFSAAI Customer Support. It is recommended not to proceed, until the reported problems are adequately addressed.

How to grant privileges if a new information domain is created?

If you are creating a new information domain, provide a set of privileges (database permissions) to the new Atomic schema.

- Log into the database as `sys` and connect as `sysdba` user.
- Execute the file `privileges_config_user.sql` available under `$FIC_HOME` directory
- Enter the database schema for which you want to grant privileges.

When should I run the MLS utility?

See the Multiple Language Support (MLS) Utility section in *OFSAAI Administration Guide* in the [Related Documents](#) section.

Does OFSAAI support Oracle Linux versions other than 5.5?

OFSAAI supports the Oracle Linux versions from 5.5 up to 5.10.

On the UNIX System terminal, error message shows "Insert New Media. Please insert Disk1 or type it's location"while executing ./setup.sh, what should be done?

1. Login as root user on the Unix machine where OFSAAI is getting installed.
2. Navigate to the path `/etc/security/`.
3. Edit the file `limits.conf` to add/edit a row for the unix user installing OFSAA:


```
<Unix User> soft nfile 9216
```

4. After saving the changes, log in as unix user with which OFSAAI is getting installed and execute the command:

```
ulimit -n
```

The command should return the value 9216.

How does one verify if the system environment is ready for OFSAAI installation?

To verify the system environment meets the minimum requirements for the installation, a Pre-Install Check utility is available within the Install Kit archive file. This utility can also be obtained separately by contacting Oracle Support.

See [Verifying the System Environment](#) section for additional information.

How does one know if the installation is completed successfully?

The OFSAA Infrastructure installation performs a post install health check automatically on successful installation of the product. To rerun the post install verification at a later time, perform the following steps:

1. Navigate to the path \$FIC_HOME (Product Installation Directory).
2. Execute the command:

```
./piverify.sh
```

What should one do if the installation in GUI mode is not invoked?

There are set of configuration steps required to be performed during the installation in GUI mode. Verify whether the steps mentioned under [Configuration for GUI Mode Installation](#) section are done correctly.

What should one do if there are any exceptions or errors in installation and how to proceed?

1. Please backup the installation logs.
2. Share the backup logs with Oracle support.

On Solaris 11 system, if one gets the following error message during OFSAAI installation, what should be done:

"Error: OFSAAI-1108

ORA-00604: error occurred at recursive SQL level 1

ORA-01882: timezone region not found"

Or

"Time zone cannot be set as null or 'localtime' "

This happens if the time zone is not set, that is NULL or it is set as 'localtime'. Set the environment variable TZ to a valid time zone region in the .profile file. For example,

```
TZ=Asia/Calcutta
```

```
export TZ
```

What happens if the installation process is abruptly terminated or aborted? What should one do?

If the installation is abruptly terminated, then the installation process will be incomplete. To recover from this, follow the below steps:

1. Drop the DB objects in the config schema created by OFSAAI installation.
2. Open the `.profile` and remove the entries made by the OFSAAI installation which are made between the comment statements, #Beginning of entries by OFSAA Infrastructure installation and #End of entries by OFSAA Infrastructure installation.
3. Delete the OFSAA install directory created by the OFSAAI installer.
4. Perform the OFSAAI installation again.

Would OFSAA support any other web server types, other than the ones stated in tech matrix and installation guide?

No, all the supported softwares and versions are stated in the OFSAA Technology Stack Matrices.

What should one do if the database connection from connection pool throws an error "java.sql.SQLRecoverableException: IO Error: Connection reset"?

This happens while running several database intensive tasks in parallel. To correct this error, add the line `securerandom.source=file:/dev/.urandom` in the `java.security` configuration file available in `$JAVA_HOME/jre/lib/security/` path.

Note: This needs to be configured on all the machines or VMs where the OFSAAI components are installed.

If the issue is not resolved even with the above settings, check the MTU(Maximum Transmission Unit) settings on the linux box. For details on MTU settings and updating them, contact your system Administrator.

When I invoke setup.sh file from my install archive, it throws syntax errors/file not found error messages, what should I do?

This could mostly happen:

- When installer was not unzipped rightly or corrupted during unzip.
- `setup.sh` file which resides within the install archive was not transferred in ASCII or text mode, which could have corrupted the file.

To correct this, follow the steps:

1. Copy the installer (in BINARY mode) to the system on which the OFSAA Infrastructure components will be installed.
2. Unzip the installer using the command:

```
unzip <OFSAAI_Installer>.zip
```
3. The corrupted `setup.sh` file would have introduced certain `^M` characters into the file. You can remove `^M` characters from `setup.sh` file by following the below steps:
 - a. Login to the server where the installer is copied.
 - b. Navigate to the directory `OFSAAI_73300`.
 - c. Open the `setup.sh` file in the `vi` editor using the command: `vi setup.sh`.
 - d. Inside `vi` editor in Esc mode, type: `%s/^M//g`

Note: To enter ^M, hold the CTRL key then press V and M in succession.

- e. Save the `setup.sh` file by typing: `wq!`

Does OFSAA support Oracle DB 11g Standard edition?

The OCI client and the jdbc driver does not change depending on whether it is a standard or enterprise edition. So, OFSAAI will work with standard edition as well.

We do not recommend standard edition because it will not scale and does not support partition pack, database security vault, or advanced analytics.

On the UNIX System terminal, Error message shows "./reveleusstartup.sh: /java: Execut permission denied" while executing ./reveleusstartup.sh file. What is to be done?

- Ensure JAVA_BIN environment variable path is set on the "unix user" terminal from where the `reveleusstartup.sh` file is invoked.
- Ensure the `.profile` where the environment/ path settings are made has been executed successfully.

OFSAAI Login page does not come up, error message "Could not retrieve list of locales" is displayed. What should one do?

This could be due to 2 reasons:

- System is unable to resolve the hostname configured.
- Conflict with the ports configured.

To correct them, follow the below steps:

A. Steps to replace the hostnames with IP address:

1. Stop all the OFSAA services. See [Stopping Infrastructure Services](#) section on how to stop the services.
2. Replace all the hostnames with the IP address in all the places mentioned in the document (Where to find port, IP address, HTTPS Configuration for OFSAAI 7.2 Installation (DOC ID [1500479.1](#))).
3. Restart all the OFSAAI services. See [Starting Infrastructure Services](#) section.

B. Steps to correct the port number conflicts

1. Stop all the OFSAA services.
2. Refer to the port numbers stated in the document (Where to find port, IP address, HTTPS Configuration for OFSAAI 7.2 Installation (DOC ID [1500479.1](#))) and check on the discrepancy in the port numbers and correct them.
3. Restart all the OFSAAI services.

What happens when the OFSAAI Application Server does not proceed even after providing the system password?

Ensure that, the System Password provided when prompted should match with the "Oracle Configuration password" provided during installation. Also check

whether the connection to the "configuration schema" can be established through sqlplus.

Although the OFSAAI installation has completed successfully, when OFSAAI servers are started, and the application URL is accessed, it gives an error message "the page cannot be found or displayed" or "Could not retrieve list of languages from Server. Please contact the system administrator". What should one do?

Ensure OFSAAI servers have been started and are running successfully. On the server start up parameters options, see [Starting Infrastructure Services](#) section.

For more details on the issue, refer on to the Revappserver log in \$FIC_APP_HOME/common/FICServer/logs directory or the Web Server log files.

Is it necessary to provide the specified grants to the Oracle schema user before installation? If yes, can it be revoked after completion of installation?

The "Oracle schema" user requires the necessary grants specified before, during, and after the installation process. Grants provided should never be revoked as the application makes use of these grants all the time.

Can we have distributed OFSAAI Application Server for load balancing?

OFSAAI Application server can be scaled out/distributed across different JVM's (machines) based on the various services and Information Domains, in other words, Load balancing could be achieved with distribution of services.

Why do we need Ftpshare? Why is it needed on all the layers? Can we have ftpshare on another machine other than the machines where OFSAAI is installed?

Ftpshare is a Metadata Repository directory. All the metadata related files used in Infrastructure are stored in the ftpshare directory. The ftpshare contains folders for each Information Domain, with each Information Domain folders holding Erwin, log, and scripts folder. The transfer of data among the Web, Application, and Database servers in Infrastructure takes place through FTP/SFTP.

You need to configure FTP/SFTP and enable communication between the servers by providing App server's FTP/SFTP credentials to the Web server and DB server users.

Yes, we can have ftpshare on another machine other than the machines where OFSAAI is installed.

Is it mandatory to provide the ftp/sftp password?

Yes, OFSAAI needs credentials of the user which has complete permissions on ftpshare directory, and should be able to independently login to the unix server.

What are the permissions required for ftpshare and when should I give them?

It is recommended to provide permissions on ftpshare in case of installations done across different machines or VMs (multitier installation).

In case of single tier installation, 770 permissions can be provided if the unix users of OFSAAI and web server belong to the same unix group.

And on any new file that is created in the 'ftpshare' folder of any installation layer should be granted specific/explicit permission.

Port Change utility could be used to have the Port number modified, which are currently being used by the Infrastructure application. For more information, refer [Configure Infrastructure Ports](#) section.

Are there any in-built system administration users within OFSAAI Application?

The three in-built system administration users are provided to configure and setup OFSAAI.

- SYSADMN
- SYSAUTH
- GUEST

Does OFSAAI Application support both FTP and SFTP?

OFSAAI supports both FTP and SFTP configuration.

Is it necessary to enable the FTP/SFTP services to use the OFSAAI?

Yes, enabling of FTP/SFTP services and its ports is a pre-requisite step towards using the OFSAAI.

OFSAAI Configuration: Unable to save the server details?

- Ensure the input User ID, Password, and Share Name are correct.
- Ensure FTP/SFTP services are enabled.
- Have a test FTP/SFTP connection made and confirm if they are successful.

During Information Domain creation, the message "Please create a database and then create the information domain" appears. What should be done?

Information Domain is mapped to only one Database; and thus before the creation of Information Domain, at least one database details would need to exist.

The message "ConnectToDatabase: FatalError, could not connect to the DB server" appears during startup of backend engine message server. What does one need to do?

- Verify whether connection to the "configuration schema" can be established through sqlplus.
- Verify "configuration schema" password is modified post installation.
- Ensure oracle database alias name created for oracle instance and oracle service name are same.
- On a multi tier Installation mode, ensure TNSNAME and SID are the same in both the Application and Database Layers.

The message "Fatal Error, failed to get user ID from LibSmsConnect" appears during the startup of backend engine message server. What has to be done?

Ensure Reveleus.sec file exist under the \$FIC_HOME/conf directory where the Database components are installed.

Does OFSAAI Application support LDAP authentication?

OFSAAI supports LDAP configuration and authentication.

Does OFSAAI support multiple languages?

Yes, OFSAAI supports multiple languages.

Does OFSAAI provide any data back-up features?

OFSAAI does not have built-in back up facility. External Storage Infrastructure is recommended for back-up.

What kind of security features does the OFSAAI provides?

OFSAAI provides security at:

- Segment Level - Users can access only the segment they are mapped to.

- Application Level - Users can perform an operation only if mapped to appropriate role and functions.

Does OFSAAI have the ability to enforce periodic password change?

OFSAAI provides configurable parameters to define number of days after which the user password would expire and then the user is forced to change the password after expiration period.

What is the password policy followed in OFSAAI?

OFSAAI enforces a minimum password length with a combination of Upper and Lower case characters and alpha-numeric strings.

Which version of Erwin Data Modeller does OFSAAI support?

OFSAAI now supports ERwin version 9.2 and 9.5 generated xmls in addition to ERwin 4.1, ERwin 7.1, ERwin 7.3 and ERwin 9.0 formats.

Does OFSAAI provide the mechanism to upload Business Data model?

OFSAAI provides two mechanisms for business data model upload:

- Easy to use GUI based Model upload mechanism to upload the Business Data Model through Unified Metadata Manager --> Import Model.
- OFSAAI also provides a model upload utility "upload.sh" for uploading the business data model through the command line parameter by executing this shell script file under the path <FIC_HOME>/ficapp/common/FICServer/bin.

Refer the section *Run Model Upload Utility* of the *Oracle Financial Services Analytical Applications Infrastructure User Guide* for details.

The Business Data model undergoes changes; how does this incremental change get applied to the existing model?

Modified data model can be uploaded into the system and OFSAAI has the ability to compare the changes within the data model with respect to the one already present in the system and enables propagation of incremental changes in a consistent manner.

What are the different types of uploading a business data Model?

OFSAAI supports uploading of business data model from client desktop and also by picking up the data model from the server location.

Can the OFSAAI "Configuration Schema" password be modified post installation?

The OFSAAI "configuration schema" password can be modified post installation. OFSAAI application stores the password in the database and few configuration files, thus any changes to the "configuration schema" password would necessitate updating in these. Contact OFSAAI support for more details.

Can the OFSAAI "Atomic Schema" password be modified?

The OFSAAI "Atomic Schema" password can be modified. OFSAAI application stores the atomic schema password in the database and few configuration files, thus any change to the atomic schema password would necessitate updating the password.

To change the Atomic Schema password, follow the steps:

1. Login to OFSAA.
2. Navigate to System Configuration > Database Details window. Select the appropriate connection, provide the modified password and save.

3. Navigate to Unified Metadata Manager > Technical Metadata> Data Integrator > Define Sources window. Update the appropriate Source details.
 - a. If you are using Apache Tomcat as Web server:
 - * Update the <Context> -> Resource tag details in `server.xml` file from the `$(CATALINA_HOME)/conf` folder. (In case of Tomcat only Atomic <Resource> will exist).
 - b. If you are using WebSphere as Web server:
 - * Login to the WebSphere Administration Console from the left side menu.
 - * Navigate to Resources >JDBC >Data Sources. A list of data sources will be populated on the right side.
 - * Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources need to be modified).
 - c. If you are using WebLogic as Web server:
 - * Login to the WebLogic Administration Console from the left side menu.
 - * Under Domain Structure list box, expand the appropriate Domain and navigate to Services > JDBC >Data Sources. A list of data sources will be populated on the right side.
 - * Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources need to be modified).
4. Restart the OFSAAI services

Note: If the modified passwords are not updated, OFSAAI logs displays the message ORA-28000: the account is locked.

Does the upload of Business Data model depend on Java Memory?

Business data model upload through OFSAAI depends on the Java memory settings on the client and server machines. Java memory setting varies with the data model size and the available RAM. Contact OFSAAI support for more details.

Why do the Business Metadata Management screens (Business Processors screen) in User Interface, takes longer time to load?

The Log file in `DynamicServices.xml` which resides in `$(FIC_HOME)/conf` is continuously being updated/refreshed to cache metadata. This can be observed when you are starting `reveleusstartup.sh` and if any of the log file (Ex: `SMSService.log`) in `DynamicServices.xml` is being continuously refreshed for longer time.

By default, the Metadata Log file cache size is set to 1000. If in case the log is being updated beyond this limit, retrospectively the preceding entries are overwritten. For example, the 1001th entry is overwritten by deleting the first entry. This results in the application screen taking a longer time to load.

Increase the cache size limit in `Dynamicservices.xml` located at `<FIC_HOME>/conf`, depending on the currently logged count for the specific metadata.

1. Generate the Log report by executing the below query in config schema.

```
select count(1), t.metadata_name, m.dsn_id
from metadata_master m, metadata_type_master t
```

```
where m.metadata_type = t.metadata_type  
group by t.metadata_name, m.dsn_id
```

2. The above query returns a list of codes with their respective metadata count. You can refer to "metadata_type_master" table to identify the metadata name.
3. View the log report to identify the metadata which is being updated/refreshed beyond the specified cache size limit. Accordingly increase the cache size limit in Dynamicservices.xml depending on the currently logged count for the specific metadata.

For example, if the "MEASURE_CACHE_SIZE" is set to 1000 and total measure reported in log is 1022, increase the limit to 2000 (approximately).

4. Restart Reveleus/OFSAAI servers (Web and APP) and check the issue.

What should I do if I get OutOfMemoryError while deploying EAR file in WebSphere application server?

The Java memory needs to be increased in ejbdeploy.sh file which is present under <WebSphere Install directory>/AppServer/deploytool/itp. For example,

```
$JAVA_CMD \  
-Xbootclasspath/a:$ejbd_bootpath \  
Xms256m -Xmx1024m \  

```

What configurations should I ensure if my data model size is greater than 2GB?

In order to upload data model of size greater than 2GB in OFSAAI Unified Metadata Manager- Import Model, you need to configure the required model size in struts.xml file available in the path \$FIC_WEB_HOME/webroot/WEB-INF/classes.

Note: The size requirements have to be always specified in bytes.

For example, if you need to configure for model size of 2.5GB, then you can approximately set the max size to 3GB (3221225472 bytes) as indicated below, in order to avoid size constraints during model upload.

```
<constant name="struts.multipart.maxSize" value="3221225472"/>
```

After configuring struts.xml file, generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, see [Configuring Web Application Servers](#).

What should I do if my Hierarchy filter is not reflecting correctly after I make changes to the underlying Hierarchy?

In some cases, the Hierarchy Filters do not save the edits correctly if the underlying Hierarchy has been changed. This can occur in hierarchy maintenance, where you have moved a member to another hierarchy branch, and that member was explicitly selected in the Filter and is now a child of a node which is already selected in the Filter.

Please refer to [Support Note](#) for the workaround.

What should I do to change context name for a cloned environment?

Refer to [Support Note](#).

How do you turn off unused information domains (infodoms) from cache?

Follow the below steps to turn off unused infodoms from cache:

Navigate to \$FIC_HOME/conf in the APP layer of your OFSAAI installation.

1. In the DynamicServices.xml file, identify the section for <Service code="20">.
2. Modify the value of parameter CACHE_ON_STARTUP to 0 (default is 1).
3. Repeat the same in the WEB layer too. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, see [Configuring Web Application Servers](#).
4. Restart the OFSAAI Services (APP and WEB). For more information, see [Chapter 6, "Start And Stop of Services"](#) chapter.

Note: This setting will cache the Infodom metadata only for the infodoms that get accessed upon user login. Infodoms which do not get accessed, will not be cached.

Sample code is pasted below:

```
<SERVICE CODE="20"
CLASS="com.iflex.fic.metadata.services.MetadataServiceProvider"
NAME="BMD"
SERVERID="DEFAULT" PATH=" " LOGGERNAME="UMMLOGGER" LOGGERLEVEL="10">
<PARAMETERS>
<PARAMETER NAME="CACHE_ON_STARTUP" VALUE="0" />
<PARAMETER NAME="BACKUP_XML" VALUE="1" />
<PARAMETER NAME="MAX_BACKUP_XML" VALUE="2" />
<PARAMETER NAME="PC_NONBI_BI_SWITCH" VALUE="2048" />
<PARAMETER NAME="HIERARCHY_NODE_LIMIT" VALUE="2000" />
<PARAMETER NAME="ALIAS_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="DATASET_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="MEASURE_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="HIERARCHY_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="DIMENSION_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="HIERARCHYATTRIBUTE_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="CUBE_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="RDM_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="BUSINESSPROCESSOR_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="DERIVEDENTITY_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="LOG_GET_METADATA" VALUE="false" />
<PARAMETER NAME="METADATA_PARALLEL_CACHING" VALUE="0" />
```

</PARAMETERS>

</SERVICE>

"While creating an Excel Mapping, after specifying the excel worksheet, the target table, and mapping each column in the worksheet to a target table, I click SAVE and nothing happens. But when I click CANCEL, a message pops up informing me that all changes will be discarded", what is to be done.

Check if the excel mapping creation is done using I.E 8 with JRE 1.4 plug in enabled on machine. If so, upgrade the JRE plug in to 1.7+.

Application Pack 8.0.0.0 FAQs

What is an Application pack?

An Application Pack is suite of products. For more information, refer [About Oracle Financial Services Analytical Applications \(OFSAA\)](#).

Can I get a standalone installer for OFSAA 8.0?

No. AAI is part of every application pack and installs automatically.

How does OFSAA 8.0 Application pack relate to OFSAA 7.x series?

8.0 is a new major release consolidating all products from OFSAA product suite.

Can existing OFSAA 7.x customers upgrade to OFSAA 8.0 Application Pack?

There is no upgrade path available. However, we will have migration kit / path for every product to 8.0 application pack. Further details will be available with Oracle Support.

Does OFSAA 8.0 Application pack UPGRADE's automatically existing environments?

No. Refer Point 5. OFSAA 8.0 application pack has to be installed in a new environment and subsequently migration path / migration kit needs to be run to migrate from 7.x to 8.0. Please note we will have migration path only from the previously released version of OFSAA products.

Where can I download OFSAA 8.0 Application Pack?

OSDC

What are the minimum system and software requirements for OFSAA 8.0 Application Pack?

Refer installation guide section [Hardware and Software Requirements](#) section.

Is my environment compatible with OFSAA 8.0 Application Pack?

Environment Check utility performs the task. It is part of install and can also be run separately.

Has OFSAA 8.0 Application Pack is supports all Operating systems?

LINUX, AIX, SOLARIS 10, 11. Refer to [Technology Matrix](#) for the technology matrix that OFSAA suite products are/ will be qualified on.

How can I install OFSAA 8.0 Application Pack?

Refer to Oracle Financial Services Advanced Analytical Infrastructure Installation And Configuration Guide published in [OTN](#) for the application pack installers.

Do we need any License Key to install?

No, you do not need any License Key to install.

Does this installation require any Third party Software's?

Installation Guide lists the third party software that needs to be installed.

What languages are supported during OFSAA 8.0 Application Pack installation?

US English is the language supported.

What mode of installations OFSAA Application Pack supports? [i.e., Silent , GUI]

OFSAA Application Packs supports both, GUI and Silent Mode.

Does OFSAA 8.0 Application Pack support Multi tier Installations?

OFSAA 8.0 does single tier installation. For more information refer to [OFSAAI FAQs](#) section.

Does this Application Pack validate all Pre-requisites required for this installation i.e., Memory, Disk Space etc.?

Yes. The pre-requisite checks are done by the respective application pack installer.

What happens if it aborts during installation of any application with in Application pack?

Customer needs to restore the system and retrigger the installation

Does this Application pack 'Rolls Back' if any of application installation fails due to errors?

Rollback of installation is not supported.

Does the Application pack installs all applications bundled?

All application pack file system files are installed but there is an option to enable the licensed products.

How can I re-install any of the Application Pack?

You can retrigger in case of failure.

Does Application pack allow enabling / disabling any of the applications installed?

Yes. You cannot disable once the product is enabled in an environment.

I have installed one application in a Application pack and can I install any of new applications within the Application pack later point of time?

No, installation is not required. Enabling the application is an option to use it later.

Is it possible to Install OFSAA 8.0 Application pack on any one of the existing 'Infodom' where another OFSAA 8.0 application is installed?

Yes. But Behavioral Detection Pack and Compliance Regulatory Reporting pack are the exceptions. They need to be installed in a different INFODOM.

Is there any option in Application pack for the user to select Infodom during installations?

Yes. You can select or change the required infodom.

Can I install all Application Packs in a 'Single Infodom'?

Yes. But Behavioural Detection Pack and Compliance Regulatory Reporting Pack are the exceptions. They need to be installed in a different INFODOM.

Is it possible to install applications on different Infodom within the Application pack? (That is if you want to install LRM & MR in two infodoms)

Applications within application pack have to be installed in the same information domain in the same environment.

Does 'Data Model' bundled is Application pack Specific or Specific to individual application?

A merged data model for all applications within the application pack is bundled and uploaded.

Is it possible to install OFS Enterprise Modeling in later point of time?

OFS Enterprise Modeling as separate product and can be enabled as an option at later point of time from any application pack that bundles Enterprise Modeling.

Does OFS Enterprise Modeling is required for all applications?

This product is enabled depending on the applications that use the features of OFS Enterprise Modeling.

Will Application pack creates sandbox automatically for the required applications?

Yes, Sandbox creation is part of application install process.

Do we have upgrade Kits for individual applications or it's a Application Pack Upgrade?

ML/ IR releases / upgrades will be across Packs.

Can I upgrade AAI only?

Yes, you can upgrade AAI alone.

Can I upgrade one application within the Application Pack? i.e., LRM will be upgraded in Treasury Application pack, but MR won't be upgraded.

No. Not possible Upgrade is applied across packs.

Is it possible to uninstall any Application from the Application pack?

No, it is not possible to uninstall any Application from the Application Pack.

Can I uninstall entire Application Pack?

No, you cannot uninstall the Application Pack.

Is it possible to uninstall only application and retain AAI in the installed environment?

No, you cannot uninstall only the application and retain AAI in the installed environment.

Does Application Pack contain all Language Packs supported?

Language Packs are installed on top of 8.0 application pack. Releases are planned post the 8.0 availability.

Can I install an Application Pack over another Application Pack (that is same infodomain or different information)?

Yes, you can install an Application Pack over another Application Pack in the same information domain or different information domain.

Can I use an existing manually created schema as information domain for application pack installation?

No. Schemas required by OFSAA applications have to be created using Schema Creator Utility.

Does OFSAA 8.0 support on WebLogic 10.3.6 with Oracle 12c?

Yes, OFSAA 8.0 will support on WebLogic 10.3.6 with Oracle 12c. WebLogic 10.3.6 supports oracle 12c with some additional configurations. Refer the link http://docs.oracle.com/cd/E28280_01/web.1111/e13737/ds_12cdriver.htm#JDBCA655 for additional configurations.

While running the schema creator utility, I get an error "HostName in input xml is not matching with the local hostname"?

One possible reason could be the machine is configured for zonal partitioning. Ensure all the known IP Addresses of the machine are present in the /etc/hosts file.

"While creating an Excel Mapping, after specifying the excel worksheet, the target table, and mapping each column in the worksheet to a target table, I click SAVE and nothing happens. But when I click CANCEL, a message pops up informing me that all changes will be discarded", what is to be done.

Check if the excel mapping creation is done using I.E 8 with JRE 1.4 plug in enabled on machine. If so, upgrade the JRE plug in to 1.7.

What are the Java versions supported in OFS AAI Application Pack version 8.0.0.0?

OFS AAI Application Pack supports Java 1.7.x and 1.8.x.

Is this release of the OFS AAI Application Pack version 8.0.0.0 supported on Java 8?

Yes. To install this release of the OFS AAI Application Pack version 8.0.0.0 on Java 8. For more information, refer to specific notes mentioned in the sections [Prerequisite Information Configurations for Java 8](#), [Configuring the Schema Creator Utility](#), [GUI Mode Installation](#), [Silent Mode Installation](#) .

Error Dictionary

This contents of this section has been created with the interest to help you resolve the installation issues if any. There is a compilation of all the possible errors that might arise during the installation process with the possible cause and the resolution to quickly fix the issue and proceed further with the installation.

Accessing Error Dictionary

Instead of scrolling through the document to find the error code, you can use the pdf search functionality. In the "Find" dialog available in any of the Adobe Acrobat version that you are using to view the pdf document, follow the below instructions to quickly find the error resolution.

1. With the Installation pdf open, press **Ctrl+F** or select **Edit > Find**.
2. The *Find* dialog is displayed as indicated.
3. Enter the error code that is displayed on screen during Infrastructure installation.
4. Press **Enter**. The search results are displayed and highlighted as indicated below.

Figure 7-62 Error Dictionary

Error code - OFSAAI-1003	
Cause	JAVA_HOME/bin not found in PATH variable.
Resolution	Import <JAVA_HOME>/bin into PATH variable. Example: PATH = \$JAVA_HOME/bin:\$PATH export PATH.

View the details of the issues, its cause, and resolution specific to the error code. Repeat the step to find an answer to any other errors that you notice during installation. If you are not able to resolve the issue even after following the steps provided in resolution, you can contact support.oracle.com along with log files and appropriate screen shots.

Error Code Dictionary

Error code - OFSAAI-1001

Cause	Unix shell is not "korn" shell.
Resolution	Change the shell type to "korn". Use chsh unix command to change SHELL type. Shell type can also be changed by specifying shell path for the Unix user in /etc/passwd file. Note: chsh command is not available in Solaris OS.

Error code - OFSAAI-1002

Cause	No proper arguments are available.
Resolution	Provide proper arguments. Invoke Setup.sh using either SILENT or GUI mode. Example: ./Setup.sh SILENT or ./Setup.sh GUI

Error code - OFSAAI-1004

Cause	File .profile is not present in \$HOME.
Resolution	Create .profile in \$HOME, i.e. in the home directory of user.

Error code - OFSAAI-1005

Cause	File OFSAAInfrastructure.bin is not present in current folder.
Resolution	Copy OFSAAInfrastructure.bin into installation kit directory.

Error code - OFSAAI-1006

Cause	File CustReg.DAT is not present in current folder.
Resolution	Copy CustReg.DAT into installation kit directory.

Error code - OFSAAI-1007

Cause	File OFSAAI_InstallConfig.xml is not present in current folder.
Resolution	Copy OFSAAI_InstallConfig.xml into installation kit directory.

Error code - OFSAAI-1008

Cause	File validateXMLInputs.jar is not present in current folder.
Resolution	Copy validateXMLInputs.jar into installation kit directory.

Error code - OFSAAI-1009

Cause	File log4j.xml is not present in current folder.
Resolution	Copy log4j.xml into installation kit directory.

Error code - OFSAAI-1010

Cause	Unknown error occurred.
Resolution	Make sure to provide proper argument (SILENT or GUI) to the Setup.sh file.

Error code - OFSAAI-1011

Cause	XML validation failed.
Resolution	Check InfrastructurePreValidations.Log for more details.

Error code - OFSAAI-1012

Cause	Property file with locale name does not exist.
Resolution	Copy MyResources_en_US.properties to the setup kit directory and keep en_US in LOCALE tag of OFSAAI_InstallConfig.xml.

Error code - OFSAAI-1013

Cause	File OFSAAI_InstallConfig.xml/OFSAAI_PostInstallConfig.xml not found.
Resolution	Copy OFSAAI_InstallConfig.xml/OFSAAI_PostInstallConfig.xml to the setup kit directory.

Error code - OFSAAI-1014

Cause	XML node value is blank.
Resolution	Make sure all node values except SMTPSERVER, PROXYHOST, PROXYPORT, PROXYUSERNAME, PROXYPASSWORD, NONPROXYHOST, or RAC_URL are not blank.

Error code - OFSAAI-1015

Cause	XML is not well formed.
Resolution	Execute the command <code>dos2unix OFSAAI_InstallConfig.xml</code> to convert plain text file from DOS/MAC format to UNIX format. OR Make sure that <code>OFSAAI_InstallConfig.xml</code> is valid. Try to open the file through Internet Explorer for a quick way to check validity. If it is not getting opened, create new <code>OFSAAI_InstallConfig.xml</code> using the <code>XML_Utility.jar</code> .

Error code - OFSAAI-1016

Cause	User installation directory contain blank spaces.
Resolution	Provide an installation path that does not contain spaces. Check the tag <code>USER_INSTALL_DIR</code> in <code>OFSAAI_InstallConfig.xml</code> file. This path should not contain any spaces.

Error code - OFSAAI-1017

Cause	User installation directory is invalid.
Resolution	Provide a valid installation path. Check if you are able to create the directory mentioned in <code>USER_INSTALL_DIR</code> tag value of <code>OFSAAI_InstallConfig.xml</code> file.

The `ojdbc<version>.jar` file should be copied based on Database & Java version. Refer to the following table for details.

Table J-1 *JDBC Jar files version details*

Oracle Database Version	JDK Version Supported	JDBC Jar files specific to the release
12.1 or 12cR1	JDK 7 & JDK 6	ojdbc7.jar for JDK 7 ojdbc6.jar for JDK 6
11.2 or 11gR2	JDK 6 & JDK 5 JDK 7 supported in 11.2.0.3 and 11.2.0.4	ojdbc6.jar for JDK 7 ojdbc6.jar for JDK 6 ojdbc5.jar for JDK 5

This section provides detailed instructions to migrate for excel upload.

Prerequisites

The following are the pre-requisites for migration.

- "Data model in ATOMIC schemas should be same on the source and target setups
- "OFS AAI (platform) patch level version should be same on the source and target setups.
- "PL/SQL Developer to connect and query the database.
- "WinSCP to connect and access server file system.

Migration for Excel Upload

To migrate, follow these steps:

1. Open PL/SQL Developer and logon to the source setup's configuration (CONFIG) schema by entering the appropriate username and password.
2. In a new SQL window query the data of table `EXCEL_MAPPING_MASTER`.
3. Open a new session in PL/SQL developer and logon to the target setup's configuration (CONFIG) schema by entering the appropriate username and password.
4. Insert the records from Step 1 above in to this table.
5. In `V_INFODOM` column of `EXCEL_MAPPING_MASTER` table update the infodom name with the target infodom name.

Note: If all the mappings can work out of the single target Infodom, update same Infodom value across all rows. If only few mappings will work out of the target infodom, update the infodom value for selective records. Kindly note, excel upload mappings will work only if the target infodom has same data model entities as used in the mappings defined on source setup.

6. Update `V_CREATED_BY` column with the name of any user present in the target setup that has appropriate roles to perform Excel Upload tasks.

Note: It is mandatory to update values for V_INFODOM and V_CREATED_BY columns.

7. Open WinSCP and login a new session by entering the host name, port number, user name and password to access the source setup.
8. Navigate to the folder referred as FTPSHARE.
9. Copy the excel-entity mapping xml file(s) which are located in this folder according to their folder structure on to your desktop. For example: /ftpshare/STAGE/ExcelUpload/\$SOURCE_INFODOM_NAME/\$EXCEL_FILE_NAME.xml

Note: Actual file name of Excel Sheet is mentioned in the V_EXCEL_NAME column of EXCEL_MAPPING_MASTER table.

10. Copy the excel templates (.xls/ .xlsx) file(s) which are located in this folder according to their folder structure on to your desktop. For example: /ftpshare/STAGE/ExcelUpload/TEMPLATE/*.xls or *.xlsx

Note: Ignore this step if files are not present at the location.

11. Login a new session in WinSCP by entering the host name, port number, user name and password to access the target setup.
12. Copy the xml file(s) from Step3 to the below location in the target setup. For example: /ftpshare/STAGE/ExcelUpload/\$TARGET_INFODOM_NAME/\$EXCEL_FILE_NAME.xml

Note: \$TARGET_INFODOM_NAME should be target setup infodom in which you have uploaded the appropriate data model and the name should be same as the V_INFODOM column value updated in EXCEL_MAPPING_MASTER table.

13. Copy the xls/ xlsx file(s) from Step 3 to the below location in target setup. For example: /ftpshare/STAGE/ExcelUpload/TEMPLATE/*.xls or *.xlsx

Note: Ignore this step if files are not present at the location.

This section explains the configurations required to upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8. It consists of the following topics:

- [Prerequisites](#)
- [Steps for upgrading OFSAA 8.0.x Java 7 instance to Java 8](#)
- [Web Application Server Configurations](#)
- [OFSAA Generic Configurations](#)
- [OFSAA Configurations for New Web Application Server Installation](#)

Prerequisites

The following are the prerequisites for upgrading OFSAA 8.0.x Java 7 instance to Java 8:

- Java 8 should be installed on the OFSAA server and Web Application Server.
- Oracle WebLogic Server should be 12.1.3.0 or above. Download and install patch **18729264** from <https://support.oracle.com> for the same.

Note: IBM WebSphere 8.5.x (Full Profile) on Java 8 is not available.

Steps for upgrading OFSAA 8.0.x Java 7 instance to Java 8

To upgrade OFSAA 8.0.x Java 7 instance to Java 8, follow these steps:

1. Configure Web Application Server to Java 8. For more information, refer [Configuring Web Application Servers](#).
2. Configure the OFSAA instance to Java 8. For more information, refer [OFSAA Generic Configurations](#). For a newly installed Web Application Server, refer [OFSAA Configurations for New Web Application Server Installation](#)
3. Restart the OFSAA services. For more information, refer the *Start/Stop Infrastructure Services* section in [Chapter 6, "Start And Stop of Services"](#)
4. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, refer [Appendix C](#).

Web Application Server Configurations

This section describes the changes to be made in the Web Application Server. Following are the two options to perform Web Application Server Configurations which are listed as follows:

- Upgrade the existing Web Application Server installation to Java 8
- Install a new instance of the Web Application Server with Java 8

This section consists of the following topics:

- [Oracle WebLogic Server Updates](#)
- [Apache Tomcat Server Updates](#)

Oracle WebLogic Server Updates

Perform the following configurations to upgrade the existing WebLogic server instance to Java 8:

1. Navigate to `<WLS_HOME>/Middleware/Oracle_Home/wlserver.`
2. Edit the `product.properties` file. Set `JAVA_HOME`, `WLS_JAVA_HOME`, `JAVAHOME` properties to the new Java path and `java.vm.version` to the new Java version. For example,

```
JAVA_HOME=/usr/java/jdk1.8.0_45
WLS_JAVA_HOME=/usr/java/jdk1.8.0_45
JAVAHOME=/usr/java/jdk1.8.0_45
java.vm.version=1.8.0_45
```
3. Navigate to `<WLS_HOME>/Middleware/Oracle_Home/user_projects/domains/<domain>/bin`. Update `SUN_JAVA_HOME`, `DEFAULT_JAVA_HOME`, `JAVA_HOME` in the `setDomainEnv.sh` file to point to the new Java path. For example,

```
SUN_JAVA_HOME="/usr/java/jdk1.8.0_45"
DEFAULT_SUN_JAVA_HOME="/usr/java/jdk1.8.0_45"
JAVA_HOME="/usr/java/jdk1.8.0_45"
```
4. Clear the Application cache. Navigate to the following path and delete the files:

```
<Weblogic installation location>/domains/<Domain name>/servers/<Server name>/tmp/_WL_user/<Application name>/qaelce/jsp_servlet
```

If you wish to install a new instance of the Oracle WebLogic Server, follow these steps:

1. Install Oracle WebLogic Server 12.1.3.x on Java 8.
2. Perform the configurations for the newly installed WebLogic server. For more information refer [Configuring Resource Reference in Weblogic Application Server](#).

Note: While creating WebLogic Domain, the Listen Port should be set same as that of the existing Domain.

Note down the new Domain path to perform OFSAA Configurations.

Apache Tomcat Server Updates

Perform the following configurations to upgrade the existing Apache Tomcat Server from Java 7 to Java 8:

1. Login to the Apache Tomcat Server as a non-root user.
2. Edit the user `.profile`. Update the value for `JAVA_HOME` from JRE 1.7 to JRE 1.8. For Example,

```
JAVA_HOME=/usr/java/jre1.8.0_45
```

3. Clear the Application cache. Navigate to the following path and delete the files:

```
<Tomcat installation folder>/work/Catalina/localhost/<Application name>/org/apache/jsp
```

If you wish to install a new instance of the Apache Tomcat Server, follow these steps:

1. Install Apache Tomcat Server 8 with Java 8.
2. Perform the configurations for the newly installed Tomcat server. For more information refer [Configuring Resource Reference in Tomcat Application Server](#).

Note: Update the Connector Port in `/apache-tomcat-8.0.21/conf/server.xml` file to that of the existing Tomcat instance.

Note down the new deployment path to perform OFSAA Configurations.

OFSAA Generic Configurations

This section consists of the following topics:

- [User .profile Settings](#)
- [Configurations for Java 8](#)

User `.profile` Settings

Perform the following configurations:

1. Login to the OFSAA Server as a non-root user.
2. Edit the user `.profile`. Update the value for `PATH` variable from JRE 1.7 to JRE 1.8. For Example,

```
PATH=/usr/java/jdk1.8.0_45/jre
```

```
JAVA_BIN=/usr/java/jdk1.8.0_45/jre/bin
```

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/java/jdk1.8.0_45/jre/lib/amd64/server
```

Configurations for Java 8

Perform the configurations explained in the section [Configurations for Java 8](#)

OFSAA Configurations for New Web Application Server Installation

This configuration is required only if you have freshly installed Oracle WebLogic 12.1.3 or Apache Tomcat Server 8.0. Follow these steps:

1. Modify the following parameters in the Configuration table present in the Config Schema with the new Domain Path in case of WebLogic or with the new deployment path in case of Tomcat:
 - DeFiHome
 - REV_IMG_PATH
 - EMBEDDED_JSP_JS_PATH
2. Login to the OFSAA Server as a non-root user.
3. Navigate to `$FIC_HOME/ficweb/webroot/WEB_INF` and update the following parameters in the `web.xml` file with the new Domain path in case of WebLogic or with the new deployment path in case of Tomcat:
 - FIC_PHYSICAL_HOME_LOC
 - FIC_HOME
 - ICC_SERVLET_LOG_FILE
4. Navigate to `$FIC_HOME/ficweb/webroot/conf` and update the Domain path in case of WebLogic or with the new deployment path in case of Tomcat:
 - OFSAALogger.xml
 - MDBLogger.xml
 - RevLog4jConfig.xml
 - RFDLogger.xml
 - ExportLog4jConfig.xml
 - RFDLogger.xml
 - PR2Logger.xml