

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

Installation Guide

Release 8.0.6.0.0

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Document Control

This section provides the revision details of the document.

Version Number	Revision Date	Changes Done
1.0	Created: March 2017	Captured installation and configuration steps for 8.0.4.0.0 Release.
2.0	Modified: April 2017	Added Solaris OS related changes.
3.0	Modified: April 2017	Added AIX OS related changes.
4.0	Modified: Nov 2018	<ul style="list-style-type: none">• Added details to Silent Mode Installation.• Deleted the GUI mode of installation

This document includes the necessary instructions to install the OFS CRR Application Pack and perform the required post installation configurations. The latest copy of this guide can be accessed from [OTN Library](#).

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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Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

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 Conventions and their Meaning

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

Abbreviations

The following table lists the abbreviations used in this document:

Table 0–2 Abbreviations and their meaning

Abbreviation	Meaning
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
OFSAA	Oracle Financial Services Analytical Application
OFSAAI	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 OFSAA and OFSAA Application Packs

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](#)
- [About Oracle Financial Services Compliance Regulatory Reporting Application \(OFS CRR\)](#)
- [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.

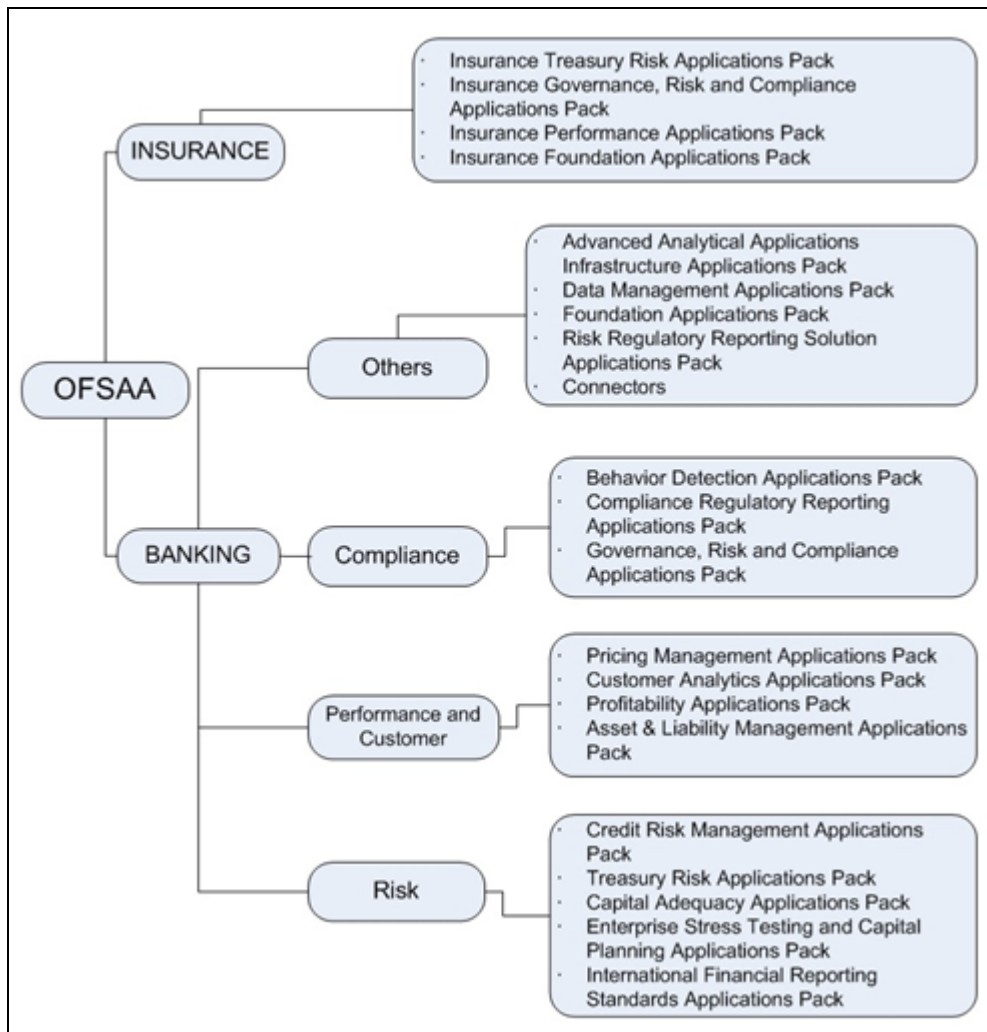
With the help of OFSAA, the financial services organizations can achieve, management excellence with a lower total cost of ownership, due to our integrated, architecture, combining performance and risk applications into a single, seamlessly integrated framework.

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



About Oracle Financial Services Compliance Regulatory Reporting Application (OFS CRR)

OFS CRR Application assists financial institutions in information gathering, and generating and filing of Suspicious Activity Report (SAR) and Suspicious Transaction Reports (STR) 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 and STR 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.

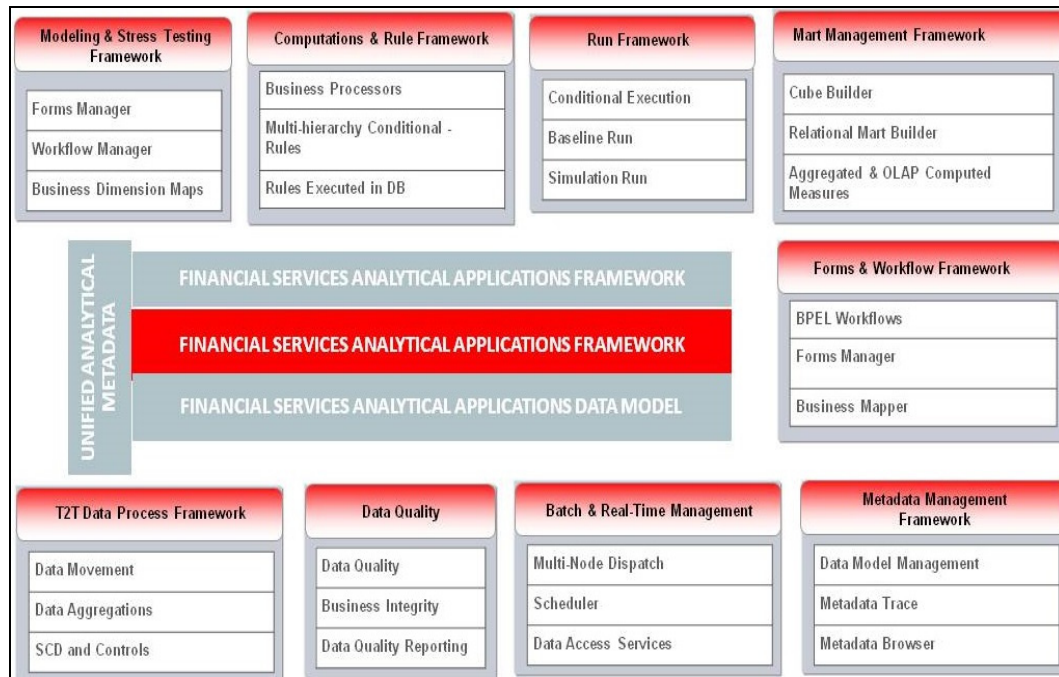
Components of OFSAAI

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



OFSAA Infrastructure High Availability

The current release of the OFSAA 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.

This release supports Active-Passive model of implementation for OFSAAI components. For more information, refer [Configuration for High Availability- Best Practices Guide](#).

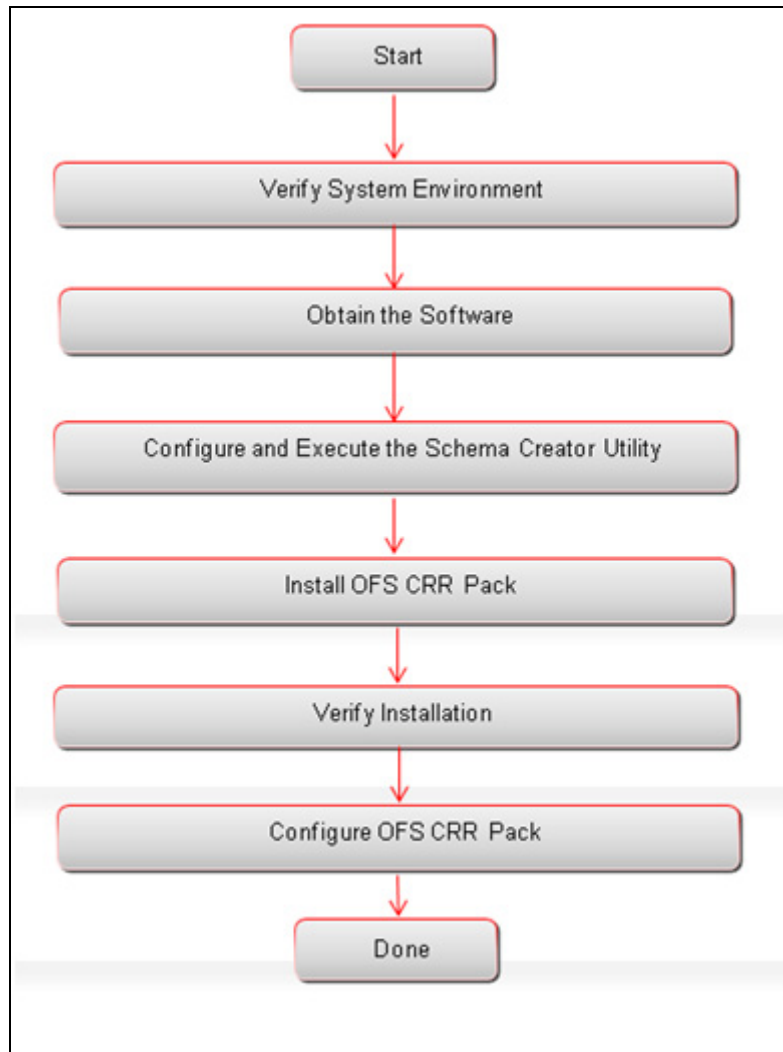
Understanding OFS CRR Pack Installation

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](#).

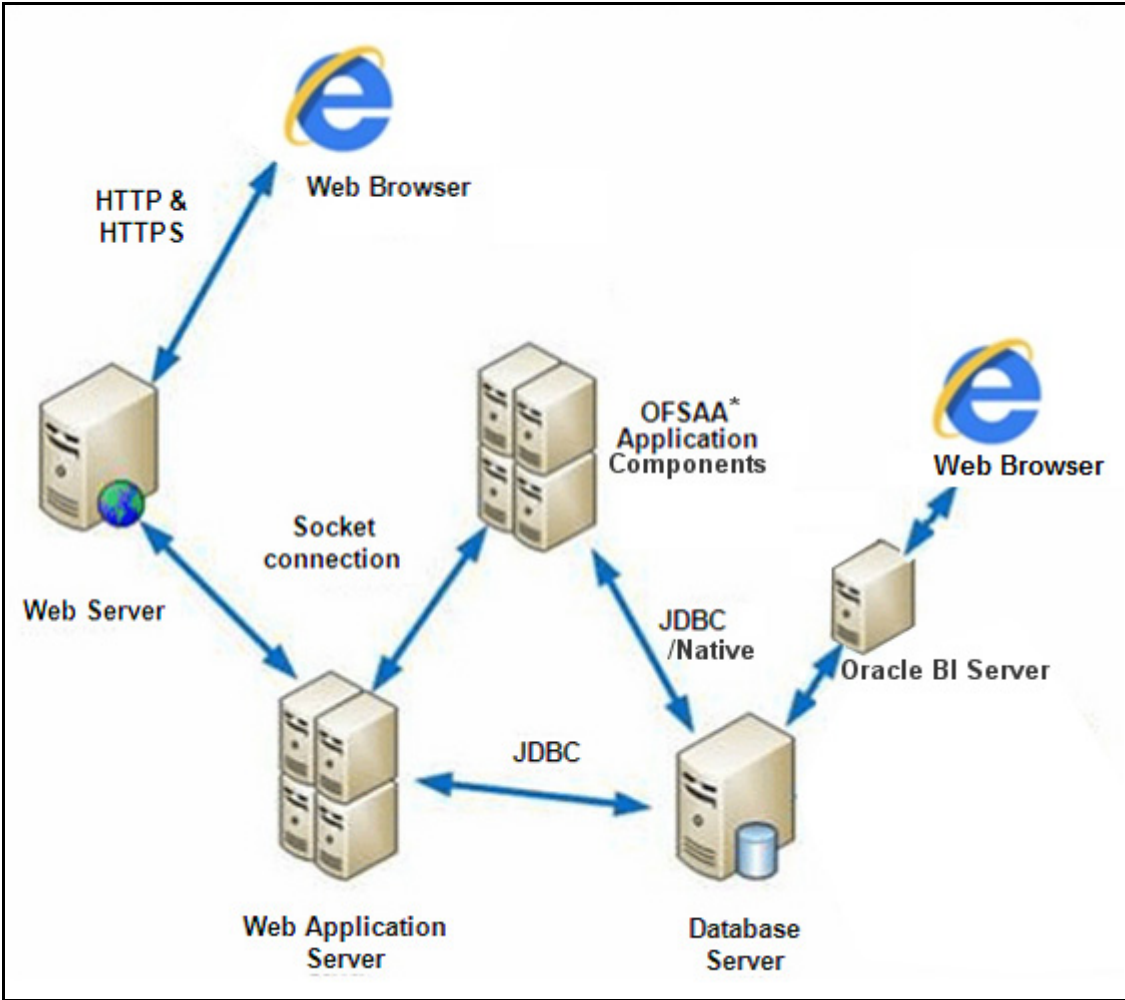
- **Configure OFS CRR Pack:** This section provides details about post installation configuration. For more information, see [Post Installation Configuration](#).

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 7.1 - 64 bit Oracle Linux Server release 6.6 and above - 64 bit <p>Note: Same versions of RHEL is supported</p>
Oracle Solaris (SPARC)	<ul style="list-style-type: none"> Oracle Solaris v5.10 Update 11 and above - 64 bit Oracle Solaris v5.11 update 3 and above - 64 bit
IBM AIX (POWERPC)	<ul style="list-style-type: none"> AIX 6.1 (TL 09 and above) - 64 bit AIX 7.1 (TL 03 and above) - 64 bit
Shell	<ul style="list-style-type: none"> KORN Shell (KSH)
<p>Note:</p> <ul style="list-style-type: none"> If the OS is IBM AIX 6.1 and the file size limit for the AIX user on the target server is too small, configure the size parameter setting for "Large File Support". Follow these steps: Change the file size limit for the user that initiates the transfer on the AIX system. To change the file size limit for a particular user, add or edit the fsize attribute for the user in the /etc/security/limits file on the AIX system. Change the file size limit to unlimited (fsize = -1) or to a size equal to the size of the file being transferred. This may require a restart of the AIX server to pick up the new configuration. For more information refer IBM Support. 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"> yum install redhat-lsb-core yum install redhat-lsb 	
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	

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

<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) 	
<p>Note:</p> <p>Ensure that the following patches are applied:</p> <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) • Oracle R Enterprise 1.4 requires Oracle Database Enterprise Edition 11.2.0.3/ 11.2.0.4/ 12.1.0.1 	
<p>OLAP</p>	
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
<p>Note:</p> <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. 	
<p>Web Server/ Web Application Server</p>	
Oracle Linux / Red Hat Enterprise Linux / IBM AIX 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.x and 12.2.x (64 bit) • IBM WebSphere Application Server 8.5+ with IBM Java Runtime (64 bit) • Apache Tomcat 8.0.x (64 bit)
<p>Note:</p> <ul style="list-style-type: none"> • OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported. 	
<p>Desktop Requirements</p>	
Operating System	MS Windows 7/ Windows 8/ Windows 8.1

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

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) <p>Turn off 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.
<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 Infrastructure LDAP Configuration. Open LDAP needs to be installed on MS Windows Server machine only. 	

Configurations supported for Java 8

The following table shows the minimum hardware and software requirements for installing OFS CRR Application Pack (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 7.1 - 64 bit Oracle Linux Server release 6.6 and above - 64 bit <p>Note: Same versions of RHEL is supported</p>
Oracle Solaris (SPARC)	<ul style="list-style-type: none"> Oracle Solaris v5.10 Update 11 and above - 64 bit Oracle Solaris v5.11 update 3 and above - 64 bit
IBM AIX (POWERPC)	<ul style="list-style-type: none"> AIX 6.1 (TL 09 and above) - 64 bit AIX 7.1 (TL 03 and above) - 64 bit
Shell	<ul style="list-style-type: none"> KORN Shell (KSH)
<p>Note:</p> <ul style="list-style-type: none"> If the OS is IBM AIX 6.1 and the file size limit for the AIX user on the target server is too small, configure the size parameter setting for "Large File Support". Follow these steps: Change the file size limit for the user that initiates the transfer on the AIX system. To change the file size limit for a particular user, add or edit the fsize attribute for the user in the /etc/security/limits file on the AIX system. Change the file size limit to unlimited (fsize = -1) or to a size equal to the size of the file being transferred. This may require a restart of the AIX server to pick up the new configuration. For more information refer IBM Support. 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"> yum install redhat-lsb-core yum install redhat-lsb 	
Java Runtime Environment	

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

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) 	
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	<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.x and 12.2.x (64 bit) IBM WebSphere Application Server 8.5+ with IBM Java Runtime (64 bit) Apache Tomcat 8.0.x (64 bit)

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

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 off 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.
Note:	
<ul style="list-style-type: none"> • Configuration of Directory services software for OFSAAI installation is optional. For more information on configuration, see Appendix H. • Open LDAP needs to be installed on MS Windows Server machine only. 	

Note: If you want to upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8, see [Appendix O](#).

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.

- [Silent Mode](#)

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 v8.0.6.0.0.

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 Ensure to add an entry (with SID/ SERVICE NAME) in the tnsnames.ora file on the OFSAA server.
	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>

Table 3–1 (Cont.) Prerequisite Information

Category	Sub-Category	Expected Value
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. However, the owner of the installation directory mentioned above should have RWX permissions on this folder. • Set 777 permission on this directory. <p>Note: This directory is also referred as FTPSHARE folder.</p>
	Installation Directory	<ul style="list-style-type: none"> • A directory where the product 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.
	OS Locale	<ul style="list-style-type: none"> • Linux: en_US.utf8 • AIX: EN_US.UTF-8 • Solaris: en_US.UTF-8 <p>To check the locale installed, execute the following command:</p> <pre>locale -a grep -i 'en_US.utf'</pre>
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 OFSAAI installation.</p> <p>Note: Refer Appendix B 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>

Table 3–1 (Cont.) Prerequisite Information

Category	Sub-Category	Expected Value
Web Server	Apache HTTP Server/ Oracle HTTP Server/ IBM HTTP Server	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. Note: Refer Appendix A for Web Server installation.
OFSSAI	One-Off	<ul style="list-style-type: none"> Download the consolidated one- off patch for bug number 27938294 from http://support.oracle.com/ Download the mandatory patch for bug number 28033370 from http://support.oracle.com/ Download the mandatory installer patch 28398331 from https://support.oracle.com/.

Obtaining the software

This release of OFS CRR Applications Pack v8.0.6.0.0 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](#)
- [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 "FTPSHARE".

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.
 - Ensure the OFSAA staging directory is not set to the same path as the OFSAA installation directory and is not a sub-folder inside the OFSAA installation directory.
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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.

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 8.0.4.0.0 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
```

6. Apply the mandatory installer patch **28398331**.

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 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](#)
- [Mandatory Patches to Install](#)

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 8.0.4.0.0 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 the following mode of execution:

- **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.

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 Schema Creator Log Files](#)

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.Oracle Driver	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
<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_ofsaconf, uat_ofsaatm.	Accepts strings with a minimum length of two and maximum of four. Example, DEV, SIT, PROD	Mandatory
<PREFIX_SCHEMA_NAME>	Enter as Y if You want to prefix the schema name with the <SETUPINFO>/<NAME>	Y/N	Mandatory

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<PASSWORD>/APPLYSAMEFORALL	<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 APPLYSAMEFORALL 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>
ADV_SEC_OPTIONS/TDE	<p>Enter the value as True if the user wants to utilize the Transaction Data Encryption (TDE) feature while creating the database schema.</p>	True/False	Mandatory. Default value is false.
ADV_SEC_OPTIONS/DATA_REDACT	<p>Enter the value as True if the user wants to utilize the Data Redaction feature while creating the database schema.</p>	True/False	Mandatory. Default value is false.
<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

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
TABLESPACE NAME/DATAFILE	Update the table space data fully qualified file name. Replace the <CHANGE_ME> with the path to the data file.	-	Mandatory
TABLESPACE NAME/ENCRYPT	Enter the value as On if use want to encrypt the tablespace data file. This should be set to ON only if ADV_SEC_OPTIONS/TDE is set to True.	-	Mandatory. Default value is OFF.
<SCHEMA>TYPE	The different types of schemas that are supported in this release are ATOMIC, CONFIG, and SANDBOX. By default, the schemas types are seeded based on the Applications Pack. Note: Do not edit this attribute value.	ATOMIC/CONFIG	Mandatory
<SCHEMA> NAME	By default, the schemas names are seeded based on the Applications Pack. You can edit the schema names if required. <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. 	The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore '_'. 	To identify which schema is associated to this Application. Cannot be blank

Table 4–1 (Cont.) Prerequisite Information

Element Name	Description	Permissible Value	Mandatory/Optional change
<SCHEMA>/ PASSWORD*	<p>Enter the password of the schema to be created.</p> <p>Note:</p> <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 	-	<p>Optional</p> <p>Note: You need to mandatorily enter the password if you have set the <PASSWORD>/APPLYSAMEFORALL attribute as N.</p>
<SCHEMA>/ APP_ ID	<p>By default, the Application ID is seeded based on the Applications Pack.</p> <p>Note: Do not edit this attribute value.</p>	-	<p>Mandatory</p> <p>This value should not be edited.</p>
<SCHEMA>/ DEFAULTTABLES PACE	<p>Enter the available default tablespace for DB User.</p> <p>Note: If this attribute is left blank, then USERS is set as the default tablespace.</p>	-	Optional
<SCHEMA>/ TEMPTABLESPAC E	<p>Enter the available temporary tablespace for the DB User.</p> <p>Note: If this attribute is left blank, then TEMP is set as the default tablespace.</p>	-	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, • 600M/m • 20G/g • UNLIMITED/unlimited	Optional
<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
<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

5. Save the OFS_CRR_SCHEMA_IN.xml file.

Note: •On successful execution of the utility, the entered passwords in the OFS_CRR_SCHEMA_IN.xml file are nullified.

- Do not clean up the OFS_CRR_SCHEMA_OUTPUT.xml file post-installation as it would be required in future patch installations and upgrades
-

Executing the Schema Creator Utility

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

- [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 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.


```
Validating Connection URL ...jdbc:oracle:thin:@whf00ari.in.oracle.com:1521/DBWHFARI
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@whf00ari.in.oracle.com:1521/DBWHFARI
Connection URL successfully validated...
localhost name - whf00ari IPAddress - 10.184.152.8
Parsing TABLESPACE tags...
You have chosen to install this Application Pack on "cr_atom" ATOMIC schema. Do you want to proceed? (Y/N)
Y
You have chosen to install this Application Pack on INFODOM "crr804i". Do you want to proceed? (Y/N)
Y
=====
Executing TableSpace Scripts started...
Skipping the creation of tablespace RRS_TABLE_SPACE
Skipping the creation of tablespace RRS_INDEX_TABLE_SPACE
Skipping the creation of tablespace RRS_CONF_TABLE_SPACE
=====
Creating Schemas started...
CONFIG User cr_conf successfully created on Default TableSpace : RRS_CONF_TABLE_SPACE on Temp TableSpace : TEMP
Grants creation scripts execution started...
Grants creation scripts execution completed...
Successfully connected to User - cr_conf URL - jdbc:oracle:thin:@whf00ari.in.oracle.com:1521/DBWHFARI
Scripts execution for CONFIG schema started ...
Scripts execution for CONFIG schema completed ...
User cr_conf details updated into the dbmaster table
User cr_conf details updated into the I18NMASTER table
User cr_conf details updated into the aai_db_detail table
User cr_conf details updated into the aai_db_auth_alias table
User cr_atom details updated into the dbmaster table
User cr_atom details updated into the I18NMASTER table
User cr_atom details updated into the aai_db_detail table
User cr_atom details updated into the aai_db_auth_alias table
User cr_atom is successfully created on Default TableSpace : RRS_TABLE_SPACE on Temp TableSpace : TEMP
Creating Schemas completed ...
=====
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
=====
Grants creation scripts execution started...
Grants creation scripts execution completed...
=====
Schemas Creation Completed
=====
```

```

====
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.

```

Enter user-name: sys/##### as sysdba

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> @sysdba_output_scripts.sql

Warning: Package Body created with compilation errors.

Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics 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.

9. Once the above file gets executed, a warning is displayed as shown in the above screen.
10. Run the below script in config schema:
 1. Navigate to the `<OFS_CRR_PACK>/schema_creator/SQLScripts/oracle` folder.
 2. Connect to the config schema through `sqlplus`
 3. Execute the `@compile_objects.sql` command.
 4. Commit the change.

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: 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.

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

In case of any errors, contact Oracle Support.

Verifying the Schema Creator Log Files

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](#)

Silent Mode Installation

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

Prerequisites

For a Pack on Pack installation where CRR is being installed on top of some other pack, then before installing CRR execute the below mandatory sql commands in the Config schema.

```
CREATE TABLE EXCEL_MAPPING_MASTER_BKP AS SELECT * FROM EXCEL_MAPPING_MASTER
/
COMMIT
/
```

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=< OFSAA 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 section [Configuring OFSAAI_InstallConfig.xml File](#).
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>

7. Navigate to the file: /OFS_CRR_PACK/OFS_CRR/conf/InstallConfig.xml and set the following value to 1:

```
<Variable name="RR_UPLOAD_MODEL">1</Variable>
```

Running the installer in Silent Mode

To install the OFSAA Infrastructure in Silent mode, follow these steps:

1. Navigate to the OFS_CRR_PACK/OFS_AAI/bin and OFS_CRR_PACK/OFS_CRR/bin folders.
2. Execute the following command in the console:

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

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:

```
$ cd /scratch/ofsaapp/CRR804I/Installer/OFS_CRR_PACK/bin
$ ls
install.jar OFSAAI.jar pack_install.bin pack_installsilent.bin setup.sh
$ ./setup.sh SILENT
profile Executed
  FIC_HOME : /scratch/ofsaapp/CRR804I/CRR804I
Environment check utility started...
=====
Java Validation Started ...
  Java found in : /usr/java/jdk1.7.0_72/bin
  JAVA Version found : 1.7.0_72
  JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
Environment Variables Validation Started ...
  ORACLE_HOME : /scratch/oracle/app/product/12.1.0/client_1
  TNS_ADMIN : /scratch/ofsaapp
Environment Variables Validation Completed. Status : SUCCESS
=====
OS specific Validation Started ...
  Checking en_US.utf8 locale. Status : SUCCESS
  Unix shell found : /bin/ksh. Status : SUCCESS
  Total file descriptors : 15000. Status : SUCCESS
  Total number of process : 10240. Status : SUCCESS
  OS version : 6. Status : SUCCESS
OS specific Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
  Oracle Client version : 12.1.0.2.0. Status : SUCCESS
  Successfully connected to schema cr_atom. 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 NLS_INSTANCE_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_$parameter view. Current value : SELECT. Status : SUCCESS
  Open cursor value is greater than 1000. Current value : 1000. Status : SUCCESS
```

Table 4–2 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 4–1 OFSAAI License Agreement Page

```

Current OS Version:6.6
Supported OS Version:5.5
OS Version Validation Status: SUCCESS
=====
-----Checking Disk Space-----
Available Disk Space is :21875
Required Disk Space is :500 MB
Validation for category DISK SPACE. STATUS : SUCCESS
=====
-----Checking Temp Space-----
Available Temp Space is 18884 MB
Required Temp Space is 500 MB
Validation for category TEMP SPACE. STATUS : SUCCESS
=====
-----Checking RAM-----
Available RAM in MB 25199
Required RAM in MB 500 MB
Validation for category RAM. STATUS : SUCCESS
=====
End of Environment Checks
=====
*****
OFSAA APPLICATION PACK LICENSE AGREEMENT
*****
* Oracle Financial Services Analytical Applications (OFSAA) application packs are groups of OFSAA products packaged together into a single installer. Each application pack contains OFSAA applications that address specific functional domains.*
* Every application pack also includes the following OFSAA infrastructure application options which are automatically installed by every application pack installer:
  1. Oracle Financial Services Analytical Applications Infrastructure
  2. Oracle Financial Services Enterprise Modeling
  3. Oracle Financial Services In-line Processing Engine
  4. Oracle Financial Services Big Data Processing
* Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.*
* The application pack installer always installs Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial Services Big Data Processing application options along with the application pack applications, but enables them only if any application that requires their functionality is enabled.*
* Any OFSAA application that is enabled must be licensed for use. Oracle Financial Services Analytical Applications Infrastructure, Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial Services Big Data Processing are individually licensable application options.*
* Application products once enabled cannot be disabled. Application products not enabled on installation, may later be enabled using the "Manage OFSAA Product License(s)" feature of the platform.*
*****
Are you accepting the terms and conditions mentioned above? [Y/N]:
    
```

2. Accept the License Agreement.

Table 4–3 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.

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

```

OFSAA APPLICATION PACK LICENSE AGREEMENT
*****
* Oracle Financial Services Analytical Applications (OFSAA) application packs are groups of OFSAA products packaged together into a single installer. Each application pack contains OFSAA applications that address specific functional domains.*
* Every application pack also includes the following OFSAA infrastructure application options which are automatically installed by every application pack installer:
1. Oracle Financial Services Analytical Applications Infrastructure
2. Oracle Financial Services Enterprise Modeling
3. Oracle Financial Services In-line Processing Engine
4. Oracle Financial Services Big Data Processing
* Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.*
* The application pack installer always installs Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial Services Big Data Processing application options along with the application pack applications, but enables them only if any application that requires their functionality is enabled.*
* Any OFSAA application that is enabled must be licensed for use. Oracle Financial Services Analytical Applications Infrastructure, Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial Services Big Data Processing are individually licensable application options.*
* Application products once enabled cannot be disabled. Application products not enabled on installation, may later be enabled using the "Manage OFSAA Product License(s)" feature of the platform.*
*****
Are you accepting the terms and conditions mentioned above? [Y/N]:
y
Starting installation...
Preparing to install...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing SILENT Mode Installation...

=====
OFSAAInfrastructure                               (created with InstallAnywhere)
-----

=====

Installing...
-----

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

```

```

Preparing SILENT Mode Installation...

=====
pack_installsilent                               (created with InstallAnywhere)
-----

=====

Installing...
-----

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

Installation Complete.
profile Executed
*****
CTRL characters removal started ...
CTRL characters removal over ...
Windows executable files removal started ...
Windows executable files removal over ...
We are now in /scratch/ofsaapp/CRR804I ...
*****
profile Executed
profile Executed
executing "ant"
Buildfile: /scratch/ofsaapp/CRR804I/CRR804I/ficweb/build.xml

createwar:
[war] Building war: /scratch/ofsaapp/CRR804I/CRR804I/ficweb/CRR804I.war

createear:
[ear] Building ear: /scratch/ofsaapp/CRR804I/CRR804I/ficweb/CRR804I.ear

BUILD SUCCESSFUL
Total time: 58 seconds
OFSAA App Layer Services start-up check started...
Preparing start-up check results

```

```

profile Executed
profile Executed
executing "ant"
Buildfile: /scratch/ofsaapp/CRR804I/CRR804I/ficweb/build.xml

createwar:
    [war] Building war: /scratch/ofsaapp/CRR804I/CRR804I/ficweb/CRR804I.war

createear:
    [ear] Building ear: /scratch/ofsaapp/CRR804I/CRR804I/ficweb/CRR804I.ear

BUILD SUCCESSFUL
Total time: 58 seconds
OFSAA App Layer Services start-up check started...
Starting startofsaai.sh service...
OFSAA Service - OK
Starting icc service...
ICC service - OK
Shutting down icc service...
Shutting down OFSAA service...
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI DB Layer Services check started...
Calling agentsshutdown.sh to check and kill, if any of the server is running...
OLAP Data Server service is not running.
Stop MESSAGE Server service with Proces ID : 26473
Stop AM service with Proces ID : 26460
Stop ROUTER service with Proces ID : 26452
Starting ROUTER Service
ROUTER service started in background mode.
Starting AM Service
AM service started in background mode.
Starting MESSAGE SERVER Service
MESSAGE SERVER service started in background mode.
Starting OLAP DATA SERVER Service
OLAP DATA SERVER service started in background mode.
OLAP Data Server service is not running.
Stop MESSAGE Server service with Proces ID : 17851
Stop AM service with Proces ID : 17839
Stop ROUTER service with Proces ID : 17830
OFSAAI DB Layer File Services check 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.
-
-

3. After the successful installation of CRR, execute the below mandatory commands in Config schema:

```

INSERT ALL INTO EXCEL_MAPPING_MASTER
(V_MAPPING_CODE,
V_MAPPING_NAME,
V_MAPPING_DESC,
V_INFODOM,
V_CREATED_BY,
V_CREATED_ON,
V_EXCEL_NAME)
VALUES
(V_MAPPING_CODE,
V_MAPPING_NAME,

```



```

V_MAPPING_DESC,
V_INFODOM,
V_CREATED_BY,
V_CREATED_ON,
V_EXCEL_NAME)
SELECT V_MAPPING_CODE,
V_MAPPING_NAME,
V_MAPPING_DESC,
V_INFODOM,
V_CREATED_BY,
V_CREATED_ON,
V_EXCEL_NAME
FROM EXCEL_MAPPING_MASTER_BKP
/
DROP TABLE EXCEL_MAPPING_MASTER_BKP
/
COMMIT
/

```

4. Download and install OFSAAI one-off patch 28398331 from <https://support.oracle.com/>.
5. Perform steps mentioned in the [Post Installation Configuration](#) section.

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. If this is a pack on pack installation and both packs are installed on same ofsaai infodomain, please ignore the below message.

[Tue 08/5/2018 04:36:52] [OFS_CRR] [WARN] - Query:

```
CREATE TABLE AAI_DRF_QUERY_METADATA(
ID NUMBER(10) NOT NULL,
V_TABLE_NAME VARCHAR2(100) NOT NULL,
V_COLUMN_NAME VARCHAR2(100),
V_CHILD_TABLE_NAME VARCHAR2(100),
V_CHILD_COLUMN_NAME VARCHAR2(100),
F_QUERY_FLAG CHAR(1),
V_COLUMN_DATA_TYPE VARCHAR2(20),
V_TARGET_COLUMN_NAME VARCHAR2(100),
V_QUERY_NAME VARCHAR2(200),
CONSTRAINT PK_QUERY_META PRIMARY KEY(ID)
)
```

Warn:ORA-00955: name is already used by an existing object

Mandatory Patches to Install

You must install the following mandatory patches after successful installation of CRR Application pack:

Table 4-4

Patch Number	Type	Description
27938294	Consolidated one-off patch	Refer to the Readme available with the patch for further instructions on installing the patch.
28033370	Mandatory OFSAAI Maintenance Level one-off	OFSAAI 8.0.6.1.0 ML is regularized with all the mandatory patches released on top of 8.0.6.0.0 release. This ML has the compatibility patch as well, which enables you to upgrade selected packs in your OFSAA instance to 8.0.6.x.x and makes the existing packs from earlier versions compatible with 8.0.6.x.x.

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](#)
- [Configurations for Web logic 12.1 and 12.2](#)
- [Creating and Deploying the Applications Pack Web Archive](#)

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](#).

Configurations for Web logic 12.1 and 12.2

1. Check if the below file is available.

`$FIC_HOME/ficweb/webroot/WEB-INF/metro-default.xml.`

2. If file from step 1 is present, Copy the file metro-default.xml from

`$FIC_HOME/ficweb/webroot/WEB-INF/` to

`$FIC_HOME/ficweb/webroot/WEB-INF/classes/META-INF`

3. If file from step 1 is not present, create a file metro-default.xml under

`$FIC_HOME/ficweb/webroot/WEB-INF/classes/META-INF` using the content from

`<<Appendix,Table/Section metro-default.xml>>`

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](#).

Configuring Redaction

1. Data Controller group to be mapped to two roles:
 - DATASECURITY
 - DATASECURITYADMIN
2. Login as system administrator (SYSADMN) and navigate to Identity management screen.
3. Go to User Group Role map
4. Select data controller user Group. By default user group will be mapped to only one role, i.e. Data Security Admin. User has to map Data Security Role.
5. Click on Map.
6. In the new window select Data Security Role and click Ok.

[User Group Role Map](#)> User Group Role Map

User Group Role Map

Search

Roles List

Members		Selected Members
ABC Qtnr Admin		Data Security Admin
ABC Qtnr Confidential		Data Security Role
ABC Qtnr Loc Admin	>	
ABC Qtnr Loc Auth	>>	
ABC Qtnr Loc View		
ABC Qtnr Maintenance		

7. User needs to login as system authorizer (SYSAUTH) and authorize the group role mapping for data controller group with Data Security Role.
8. Once the authorization is done, user should be able to view data Security role under data controller group under User group role map section.

9. Map data controller group to RR infodom and RR Segment.

User Group Domain Map

User Group Domain Map

Search and Filter

User Group ID Group Name

Description

User Group Domain Map

<input type="checkbox"/>	User Group ID	Group Name	Description
<input type="checkbox"/>	BUSINESSADMIN	Business Administrator	Business Administrator Group
<input type="checkbox"/>	BUSINESSAUTHORIZER	Business Authorizer	Business Authorizer Group
<input type="checkbox"/>	BUSINESSOWNER	Business Owner	Business Owner Group
<input type="checkbox"/>	BUSINESSUSER	Business User	Business User Group
<input checked="" type="checkbox"/>	DATACONTROLLER	Data Controller	Data Controller Group
<input type="checkbox"/>	GUEST	Guest	Guest Group
<input type="checkbox"/>	IDENTITYMGMTADMIN	Identity Administrator	Identity Administrator
<input type="checkbox"/>	IDENTITYMGMTAUTH	Identity Authorizer	Identity Authorizer
<input type="checkbox"/>	RRINDANAGROUP	Indonesia Analyst Group	Indonesia Analyst Group
<input type="checkbox"/>	RRINDAUDGROUP	Indonesia Auditor Group	Indonesia Auditor Group

Data Controller Map

Mapped Domains

10. Login as system administrator (SYSADMN) and navigate to Identity management screen.

11. Data Controller group to be mapped to two roles:

- DATASECURITY

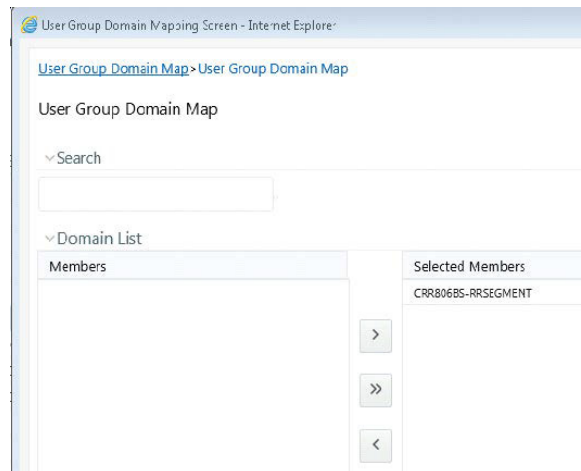
-DATASECURITYADMIN

12. On the Identity management screen select user group Domain Map.

13. Select DATACONTROLLER group from the User Group Domain Map.

14. Click MAP, User group domain mapping screen is open.

15. Select the RR Infodom and Segment and click Ok.



16. User Group Domain Segment Map is successfully saved.

17. User needs to login as system authorizer (SYSAUTH) and authorize the group domain segment mapping for data controller group with RR Infodom and RR Segment.

18. Once the authorization is done, user should be able to view data controller group under user – user group map.

Mapping data controller group to RR Administrator user

1. Login as system administrator (SYSADMN) and navigate to Identity management screen.
2. On the Identity management screen select user group Domain Map.

User - User Group Map

User - User Group Map

Search and Filter

User ID Name

User - User Group Map

User ID	Name
<input type="checkbox"/> GOANA	GOAML Analyst1
<input type="checkbox"/> GOAUD	GOAML Auditor
<input type="checkbox"/> GOSUP	GOAML Supervisor
<input type="checkbox"/> GUEST	Guest Login
<input checked="" type="checkbox"/> RRADMN	RR Administrator
<input type="checkbox"/> SYSADMN	System Administrator
<input type="checkbox"/> SYSAUTH	System Authorizer

RRADMN Map

Mapped Groups	
Data Controller	SMS
RRADMINISTRATOR	SMS

3. Map data controller group to the RR ADMINSTRATOR user.

User - User Group Mapping Screen - Internet Explorer

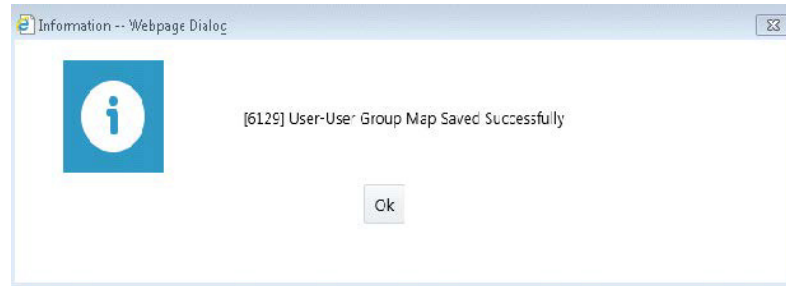
User - User Group Map > User - User Group Map

User - User Group Map

Search

User Groups

Members	Selected Members
Indonesia Analyst Group	Data Controller
Indonesia Auditor Group	RRADMINISTRATOR
Indonesia Supervisor Group	
RR GoAML SUPERVISOR User Group	
RR GoAml ANALYST User Group	
RR GoAml AUDITOR User Group	
RRANALYST	
RRANALYST1	
RRANALYST2	
RRAHAMASAFF	



4. Login as System Authorizer and approve the User-User group mapping for RR Administrator User.

Batch Execution

1. Login as a user with RR admin roles.
2. Create and execute Batch for Data Redaction. For more information on this please refer to OFS AAAI Applications Pack Installation Guide.

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 select the **Financial Services Regulatory Reporting** 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 pack installation.
- Context: Refer to the CONTEXT_PATH variable mentioned during the OFS CRR application pack 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*.

HTML Compliant Template

NSTR, USSAR and goAML these are the templates that can be accessed in IE, Chrome, Safari and Mozilla. The rest of templates are compliant only in IE.

Configuring Web Server

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.

- Refer Oracle Financial Services Analytical Applications Infrastructure Security Guide mentioned in the [Related Documents](#) section for additional information on securely configuring your Web Server.
- Add umask 0027 in the .profile of the UNIX account which manages the WEB server to ensure restricted access permissions.
- Ensure to enable sticky session/ affinity session configuration on the web server. Refer the respective product specific Configuration Guide for more details. Additionally, you also need to enable the sticky session/ affinity session configuration at Load Balancer level if you have configured a Load Balancer in front of the web server(s).

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`.

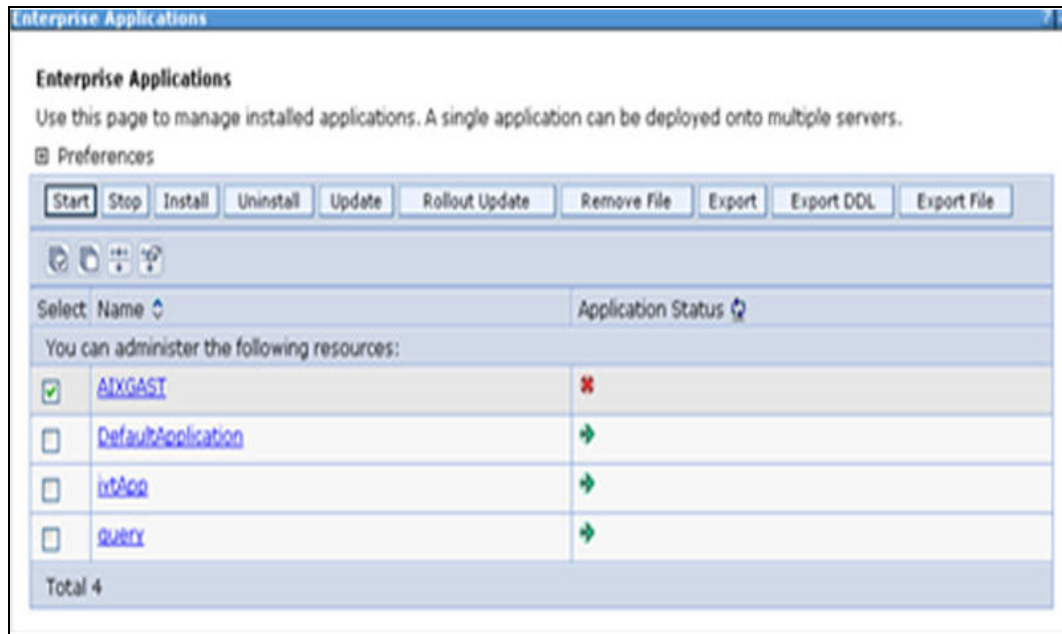
The *Integrated Solutions Console Login* window is displayed.

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

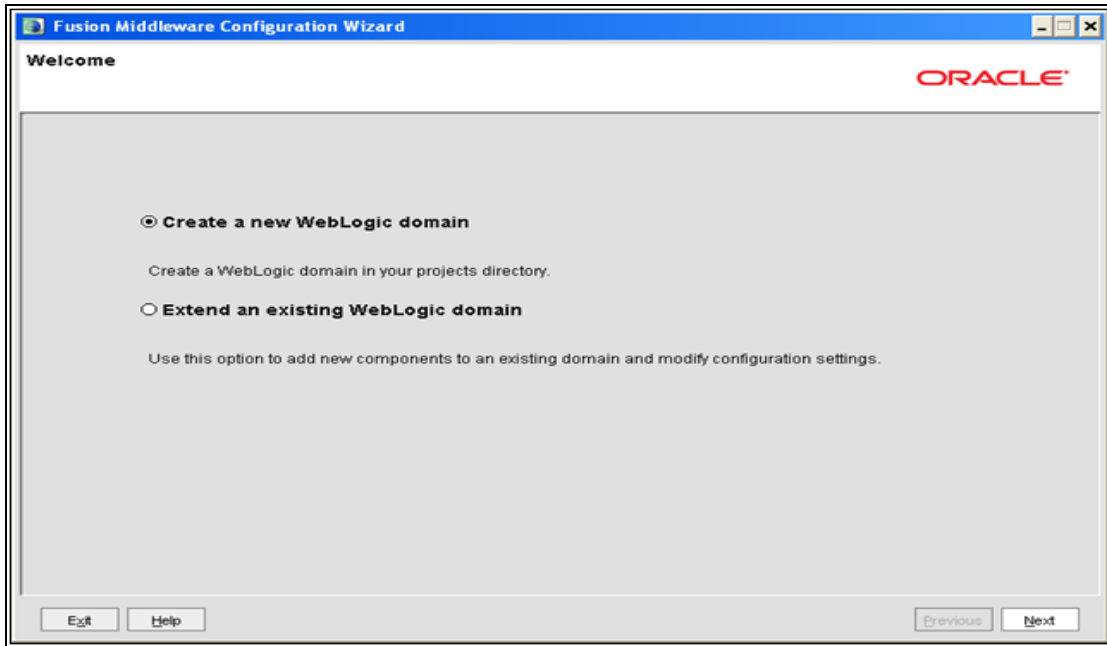
To create a new domain using Configuration Wizard in WebLogic, do the following:

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

```
.\config.sh
```

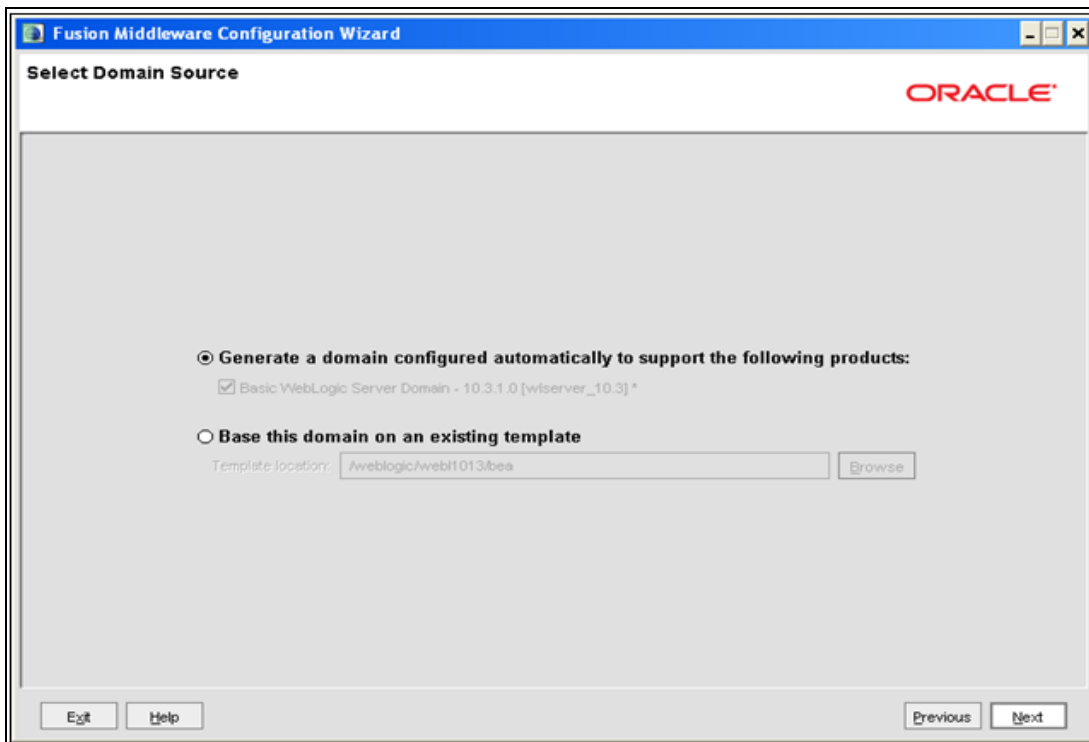
The Welcome window of the Configuration Wizard is displayed.

Figure 7-3 Welcome



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

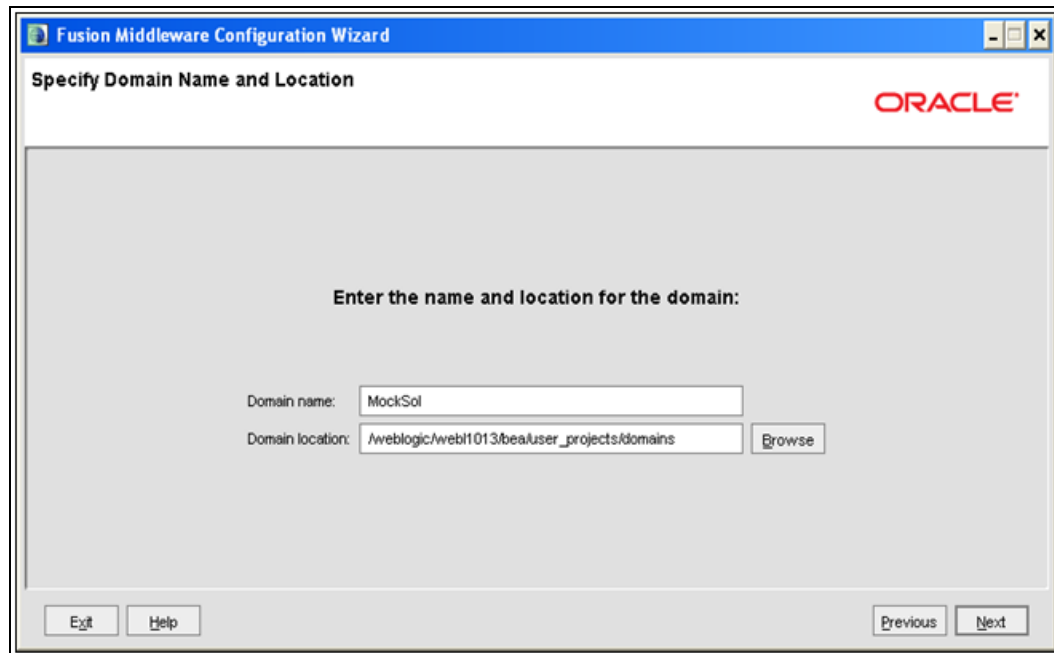
Figure 7-4 Select Domain Source



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



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

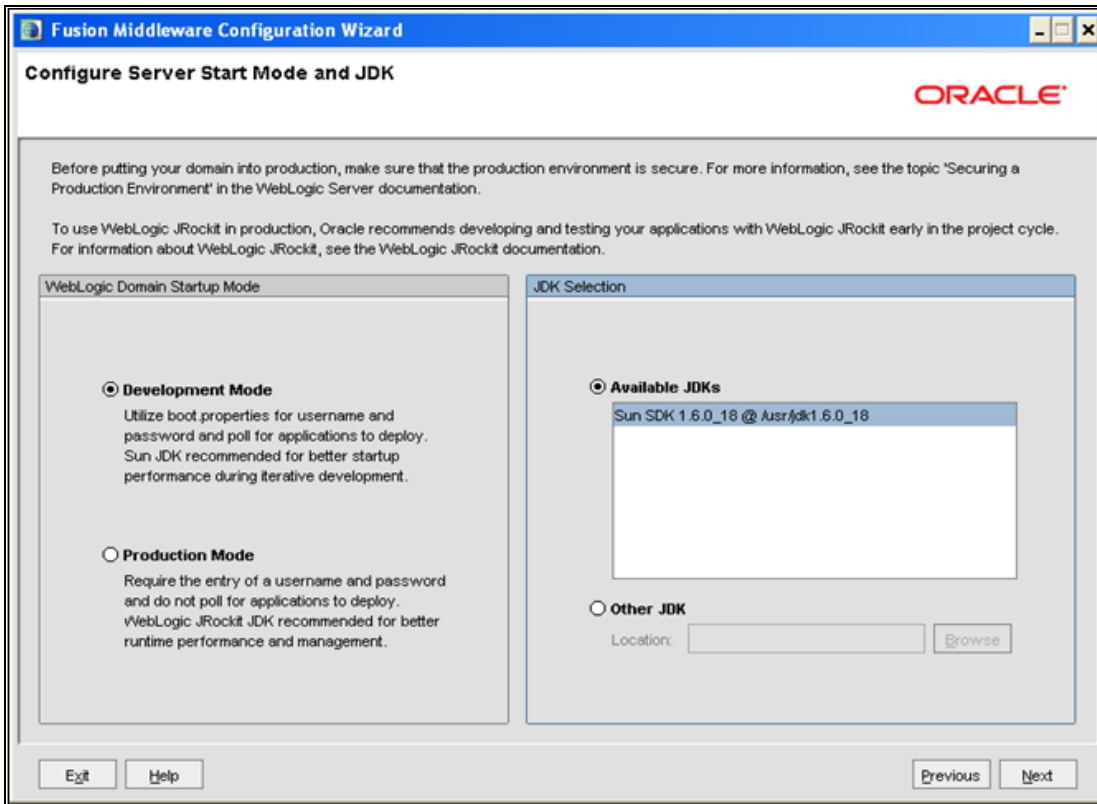
The *Configure Administrator Username and Password* window is displayed.

Figure 7-6 Configure Administrator Username and Password



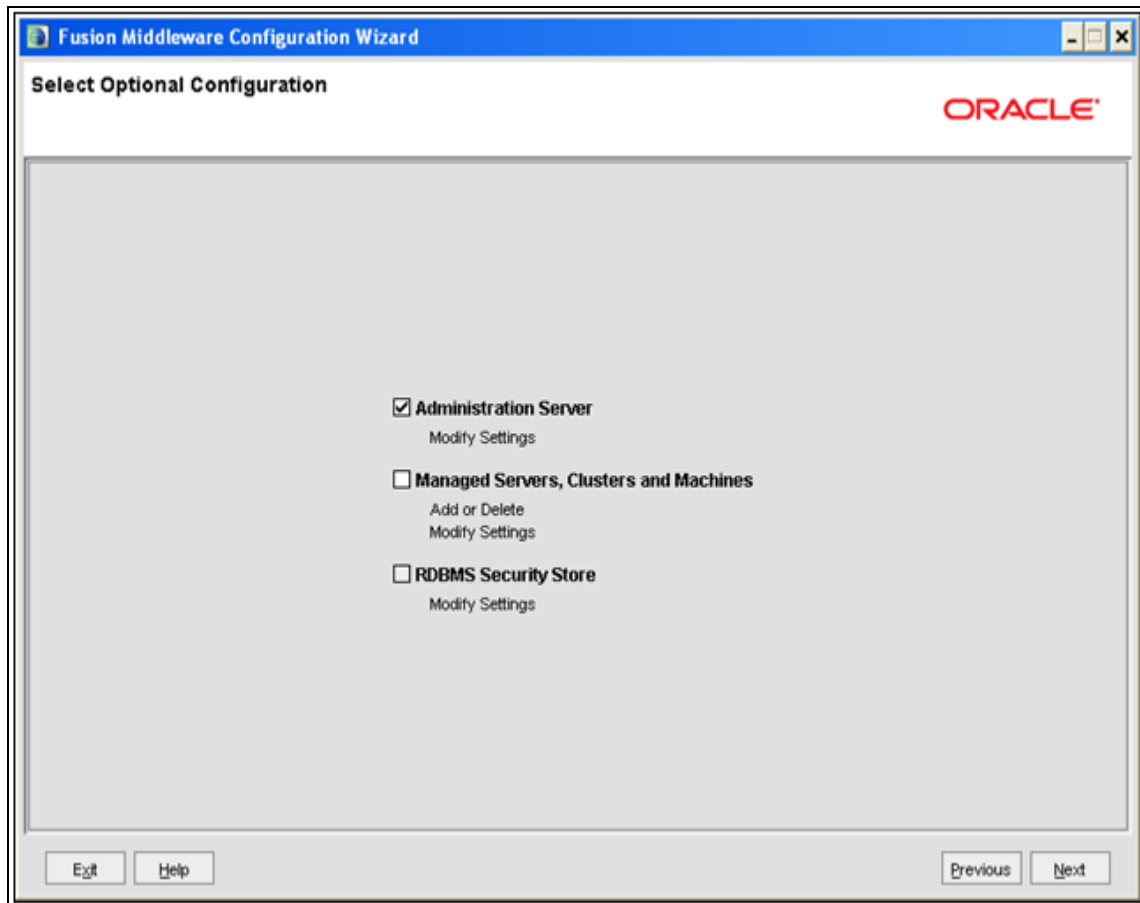
5. Enter the **User name** and **User password** to be assigned to the Administrator. Ensure that the password is of minimum 8 characters in length.
6. Re-enter the password for confirmation and add a brief **Description**. Click **Next**.
The *Configure Server Start Mode and JDK* window is displayed.

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.

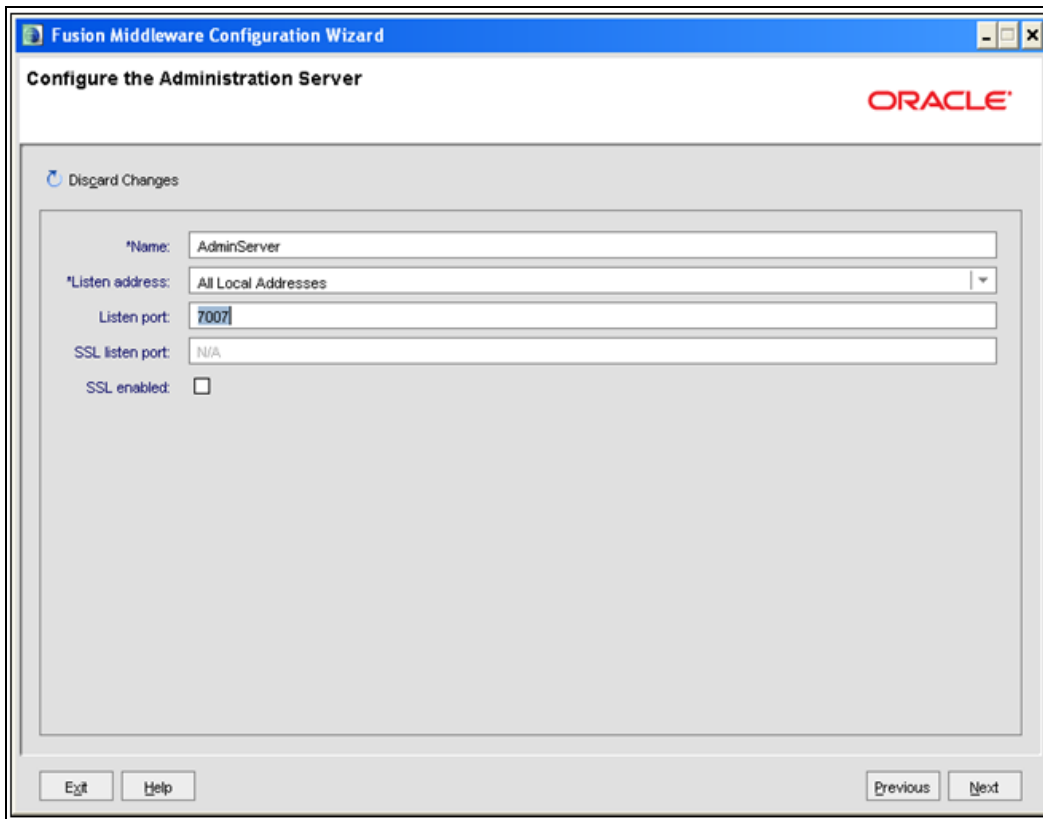
Figure 7–8 Select Optional Configuration



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

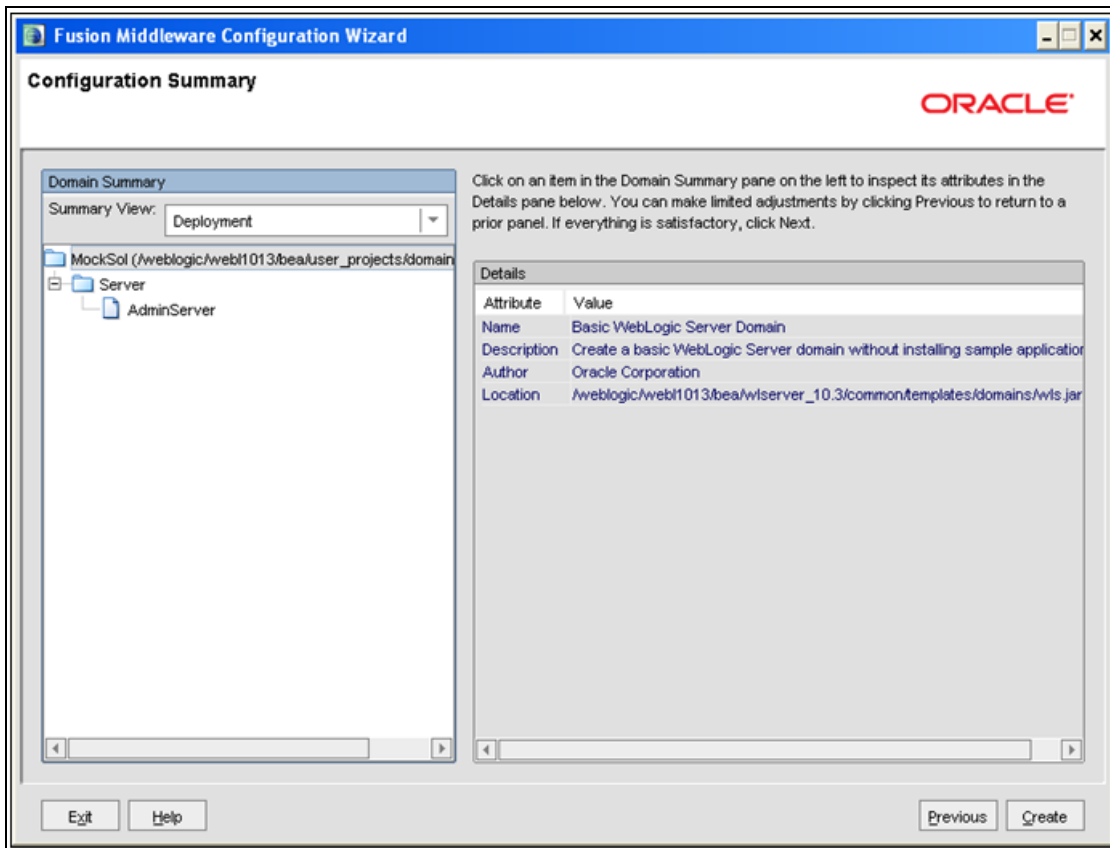


9. Enter Administration Server details such as the Name, Listen address, Listen Port, SSL listen port, and SSL enabled (for secure login using https) check box. Click **Next**.

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.

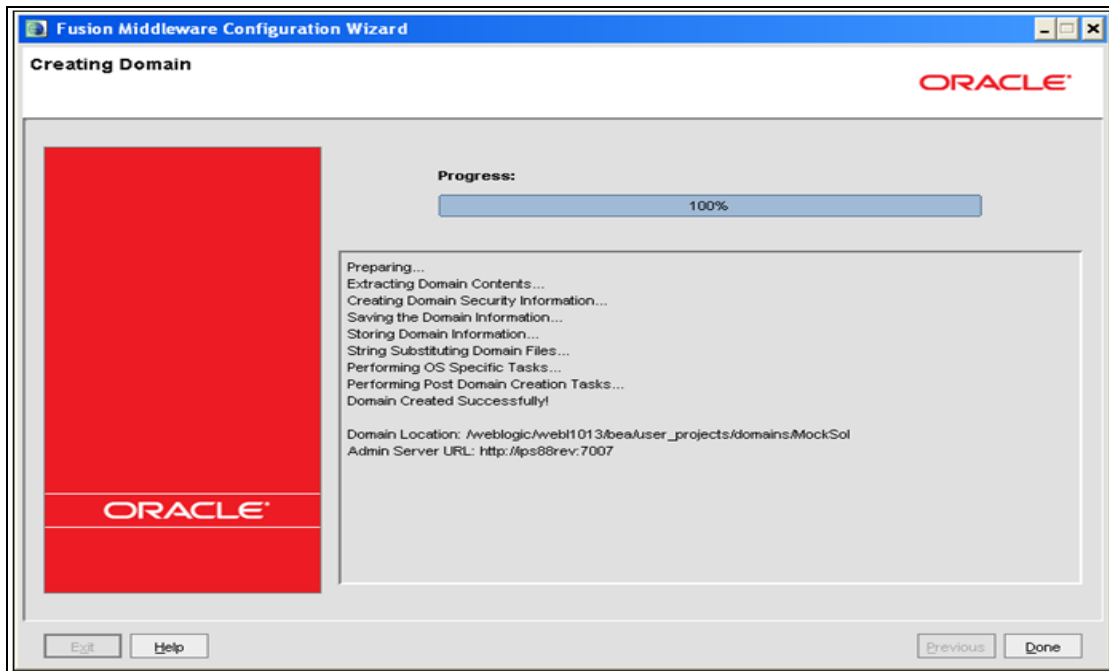
Figure 7–10 Configure Server Start Mode and JDK



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 Servers

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.

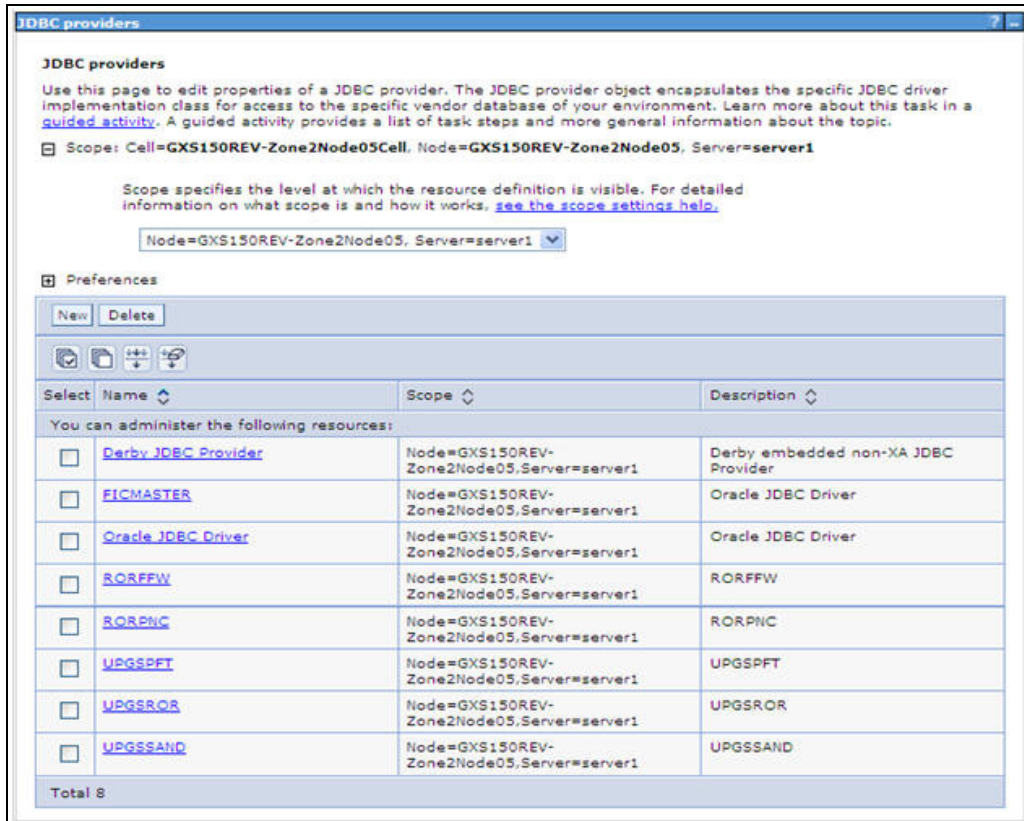
This section covers the following topics:

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

Creating JDBC Provider

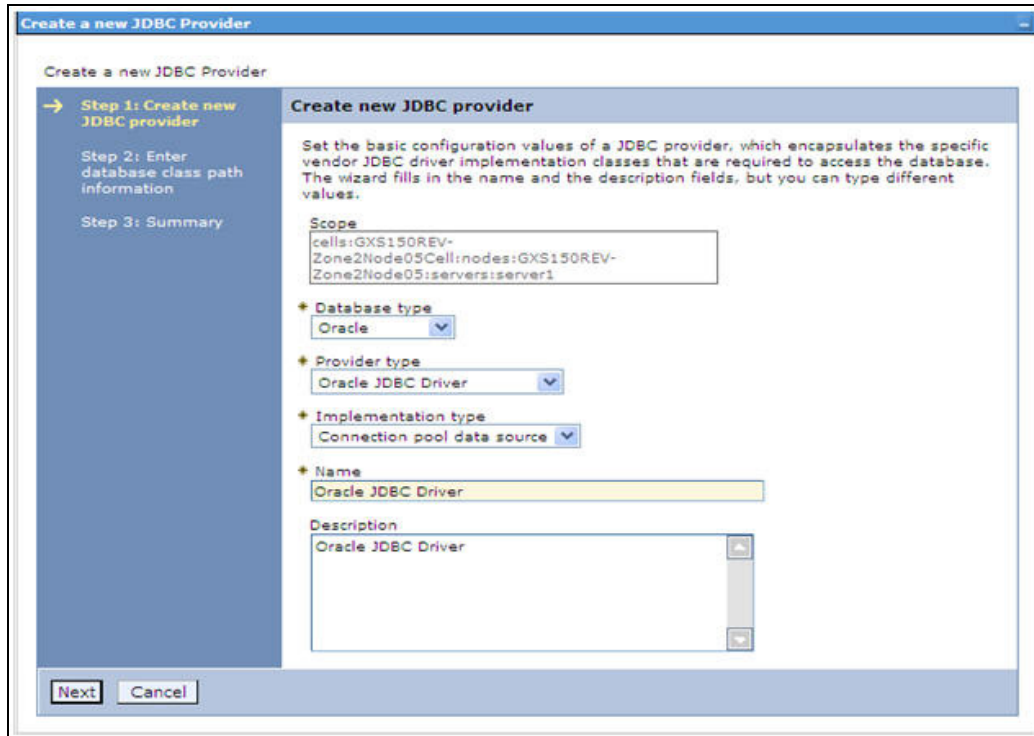
1. Open the WebSphere admin console in the browser window:
`http://<ipaddress>:<administrative console port>/ibm/console`. (`https` if SSL is enabled). The *Login* window is displayed.
2. Login with the user id that has admin rights.
3. Expand the **Resources** option in the LHS menu and click **JDBC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

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.

Create a new JDBC Provider



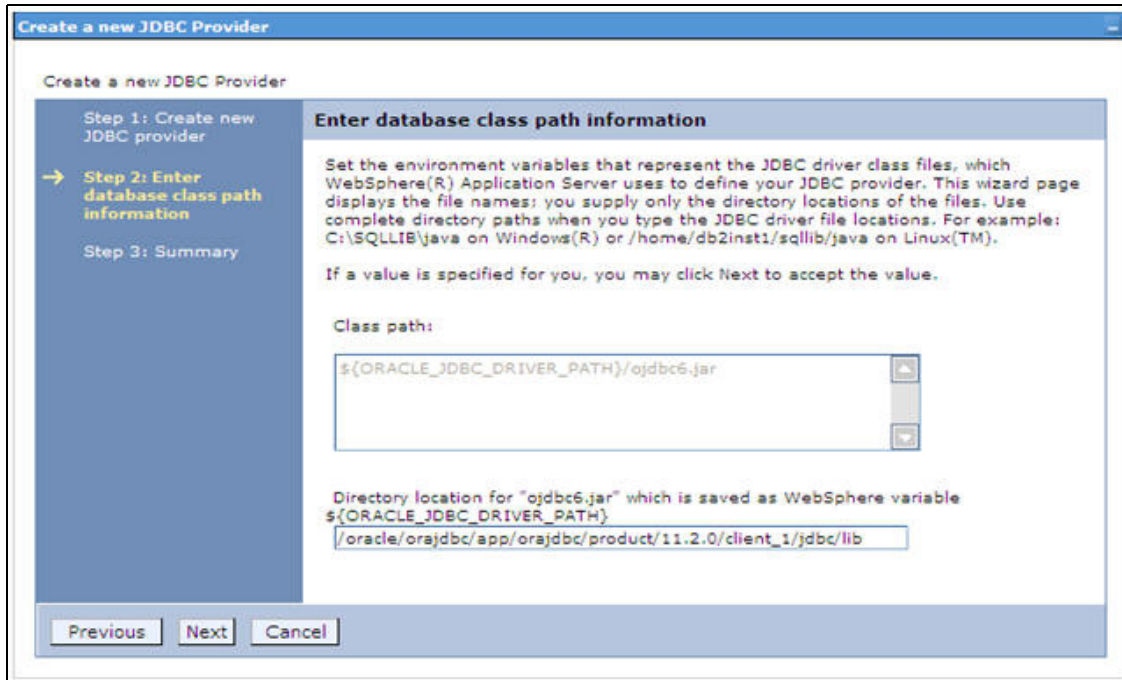
6. Enter the following details:

Table 7-1 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**.

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 can be downloaded from the following Oracle Download site:

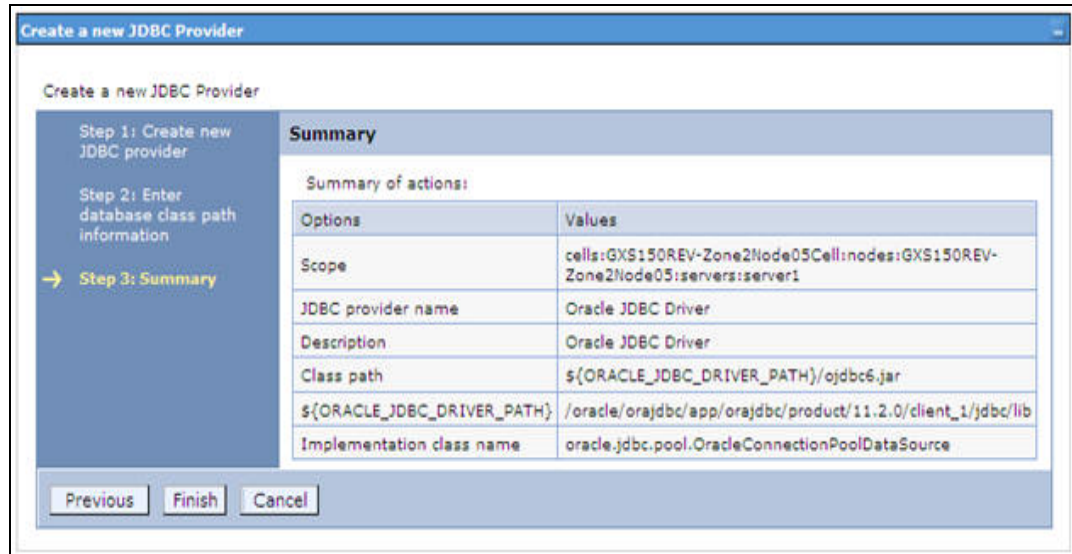
- [Oracle Database 11g Release 2 \(11.2.0.4\) JDBC Drivers](#)
- [Oracle Database 12c Release 1 \(12.1.0.1\) JDBC Drivers](#)

Once downloaded, you need to copy the file in the required folder on the server.

Note: Refer [Appendix N](#) for identifying the correct ojdbc<version>.jar version to be copied.

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

Summary



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

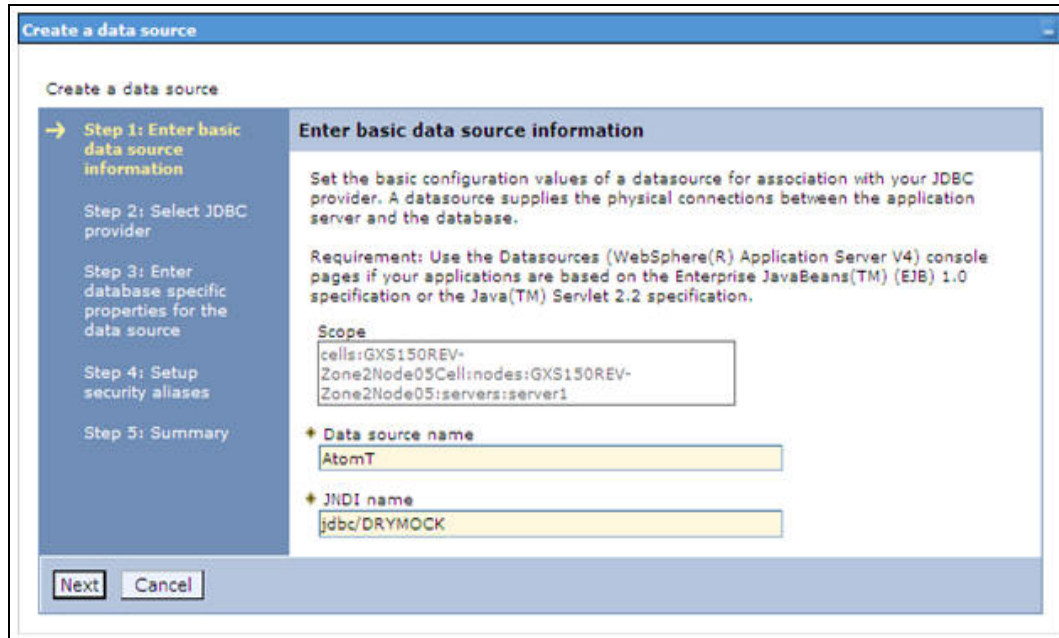
1. Open this URL in the browser window: `http://<ipaddress>:<administrative console port>/ibm/console`. (https if SSL is enabled). The *Login* window is displayed.
2. Login with the user id that has admin rights.
3. Expand the **Resources** option in the LHS menu and click **JDBC > Data sources** option.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

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.

Create a data source

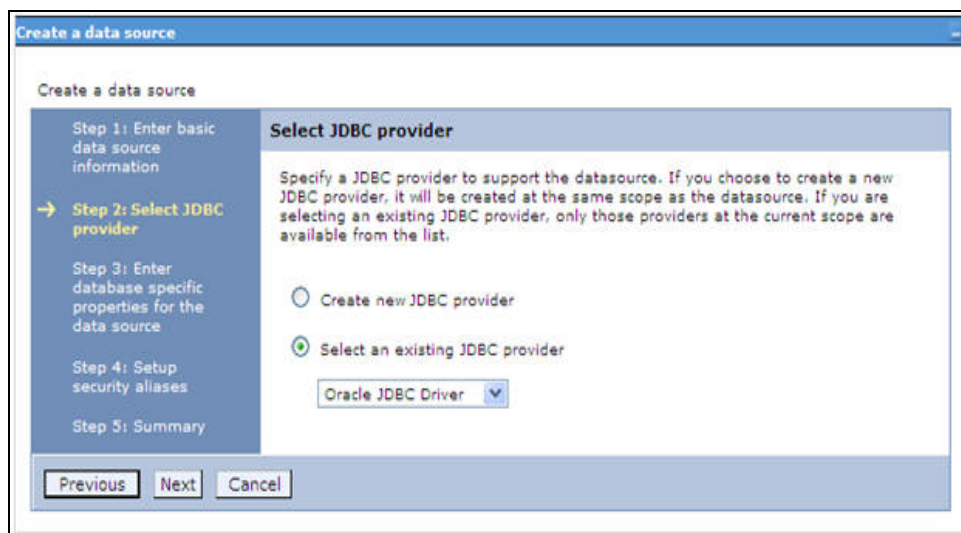


6. Specify the **Data Source name** and **JNDI name** for the new "Data Source".

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

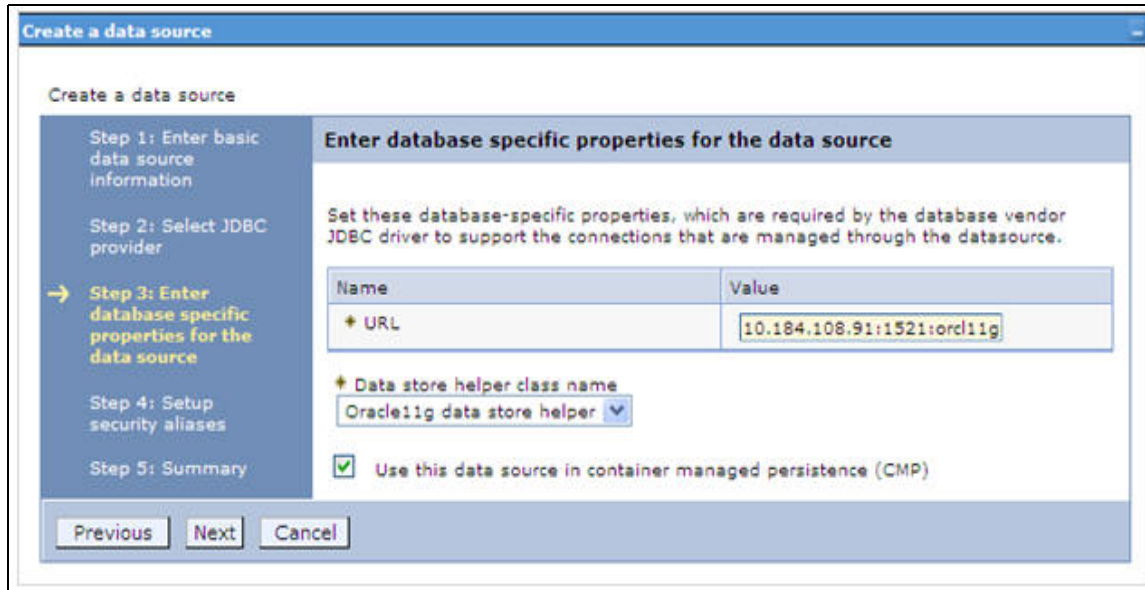
7. Click **Next**. The Select JDBC provider window is displayed.

Select JDBC provider



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

Enter database specific properties



9. Specify the database connection URL.

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

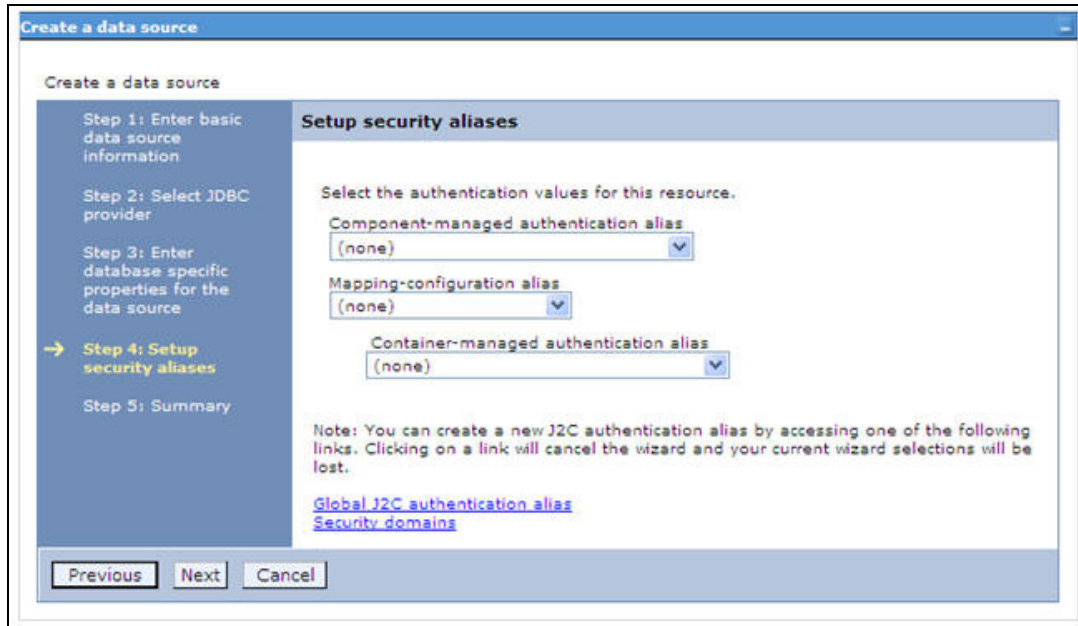
10. Select **Data Store Helper Class Name** from the drop-down list and ensure that the checkbox **Use this data source in container managed persistence (CMP)** is selected.

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)))`

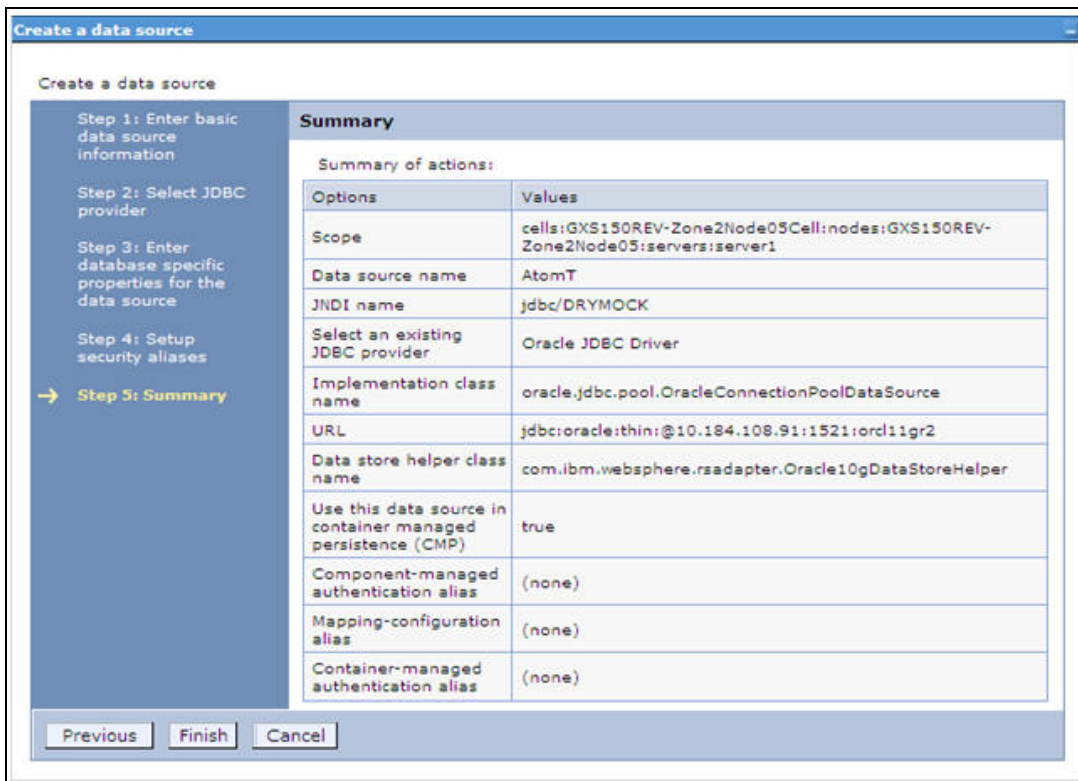
11. Click **Next**.

Setup security aliases



- 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**.

Summary



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

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

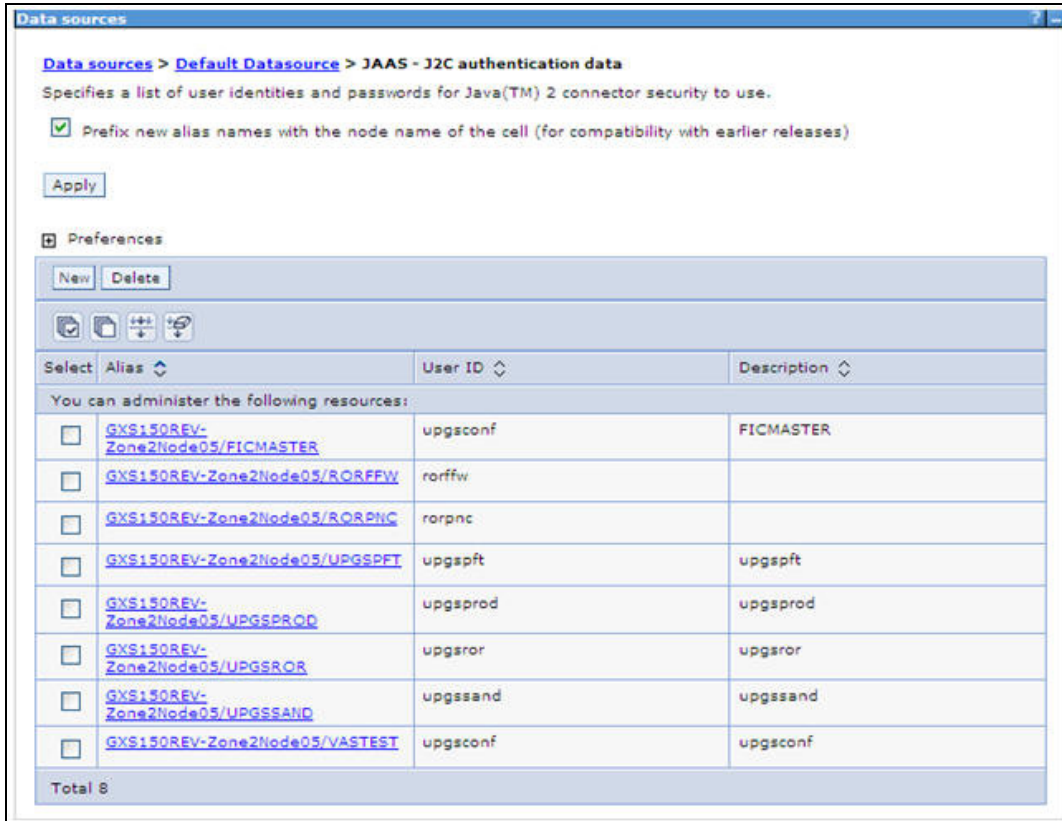
J2C Authentication Details

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

To create J2C Authentication details:

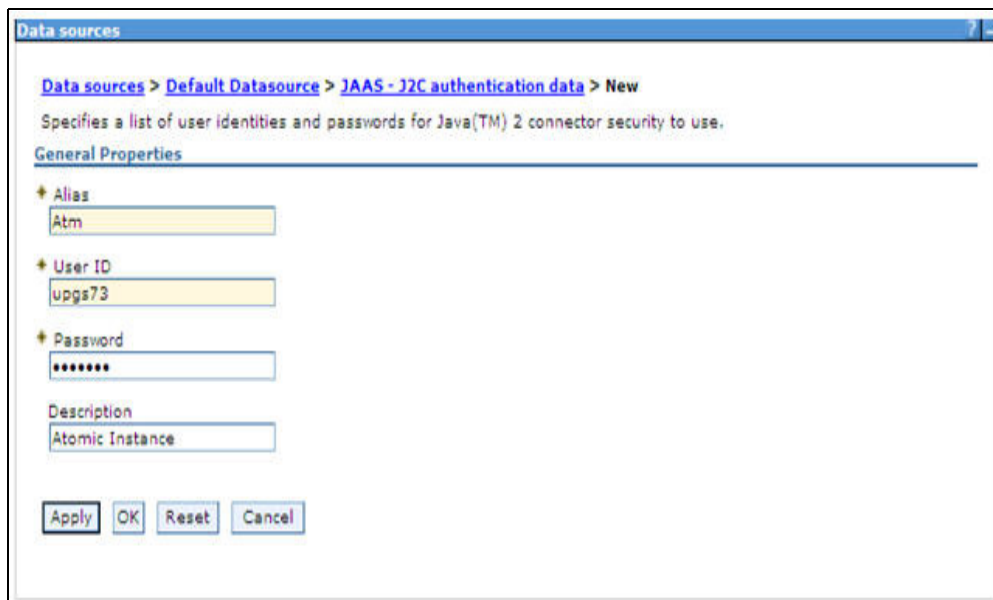
1. Select the newly created Data Source and click **JAAS - J2C authentication data** link under **Related Items**.

JAAS- J2C authentication data



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

JAAS- J2C authentication data- New



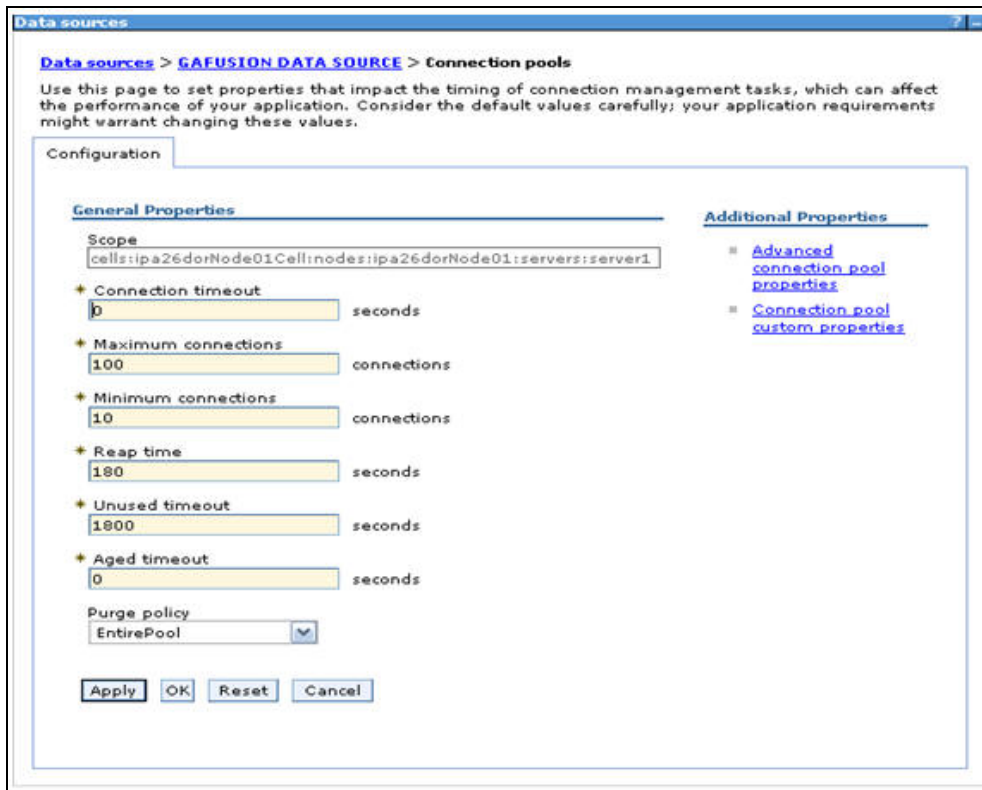
3. Enter the **Alias**, **User ID**, **Password**, and **Description**. Ensure the following:
 - User ID is the Oracle user ID created for the respective CONFIG and ATOMIC Schema for the "Information Domain".
 - Specify the CONFIG database user ID and password information for the jdbc/FICMASTER data 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 7–12 Connection pools



3. 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.

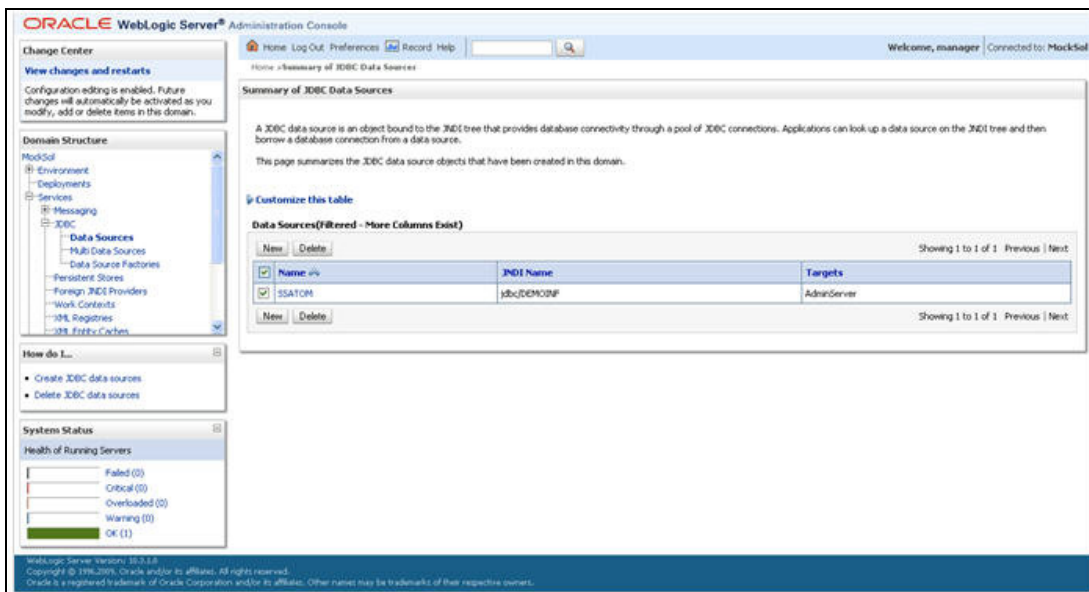
1. Open the following URL in the browser window:
<http://<ipaddress>:<administrative console port>/console>. (https if SSL is enabled). The Welcome window is displayed.
2. Login with the Administrator **Username** and **Password**.

Welcome



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

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](#).

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**.

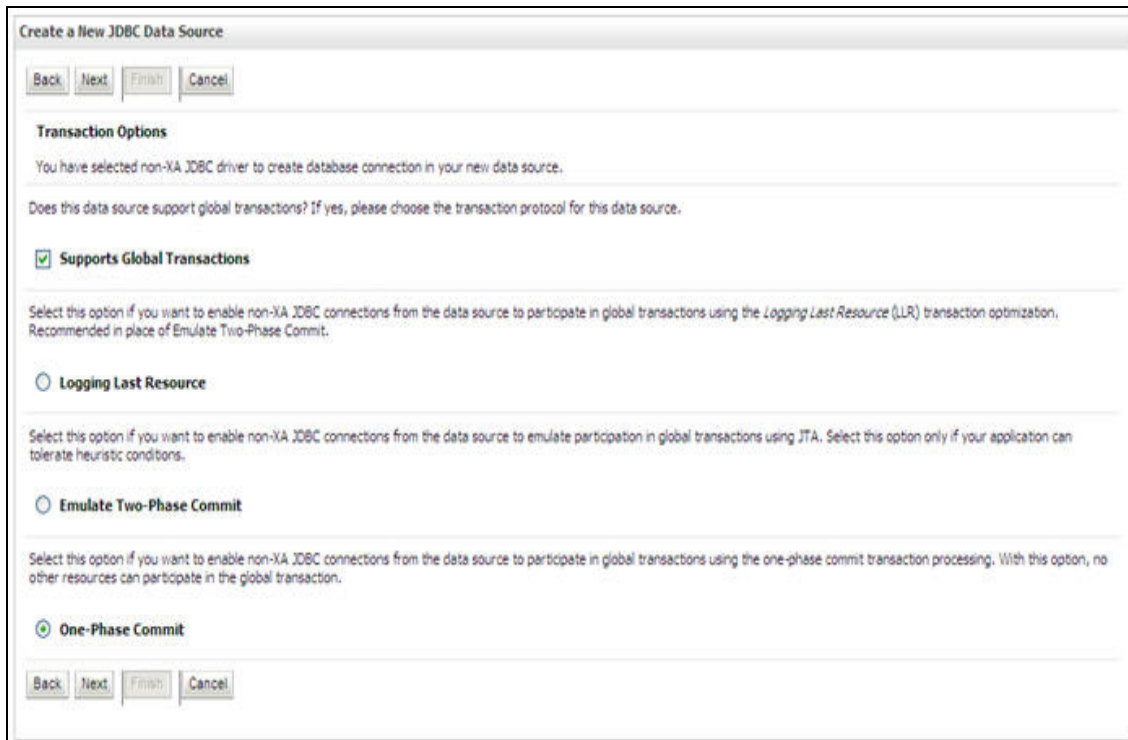
Ensure the following:

- 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.

JDBC Data Source Properties

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

Transaction Options



The screenshot shows a dialog box titled "Create a New JDBC Data Source". At the top, there are four buttons: "Back", "Next", "Finish", and "Cancel". Below the buttons is a section titled "Transaction Options". The text in this section reads: "You have selected non-XA JDBC driver to create database connection in your new data source." followed by "Does this data source support global transactions? If yes, please choose the transaction protocol for this data source." There are three radio button options: "Supports Global Transactions" (which is checked), "Logging Last Resource", and "Emulate Two-Phase Commit". Below these are three text boxes providing details for each option. The "One-Phase Commit" option is selected with a radio button. At the bottom of the dialog, there are four 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.

Connection Properties

Create a New JDBC Data Source

Back Next Finish Cancel

Connection Properties

Define Connection Properties.

What is the name of the database you would like to connect to?

Database Name: fsgbu

What is the name or IP address of the database server?

Host Name: 10.184.74.80

What is the port on the database server used to connect to the database?

Port: 1521

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?

Password:

Confirm Password:

Back Next Finish 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.

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: [masked]

Confirm Password: [masked]

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."

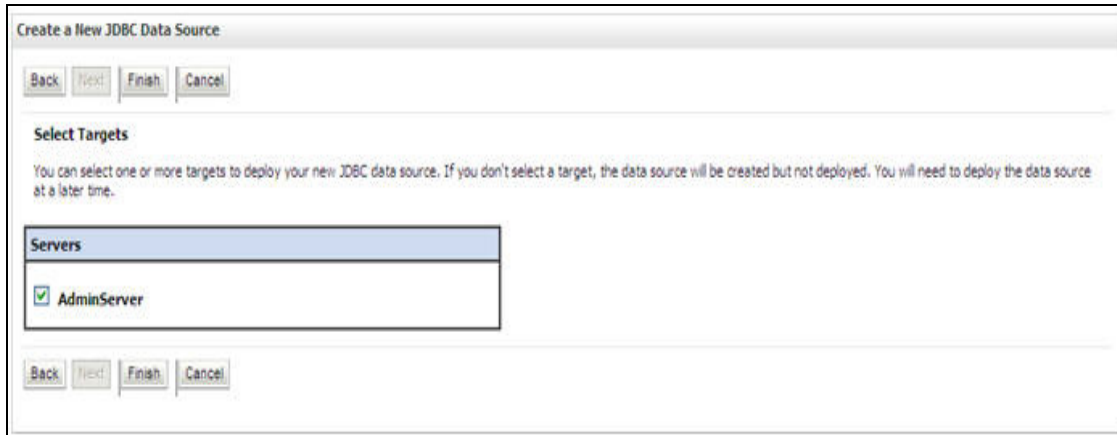
12. Click **Finish**. The created "Data Source" is displayed in the list of Data Sources.

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.

Select Targets

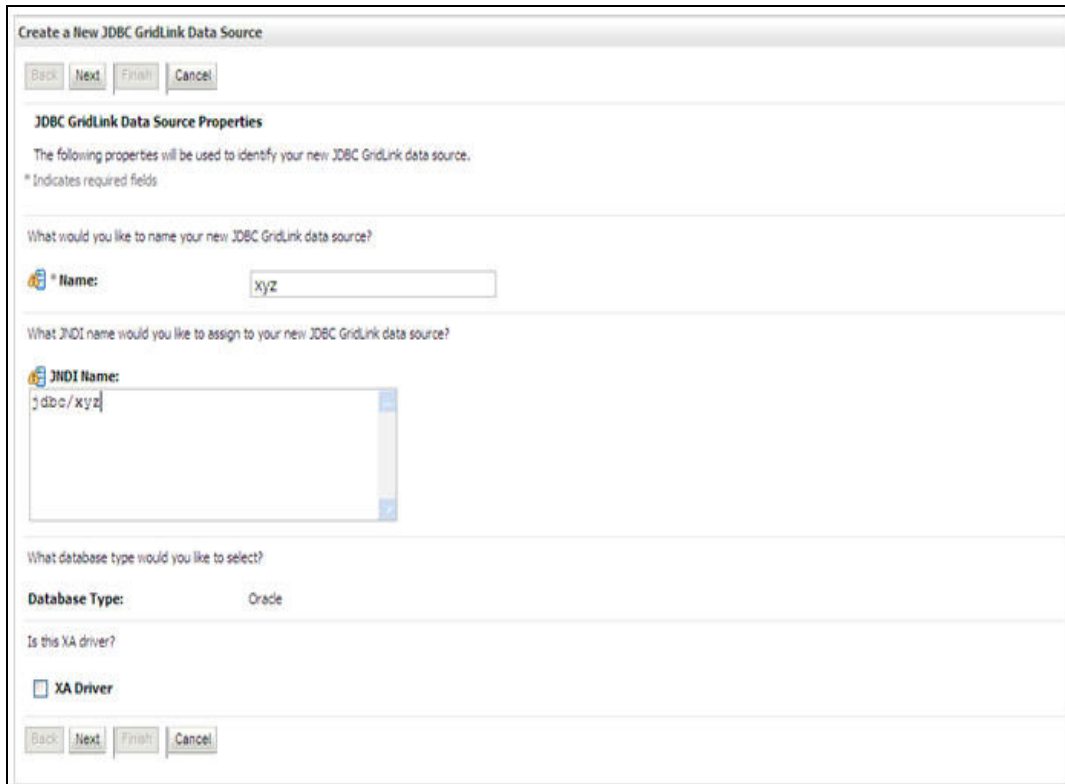


14. Select the **AdminServer** option and click **Finish**.

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.

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**.

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.

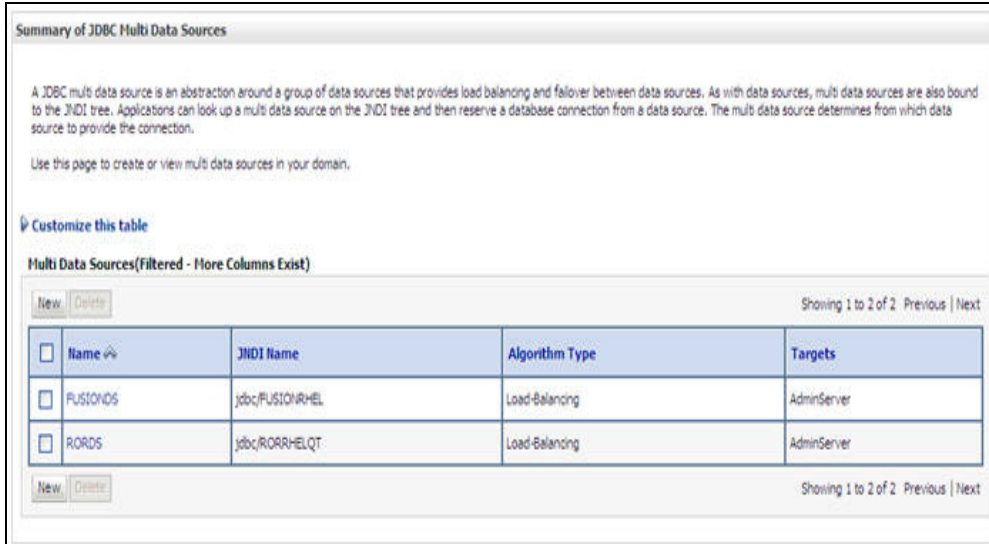
Configure Multi Data Sources

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.

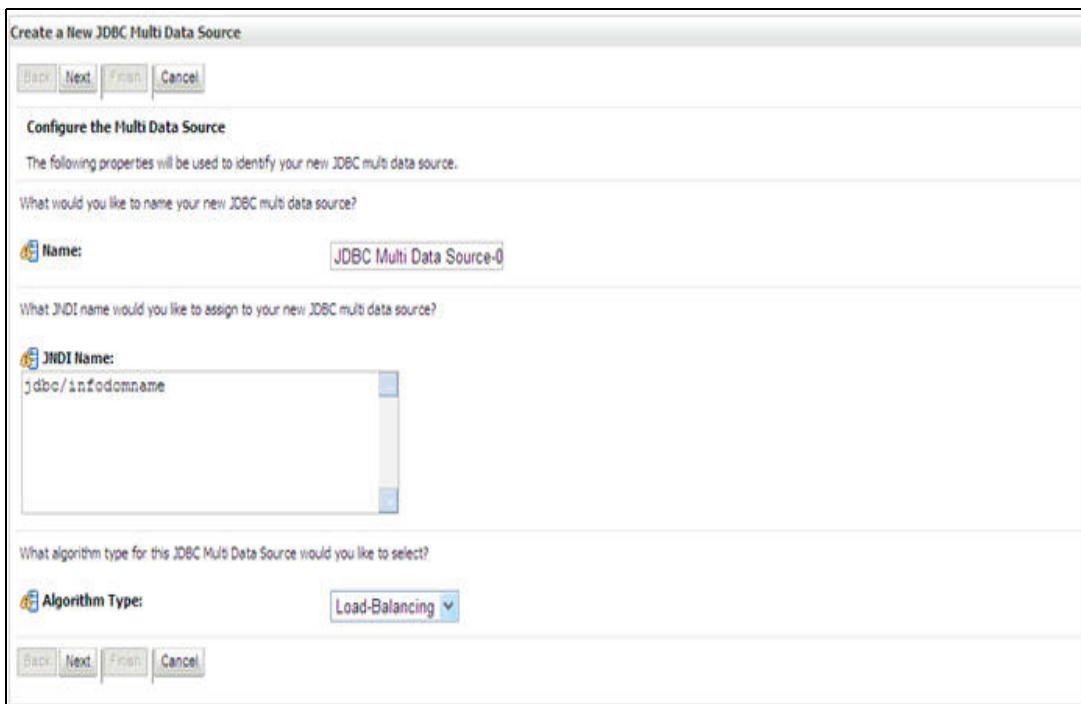
Summary of JDBC Multi Data Sources



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.

Configure the Multi Data Source



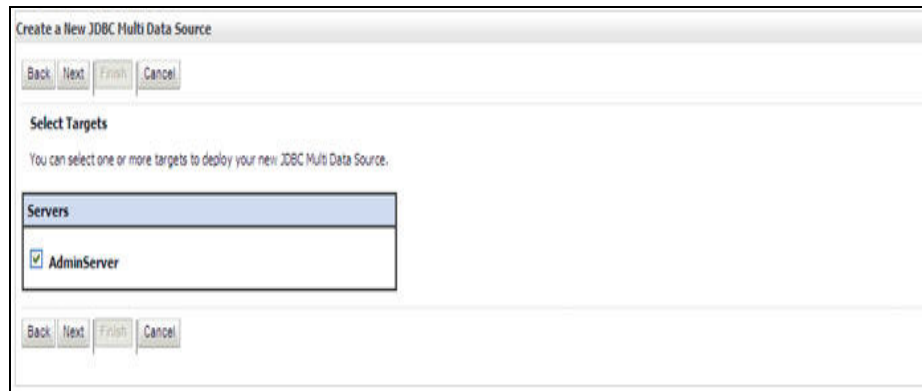
5. Enter the JDBC Source **Name**, **JNDI name**, and select the **Algorithm Type** from the drop-down list. Click **Next**.

Note the following:

- The JNDI Name has to be specified in the format `jdbc/infodomainname`.

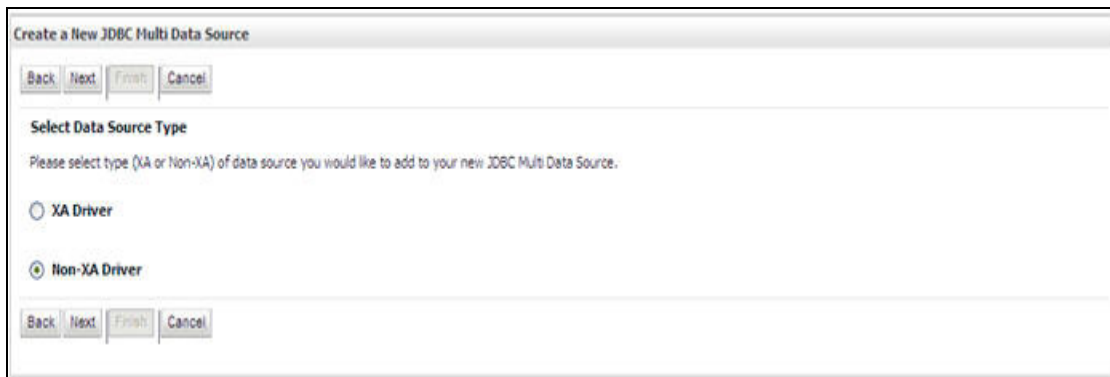
- JNDI Name of the Data Sources that will be added to new JDBC Multi data source should be different from the JNDI name specified during Multi Data Source.
- Same steps needs to be followed to create a mandatory data source pointing to the "configuration schema" of infrastructure with jdbc/FICMASTER 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**.

Select Targets



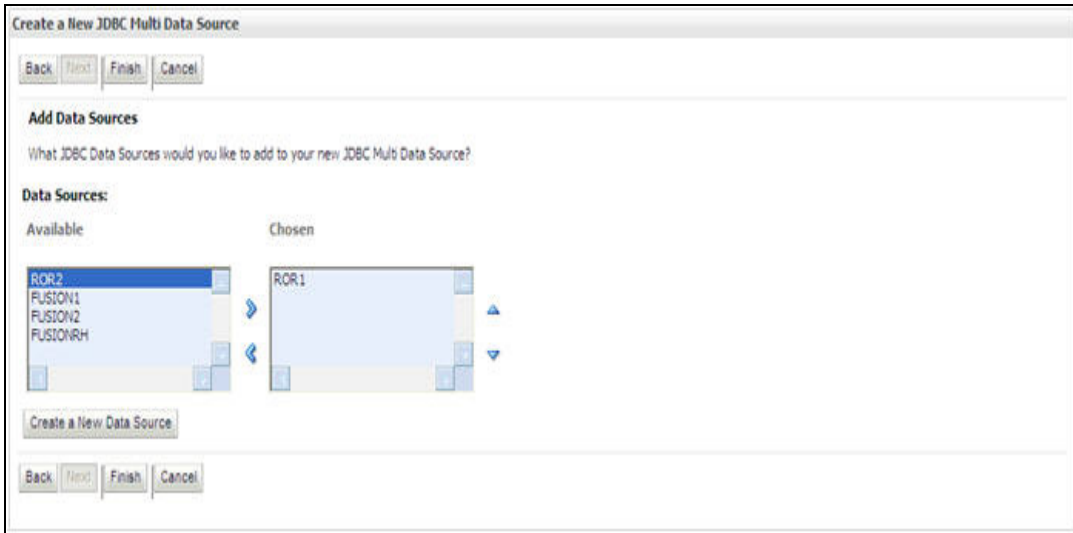
6. Select the **AdminServer** check box and click **Next**.

Select Data Source Type



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

Add Data Sources



8. Map the required Data Source from the Available Data Sources. Click **Finish**.

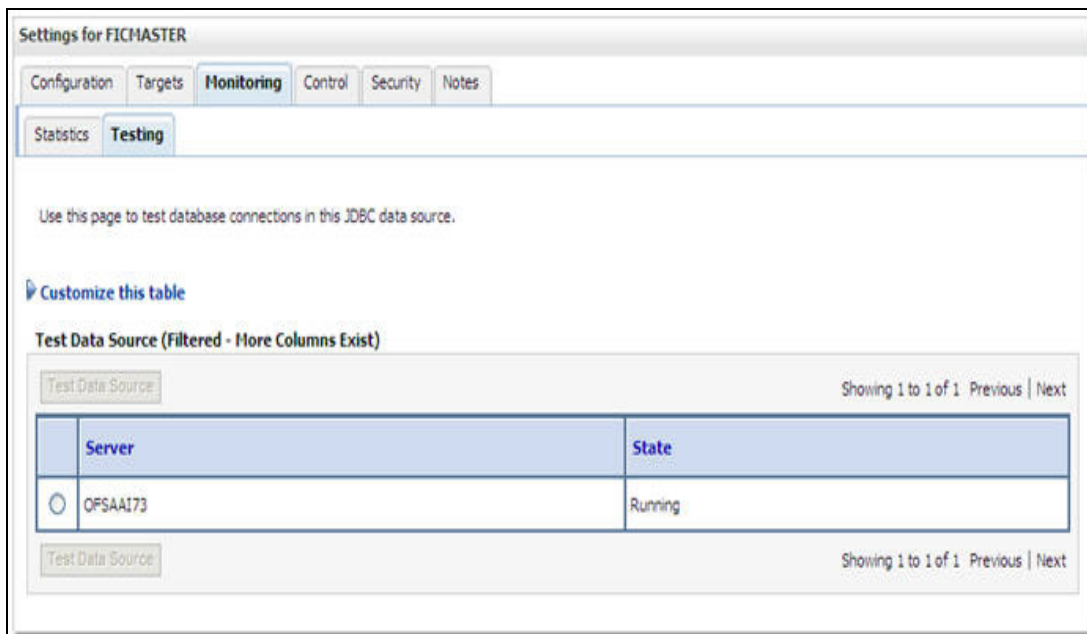
The New JDBC Multi Data Source is created with added data sources.

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.

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](#)
- [Class Loader Configuration for Apache Tomcat](#)

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

Note: Refer [Appendix N](#) for identifying the correct `ojdbc<version>.jar` version to be copied.

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/.

Note: Refer [Appendix N](#) for identifying the correct ojdbc<version>.jar version to be copied.

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.

Creating and Deploying EAR/WAR File

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:

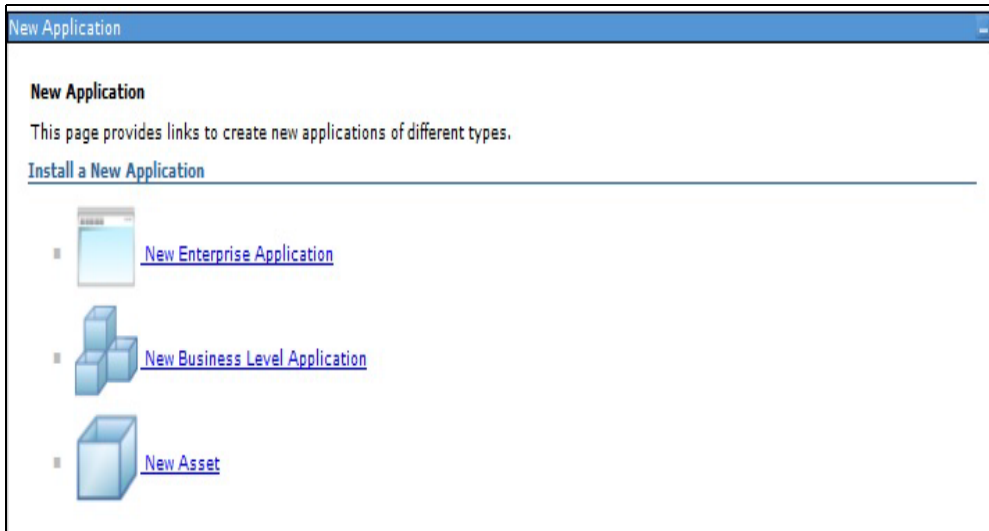

```
./startServer.sh server1
```
2. Open the following URL in the browser: `http://<ipaddress>:<Administrative Console Port>/ibm/console`. (https if SSL is enabled). The login screen is displayed.

Figure 7-13 Login Window



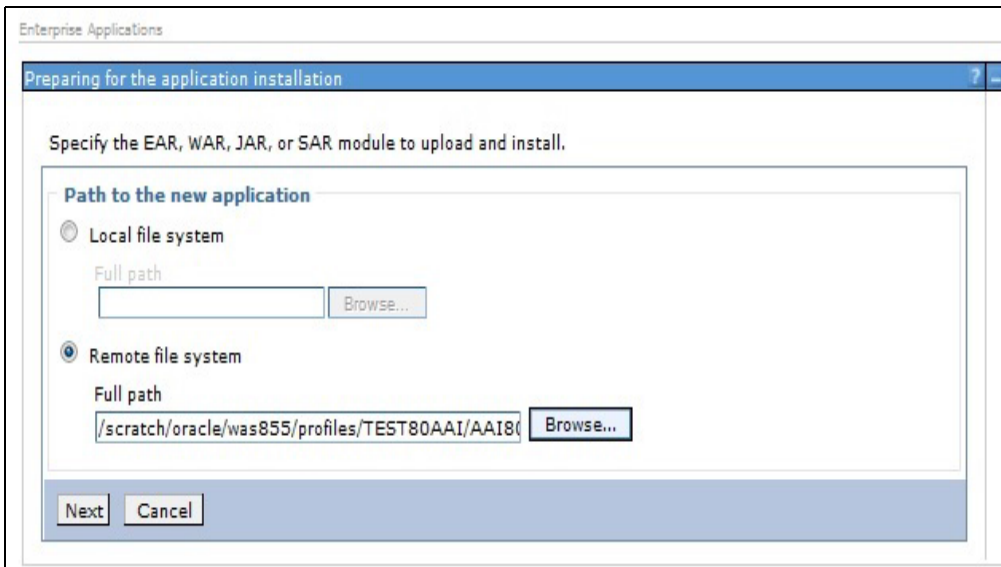
3. Enter the user credentials which has administrator rights and click **Log In**.
4. From the LHS menu, select **Applications** and click **New Application**. The New Application window is displayed.

Figure 7–14 *New Application*

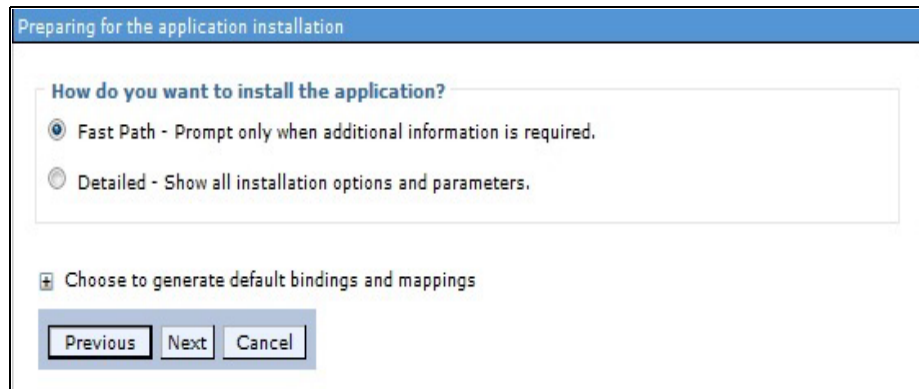


5. Click **New Enterprise Application**. The Preparing for the application installation window is displayed.

Figure 7–15 *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 7–16 *Installation Options*

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

Figure 7–17 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
 warn ▼

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
 Disabled ▼

Allow EJB reference targets to resolve automatically

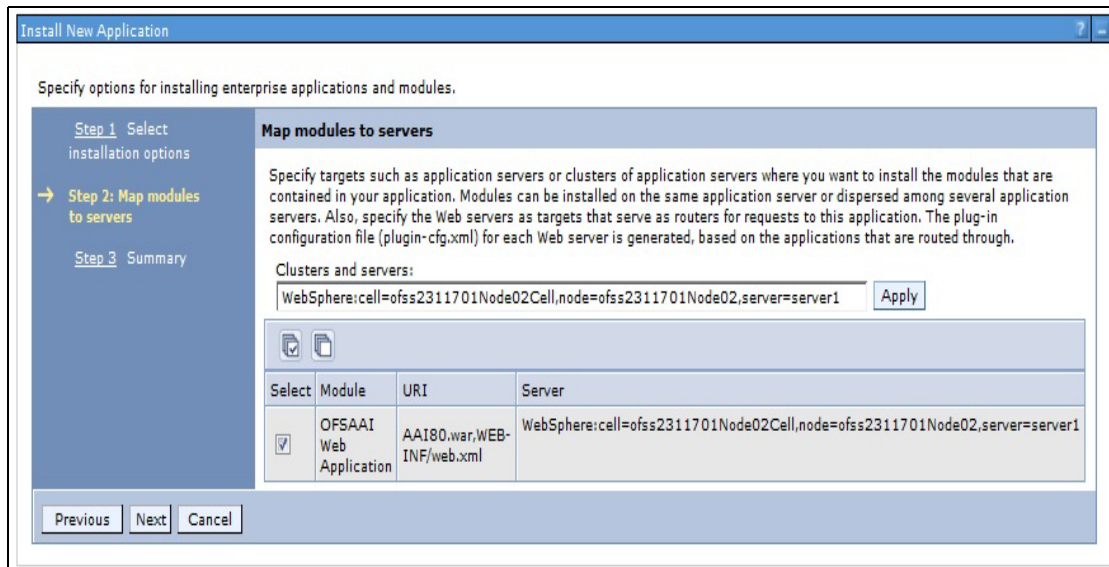
Deploy client modules

Client deployment mode

Validate schema

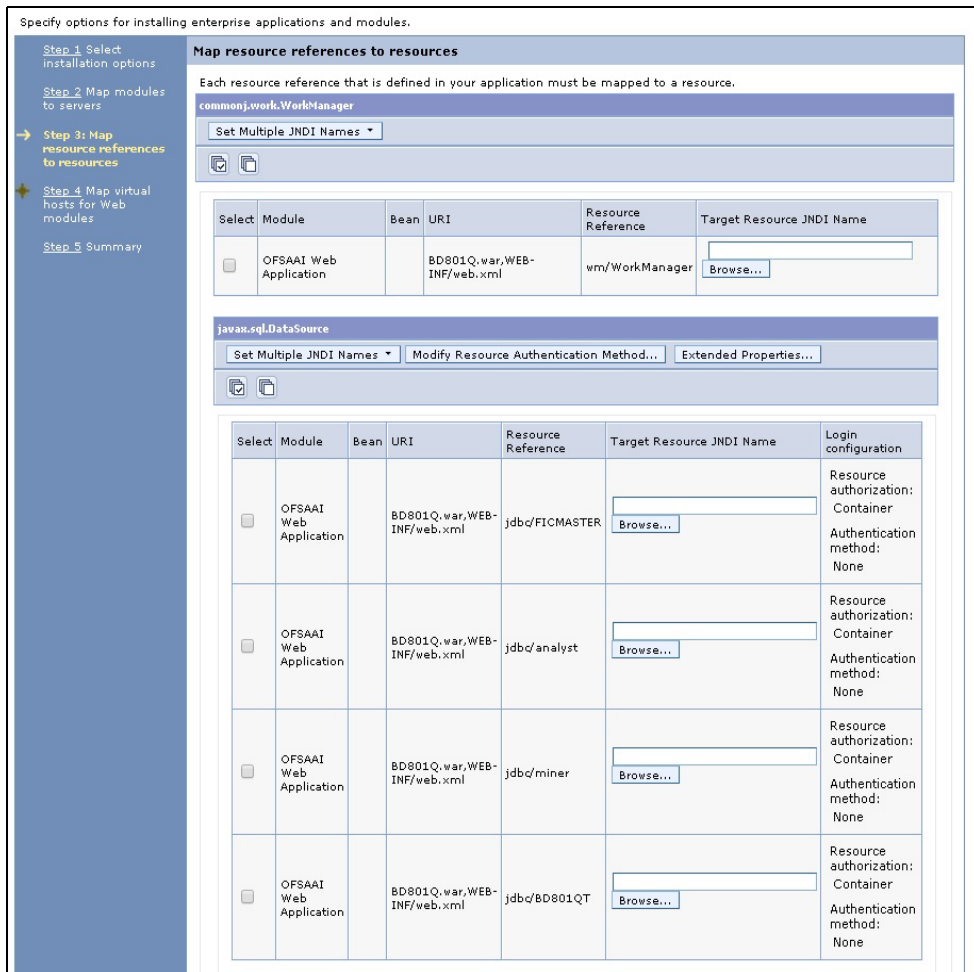
8. Enter the required information and click **Next**. The Map Modules to Servers window is displayed.

Figure 7-18 Map Modules to Servers



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

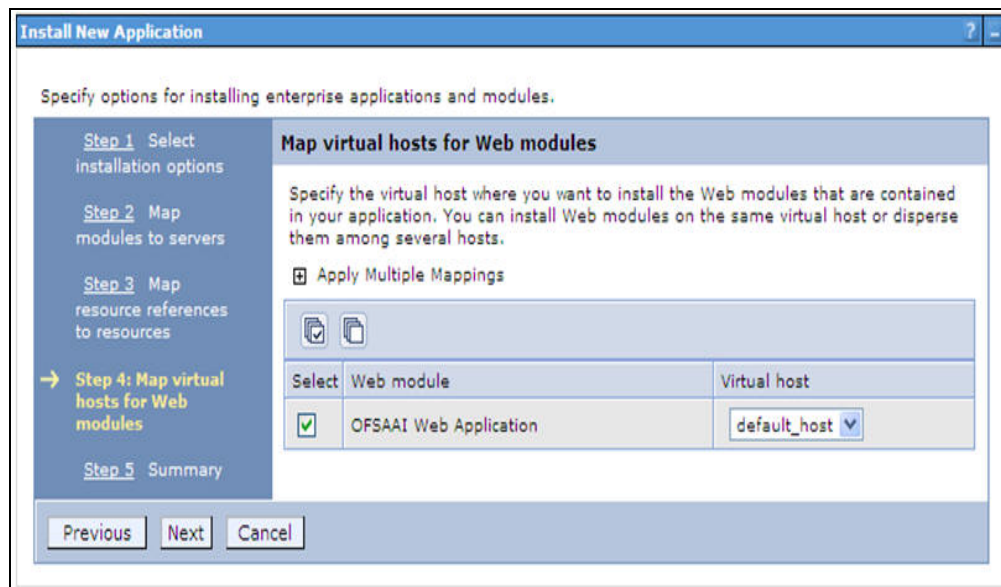
Figure 7–19 Map Resource References to Resources



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 7–20 Map Virtual host for Web Modules

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

Figure 7–21 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

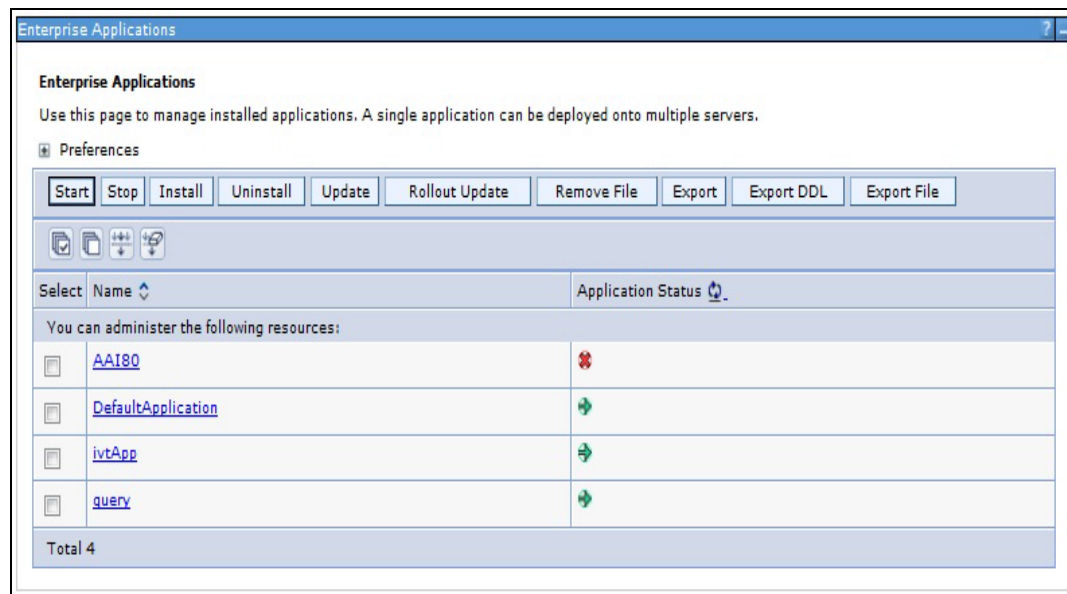
Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	AAI80
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	*\,dll=755*.*\,so=755*.*\,a=755*.*\,sl=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

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 7–22 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:

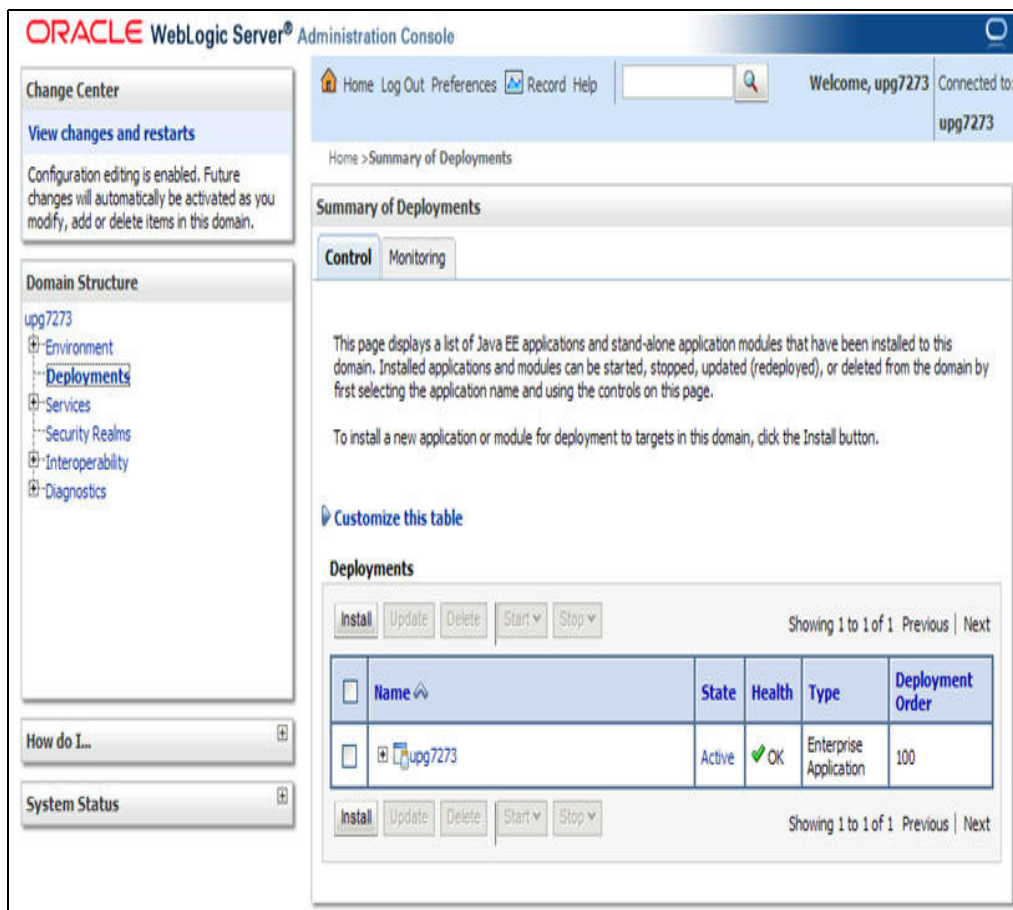

```
./startWebLogic.sh -d64 file
```

- 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 `"/startofsaai.sh"` as mentioned in [Starting Infrastructure Services](#) section.

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

Figure 7–23 Summary of Deployments



- Click **Install**. The Install Application Assistant window is displayed.
- 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:

- 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:

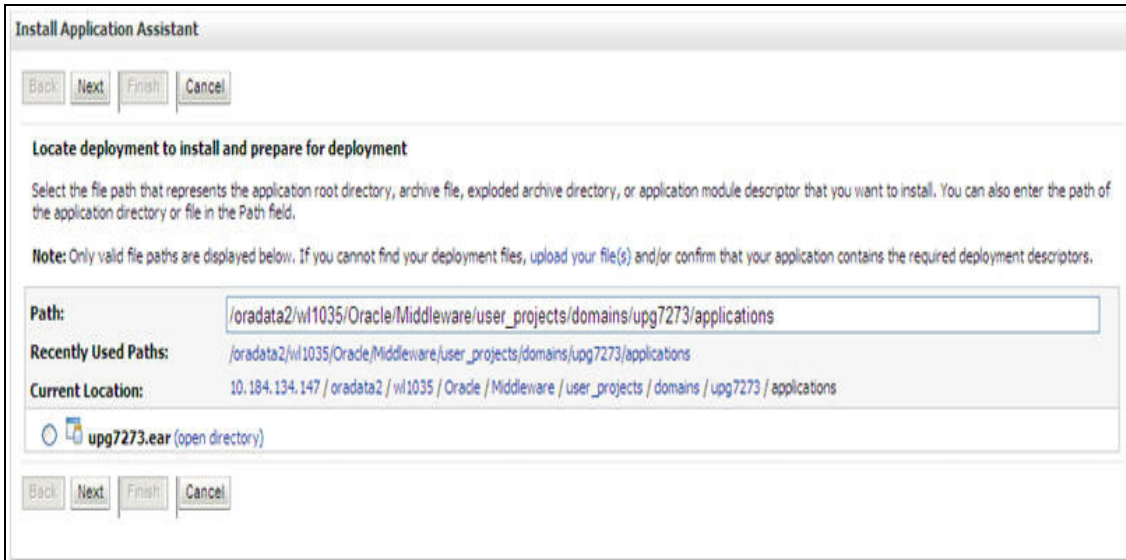
```
jar -xvf <context_name>.war
```

Install Application

To install Application:

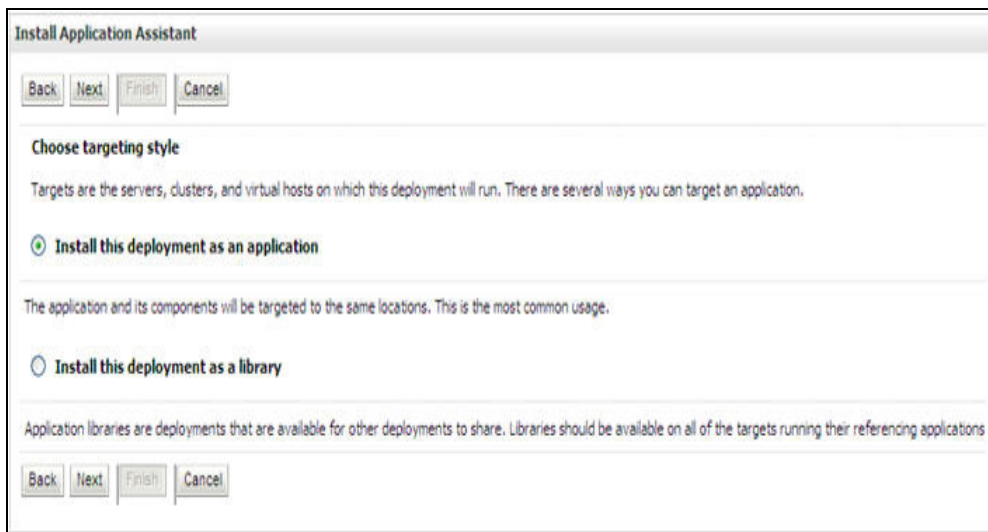
1. Open the Install Application Assistant.

Figure 7–24 *Install Application Assistant*



2. Click Next.

Figure 7–25 *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 7–26 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

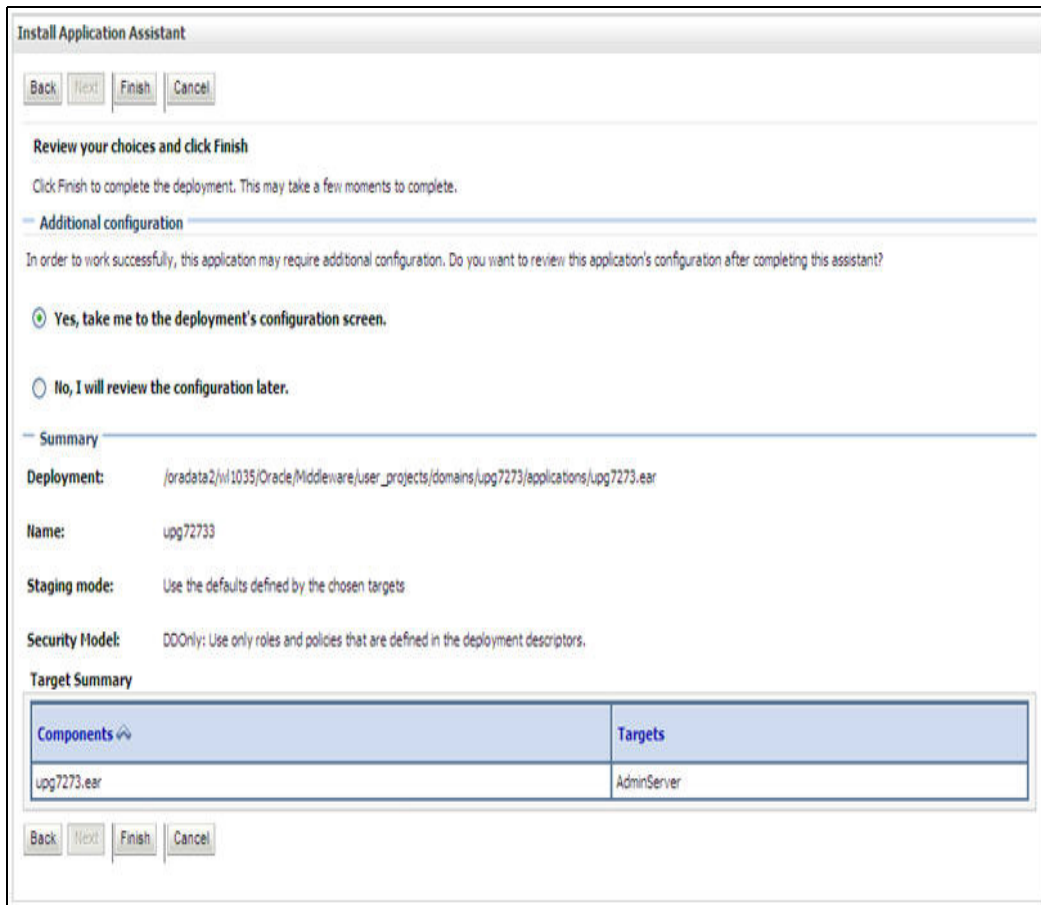
Location:

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 7–27 Deployment Summary



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 7–28 Settings for <Deployment Name>

Settings for upg7273

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

Save

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

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

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

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

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

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

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

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

Save

Modules and Components

Showing 1 to 1 of 1 Previous | Next

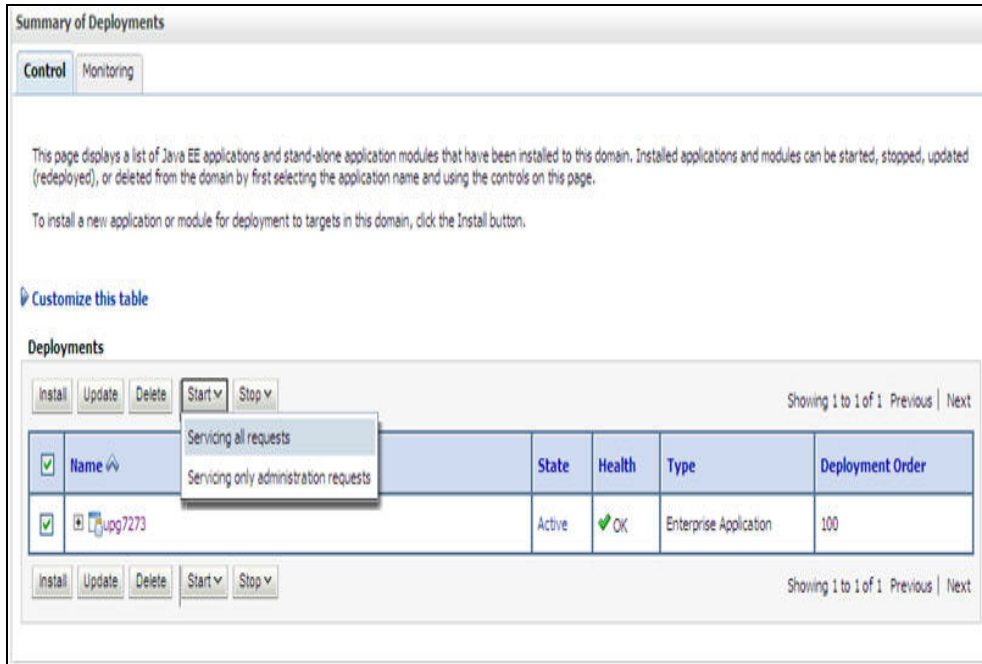
Name	Type
[-] upg7273	Enterprise Application
[-] EJBs	
[-] StatelessCacheBeanBean	EJB
[-] Modules	
[-] /upg7273	Web Application
[-] beancache.jar	EJB Module
[-] Web Services	
None to display	

Showing 1 to 1 of 1 Previous | Next

9. Review the general configuration details of the deployment. You can also update the configuration of the deployment in this window. In the Overview tab, you can view the complete deployment configuration.
10. Click **Save** to update the changes, if any.

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

Figure 7–29 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 7–30 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.

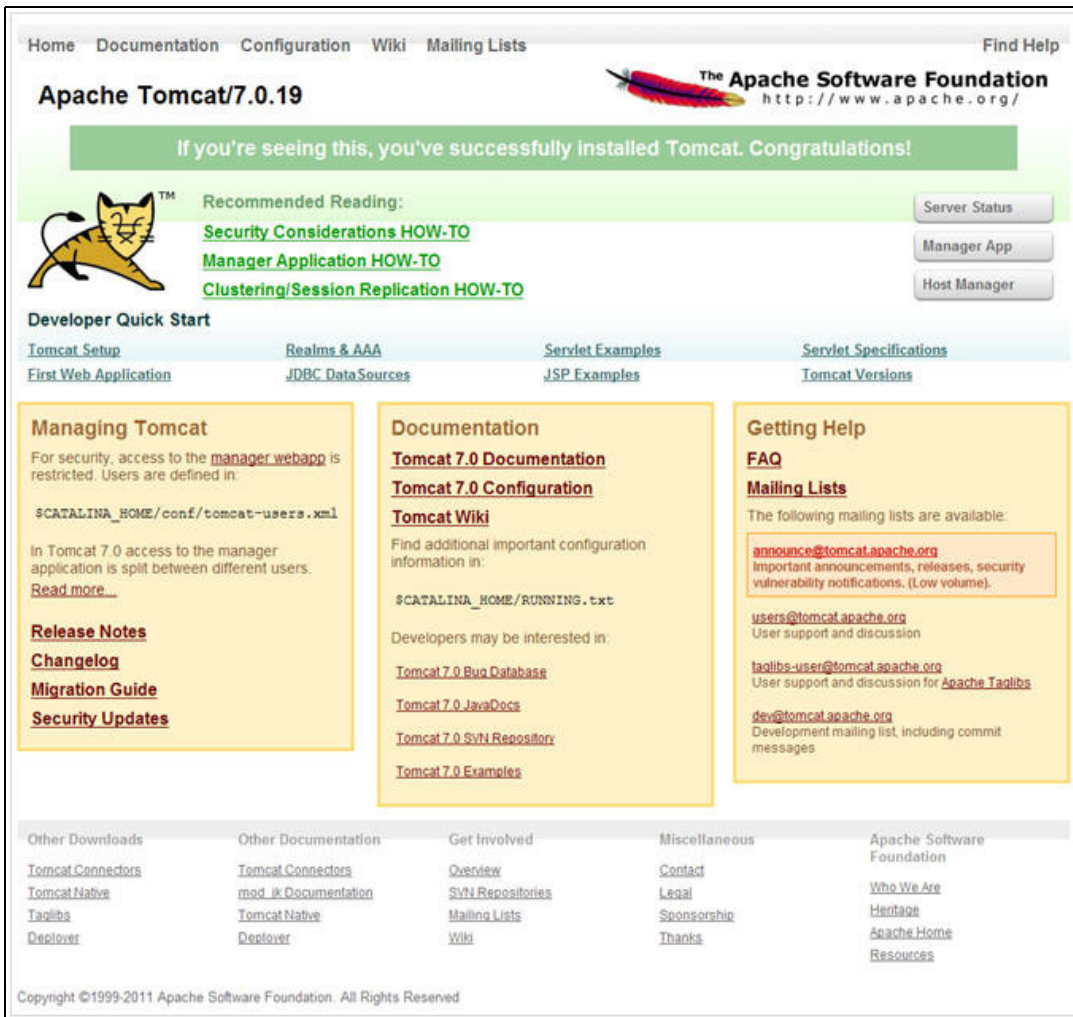
Deploy Tomcat WAR Files

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 7-31 Tomcat home



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 7–32 Tomcat Web Application Manager

Context Path	None specified	Tomcat Host Manager Application	true	0	Expire sessions with idle > 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/ofsa73st	None specified	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

Copyright © 1999-2011, Apache Software Foundation

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](#).

Starting/Stopping Infrastructure 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 7-2 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:

```
./iccservers.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:

```
./agentshutdown.sh
```

Accessing OFSAA Application

This section gives details about the steps to be performed to access OFSAA Application.

Access the OFSAA Application

1. From your desktop, open the browser and enter the URL in the following format:

```
<scheme>://<IP address/  
hostname>:<port>/<context-name>/login.jsp
```

For example, <https://190.0.2.2/ofsa/login.jsp>

The OFSAA login window is displayed.

Figure 7–33 OFSAA Login Window



2. With installation of every OFSAA Application Pack, there are two seeded user profiles configured in the system:

"SYSADMN - System Administrator

"SYSAUTH - System Authorizer

3. Login to the application using the "SYSADMN" User ID. (Note that, there is no "I" in the SYSADMN login USER ID). Enter the password that was provided during installation. On the first login, you will be prompted to change the password.

Cloning OFSAA Instance

There is a consistent need for a faster and effective approach of replicating an existing OFSAA instance for further project developments, that is, setting up OFSAA instances that are exact copies of the current OFSAA instance. For more information on cloning, refer [OFSAA Cloning Reference Guide](#).

OFSAA Landing Page

This section includes the following topics:

- [OFSAA Landing Page](#)
- [Enabling a Product within an Application Pack](#)

OFSAA Landing Page

On successful authentication, the OFSAA Landing Page is displayed. This is a common landing page for all users until a preferred application landing page is set by the user in his preferences.

The landing page includes multiple tabs and each tab has specific links to OFSAA Infrastructure and/or Application modules. The tabs and links are displayed based on the OFSAA Application accessed and the access roles mapped to the logged in user.

Each tab contains LHS Menu and RHS Menu. The LHS Menu holds link(s) to modules in a tree structure. The RHS Menu holds link(s) to modules in a navigational window format.

The following tabs are available in the Landing Page:

- [Applications Tab](#)
- [Sandbox Tab](#)
- [Object Administration Tab](#)
- [System Configuration and Identity Management Tab](#)

Applications Tab

This tab lists the various OFSAA Applications that are installed in the OFSAA setup. The **Select Application** drop-down list displays the OFSAA Applications, based on the logged in user and mapped OFSAA Application User Group(s). Links to related modules within Applications and Infrastructure are grouped appropriately to maintain a unified experience.

Sandbox Tab

This tab lists the various OFSAA Sandboxes created in the OFSAA setup and the **Select Sandbox** drop-down list displays the OFSAA Sandboxes based on the logged in user and mapped OFSAA Application User Group(s). Links to modules that operate only on Sandbox features are grouped in this tab.

Object Administration Tab

This tab lists the various OFSAA Information Domains created in the OFSAA setup. The **Select Information Domain** drop-down list displays the OFSAA Information Domains based

on the logged in user and mapped OFSAA Application User Group(s). Links to modules that enable object traceability and migration of objects are grouped in this tab.

System Configuration and Identity Management Tab

This tab lists the OFSAA Infrastructure System Configuration and Identity Management modules. These modules work across Applications/ Information Domains and hence there are no Application and Information Domain drop-down lists in this tab. Links to modules that allow the maintenance of setup installation and identity management tasks are grouped together in this tab.

Note: The navigation path differs from Application to Application. That is, based on the selected Application, the navigation varies.

For more details on how to operate on each tab, see OFSAAI User Guide available in [OTN](#).

Enabling a Product within an Application Pack

You can also enable a product/ application within an application pack post installation at any point of time.

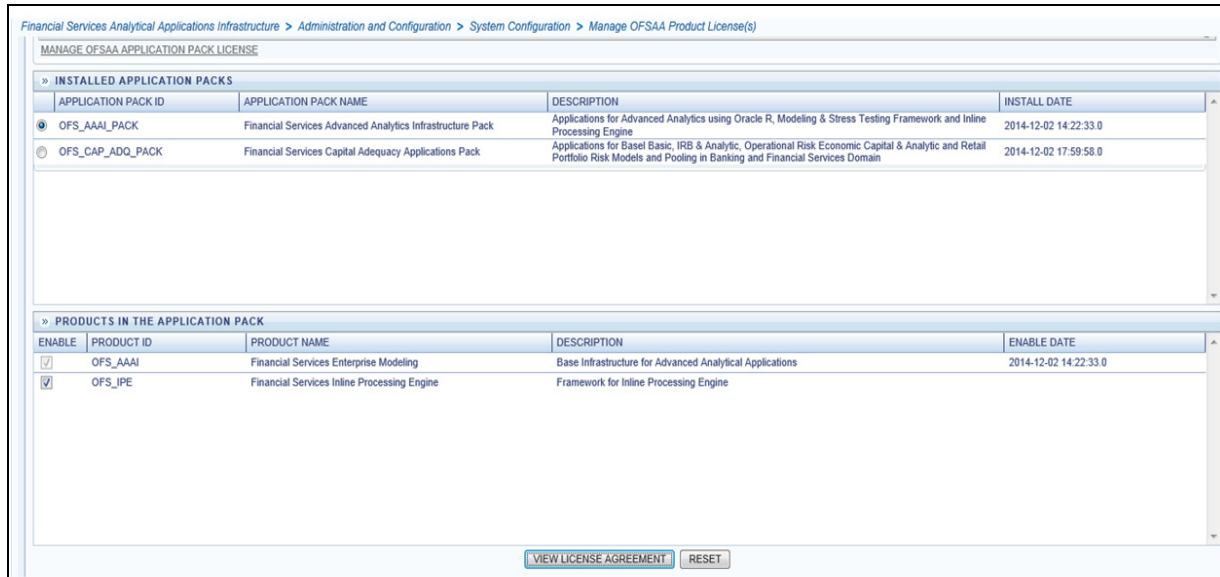
To enable a product through the application UI, follow these steps:

1. Login to the application as SYSADMN user or any user with System Administrator privileges.
2. Navigate to **System Configurations & Identity Management** tab, expand **Financial Services Analytical Applications Infrastructure**, and **Administration and Configuration**. Select **System Configuration**.
3. Click **Manage OFSAA Product License(s)**.
4. The Manage OFSAA Product License(s) window is displayed as follows.

This window includes the following sections:

- INSTALLED APPLICATION PACKS
- PRODUCTS IN THE APPLICATION PACK

Figure 7–34 Manage OFSAA Product License(s) window



5. The following fields are displayed in the *INSTALLED APPLICATION PACKS* section:

Table 7–3 Installed Application Pack - Field Description

Field	Description
Application Pack ID	Displays a unique Application Pack ID related to the application pack. Select the appropriate Pack id using the radio button. The Products in the application pack will be displayed in the <i>PRODUCTS IN THE APPLICATION PACKS</i> section.
Application Pack Name	Displays the name of the Application Pack.
Description	Displays the description of the Application Pack.
Install Date	Displays the date when the Application Pack was installed.

6. Select an Application Pack by clicking the radio button next to the Application ID.

7. The following fields are displayed in the *PRODUCTS IN THE APPLICATION PACK* section:

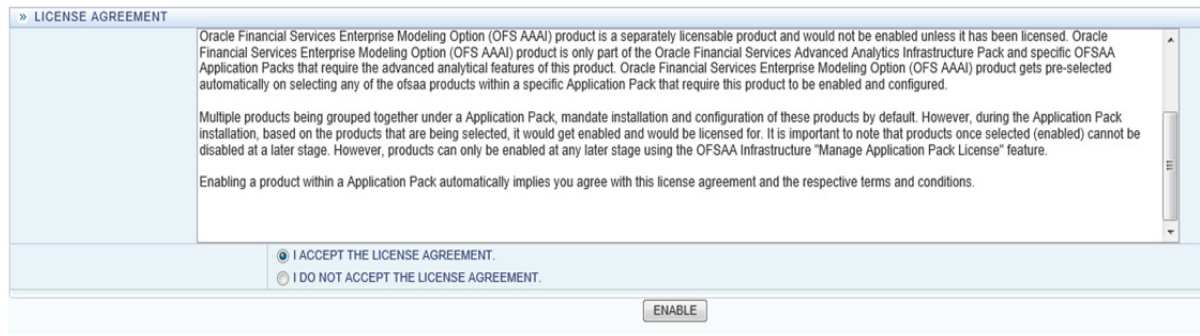
Table 7–4 Products in the Application Pack - Field Description

Field	Description
Enable	Select the checkbox to enable a product within an Application Pack. The checkbox is disabled for the products which were enabled during installation.
Product ID	Displays a unique product id for the product.
Product Name	Displays the name of the Product.
Description	Displays the description of the product.
Enable Date	Displays the date when the product was enabled.

8. Click **RESET** to cancel the operation and refresh the screen.

9. Click **VIEW LICENSE AGREEMENT** to view the license information. The *License Agreement* section is displayed.

Figure 7–35 License Agreement



10. Select the option **I ACCEPT THE LICENSE AGREEMENT** and click **ENABLE**. A pop-up message confirmation is displayed showing that the product is enabled for the pack.

Note:

- To use the newly enabled product, you need to map your application users to the appropriate product specific User_Group(s) and authorize the actions by logging in as System Authorizer.
 - For more information refer to Mapping/Unmapping Users section in the OFSAAI User Guide available in [OTN](#).
 - To identify the newly enabled product specific UserGroups/ Application Pack specific User_Groups, refer to the respective Application Pack specific Installation and Configuration Guide/ User Manual.
-
-

Additional Configuration

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 File Transfer](#)
- [Configuration for Dimension and Hierarchy Management](#)
- [Configuring Infrastructure Server Memory](#)
- [Internet Explorer Settings](#)
- [Retrieving Patch Information](#)
- [OLAP Data Server Configuration](#)
- [Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance](#)
- [Configuring OFSAAI Web Services](#)
- [Configuring OFSAAI Web Services](#)
- [Deploying OFSAAI Web Services](#)
- [Configuration to Enable Parallel Execution of DML statements](#)
- [Configuring Message Details in Forms Designer](#)
- [Clearing Application Cache](#)
- [Configuring Passwords Changes](#)
- [Configuring Java Virtual Machine](#)
- [Configuring Internal Service \(Document Upload/Download\)](#)

FTP/SFTP Configuration for File Transfer

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 7-5 Member Deletion Configuration

Value	Code	Example
# Member Deletion Configuration - VALUE- Y/N	MEMBER_DEL-\$INFODOM\$-\$DIMENSION_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 7-6 Attribute Default Date Format

Value	Code	Example
# Attribute Default Date Format - DB_DATE_FORMAT:DD-MON-YYYY	ATTR_DEF_DATE_FORMAT-\$INFODOM\$=\$DB_DATE_FORMAT\$	ATTR_DEF_DATE_FORMAT-ORAFUSION=DD/MON/YYYY

Configure Members Reverse Population

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

Table 7-7 Members Reverse population

Value	Code	Example
# Members Reverse population - VALUE- Y/N	MEMBER_REVERSE_POP-\$INFODOM\$-\$DIMENSION_ID\$=\$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 7-8 Hierarchy Reverse population

Value	Code	Example
#Hierarchy Reverse population - VALUE- Y/N	HIERARCHY_REVERSE_POP-\$INFODOM\$-\$DIMENSION_ID\$=\$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 7-9 Hierarchy Maximum level allowed

Value	Code	Example
#Hierarchy Maximum level allowed for the hierarchy in particular Information Domain - VALUE - Integer number	MAX_DEPTH-\$INFODOM\$=\$VALUES	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 7-10 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

Configuring 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.

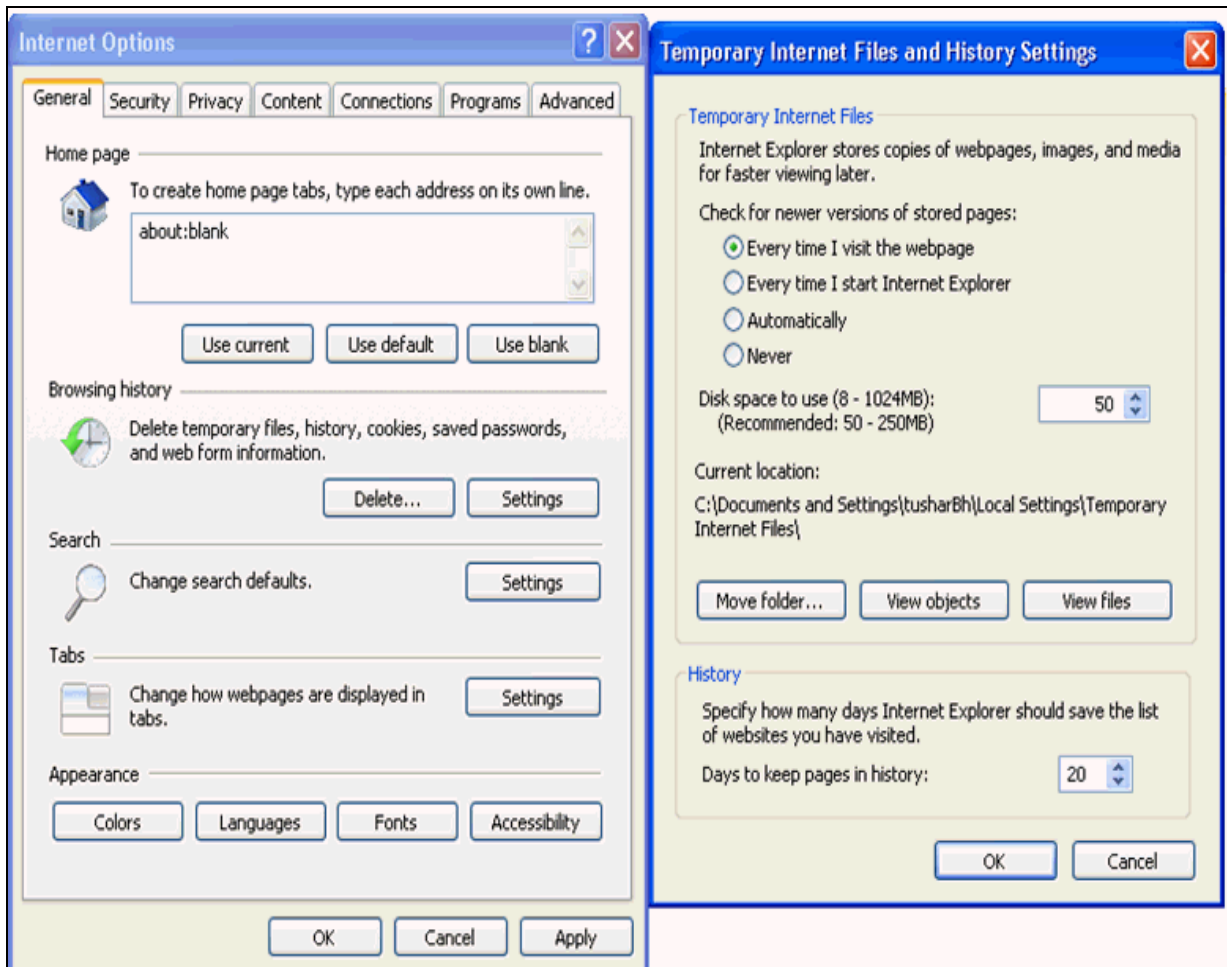
Internet Explorer Settings

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.

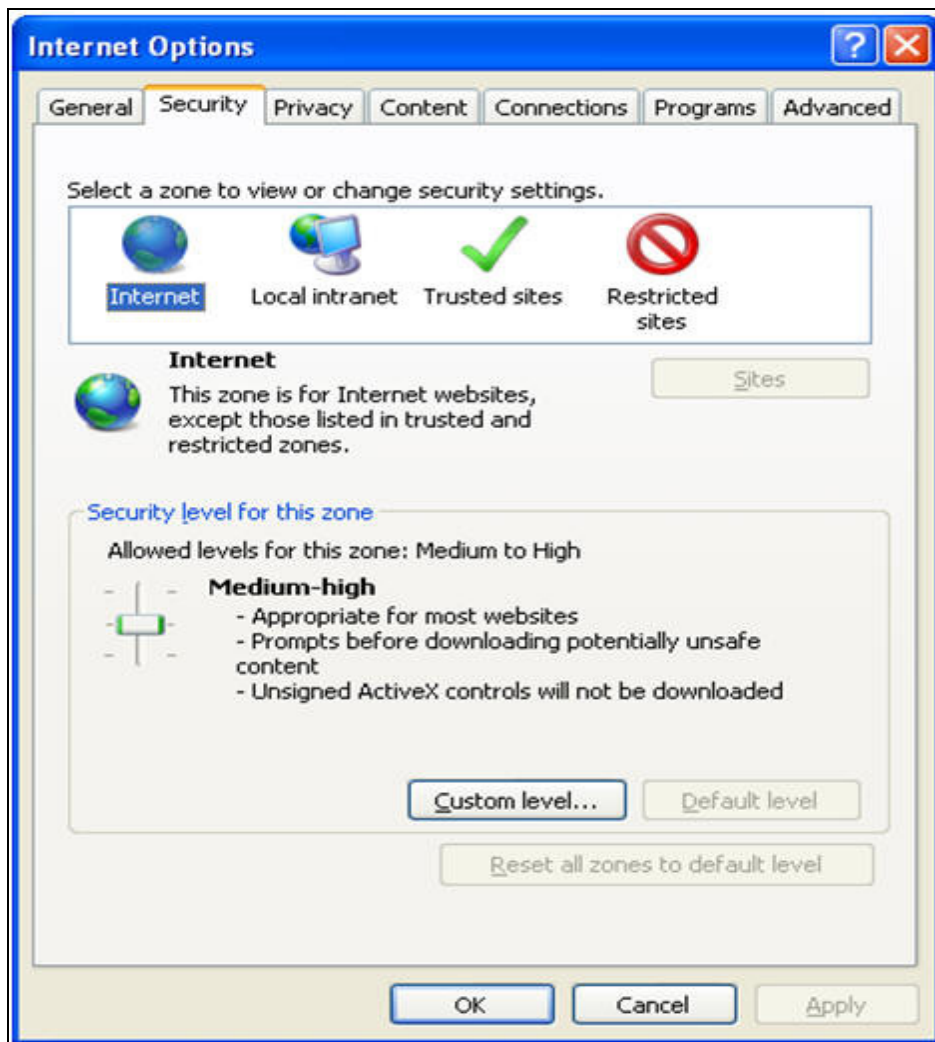
1. Open **Internet Explorer**. Select **Tools > Internet Options**. The *Internet Options* window is displayed.
2. Click the **Settings** button. The *Settings* window is displayed.
3. Select the option **Everytime I Visit the webpage** and click **OK**.

Figure 7–36 Internet Options



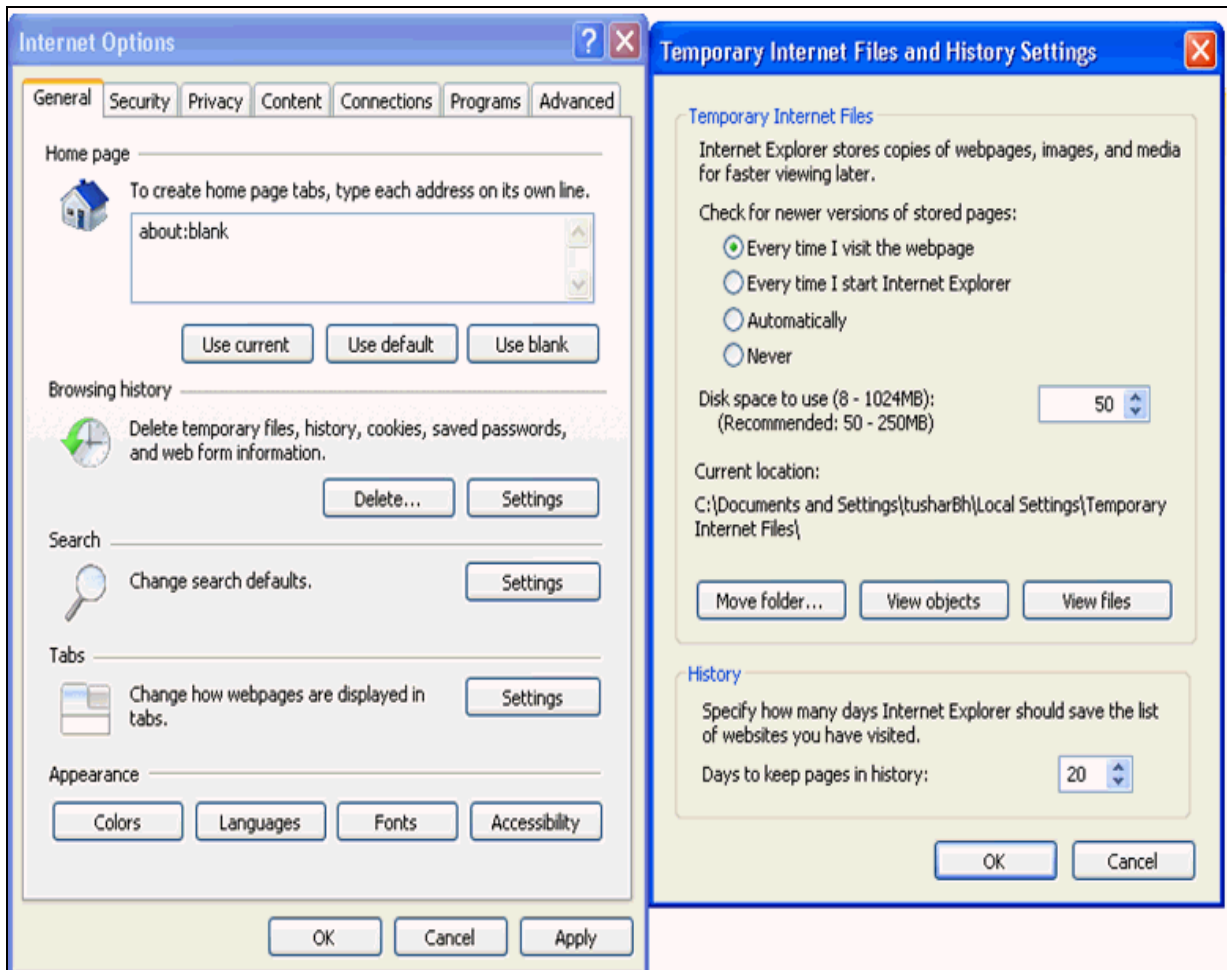
4. In the *Internet Options* window, select the **Security** tab and select the **Internet** option under **Select a zone to view or change the security** settings.
5. Click **Default Level** under **Security level for this zone**.

Figure 7-37 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 7–38 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.

Retrieving 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.

Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance

For information on this section, refer OFS Analytical Applications Infrastructure Administration User Guide in [OTN](#).

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, refer [Appendix C](#).

Infrastructure LDAP Configuration

For more information on LDAP configuration, see [OFSAAI Administration Guide](#).

Configuring 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 (webservices) to be accessed. The stub class specified must implement the "com.iflex.Oracle Reveleus.execution.webservice.EXEWebIF" interface.

Attributes for WEBSERVICE tag

Table 7–11 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.
\$PORTTYPEPEANAME	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 7–12 OPERSTION 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.

Table 7–12 (Cont.) OPERSTION tag

Placeholder	Description
\$SOAPACTION	The URL for the Operation to access. This is associated with the Operation tag of the wsdl file.
\$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 7–13 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 7–14 OUTPUT tag**

Placeholder	Description
\$PARAMNAME	Output parameter name to be returned by the web service.
\$RETURNTYPE	Output parameter Data Type. If the web service response is a complex object, then specify \$RETURNTYPE 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.

Deploying 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.

Configuring 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 7–15 NotificationConfig.cfg File

Parameter	Description
SMTP_SERVER_IP	Specify the hostname or IP address of SMTP Server.

Table 7–15 (Cont.) NotificationConfig.cfg File

Parameter	Description
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>

Configuring Passwords Changes

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

```
./startofsaai.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.

OFSAI 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 Data Management Tools >Data Sources> Source Designer window. Update the password of the appropriate Source.
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 OFSAI services.

Configuring 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 OFSAI database components (ficdb layer) are installed.

Configuring 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.

OFSA 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

Patching OFSAA Infrastructure Installation

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.

Grants for Atomic/Config Schema

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
/

```


Configuring Application Pack XML Files

This section explains configuration of OFS_CRR_PACK.xml and OFS_CRR_SCHEMA_IN.xml files.

This section includes the following topics:

- [Configuring OFS_CRR_PACK.xml file](#)
- [Configuring OFS_CRR_SCHEMA_IN.xml file](#)

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.

Table 7–16 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 7–16 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.

Configuring 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 7-17 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.
<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.

Table 7-17 OFS_CRR_SCHEMA_IN.xml parameters

<HOST>	Enter the Hostname/ IP Address of the system on which you are installing the OFSAA components.	Mandatory	Host Name/ IP Address	
<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 7-17 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 7-17 OFS_CRR_SCHEMA_IN.xml parameters

<p><SCHEMA>/TYPE</p>	<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>	<p>Mandatory</p>	<p>ATOMIC/CONFIG/SANDBOX/ADDON</p> <p>Note: SANDBOX AND ADDON schemas are not applicable for OFS AAAI Application Pack.</p>	<p>Only One CONFIG schema can exist in the file.</p> <p>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>
<p><SCHEMA.>/NAME</p>	<p>By default, the schemas names are seeded based on the Application Pack.</p> <p>You can edit the schema names if required.</p> <p>Note: The Schema Name will have a prefix of the SETUPINFO/NAME attribute.</p> <p>SCHEMA NAME must be same for all the ATOMIC Schemas of applications within an Application Pack.</p>	<p>Mandatory</p>	<p>The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore ‘_’.</p>	<p>SETUPINFO/NAME attribute value would be prefixed to the schema name being created. For E.g. if name is set as ‘ofsaaatm’ and setupinfo as ‘uat’ then schema being created would be ‘uat_ofsaaatm’.</p> <p>NAME should be same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack).</p>

Table 7-17 OFS_CRR_SCHEMA_IN.xml parameters

<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>/APPLYSAMEFORALL 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.
<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	Default – USERS Permissible – Any existing valid tablespace name.	Modify this value to associate any valid tablespace with the schema.
<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	Default – TEMP Permissible – Any existing valid temporary tablespace name.	Modify this value to associate any valid tablespace with the schema.

Table 7-17 OFS_CRR_SCHEMA_IN.xml parameters

<SCHEMA>/ QUOTA	Enter the quota to be set on DEFAULTTABLESPACE 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.	

Configuring OFSAAI_InstallConfig.xml File

This section gives details about the OFSAAI_InstallConfig.xml file.

Configuring OFSAAI_InstallConfig.xml file

To configure the OFSAAI_InstallConfig.xml file, follow these steps.

1. Navigate to OFS_AAAI_PACK/OFS_AAI/conf/.
2. Open the file OFSAAI_InstallConfig.xml in text editor.
3. Configure the OFSAAI_InstallConfig.xml as mentioned in the following table:

You need to manually set the InteractionVariable parameter values as mentioned in the table. If a value is not applicable, enter NA and ensure that the value is not entered as NULL.

Table 7–18 OFSAA Infrastructure Installation Tasks and Descriptions

InteractionVariable Name	Significance and Expected Value	Mandatory
<Layer name="GENERAL">		
WEBAPPSERVERTYPE	<p>Identifies the web application server on which the OFSAA Infrastructure web components would be deployed.</p> <p>The following numeric value should be set depending on the type:</p> <ul style="list-style-type: none"> • Apache Tomcat = 1 • IBM WebSphere Application Server = 2 • Oracle WebLogic Server = 3 <p>For example, <InteractionVariable name="WEBAPPSERVERTYPE">3</InteractionVariable></p>	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 <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

Table 7–18 (Cont.) OFSAA Infrastructure Installation Tasks and Descriptions

InteractionVariable Name	Significance and Expected Value	Mandatory
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> <p>Note: Refer Appendix N for identifying the correct "ojdbc<version>.jar" version to be copied.</p>	Yes
OLAP_SERVER_IMPLEMENTATION	<p>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:</p> <ul style="list-style-type: none"> • YES - 1 • NO - 0 	No
<p>Note: If value for OLAP_SERVER_IMPLEMENTATION is set to 1, it checks for following environment variables are set in.profile: ARBORPATH, HYPERION_HOME and ESSBASEPATH.</p>		
SFTP_ENABLE	<p>Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The following numeric value should be set depending on the choice:</p> <ul style="list-style-type: none"> • SFTP - 1 • FTP - 0 	Yes
<p>Note: The default value for SFTP_ENABLE is 1, which signifies that SFTP will be used. Oracle recommends using SFTP instead of FTP because SFTP is considered more secure. However, a client may choose to ignore this recommendation and to use FTP by setting SFTP_ENABLE to 0. This selection may be changed later by using the OFSAAI administration interface.</p>		
FILE_TRANSFER_PORT	<p>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.</p> <p>For example, <InteractionVariable name="FILE_TRANSFER_PORT">21</InteractionVariable></p>	Yes
LOCALE	<p>Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English.</p> <p>For example, <InteractionVariable name="LOCALE">en_US</InteractionVariable></p>	Yes
<p>Note: The following ports are used internally by the various OFSAA Infrastructure services. The default values mentioned 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.</p>		
JAVAPORT	9999	Yes
NATIVEPORT	6666	Yes
AGENTPORT	6510	Yes
ICCPORT	6507	Yes
ICCNATIVEPORT	6509	Yes
OLAPPORT	10101	Yes
MSGPORT	6501	Yes
ROUTERPORT	6500	Yes
AMPORT	6505	Yes
<p>Note: If value for HTTPS_ENABLE is set to 1, ensure you have a valid certificate available from a trusted CA and the same is configured on your web application server.</p>		

Table 7–18 (Cont.) OFSAA Infrastructure Installation Tasks and Descriptions

InteractionVariable Name	Significance and Expected Value	Mandatory
HTTPS_ENABLE	<p>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:</p> <ul style="list-style-type: none"> • YES - 1 • NO - 0 <p>For example, <InteractionVariable name="HTTPS_ENABLE">0</InteractionVariable></p>	Yes
WEB_SERVER_IP	<p>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.</p> <p>If no separate HTTP Server is available, the value should be Web Application Server IP/Hostname.</p> <p>For example, <InteractionVariable name="WEB_SERVER_IP">10.11.12.13</InteractionVariable></p> <p>or</p> <p><InteractionVariable name="WEB_SERVER_IP">myweb.server.com</InteractionVariable></p>	No
WEB_SERVER_PORT	<p>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.</p> <p>Note: The port value will not be accepted as 80 if HTTPS_ENABLE is 1 and as 443, if HTTPS_ENABLE is 0.</p> <p>For example, <InteractionVariable name="WEB_SERVER_PORT">80</InteractionVariable></p>	No
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 follows:</p> <p><scheme>://<host>:<port>/<context-name>/login.jsp</p> <p>Sample URL: 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> <p>Note: For WebLogic, value specified for this attribute is ignored and value provided against attribute WEBLOGIC_DOMAIN_HOME is considered.</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 7–18 (Cont.) OFSAA Infrastructure Installation Tasks and Descriptions

InteractionVariable Name	Significance and Expected Value	Mandatory
WEBLOGIC_DOMAIN_HOME	Identifies the WebLogic Domain Home. For example, <InteractionVariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bea/user_projects/domains/mydomain</InteractionVariable>	Yes Specify the value only if WEBSERVERTYPE is set as 3 (WebLogic)
OFSAAI_FTPSHARE_PATH	Identifies the absolute path to the directory identified as file system stage area. Note: <ul style="list-style-type: none"> • The directory should exist on the same system on which the OFSAA Infrastructure is being installed (can be on a separate mount). • The user mentioned in APP_SFTP_USER_ID the following parameter 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 the preceding parameter APP_FTPSHARE_PATH.	Yes

Removing OFSAA

This chapter includes the following sections:

- [Uninstalling OFSAA Infrastructure](#)
- [Uninstalling EAR Files in WebSphere](#)
- [Uninstalling EAR Files in WebLogic](#)
- [Uninstalling WAR Files in Tomcat](#)

Uninstalling OFSAA Infrastructure

This section will guide you through the necessary steps to uninstall the OFSAA Infrastructure product.

Before you start the uninstallation process, ensure that no open connections exist to the OFSAA Infrastructure Config and Atomic Schemas and Infrastructure services are brought down.

To uninstall OFSAA Infrastructure:

1. Log in to the system as non-root user.
2. Navigate to the `$FIC_HOME` directory and execute the command:

```
./Uninstall.sh
```
3. Enter the password for OFSAAI Configuration Schema when prompted as shown in the following figure.

Figure 7–39 *Uninstalling OFSAA Infrastructure*

```
/scratch/ofsadb/OF5HHI>./Uninstall.sh
Uninstallation Started [time : Tue Jun 10 14:20:27 IST 2014 ]
*****
*** Driver loaded with Driver oracle.jdbc.driver.OracleDriver

Please enter Configuration schema Password :
Connected to Config Schema
Cleaning config schema ....
config schema cleaned ...
Cleaning up Infrastructure Home Dir !
Please wait ..
Uninstallation Completed ! Thank You [time : Tue Jun 10 14:21:59 IST 2014 ]
*****
/scratch/ofsadb/OF5AAI>█
```

Note:

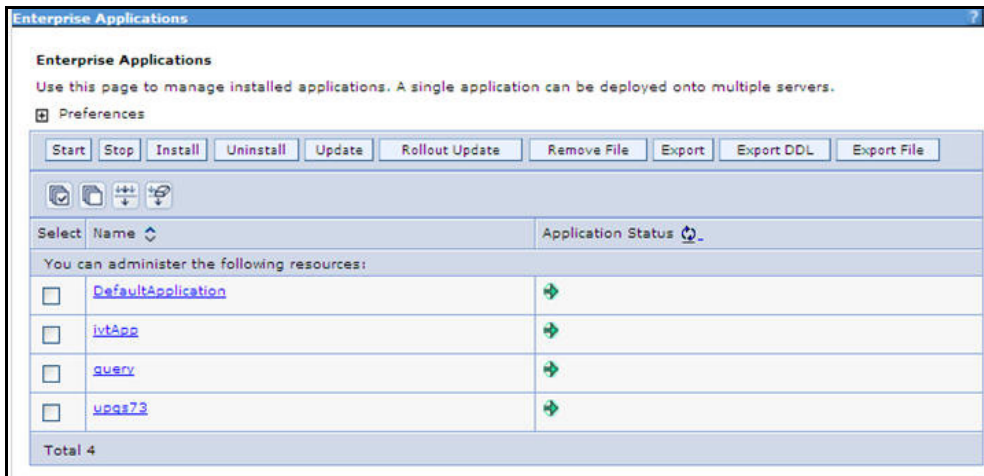
- Uninstallation does not remove the Infrastructure application from the Web Application Server. This has to be done manually.
- The entries in the .profile file will have to be removed manually.
- The files/ folders under the file system staging area (ftpsahre) have to be deleted manually.
- All the Database objects from Atomic Schemas have to be dropped manually.

Uninstalling EAR Files in WebSphere

Following are the steps to uninstall any previously deployed application:

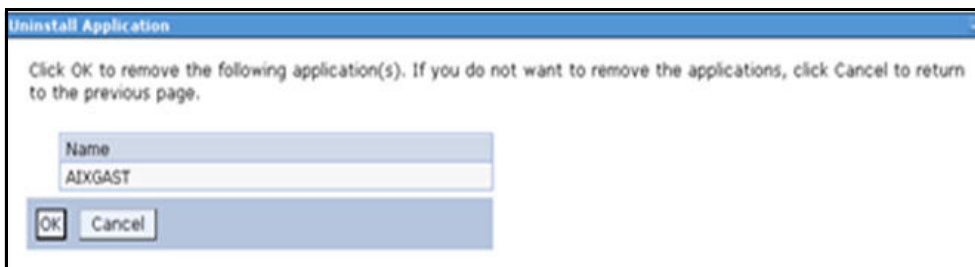
1. Open the URL in the browser window: `http://<ipaddress>:<Administrative Console Port>/ibm/console` (https if SSL is enabled). The *Login* window is displayed.
2. Login with the user id that has admin rights.
3. Expand Applications > Application Types > WebSphere enterprise applications from the LHS. The *Enterprise Applications* window is displayed with all the deployed applications.

Figure 7–40 Enterprise Applications



4. Select the checkbox adjacent to the application to be uninstalled and click **Stop**.
5. Click **Uninstall**. The *Uninstall Application* window is displayed.

Figure 7–41 Uninstall Application



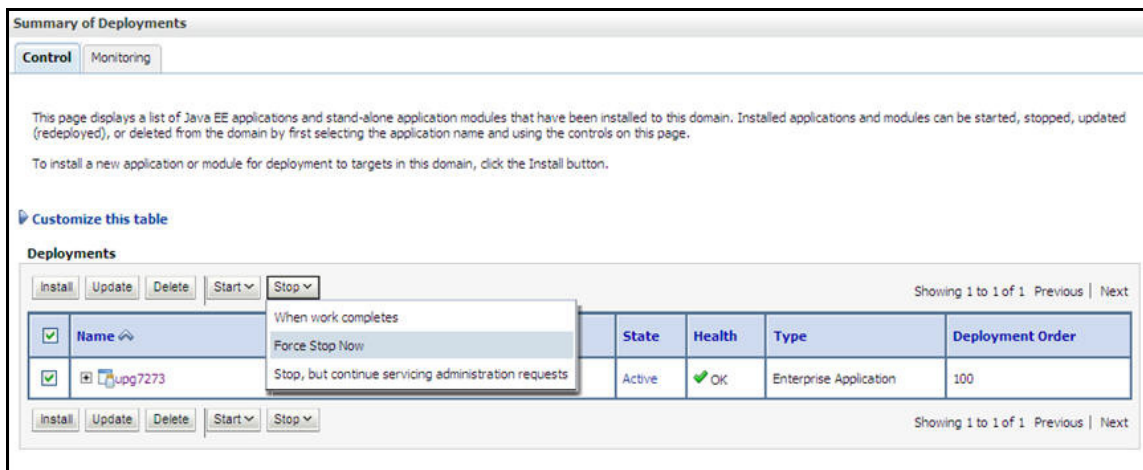
6. Click **OK** to confirm.
7. Click **Save** to save the master file configuration.

Uninstalling EAR Files in WebLogic

On the machine that hosts WebLogic, perform the following steps to uninstall any previously deployed application:

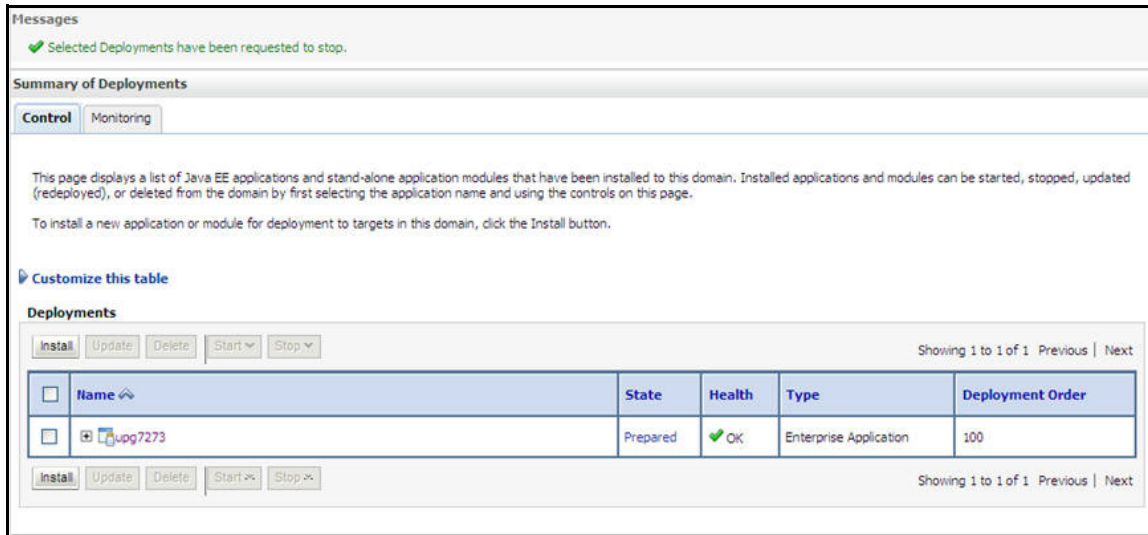
1. Open the URL in the browser window: `http://<ipaddress>:<admin server port>/console` (https if SSL is enabled). The *Login* window of the WebLogic Server Administration Console is displayed.
2. Login with the WebLogic user credentials having administrator privileges.
3. From the **Domain Structure** LHS menu, click **Deployments**. The *Summary of Deployments* window is displayed.

Figure 7-42 Summary of Deployments



4. Select the checkbox adjacent to the application to be uninstalled and click **Stop> Force Stop Now**.
5. Click **Yes** in the confirmation dialog to stop the selected deployment.

Figure 7-43 Summary of Deployments- Messages



6. Select the checkbox adjacent to the application and click **Delete** to delete the selected deployment.
7. Click **Yes** in the confirmation dialog to remove the selected deployment from the domain configuration.

Uninstalling WAR Files in Tomcat

On the machine that hosts Tomcat, perform the following steps to uninstall any previously deployed application:

1. Comment out Context path section from `server.xml` file in `$CATALINA_HOME/conf` directory to avoid conflict during undeploy and re-deploy of the WAR file.

Place comment `<!-- -->` in between the context path section. For example:

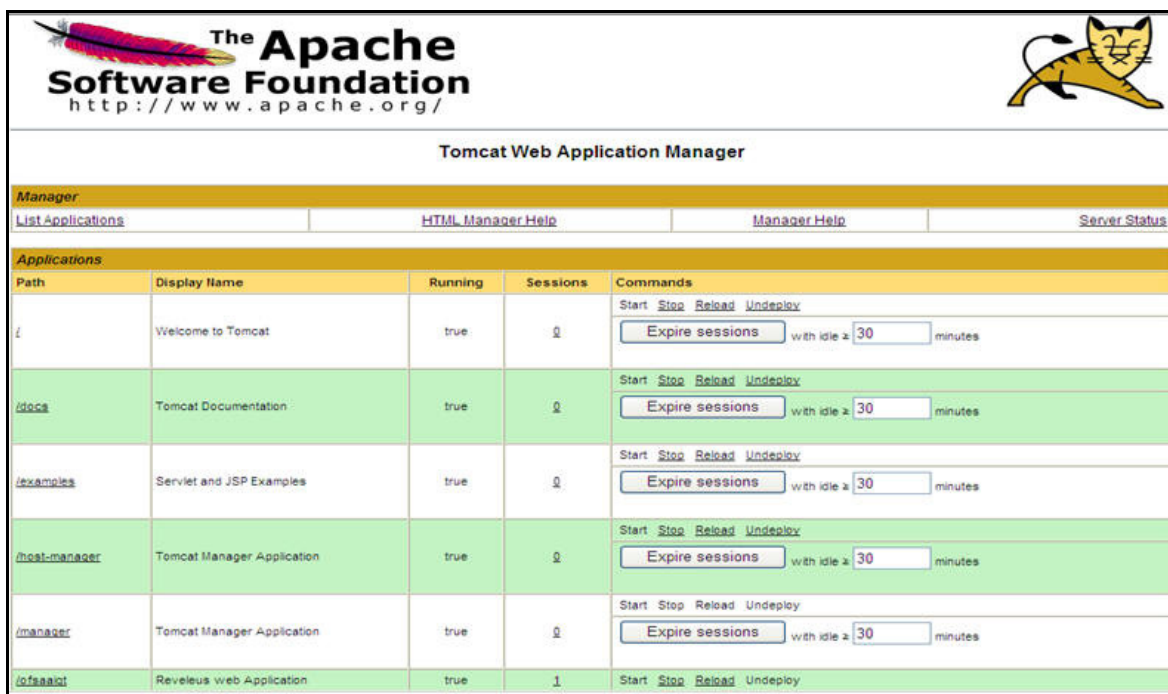
```
<!--
<Context path ="/pr2test"
docBase="/home/perfuser/tomcat-7.0.19/webapps/pr2test" debug="0"
reloadable="true" crossContext="true">
<Resource auth="Container"
name="jdbc/PR2ATM"
type="javax.sql.DataSource"
driverClassName="oracle.jdbc.driver.OracleDriver"
username="pr2atm"
password="pr2atm"
url="jdbc:oracle:thin:@10.184.74.99:1521:PERFTEST"
maxActive="100"
maxIdle="30"
maxWait="10000"/>
</Context>
```

-->

Restart the Tomcat service by doing the following:

- d. Login to the "Unix server" through a terminal emulator.
 - e. Navigate to `$catalina_home/bin` directory.
 - f. Stop the tomcat services using the command `./shutdown.sh`
 - g. Start the tomcat services using the command `./startup.sh`
2. Open the URL in a browser window: `http://<IP address>:<Tomcat server port>`. (https if SSL is enabled). The *Tomcat home* window is displayed.
 3. Click the **Manager App**. The *Connect to* window is displayed.
 4. Login with the user credentials having admin rights. The *Tomcat Web Application Manager* window is displayed with the list of all applications deployed in Tomcat.

Figure 7-44 Tomcat Web Application Manager



The Apache Software Foundation http://www.apache.org/				
Tomcat Web Application Manager				
Manager				
List Applications		HTML Manager Help		Manager Help
Server Status				
Applications				
Path	Display Name	Running	Sessions	Commands
/	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/docs	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/examples	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/host-manager	Tomcat Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/manager	Tomcat Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/ofsaaiqt	Reveleus web Application	true	1	Start Stop Reload Undeploy

5. Click the **Undeploy** link against the deployed Infrastructure application. A confirmation message is displayed on the application /Infrastructure being uninstalled.

JDBC Jar Files

The `ojdbc<version>.jar` file should be copied based on Database & Java version. Refer to the following table for details.

Table 7–19 JDBC Jar files version details

Oracle Database Version	JDK/JRE 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





Upgrading an Existing OFSAA 8.0.x Java 7 Instance to Java 8

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 [Appendix D](#)
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/jre1.8.0_45
WLS_JAVA_HOME=/usr/java/jre1.8.0_45
JAVAHOME=/usr/java/jre1.8.0_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/jre1.8.0_45"
DEFAULT_SUN_JAVA_HOME="/usr/java/jre1.8.0_45"
JAVA_HOME="/usr/java/jre1.8.0_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](#)

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/jre1.8.0_45/jre
```

```
JAVA_BIN=/usr/java/jre1.8.0_45/jre/bin
```

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/java/jre1.8.0_45/jre/lib/amd64/server
```

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

Migration for Excel Upload

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 infodomain 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.

Metro-default.xml

This section provides details about metro-default.xml.

```
<metro xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://java.sun.com/xml/ns/metro/config" version="1.0">
<tubelines default="#default-metro-tubeline">
<tubeline name="default-metro-tubeline">
<client-side>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.TerminalTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.HandlerTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.ValidationTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.MustUnderstandTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.MonitoringTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.AddressingTubeFactory"/>
<tube-factory className="com.sun.xml.ws.dump.MessageDumpingTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.TransportTubeFactory"/>
</client-side>
<endpoint-side>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.TransportTubeFactory"/>
<tube-factory className="com.sun.xml.ws.dump.MessageDumpingTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.AddressingTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.MonitoringTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.MustUnderstandTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.HandlerTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.ValidationTubeFactory"/>
<tube-factory className="com.sun.xml.ws.assembler.jaxws.TerminalTubeFactory"/>
</endpoint-side>
</tubeline>
</tubelines>
</metro>
```

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.

FAQs and Error Dictionary

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](#)
- [Forms Framework 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"](#).

What are the different modes of OFSAAI installation?

OFSAAI can be installed in Silent 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, webservers 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

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_80000 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 OFSAAInfrastructure_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 do I completely uninstall OFSAAI?

OFSAAI can be completely uninstalled by performing the steps provided in [Uninstalling OFSAA Infrastructure](#) in the OFS CRR Installation and Configuration Guide Release 8.0.4.0.0.

Can OFSAAI config and atomic schemas be on different databases?

OFSAAI requires both config and atomic schemas to be present on the same database instance.

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](#).

Does OFSAAI support Oracle Linux versions other than 5.5?

OFSAAI supports the Oracle Linux versions from 5.5 up to 5.10 and also from 6.0 and above.

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 nofile 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 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_80000.
 - 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 "./startofsaai.sh: /java: Execute permission denied" while executing ./startofsaai.sh file. What is to be done?

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

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 [Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance](#) 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 `startofsaai.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.

- 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).

- 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 [Appendix C](#).

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 [Support Note](#) for the workaround.

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.

- In the `DynamicServices.xml` file, identify the section for `<Service code="20">`.
- Modify the value of parameter `CACHE_ON_STARTUP` to 0 (default is 1).
- 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 [Appendix C](#).

- Restart the OFSAAI Services (APP and WEB). For more information, see [Appendix D](#) 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+.

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"](#).

What are the different modes of OFSAAI installation?

OFSAAI can be installed in Silent Mode.

Can the OFSAA Infrastructure components be installed on multi-tier?

No. OFSAA Infrastructure components (ficapp, ficweb, ficdb) cannot be installed on multi-tier. By default, they will be installed on single-tier. However, OFSAA Infrastructure can be deployed within the n-Tier architecture where the Database, Web Server and Web Application Server is installed on separate tiers.

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 [Hardware and Software Requirements](#), Java Runtime Environment 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, webservers 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

What should I do if I get the following error message during installation, "Execute Permission denied"?

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

To give execute permissions,

- Navigate to the path OFSAAI_80000 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).

What should I do if I get the following error message during installation, "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.

What should I do if I get the following error message during installation, "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 do I completely uninstall OFSAAI?

OFSAAI can be completely uninstalled by performing the steps provided in [Uninstalling OFSAA Infrastructure](#) in the OFS AAI Installation and Configuration Guide Release 8.0.0.0.0.

Can OFSAAI config and atomic schemas be on different databases?

OFSAAI requires both config and atomic schemas to be present on the same database instance.

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 OFS AAI Administration Guide available on [OTN](#).

Does OFSAAI support Oracle Linux versions other than 5.5?

OFSAAI supports the Oracle Linux versions from 5.5 up to 5.10 and also from 6.0 and above.

What should I do if I get the following error message on the UNIX System terminal while executing `./setup.sh`, "Insert New Media. Please insert Disk1 or type its location"?

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 nofile 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 do I 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 do I 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 I 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.

What should I do if I get the following error message during OFSAAI installation on Solaris 11 system?:

"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 should I do if the installation process is abruptly terminated or aborted?

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

Does 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 I do if the database connection from connection pool displays the following error message, "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 preceding settings, check the MTU(Maximum Transmission Unit) settings on the linux box. For details on MTU settings and updating them, contact your system Administrator.

What should I do when I get syntax errors/file not found error messages while invoking setup.sh file from my install archive?

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 these steps:

- a. Login to the server where the installer is copied.
- b. Navigate to the directory OFSAAI_80000.
- 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.

What should I do if I get the following error message while executing ./startofsaai.sh file on the UNIX System terminal ". /startofsaai.sh: /java: Execute permission denied"?

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

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, refer [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 completing the 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.

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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 [Changing IP/Hostname, Ports, Deployed Paths of the OFSAA Instance](#) 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.

What should I do if I get the following message while creating Information Domain, "Please create a database and then create the information domain"?

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.

What should I do if I get the following message during startup of backend engine message server, "ConnectToDatabase: FatalError, could not connect to the DB server"?

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.

What should I do if I get the following message during the startup of backend engine message server, "Fatal Error, failed to get user ID from LibSmsConnect"?

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 provide?

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 OFS Analytical Applications Infrastructure User Guide available on [OTN](#) for details.

How do I apply incremental change to the existing model when the Business Data model undergoes a change?

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 the User Interface, take more time to load than other screens?

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 `startofsaai.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 window 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 following 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 preceding 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 follows, 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, refer [Appendix C, "Creating and Deploying EAR/WAR File"](#).

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 [Support Note](#) for the workaround.

Can I install an Application Pack on an existing Atomic schema/ Information Domain created manually?

No, you cannot install an Application Pack on existing Atomic schema/Information Domain created manually. Application Packs can be installed only on Atomic Schemas/Information Domain created using schema creator utility and/ or the Application Pack installer.

What should I do if I get the following exception while trying to view the model outputs in Model Outputs screen, "Exception ->Local Path/STAGE/Output file name (No such file or directory)"?

Ensure you have created a folder "STAGE" under the path mentioned as "Local Path" in the web server details window. This folder needs to be created under the local path on every node, in case of web application server clustering.

What should I do if I get the following exception during OFSAA services startup, "Exception in thread "main" java.lang.UnsatisfiedLinkError: net (Not a directory)"?

Ensure the JRE referred in `.profile` is not a symbolic link. Correct the path reference to point to a physical JRE installed.

What is the optimized memory settings required for "New" model upload?

The following table lists the optimized memory settings required for "New" model upload.

Table 7–20 Optimized Memory Settings for New Model Upload

Model Upload Options	Size of Data Model XML File	X_ARGS_APP ENV Variable in OFSAI APP Layer
Pick from Server	106 MB	"-Xms1024m -Xmx1024m
	36 MB	"-Xms2048m -Xmx2048m
	815 MB	"-Xms4096m -Xmx4096m
	1243 MB	"-Xms6144m -Xmx6144m
Model Upload Utility	106 MB	"-Xms1024m -Xmx1024m"-Xms2048m -Xmx2048m
	336 MB	"-Xms4096m -Xmx4096m
	815 MB	"-Xms4096m -Xmx4096m
	1243 MB	"-Xms6144m -Xmx6144m
Save New Erwin File In Server	106 MB	"-Xms1024m -Xmx1024m
	336 MB	"-Xms2048m -Xmx2048m
		"-Xms4096m -Xmx4096m
		"-Xms6144m -Xmx6144m

What should I do if I get the following error message, "ORA 01792 maximum number of columns in a table or view is 1000 during T2T execution"?

You should apply the following patch set from Oracle. Applicable only for 12c.

<https://support.oracle.com/epmos/faces/DocumentDisplay?id=1937782.1>

I did not enable OFS Inline Processing Engine Application license during the installation. However, I have enabled it post installation, using the Manage OFSAA Product License(s) in the Admin UI. Are there any other additional configurations that I need to do?

Yes. Follow the instructions explained in the OFS Inline Processing Engine Configuration Guide available on [OTN](#).

I get an error when I try to build an Oracle OLAP cube. What should I do?

Execute the following grant on the appropriate ATOMIC schema
grant olap_user to &database_username

How do you turn off unused Information Domains (Infodoms) from caching?

Follow these steps to turn off unused infodoms from caching:

1. Navigate to \$FIC_HOME/conf in the APP layer of your OFSAAI installation.
2. In the DynamicServices.xml file, identify the section for <Service code="20">.
3. Modify the value of parameter CACHE_ON_STARTUP to 0 (default is 1).
4. 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, refer [Appendix C, "Creating and Deploying EAR/WAR File"](#).
5. Restart the OFSAAI Services (APP and WEB). For more information, refer to the [Starting Infrastructure Services](#) section.

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 as follows:

```
<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+.

Can Multiple OFSAA Infrastructure instances share the same config schema?

No, only one OFSAA environment can be installed using one config schema.

Can Atomic schema be shared?

Yes, it can be shared between two OFSAA instances.

While setting a firewall, which ports should be opened for communication between the Web Server (Apache HTTP Server/ Oracle HTTP Server/ IBM HTTP Server) and the Web Application Server (WebSphere/ WebLogic/ Tomcat) for OFSAAI to operate properly?

The OFSAA Servlet port which is same as Web server port should be open. Also the web application port should be open.

Can I modify the NLS_LENGTH_SEMANTICS to BYTE from CHAR for the Database where older versions of OFSAA is Installed?

Yes, NLS_LENGTH_SEMANTICS can be modified to BYTE from CHAR if you are not intending to use multi language support.

Can I install already installed application in a different infodom?

No, it is not possible to install the same application in two different infodom.

How can I configure the OFSAA application for High Availability?

OFSAA can have active-passive high availability. For more details, refer [Configuration for High Availability- Best Practices Guide](#).

During OFSAA installation should I provide web application server's IP/Hostname and port or web server's IP/Hostname and port, if the Apache HTTP Server/ Oracle HTTP Server/ IBM HTTP Server are configured?

In case the web server is configured, you should enter the Web Server IP Address/Hostname and Port details during OFSAA installation. Here the Servlet port should be same as the Web Server port.

If Web Server is not configured, the Web Application Server's IP Address/ Hostname and Port is required during the installation process. Here the Servlet port should be same as the Web application Server port.

Is "ReveleusAdminConsoleAgent" applicable for OFSAAI 8.0.0.0.0 and higher versions?

No, ReveleusAdminConsoleAgent is not applicable starting OFSAAI 7.3.3.0.0. There is a change in the way agentservers are managed through AGENTSTARTUP.SH & AGENTSHUTDOWN.SH.

What should I do when the message server process does not open and I get the following error message, "CI18NProvider::CI18NProvider, Error, unable to connect to the config database"?

This error is displayed due to the following reasons:

- The Config Schema password is already expired.

- If the config schema password is going to expire soon and the message like "ORA-28002: the password will expire within 6 days" displays while connecting to config schema through sqlplus.
- The Config schema password is Modified.

To resolve the error, re-set the config schema password to the old password. Else, if the config schema password is modified to something else then follow these steps:

1. Delete the \$FIC_HOME/conf/Reveleus.SEC file.
2. Shutdown the OFSAAI App service: `cd $FIC_APP_HOME/common/FICServer/bin ./stopofsaai.sh`
3. Shutdown the OFSAAI App service: `cd $FIC_APP_HOME/common/FICServer/bin ./stopofsaai.sh`
4. Start the Infrastructure Server in foreground directly on the server or through XWindows software using the command: `./startofsaai.sh`
5. Enter System Password.
6. Enter the new Config schema password. The service starts and initializes if it is able to successfully connect to the DB and generates the Reveleus . SEC file.
7. Post successful startup of the service, if required, the Infrastructure server may be shut down and restarted in the background using nohup mode.

What is the mechanism of Log File sizing and backup?

OFSAAI Log files created under \$FIC_APP_HOME/common/FICServer/logs & <OFSAAI_DEPLOYED_AREA>/<CONTEXT.war>/logs is configurable in RevLog4jConfig.xml.

The default size of the log files (MaxFileSize) is set to max 5000kb & number of max backup log files (MaxBackupIndex) retained is set to 5, both of which are configurable. Increasing these parameters to a higher value should depend on the server HW configurations and may reduce the performance.

To configure the Logs file size on OFSAA Application server, follow these steps:

1. Navigate to \$FIC_HOME/conf where OFSAA is installed.
2. Edit the following parameters in the file RevLog4jConfig.xml
 - <param name="file" : Enter the path where the Logs are to be generated.
 - <param name="MaxFileSize" : Provide the required file size.
 - <param name="MaxBackupIndex" : Provide the required number of backup files to be created.

Example:

```
<appender name="REVSERVERAPPENDER"
class="org.apache.log4j.RollingFileAppender">
<param name="file" value="$FIC_
HOME/ficapp/common/FICServer/logs/RevAppserver.log"/>
<param name="Append" value="true" />
<param name="MaxFileSize" value="5000kb" />
<param name="MaxBackupIndex" value="5" />
<layout class="org.apache.log4j.PatternLayout">
<param name="ConversionPattern" value="[REVELEUSLOG] %m%n"/>
```

```
</layout>
</appender>
```

To configure the Deployed area logs file, follow these steps:

1. Navigate to <EAR/WAR Deploy area>/conf folder.
2. Repeat step 2 from the preceding section.

Can we modify the Log file path?

Yes, Log file path is configurable, it can be configured in RevLog4jConfig.xml. default log file path (file) is set by the installer. This can be configured to another path.

Can I point the environment with HTTP enabled to HTTPS after installation and vice versa?

Follow these steps:

1. Create SSL related certificates and import to respective servers.
2. Enable SSL on a desired Port (example 9443) on your existing and already deployed web application servers.
3. Replace the protocol as https and new ssl port (FIC_SERVLET_PORT) configured and in all the URLs specified on the following files:
 - \$FIC_HOME/ficapp/common/FICServer/conf/FICWeb.cfg and \$FIC_HOME/ficweb/webroot/conf/FICWeb.cfg
 - \$FIC_HOME/ficapp/icc/conf/WSMREService.properties
 - \$FIC_HOME/ficweb/webroot/conf/ModelExecution.properties
 - \$FIC_HOME/ficdb/conf/MDBPublishExecution.properties
 - \$FIC_HOME/ficdb/conf/ObjAppMap.properties
 - \$FIC_HOME/utility/Migration/conf/WSMigration.properties
 - \$FIC_HOME/utility/WSExecution/conf/WSExecution.properties
 - \$FIC_HOME/EXEWebService/WebSphere/ROOT/WEB-INF/wsdl/EXEWebServiceImpl.wsdl
 - \$FIC_HOME/EXEWebService/Tomcat/ROOT/WEB-INF/wsdl/EXEWebServiceImpl.wsdl
 - \$FIC_HOME/EXEWebService/weblogic/ROOT/WEB-INF/wsdl/EXEWebServiceImpl.wsdl
4. Replace XML attribute/Node values as specified on the following files:
 - \$FIC_HOME/ficweb/webroot/WEB-INF/web.xml
FIC_WEBSERVER_PORT=9443
 - FIC_WEBPROTOCOL=https
\$FIC_HOME/conf/LookUpServices.xml and \$FIC_HOME/ficweb/webroot/conf/LookUpServices.xml
PORT="9443" PROTOCOL="https:"
5. Login to config schema and execute the following SQL command to replace protocol and SSL port.


```
SQL> update configuration cn set cn.paramvalue='9443' where
cn.paramname='SERVLET_ENGINE_PORT';
```

```
SQL> update configuration cn set
cn.paramvalue=replace(cn.paramvalue, 'http:', 'https:') where
cn.paramname='FormsManagerCacheReload';

SQL> update web_server_info ws set
ws.servletport='9443',ws.servletprotocol='https';
```

6. Create EAR/WAR file and Re-Deploy.

What should I do if the sliced data model upload takes a long time to complete?

If the metadata cache size is set to a lower value than the actual count of each metadata type (hierarchy, dataset, dimension etc), then it gets into performance degrade issues. We have to increase the cache size for each metadata type according to the count in the environment.

Following are the parameters in DynamicServices.xml to be configured depends on the metadata count in your environment.

```
<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="3000"/>
<PARAMETER NAME="HIERARCHY_CACHE_SIZE" VALUE="2000"/>
<PARAMETER NAME="DIMENSION_CACHE_SIZE" VALUE="2000"/>
<PARAMETER NAME="CUBE_CACHE_SIZE" VALUE="1000"/>
<PARAMETER NAME="BUSINESSPROCESSOR_CACHE_SIZE" VALUE="2000"/>
<PARAMETER NAME="DERIVEDENTITY_CACHE_SIZE" VALUE="1000"/>
```

Metadata count can be derived based on the following queries:

```
select count(1) from metadata_master where metadata_version=0 --- for all metadata
select count(1) from metadata_master where metadata_version=0 and metadata_type=1 --- for
measure
select count(1) from metadata_master where metadata_version=0 and metadata_type=2 --- for
Dimension
select count(1) from metadata_master where metadata_version=0 and metadata_type=3 --- for
HCY
select count(1) from metadata_master where metadata_version=0 and metadata_type=4 --- for
DATASET
select count(1) from metadata_master where metadata_version=0 and metadata_type=59 ---
for BP's
select count(1) from metadata_master where metadata_version=0 and metadata_type=54 ---
for Alias
select count(1) from metadata_master where metadata_version=0 and metadata_type=5 ---
for CUBES
select count(1) from metadata_master where metadata_version=0 and metadata_type=856 ---
for Derived Entity
```

For LDAP authentication, which server connects with the LDAP server, the Application server (where ofsaai is installed), or Web Application server (where EAR is deployed)?

For LDAP authentication, the Application server (ficapp) connects with the LDAP server.

The LDAP server in the setup listens on secure protocol ldaps (port 636). I have the root certificate of the LDAP server for SSL, and would like to know where to offload this certificate?

You need to import the certificate into the JDK/JVM used by Reveleus server in ficapp layer.

How to relocate FTPSHARE folder?

You can run the PortC.jar utility. For more details, refer Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance section in the OFSAAI Admin Guide available on [OTN](#).

How do we identify the list of ports that are used by/configured in an OFSAA environment?

1. Navigate to \$FIC_HOME folder on Target.
2. Run the PortC.jar utility using the command:

```
java -jarPortC.jar DMP
```

A file with the name **DefaultPorts.properties** will be created under \$FIC_HOME directory which will contain the ports. For more information, refer Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance section in the OFSAAI Admin Guide available on [OTN](#).

What should I do if I get the following error message, "Error while fetching open cursor value Status : FAIL"?

This error occurs while executing `envCheck.sh` because the user does not have access to `V$parameter`. This error does not occur due to `sysdba` or non `sysdba` privileges provided they have access/grants to `V$parameter`.

Application Pack 8.0.0.0.0 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 OFSAAI 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 an 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?

You can download the OFSAA 8.0 Application Pack from [Oracle Software Delivery Cloud \(OSDC\)](#).

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.

Does this installation require any Third party Softwares?

OFS CRR Installation Guide that is published in [OTN](#) 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 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 an Application pack and can I install any of new applications within the Application pack later?

No, installation of additional Applications is not required. If you wish to add an application later, you can enable the application at that time.

How many OFSAA Infrastructures can be installed in a single server?

There is no issue in installing separate OFSAAI installations, each with their own PFT/FTP installations and separate associated database instances and separate Web Server installations on the same server as long as adequate memory is allocated for each instance and as long as each OFSAAI installation is installed using a separate UNIX user and profile. Care should be taken if running multiple OFSAAI installations on a single server. Adequate memory will be

required for each installation as several OFSAAI processes (model upload, DEFQ services, etc) take significant amounts of memory. So it depends on your server memory.

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, Asset Liability Management Application Pack and Profitability Application 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, Asset Liability Management Application Pack and Profitability Application 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 in 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 later?

OFS Enterprise Modeling is a separate product and can be enabled as an option later from any application pack that bundles Enterprise Modeling.

Will Application pack create sandbox automatically for the required applications?

Yes, Sandbox creation is part of application install process.

Are upgrade Kits available for individual applications or for the complete Application Pack?

Maintenance Level (ML) Release / Minor Releases upgrades are available across all Applications.

Can I upgrade AAI only?

Yes, you can upgrade AAI alone.

How many Infodoms can be created over a single OFSAA Infrastructure of 8.0.4.0.0?

You can install only one infodom during installation. But after installation, you can create multiple infodoms.

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 infodom or different infodom)?

Yes, you can install an Application Pack over another Application Pack in the same information domain or different information domain. But Behavioural Detection Pack and Compliance Regulatory Reporting Pack, Asset Liability Management Application Pack and Profitability Application Pack are the exceptions. They need to be installed in a different INFODOM.

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.

What are the Java versions supported in OFS AAI Application Pack version 8.0.0.0.0?

OFS AAI Application Pack supports Java 1.7.x and 1.8.x.

Is this release of the OFS AAI Application Pack version 8.0.0.0.0 supported on Java 8?

Yes. To install this release of the OFS AAI Application Pack version 8.0.0.0.0 on Java 8. For more information, refer to specific notes mentioned in the sections [Prerequisite Information](#), [Configuring the Schema Creator Utility](#), [Silent Mode Installation](#).

Forms Framework FAQs

What should I do when I have large volume of data to be exported?

It is recommended to use BIP reports or OBIEE reports if you have to export large volume of data.

How do I export the columns added to the grid using Field Chooser option?

Perform Grid Export operation to export the columns added to the grid by Field Chooser option.

'Expand All/ Collapse All' button is not visible in the Hierarchy Browser window. What should I do?

Expand All/ Collapse All button is enabled only if the number of hierarchy nodes is less than 50. If it is more than that, it is considered as large hierarchy and the data will be fetched dynamically when you expand each node.

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 7-45 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.
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Resolution	Provide proper arguments. Invoke Setup.sh using either SILENT or GUI mode. Example: ./Setup.sh SILENT or ./Setup.sh GUI
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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 dos2unix OFSAAI_InstallConfig.xml to convert plain text file from DOS/MAC format to UNIX format. OR Make sure that OFSAAI_InstallConfig.xml 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 OFSAAI_InstallConfig.xml using the XML_UTILITY.jar.

Error code - OFSAAI-1016

Cause	User installation directory contain blank spaces.
Resolution	Provide an installation path that does not contain spaces. Check the tag USER_INSTALL_DIR in OFSAAI_InstallConfig.xml 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 USER_INSTALL_DIR tag value of OFSAAI_InstallConfig.xml file.