Oracle Financial Services International Financial Reporting Standards Application Pack

Installation Guide

Release 8.0.0.0.0

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ORACLE
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TABLE OF CONTENTS

Preface

This Preface provides supporting information for the Oracle Financial Services Analytical Applications IFRS Pack Installation Guide and includes the following topics:

- Summary
- Audience
- Documentation Accessibility
- Related Documents
- Conventions

Summary

You can find the latest copy of this document in OTN Documentation 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

The Oracle Financial Services Analytical Applications (OFSAA) IFRS pack Installation and Configuration Guide is intended for administrators, implementation consultants who are responsible for installing and maintaining the application pack components.

The document assumes you have experience in installing Enterprise components. Basic knowledge about the OFSAA IFRS pack components, OFSAA Architecture, UNIX commands, Database concepts and Web Server/ Web Application Server is recommended.

Prerequisites for the Audience

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

- Awareness of the OFSAA Tier Architecture. For more information, see the *Application Tiers* section.
- Decision on the appropriate OFSAA Deployment Option. For more information, refer to the *Recommended Deployment Options* section.

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.

Access to Oracle Support

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 OFSAA Infrastructure. You can access Oracle documentation online from Documentation Library for OFSAAI 7.3 (OTN).

- *Oracle Financial Services Analytical Applications Infrastructure Administration Guide*
- *Oracle Financial Services Analytical Applications Infrastructure Environment Check Utility Guide*
- *Oracle Financial Services Analytical Applications Infrastructure Language Pack Guide*
- *Oracle Financial Services Analytical Applications Infrastructure User Guide*
- *Oracle Financial Services Loan Loss Forecasting and Provisioning*
- *Oracle Financial Services Hedge Management*

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

- Oracle Financial Services Analytical Applications Infrastructure Security Guide

Conventions and Acronyms

Conventions	Description
AIX	Advanced Interactive eXecutive
DEFQ	Data Entry Forms and Queries
DML	Data Manipulation Language
EAR	Enterprise Archive
EJB	Enterprise JavaBean
ERM	Enterprise Resource Management
FTP	File Transfer Protocol
GUI	Graphical User Interface
HTTPS	Hypertext Transfer Protocol Secure
J2C	J2EE Connector

Conventions	Description
J2EE	Java 2 Enterprise Edition
JDBC	Java Database Connectivity
JDK	Java Development Kit
JNDI	Java Naming and Directory Interface
JRE	Java Runtime Environment
JVM	Java Virtual Machine

1 Introduction to OFSAA Application Pack

This chapter includes the following topics:

1.1 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 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.

Oracle delivers a comprehensive, integrated suite of financial services analytical applications for Enterprise Performance Management, Enterprise Risk Management, Financial Crime and Compliance Management, Customer Insight, and Integrated Business Intelligence.

1.2 About OFS International Financial Reporting Standards 8.0.0.0.0 Application Pack

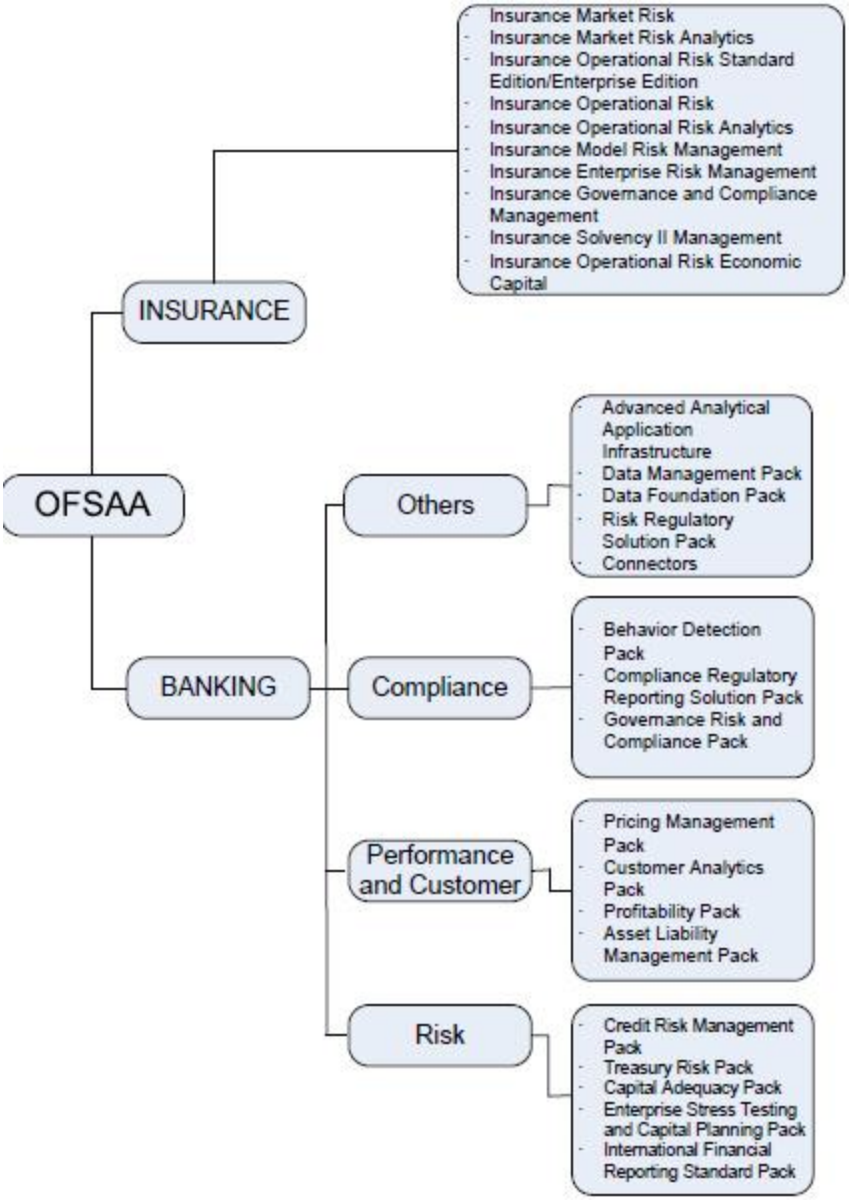
OFS International Financial Reporting Standards 8.0.0.0.0 Pack includes the following applications:

- **Oracle Financial Services Loan Loss Forecasting and Provisioning**: International Financial Reporting Standards (IFRS) guidelines have set out new requirements on classification and measurement of financial assets and liabilities. It specifies two approaches for the measurement of assets namely Amortized Cost and Fair Value approach. The scope of Oracle Financial Services Loan Loss Forecasting and Provisioning is to focus only on the amortized cost approach
- **Oracle Financial Services Hedge Management**: To help financial institutions grow, manage risk, and optimize shareholder value, Oracle delivers a comprehensive, integrated suite of financial services analytical applications for enterprise performance management (EPM).

  More than ever, financial institutions, their regulators as well as their shareholders are focused on the need to measure and meet risk-adjusted performance objectives, price

products to reflect their true risk, and better understand how their institution is impacted by threats to liquidity, capital adequacy, and exposure to market rate volatility.

1.3 Oracle Financial Services Analytical Applications Application Pack



1.4 Oracle Financial Services Analytical Applications Infrastructure (OFSAAI)

Oracle Financial Services Analytical Applications Infrastructure 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

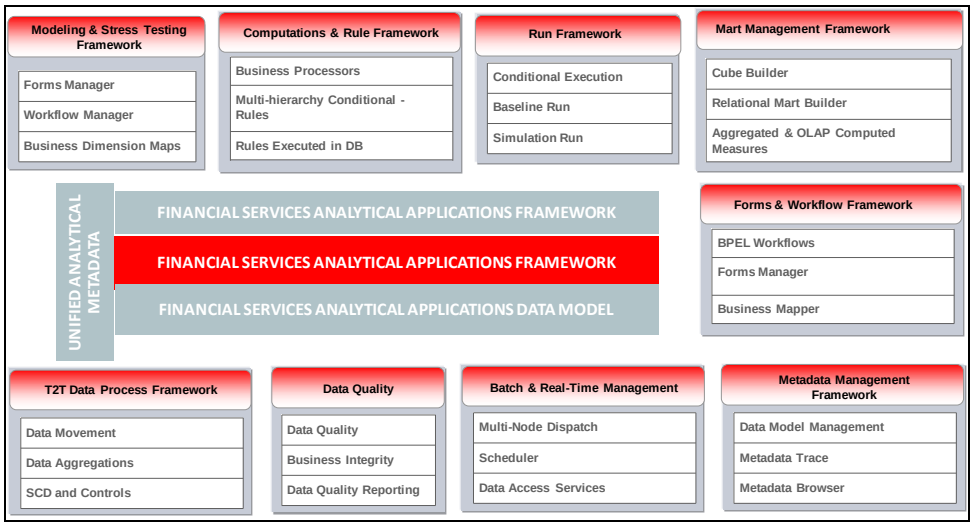
foundation for the entire family of Oracle Financial Services Analytical Applications across the domains of Risk, Performance, Compliance and Customer Insight.

1.4.1 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:

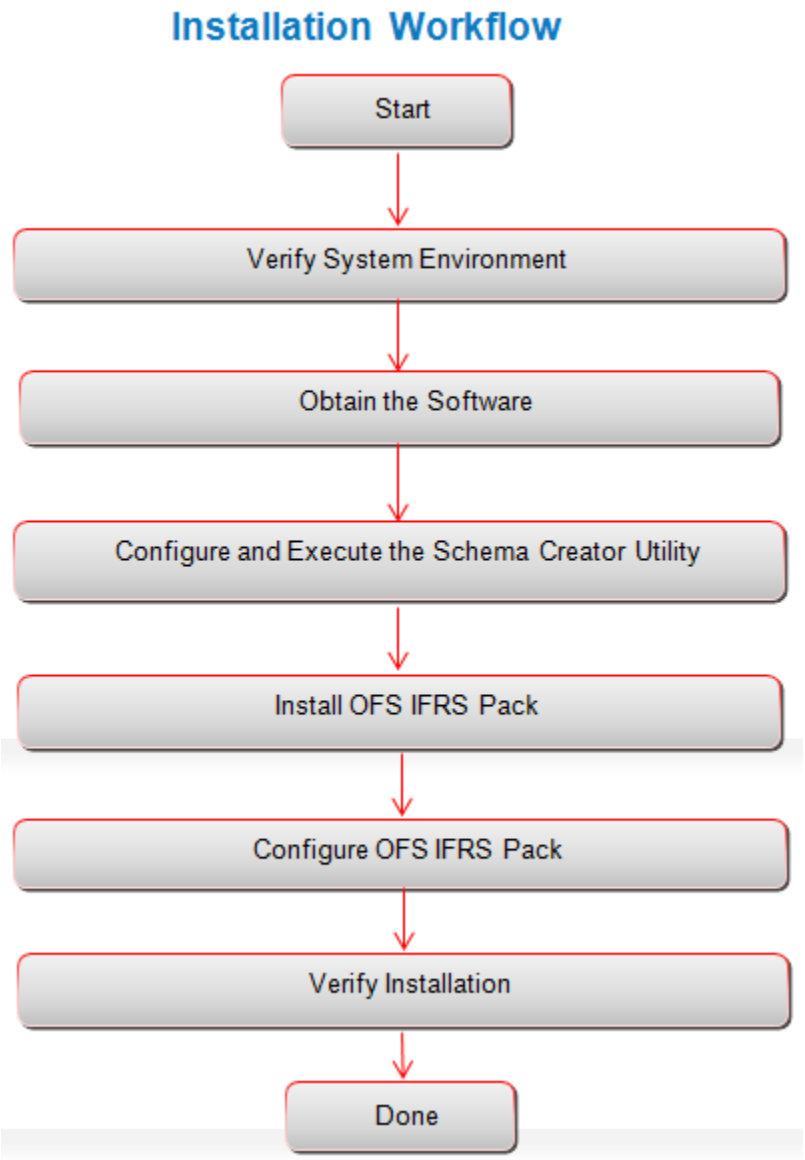


2 Overview of OFS IFRS Application Pack Installation

This chapter includes the following topics:

2.1 Installation Overview

This section gives an overview of the OFS IFRS Application Pack Installation. The figure below shows the order of procedures you need to follow:

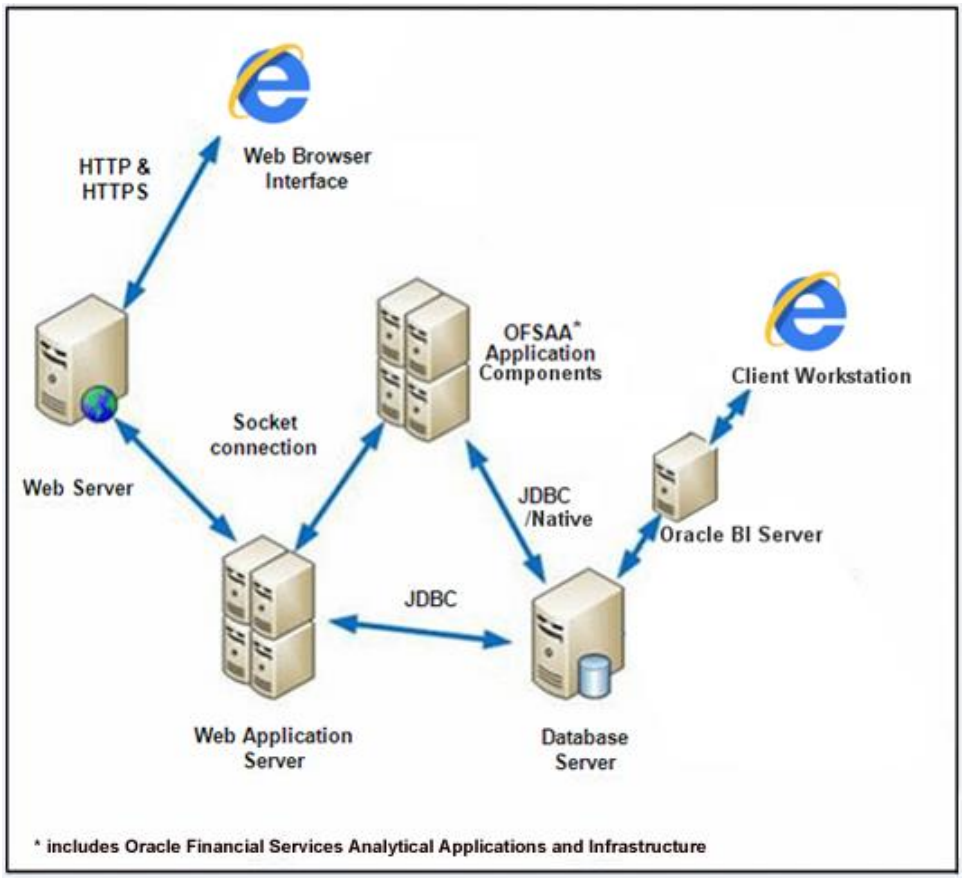


OFS IFRS Application Pack Installation Tasks and Descriptions

Tasks	Details and Documentation
Verify Systems Environment	To verify that your system meets the minimum necessary requirements for installing and hosting the OFS IFRS Application Pack, refer to Verifying the System Environment section.
Obtain the software	To access and download the OFS IFRS Application Pack, refer to Obtaining the Software section.
Configure and Execute the Schema Creator Utility	For instructions on creating the database schemas, refer to Configuring and Executing the Schema Creator Utility section.
Install OFS IFRS Application Pack	For instructions on Installing OFS IFRS Application Pack, refer to Installing OFS IFRS Application Pack section.
Configure OFS IFRS Setup	For instructions on configuring the OFS IFRS Application Pack, refer to Post Installation Configuration and Post Deployment section.

2.2 Logical Deployment Topology

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.



Logical Deployment

2.3 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 OFSAA IFRS Application Pack has been qualified.

NOTE: OFS IFRS Application pack installation can be performed on both Virtual and Physical servers.

2.3.1 Configurations supported for Java 7

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

Configurations supported for Java 7

Requirement	Sub-Category	Value
Operating System	Oracle Linux / Red Hat Enterprise Linux (x86-64)	Oracle Linux Server release 5.3 up to 5.10 - 64 bit Oracle Linux Server release 6.0 and above - 64 bit **Note**: Same versions of RHEL is supported.
	Oracle Solaris (SPARC)	Oracle Solaris v5.10 Update 11 and above - 64 bit Oracle Solaris v5.11 update 1 and above – 64 bit
	IBM AIX (PowerPC)	AIX 6.1 (TL 09 and above) - 64 bit
	Shell	KORN Shell (KSH)

Note: If the OS is IBM AIX 6.1, configure the size parameter setting for “Large File Support”. Refer to the link http://www-01.ibm.com/support/docview.wss?uid=isg3T1000290 for more details.

If the operating system is RHEL, install the package lsb_release using one of the following commands by logging in as root user:

- `yum install redhat-lsb-core`
- `yum install redhat-lsb`

Requirement	Sub-Category	Value
Java Runtime Environment	Oracle Linux / Red Hat Enterprise Linux Oracle Solaris	Oracle Java Runtime Environment (JRE) 1.7.x - 64 bit
	IBM AIX	IBM AIX Runtime, Java Technology JRE 1.7.x - 64 bit
Oracle Database Server and Client		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: Oracle Server 12c, v12.1.0.1 – 17082699 Oracle Server 12c, v12.1.0.2 - 19392604, 19649591 Also for latest information, refer to 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	V 11.1.2.1+ (Server and Client) with Oracle 11g Database V 11.1.2.3+ (Server and Client) with Oracle 12c

Requirement	Sub-Category	Value
		Database
	Oracle OLAP	V 11.2.0.3+ with Oracle 11g Database V 12.1.0.1+ with Oracle 12c Database
	Note: Oracle Hyperion Essbase & Oracle OLAP is required only if you are using the OLAP feature of OFSAAI. For Oracle OLAP, ensure that you have configured the Oracle Database server with OLAP option.	
Web Server/ Web Application Server	Oracle Linux / Red Hat Enterprise Linux Oracle Solaris IBM AIX	Oracle HTTP Server 11.1.1.1/ Apache HTTP Server 2.2.x/ IBM HTTP Server Oracle 11g Database: 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) Oracle 12c Database: Oracle WebLogic Server 12.1.2+ (64 bit) IBM WebSphere Application Server 8.5+ with IBM Java Runtime (64 bit) Apache Tomcat 8.0.x (64 bit)
	Note: OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported.	
Desktop Requirements	Operating System	MS Windows 7/ Windows 8/ Windows 8.1
	Browser	MS Internet Explorer 9 , 10, and 11 Oracle Java plug-in 1.7.0+* (64- bit)

Requirement	Sub-Category	Value
		Turn on Pop-up blocker settings. For more information, refer to Internet Explorer Settings section.
	Office Tools	MS Office 2007/ 2010/2013 Adobe Acrobat Reader 10 and 11
	Screen Resolution	1024*768 or 1280*1024
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: 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.	

2.3.2 Configurations supported for Java 8

The following table shows the minimum hardware and software requirements for running OFS IFRS Application Pack (for Java 8):

Configurations supported for Java 8

Requirement	Sub-Category	Value
Operating System	Oracle Linux / Red Hat Enterprise Linux (x86-64)	Oracle Linux Server release 5.3 up to 5.10 - 64 bit Oracle Linux Server release 6.0 and above - 64 bit Note: Same versions of RHEL is supported
	Oracle Solaris (SPARC)	Oracle Solaris v5.10 Update 11 and above - 64 bit

Requirement	Sub-Category	Value
		Oracle Solaris v5.11 update 1 and above – 64 bit
	IBM AIX (PowerPC)	AIX 6.1 (TL 09 and above) - 64 bit
	Shell	KORN Shell (KSH)
Note: If the OS is IBM AIX 6.1, configure the size parameter setting for "Large File Support". Refer to the link, http://www-01.ibm.com/support/docview.wss?uid=isg3T1000290 for more details. If the operating system is RHEL, install the package `lsb_release` using one of the following commands by logging in as root user: ▪ `yum install redhat-lsb-core` ▪ `yum install redhat-lsb`		
Java Runtime Environment	Oracle Linux / Red Hat Enterprise Linux Oracle Solaris	Oracle Java Runtime Environment (JRE) 1.8.x - 64 bit
	IBM AIX	IBM AIX Runtime, Java Technology JRE 1.8.x - 64 bit
Oracle Database Server and Client		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

Requirement	Sub-Category	Value
		2.15.3 (Optional) Oracle R Enterprise (Server) version 1.4 (Optional)
	Note: Ensure that the following patches are applied: ▪ Oracle Server 12c, v12.1.0.1 – 17082699 ▪ Oracle Server 12c, v12.1.0.2 - 19392604, 19649591 Also for latest information, refer to 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	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	V 11.2.0.3+ with Oracle 11g Database V 12.1.0.1+ with Oracle 12c Database
	Note: Oracle Hyperion Essbase and Oracle OLAP is required only if you are using the OLAP feature of OFSAAI. For Oracle OLAP, ensure that you have configured the Oracle Database server with OLAP option.	
Web Server/ Web Application Server	Oracle Linux / Red Hat Enterprise Linux / IBM AIX Oracle Solaris	Oracle HTTP Server 11.1.1.1/ Apache HTTP Server 2.2.x/ IBM HTTP Server Oracle 11g Database: Oracle WebLogic Server 12.1.3+ (64 bit) Apache Tomcat 8.0.x (64 bit) Note: IBM JAVA8 SDK does not support WebSphere full profile.
	Note: OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported.	

Requirement	Sub-Category	Value
	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	MS Internet Explorer 9 , 10, and 11 Oracle Java plug-in 1.7.0+* (64- bit) Turn on Pop-up blocker settings. For more information, refer to Internet Explorer Settings section.
	Office Tools	MS Office 2007/ 2010/2013 Adobe Acrobat Reader 10 and 11
	Screen Resolution	1024*768 or 1280*1024
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: 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.	

NOTE: To upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8, refer to Upgrade Java 7 Instance to Java 8 section.

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

Operating System	Database	Web Application Server	Web Server

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

2.4 Verifying the System Environment

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.

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".

For more details on download and usage of this utility, refer to *Oracle Financial Services Analytical Applications Infrastructure Environment Check Utility Guide* in OTN Documentation Library.

2.5 Understanding Installation Modes

OFS IFRS Application Pack installation supports two modes of installation:

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

  NOTE: Refer to Configuration for GUI Mode Installation section for details on configuration required for GUI Mode installation.

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

3 Preparing for Installation

This chapter provides necessary information to review before installing the Oracle Financial Services IFRS Pack v8.0.0.0.0. This chapter includes the following topics:

3.1 Installer and Installation Prerequisites

The following table mentions the list of prerequisites required before beginning the installation for OFS IFRS Application Pack. The Installer/ Environment Check utility notifies you if any requirements are not met.

The following table details the list of prerequisites required before beginning the installation for OFS IFRS Application Pack. The Installer/EnvCheck utility will notify you if any requirements are not met.

Prerequisite Information

Requirement	Sub-Category	Expected Value
Environment Settings	Java Settings	PATH in **.profile** to be set to include the Java Runtime Environment absolute path. The path should include java version (java 7 or java 8) based on the configuration. **Note**: 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 Ensure no SYMBOLIC links to JAVA installation is being set in the PATH variable.
	Oracle Database Settings	▪ 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*.

Requirement	Sub-Category	Expected Value
	Oracle Essbase Settings	ARBORPATH, ESSBASEPATH, HYPERION_HOME to be set in the **.profile** pointing to an appropriate Oracle Essbase Client installation. **Note**: Oracle Essbase settings are required only if you want to use Oracle Hyperion Essbase OLAP features.
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.
	Installation Directory	▪ A directory where the product files will be installed/copied. ▪ Set 755 permission on this directory. ▪ This directory needs to be set as FIC_HOME.
	Staging Area/ Metadata Repository Directory	▪ A directory to hold the application metadata artifacts and additionally act as staging area for flat files. ▪ The directory should exist on the same system as the OFSAA Installation. This directory can be configured on different mount or under a different user profile. ▪ Set 777 permission on this directory.
	Download Directory	▪ A directory where the product installer files will be downloaded/ copied. ▪ Set 755 permission on this directory.
Database Settings	Database Instance Settings	▪ NLS_CHARACTERSET to be AL32UTF8 ▪ NLS_LENGTH_SEMANTICS to be BYTE ▪ OPEN CURSORS limit to be greater than 1000

Requirement	Sub-Category	Expected Value
Web Application Server	WebSphere/ WebLogic/ Tomcat	▪ Web Application Server should be installed and profile/domain created. ▪ You will be prompted to enter the WebSphere Profile path or WebLogic Domain path or Tomcat Deployment path during OFSAAI installation. Note: ▪ Refer to Configuring Web Server section for WebSphere Profile Creation and WebLogic Domain Creation. ▪ For deployment on Oracle WebLogic Server 12.1.3+ (64 bit) with Java 8, download and install patch **18729264** from http://support.oracle.com/.
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 to Configuring Web Server for Web Server installation.
Others	Oracle R/ Oracle R Enterprise	This is an optional requirement. For more details, refer to the section Installation of Oracle R Distribution and Oracle R Enterprise (ORE).
	OFSAA	For installation on Java 8, login to https://support.oracle.com/ and search for 21160684 under the Patches & Updates tab. For installation of this release on an existing OFSAA instance version 8.0.1.0.0, login to https://support.oracle.com/ and search for 21133780 under the Patches and Updates tab.

3.2 Obtaining the Software

This release of OFSAA IFRS Application Pack 8.0.0.0.0 can be downloaded from the Oracle Software Delivery Cloud (https://edelivery.oracle.com). You need to have a valid Oracle account in order to download the software.

3.3 Common Installation Activities

The following are the common pre-installation activities that you need to carry out before installing the OFS IFRS application.

This section includes the following topics:

- Identifying the Installation, Download and Metadata Repository Directories

- Download and copy the OFS AAAI Application Pack Installer
- Configuration for GUI Mode Installation
- Copying and Extracting the Software
- Setting up the Web Server/ Web Application Server
- Installation of Oracle R distribution and Oracle R Enterprise (ORE)

3.3.1 Identifying the Installation, Download and Metadata Repository Directories

For installation of any IFRS Application Pack, the below folders/ directories required to be created.

- **OFSAA Download Directory** (Optional) - Create a download directory and copy the OFSAA Application Pack Installer File (Archive). This is the directory where the downloaded installer/ patches can be copied.
- **OFSAA 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**.**
- **OFSAA Staging/ Metadata Repository Directory** (Mandatory) – Create a Staging/ Metadata Repository Directory. This is the directory where you would be required to copy data loading files, save data extracts etc. Additionally, this folder also maintains the OFSAA metadata artifacts. This is commonly referred as “FTPSHARE”.

NOTE: Ensure the user permission is set to 755 on the Installation and Download Directory and user permission is set to 777 on the Staging Directory.

3.3.2 Download and copy the OFS AAAI Application Pack Installer

- To download the OFS AAAI Application 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 OFSAA installation.

3.3.3 Configuration for GUI Mode Installation

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

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

- Configure DISPLAY variable in the user .profile.
- Ensure to set the DISPLAY variable (in user .profile) on the system on which the OFSAA Infrastructure will be installed, to point to the user desktop system where the PC X Server software has been installed.

Syntax:

```
export DISPLAY = hostname:n
```

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

For example, 10.11.12.13:0.0 or myhostname: 0.0

3.3.4 Copying and Extracting the Software

Once you obtain the installer, copy the installer (in BINARY mode) to the system on which the OFSAA IFRS Application pack 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, typically $HOME path on the system on which the OFS AAA Infrastructure components will be installed. 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 OFSAA IFRS Application pack 8.0.0.0 installer archive file using the following command:

   ```
   unzip OFS_IFRS_PACK.zip
   ```

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

5. Give below permission to the installer folder. Navigate to the Download DIR and execute the command:

```
chmod -R 755 OFS_IFRS_PACK
```

3.3.5 Setting up the Web Server/Web Application Server

For setting up the environment based on your selected Web Server/Web Application Server, refer to Configuring Web Server for more information.

3.3.6 Installation of Oracle R Distribution and Oracle R Enterprise (ORE)

This is an optional step and required only if you intend to use Oracle R scripting in the Oracle Financial Services Enterprise Modeling Application. Ensure the below sequence of prerequisites are followed:

1. Install Oracle R Distribution and Oracle R Enterprise (Server Components) on the Oracle Database server if it is not installed already. Refer to *Oracle® R Enterprise Installation and Administration Guide for Windows, Linux, Solaris, and AIX, Release 1.3.1*.

   - Oracle R Distribution versions supported- Oracle Distribution of R version 2.15.1, 2.15.2 or 2.15.3.
   - ORE version supported- Oracle R Enterprise (Server) version 1.4.

   NOTE: Oracle R Enterprise 1.4 requires Oracle Database Enterprise Edition 11.2.0.3+/ 12.1.0.1+.

4 Installing the Application

Follow the instructions in this chapter to install the OFSAA IFRS Application pack depending on the mode of installation. This chapter includes the following sections:

This chapter includes the following topics:

4.1 Schema creator utility

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

This section includes the following topics:

4.1.1 About Schema Creator Utility

The schema creator utility should be configured and executed mandatorily every time prior to installation of any OFSAA Application Pack.

The following are the types of schemas that can be configured in the OFSAA:

- **CONFIG** – Denotes the unique OFSAA setup configuration schema. It contains entities and other objects required for OFSAA setup information.

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

- **ATOMIC** – Denotes the schema that contains 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.

- **SANDBOX** – Denotes the schema that contains the data for all Sandbox executions. One SANDBOX schema is attached to one Sandbox Information Domain.

NOTE: There can be multiple SANDBOX schemas per OFSAA Instance and a Sandbox Information Domain can have only one SANDBOX schema.

- **ADDON** – Denotes any additional schema used by the OFSAA Applications.

4.1.2 Execution Modes in Schema Creator Utility

The Schema Configuration Utility supports the following modes of execution:

- **Online Mode**: In the Online mode, the utility connects to the database and executes the DDLs for Users, Objects and Grants. If you have the SYSDBA privileges you can execute the Schema Creator Utility in Online mode and thereby create the Users, Objects and Grants during the execution process.

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

- **Offline Mode:** In the Offline mode, the utility generates SQL script with all the required DDLs for Users, Objects and Grants. This script needs to be executed by the DBA on the appropriate database identified for OFSAA usage. If you do not have the SYSDBA privileges, you can execute the Schema Creator Utility in Offline mode and generate the script file that contains the Schemas, Objects and Grants, information. Subsequently, a SYSDBA user can execute the script file manually.

  NOTE: 1. To execute the utility in Offline mode, you need to connect as any user with below 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_IFRS_SCHEMA_IN.XML` file and execute the utility. This regenerates the scripts with corrected information. For more information, refer to Configuring OFS_IFRS_SCHEMA_IN.XML file section.

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

  NOTE: Do not modify the `OFS_IFRS_SCHEMA_OUT.XML` file generated after the execution of this utility.

4.1.3 Execution Options in Schema Creator Utility

Depending on the option you choose to run the OFSAA Application Pack Installer, you need to choose the schema creator utility execution option. To run the OFSAA Application

Pack installer in SILENT mode, it is mandatory to execute the schema creator utility with `-s` option.

NOTE: If the schema creator utility is executed **without** the option –s, it is mandatory to run the OFSAA Application Pack Installer in GUI mode.

4.2 Configuring and Executing the Schema Creator Utility

Schema Creator Utility is used to create the schema in the database.

This section includes the following topics:

- Prerequisites
- Configuring the Schema Creator Utility
- Executing the Schema Creator Utility

4.2.1 Prerequisites

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

- You must have the Oracle User ID/Password with SYSDBA privileges (not applicable for offline mode).
- You must have the JDBC Connection URL for RAC/Non RAC database.
- The HOSTNAME/IP of the server on which OFSAA is getting installed.
- You must add a TNS entry before the installation.

4.2.2 Configuring the Schema Creator Utility

This section explains the steps to configure and run 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_IFRS_PACK/schema_creator/conf.
3. Edit the OFS_IFRS_SCHEMA_IN.xml file in a text editor.
4. Configure the elements as described in the Configuring OFS_IFRS_SCHEMA_IN.XML file section.
5. On successful execution of the utility, the entered passwords in the OFS_IFRS_SCHEMA_IN.xml file are nullified.
6. Save the OFS_IFRS_SCHEMA_IN.xml file.

NOTE: On successful execution of the utility, the entered passwords in the OFS_IFRS_SCHEMA_IN.xml file are nullified.

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

4.2.3 Executing the Schema Creator Utility

This section includes the following topics:

- Executing the Schema Creator Utility in Online Mode
- Executing the Schema Creator Utility in Offline Mode
- Executing the Schema Creator Utility with –s option
- Executing the Schema Creator Utility while Installing Subsequent Application Pack Schema Creation.

NOTE: If you intend to use Oracle OLAP feature, execute the below grant on all the ATOMIC schema(s):

```
grant olap_user to &database_username
```

4.2.3.1 Executing the Schema Creator Utility in Online Mode

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

To execute the schema creator utility while creating the schemas for the application pack, follow these steps:

1. Log in to the system as non-root user.
2. Navigate to the following folder path: `OFS_IFRS_PACK/schema_creator/bin/`
3. Execute the following command.

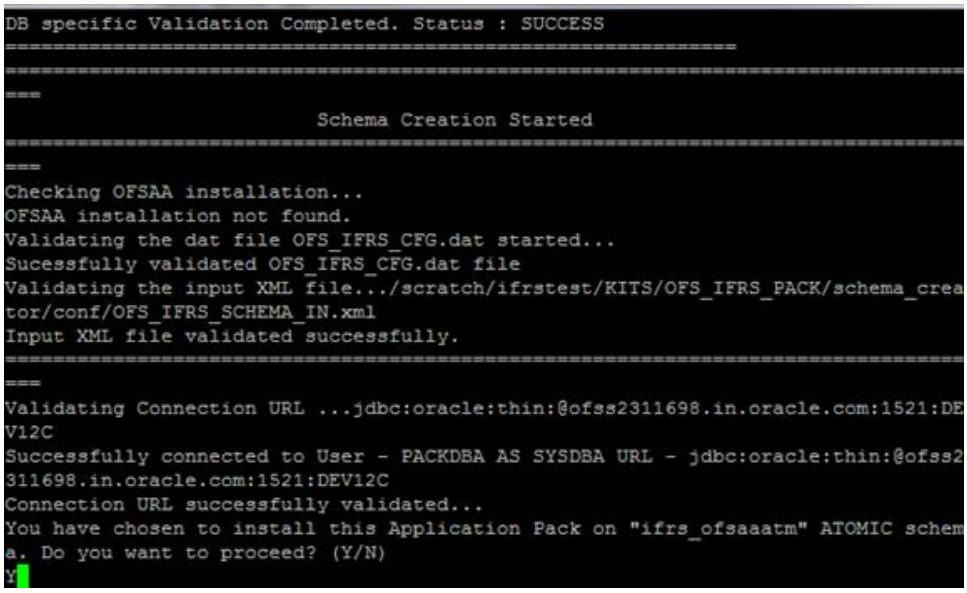
   ./osc.sh

   NOTE: For silent mode installation, execute the osc.sh file using the following command: `./osc.sh -s`.
4. The following message is displayed: You have chosen ONLINE mode. Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n).
5. Enter Y/y to proceed.

6. Enter the DB Username with SYSDBA Privileges. For example: SYS as SYSDBA.
7. Enter the User Password.
8. The console runs the initial validation checks and then displays the following message: *You have chosen to install this Application Pack on <Name of the Atomic Schema>ATOMIC schema. Do you want to proceed? (Y/N)*
9. Enter Y/y to start the schema creation.

   Or

   Enter N/n if you want to quit executing the schema creation.



10. Make TNS entries for the created users in TNSNAMES.ORA. For details, refer to Add TNS Entries in TNSNAMES.ORA File section.

NOTE: On successful execution of schema creator utility, the console displays the following status message:
Success. Please proceed with the installation.
Refer log file in *OFS_IFRS_PACK/schema_creator/logs* folder for execution status. In case of any errors, contact Oracle Support.

4.2.3.2 Executing the Schema Creator Utility in Offline Mode

In Offline Mode, the Schema Creator Utility will create 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 scripts for creation of Schemas, Schema Objects, Tablespaces, Grants, and Roles.

Prerequisites:

- Database user with below privileges:

- SELECT ON DBA_ROLES
- SELECT ON DBA_USERS
- SELECT ON DBA_DIRECTORIES
- SELECT ON 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. Log in to the system as non-root user.
2. Navigate to the following path: `OFS_IFRS_PACK/schema_creator/bin`
3. Execute the osc.sh file using the following command:

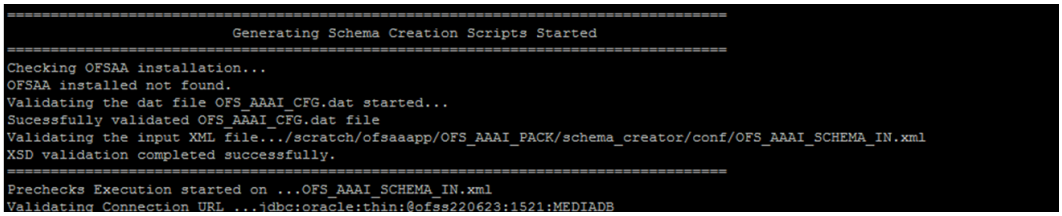
   `./osc.sh -o`

   NOTE: For silent mode installation, execute the osc.sh file using the following command: `./osc.sh -s`

4. The following message is displayed: *You have chosen OFFLINE mode. Triggering the utility in OFFLINE mode will generate the script. Do you wish to proceed? (Y/y or N/n)*.
5. Enter Y/y to proceed.
6. Enter the DB Username with `SELECT` privileges.
7. Enter the User Password.

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

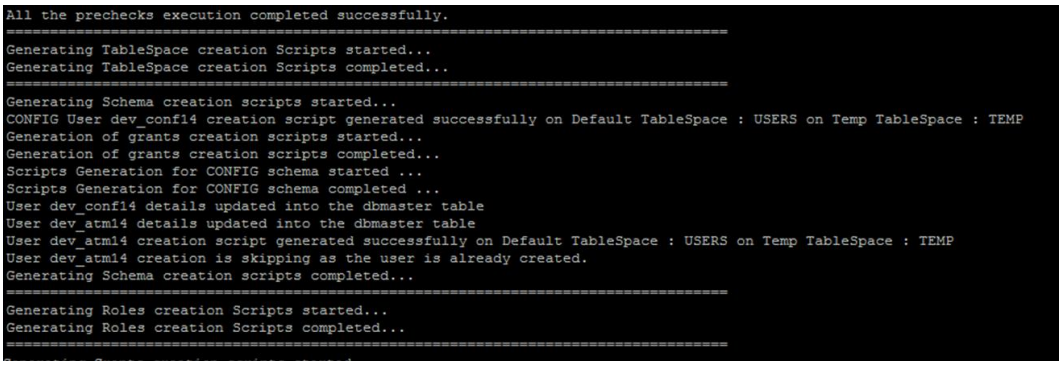
8. The console runs the initial validation checks and displays the following message: You have chosen to install this Application Pack on <Name of the Atomic Schema>ATOMIC schema. Do you want to proceed? (Y/N)



9. Enter Y/y to start the script generation.

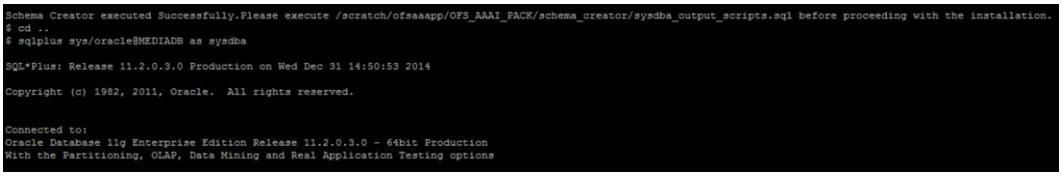
   Or

   Enter N/n if you want to quit the script generation.



NOTE: On successful execution of schema creator utility, the console displays the following status message:
Success. Please execute scratch/ofsaap/`OFS_IFRS_Pack/schema_creator/sysdba_output_scripts.sql` before proceeding with the installation.

10. Navigate to the directory: `OFS_IFRS_Pack/schema_creator`.
11. Login to SQLPLUS with a user having SYSDBA Privileges.



12. 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.

13. Make TNS entries for the created users in TNSNAMES.ORA. For details, refer to Add TNS Entries in TNSNAMES.ORA File section.

4.2.3.3 Executing the Schema Creator Utility with -s option

If you want to run the OFSAA Application 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_IFRS_PACK/schema_creator/conf/OFS_IFRS_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.

```
$ ./osc.sh -s
============================================================
You have chosen ONLINE mode
============================================================
Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n):
Y
============================================================
Java Validation Started ...
Java found in : /scratch/jdk1.6.0_45/bin
JAVA Version found : 1.6.0_45
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
============================================================
DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
```

```
Creating Schemas completed ...
================================================================================
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
================================================================================
Grants creation scripts execution started...
Grants creation scripts execution completed...
```

4. Make TNS entries for the created users in TNSNAMES.ORA. For details, refer to Add TNS Entries in TNSNAMES.ORA File section.

NOTE: If the utility is executed without the `-s` option, it is mandatory to launch the OFSAA Application Pack Installer in GUI mode. To execute the utility in OFFLINE mode with SILENT option, type. /`osc.sh -o -s`.

4.2.3.4 Executing the Schema Creator Utility while Installing Subsequent Application Pack Schema Creation

While executing the schema creator utility for subsequent Application Pack, you can choose to install the pack either on the same Information Domain/ Atomic Schema or on a new Information Domain/ Atomic Schema.

NOTE: **NOTE:** OFS IFRS Application Pack can be installed on any Information Domain/ Atomic schema where any OFS Application Packs are installed other than OFS Behavior Detection Application Pack or OFS Compliance Regulatory Reporting Application Pack

To execute the schema creator utility while installing OFS IFRS Application Pack over an existing Application pack, follow these steps:

1. Repeat the steps 1 to 8 from Executing the Schema Creator Utility section.
2. The utility identifies the Application Packs that are already installed on the current OFSAA setup and displays the following on console:
   - Atomic schema of the Existing Application Pack,
   - Information Domain Name of the Existing Pack, and the
   - List of Installed Application Packs
3. Enter Y/y to start the schema creation.

You can select the Atomic User, on which you want to install the Application Pack.

NOTE: On successful execution of schema creator utility, the console displays the following status message: Success. Please proceed with the installation.

NOTE: Refer to the log file in *OFS_IFRS_PACK/schema_creator/logs* folder for execution status. Refer to the log file sysdba_output_scripts.log for execution status, if executed in offline mode. This log will be empty if there are no errors in the execution. In case of any errors, contact Oracle Support.

4. Make TNS entries for the created users in TNSNAMES.ORA. For details, refer to Add TNS Entries in TNSNAMES.ORA File section.

Verifying the Log File

If schema creation is successful, the console would display an appropriate message. If the schema creation runs into errors, do refer to the log file.

`<<OFSIFRSAP Installer folder>>/<<OFS_IFRS_PACK>>/schema_creator/logs/`

`<<OFS_IFRS>>_osc_<timestamp>.log` for further details.

You may contact Oracle support anytime for assistance.

4.3 Installing The OFS IFRS Application Pack

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

This section includes the following topics:

- GUI Mode Installation
- Silent Mode Installation
- Verifying the Log File

4.3.1 GUI Mode Installation

NOTE: Ensure you have followed the steps as mentioned in the Configuration for GUI Mode Installation section prior to proceeding with the next steps.

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 below:

   FIC_HOME=< OFSAA Installation Directory >

   export FIC_HOME
3. Execute the user **.profile** file.
4. Configure and execute the Schema Creator utility. For details, refer to Configuring and Executing the Schema Creator Utility section.

   NOTE: Ensure to make a TNS entry for the new users created. For details, refer Add TNS Entries in TNSNAMES.ORA File section.
5. Navigate to the path: OFS_IFRS_PACK/bin.
6. To install IFRS Pack on:
   - Java 7: Proceed with step 7.
   - Java 8: Edit the VerInfo.txt to modify the value of property JAVA_VERSION to 1.8. Save the changes and proceed with step 7.
7. Run the installer in GUI Mode:

   ```
   ./setup.sh GUI
   ```

   NOTE: Refer to the console for any errors during Pre-install checks.

```
Environment check utility started...
============================================================
Java Validation Started ...
 Java found in : /usr/java/jdk1.6.0_25/bin
 JAVA Version found : 1.6.0_25
 JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
============================================================
Environment Variables Validation Started ...
 ORACLE_HOME : /scratch/oracle/app/oracle/product/12.1.0/client_1
 TNS_ADMIN : /scratch/ifrstest/tns
Environment Variables Validation Completed. Status : SUCCESS
============================================================
OS specific Validation Started ...
 Unix shell found : /bin/ksh. Status : SUCCESS
 Total file descriptors : 15000. Status : SUCCESS
 Total number of process : 124064. Status : SUCCESS
 OS version : 5. Status : SUCCESS
OS specific Validation Completed. Status : SUCCESS
============================================================
DB specific Validation Started ...
 Oracle Client version : 12.1.0.2.0. Status : SUCCESS
 CREATE SESSION has been granted to user. Status : SUCCESS
 CREATE PROCEDURE has been granted to user. Status : SUCCESS
 CREATE VIEW has been granted to user. Status : SUCCESS
 CREATE TRIGGER has been granted to user. Status : SUCCESS
 CREATE MATERIALIZED VIEW has been granted to user. Status : SUCCESS
 CREATE TABLE has been granted to user. Status : SUCCESS
 CREATE SEQUENCE has been granted to user. Status : SUCCESS
 SELECT privilege is granted for V_$nls_parameters view. Current value : SELECT. Status : SUCCESS
 NLS_LENGTH_SEMANTICS : BYTE. Current value : BYTE. Status : SUCCESS
 NLS_CHARACTERSET : AL32UTF8. Current value : AL32UTF8. Status : SUCCESS
 SELECT privilege is granted for V_$parameter view. Current value : SELECT. Status : SUCCESS
 Open cursor value is greater than 1000. Current value : 1200. Status : SUCCESS
 SELECT privilege is granted for USER_TS_QUOTAS view. Current value : SELECT. Status : SUCCESS
 Schema is granted with at least 500 MB table space. Current value : 500 MB. Status : SUCCESS
 Oracle Server version Current value : 12.1.0.1.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
============================================================
Environment check utility Status : SUCCESS
============================================================
```

Validating the Installation

Initialization Window

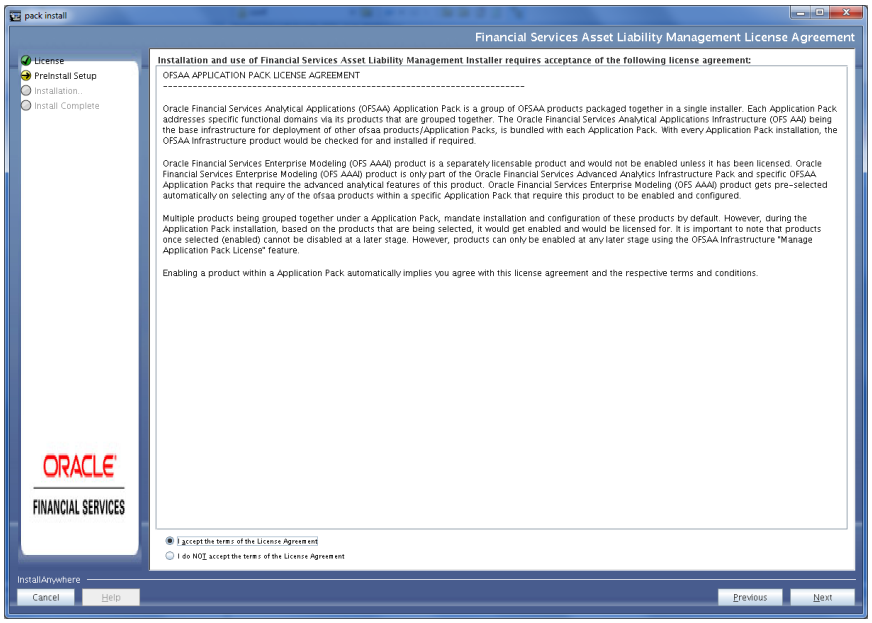
License Agreement

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

   The Application Pack details are displayed:

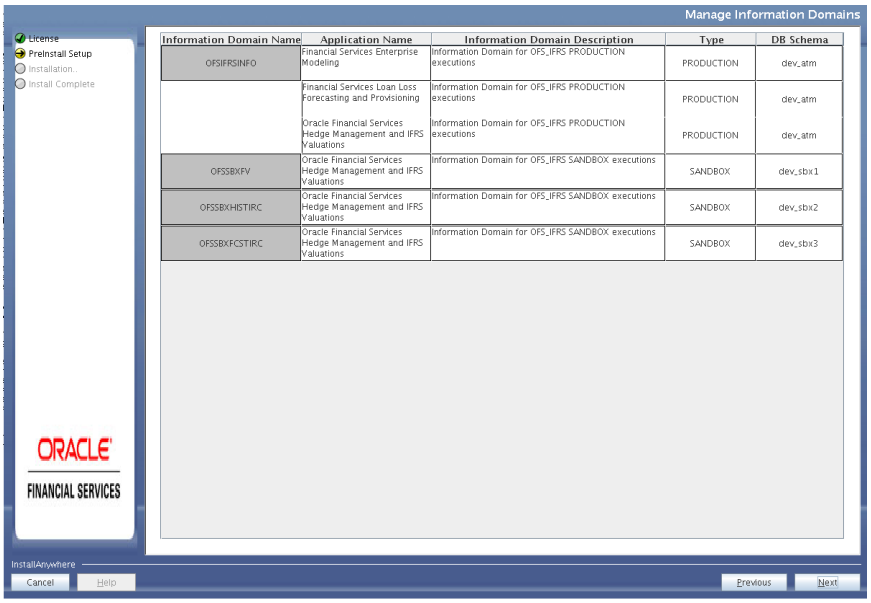
Application Pack Details

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



OFSIFRS License Agreement

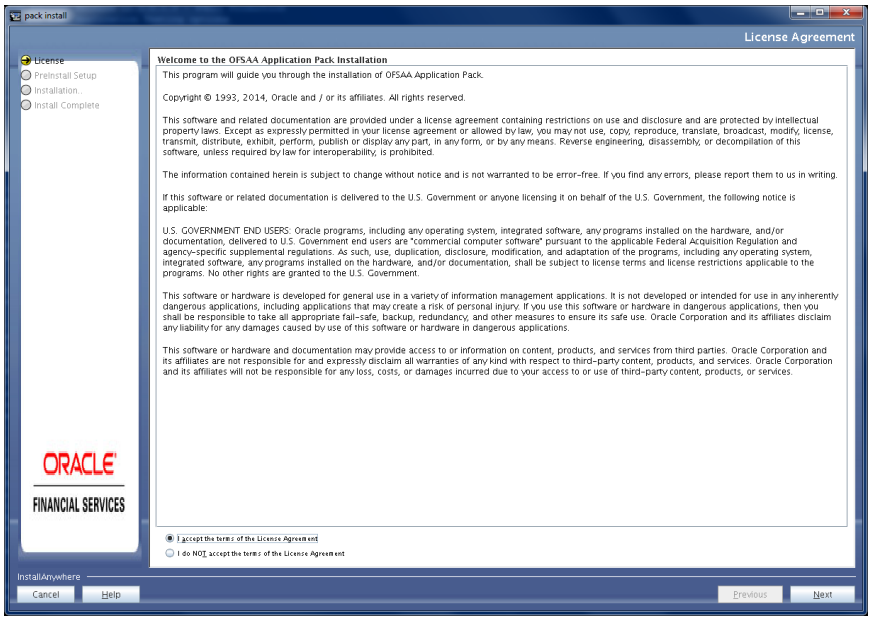
12. Select **I accept the terms if the License Agreement option**.
13. Click **Next**. The Pre Installation Summary page is displayed.
14. Click **Next**. The Manage Information Domain page is displayed.



Information Domain

15. The default Information Domain Name for this Application Pack is OFSIFRSINFO. Double-click to edit the Information Domain Name, if it is a new Information domain and you wish to change the name of the information domain name.

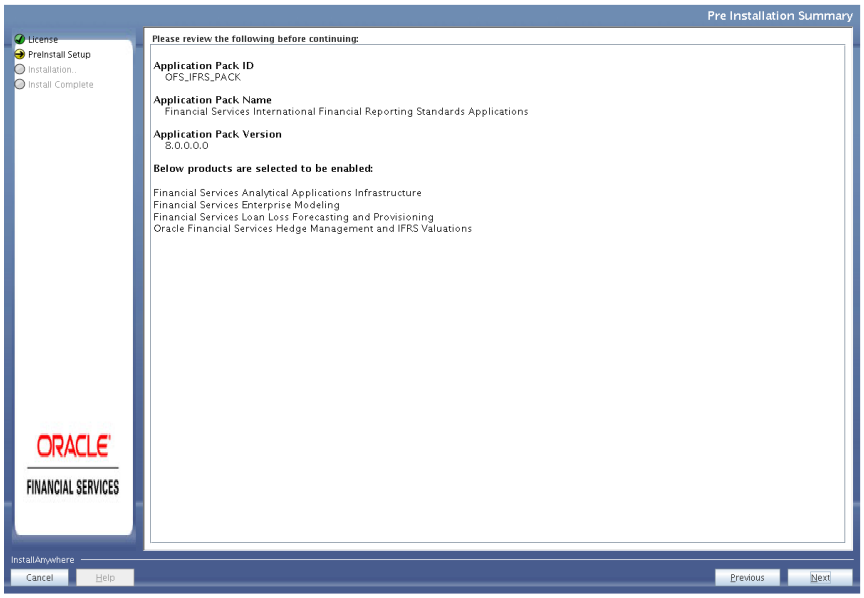
16. Click **Next**.



OFSAA App Pack License Agreement

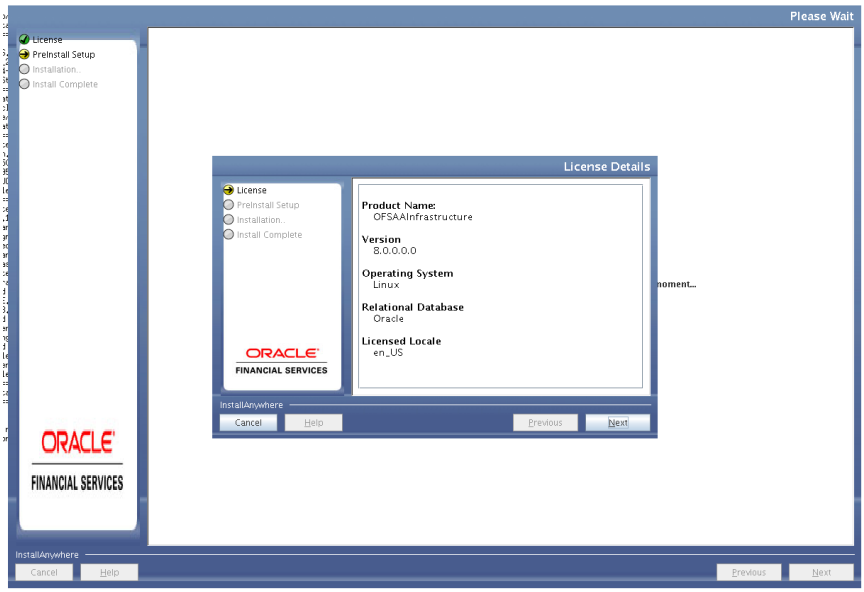
17. Select **I accept the terms if the License Agreement** option.

18. Click **Next**. The following page is displayed**.**



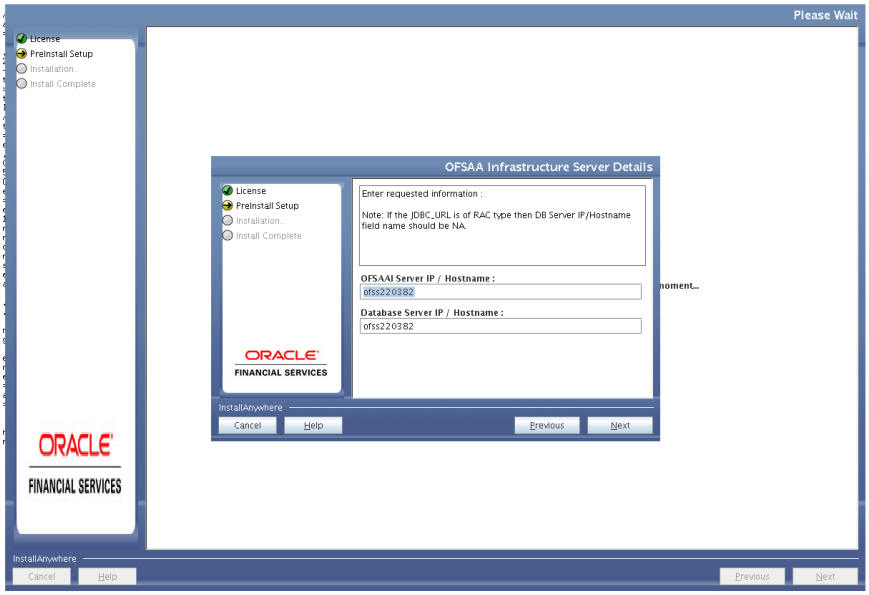
Pre Installation Summary Details

19. Click **Next**. The User Installation Directory window is displayed. Enter the installation directory path. This is the directory you have set in the user .profile file in step 2.



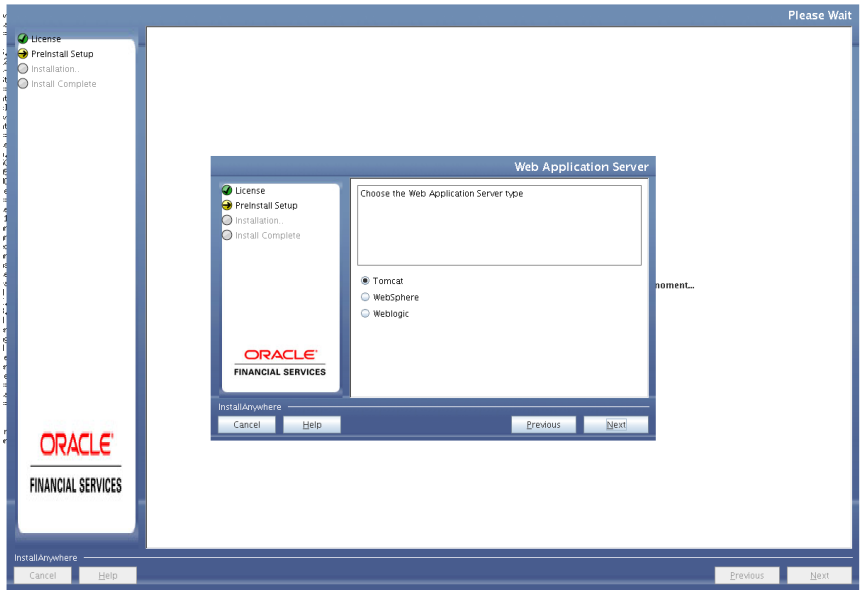
License Details

20. Click **Next**. OFSAA Infrastructure details are displayed in the following figure. Enter the IP address or hostname of the OFSAAI server and Database server.



OFSAA Infrastructure Server Details

21. Click **Next** to view the Web Application Server details. The options are Tomcat, WebSphere and WebLogic.



Web Application Server Type

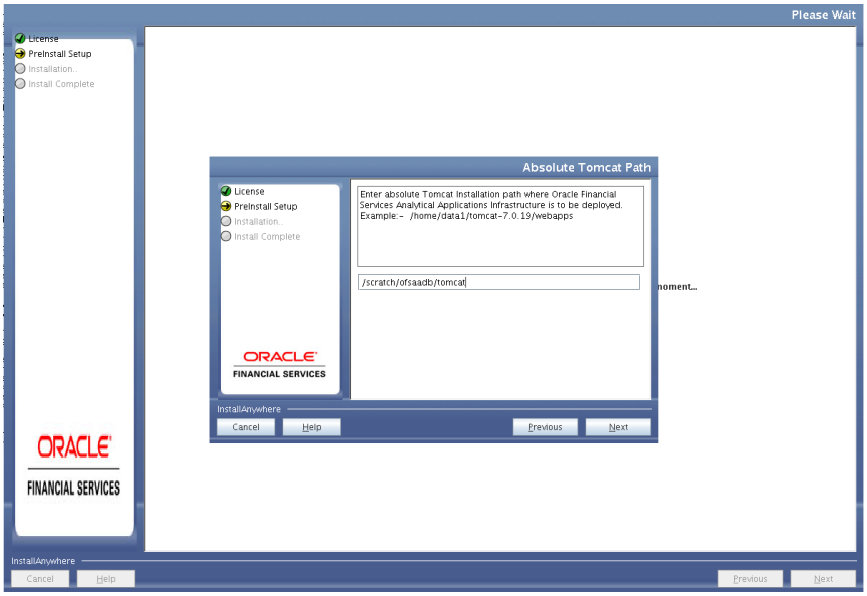
22. Select the web application server type and Click Next. Based on the selection, corresponding screens are displayed.

    For WebSphere: The WebSphere Setup Details window is displayed.

    Enter the profile path (up to the Node Cell Name directory) of WebSphere.

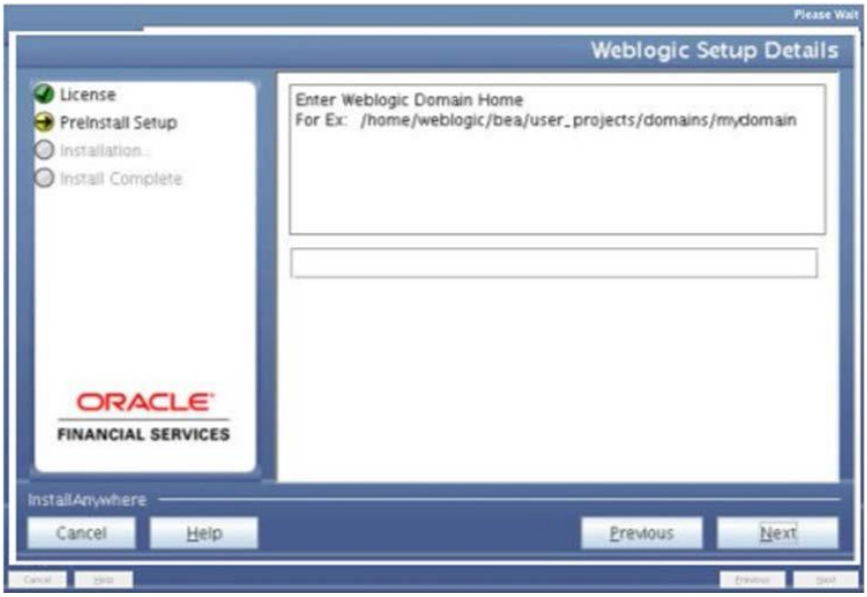
    The format is WebSphere path <WebSphere profile directory>/installedApps/<NodeCellName>.

For Tomcat: The Absolute Tomcat Path window is displayed. Enter the Tomcat deployment path (till /webapps) where the application will be deployed.

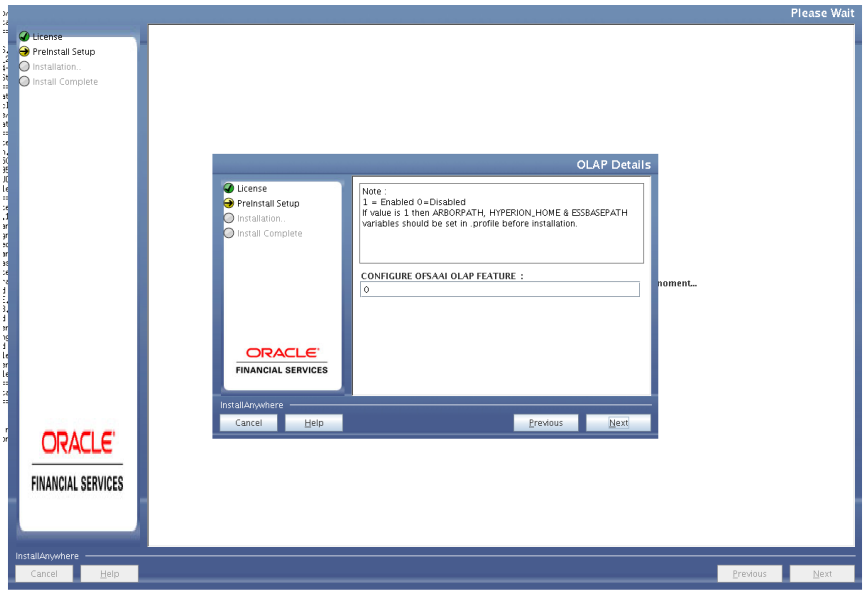


Tomcat Path

For WebLogic: The WebLogic Home window is displayed. Enter the WebLogic home directory path, and click **Next**.

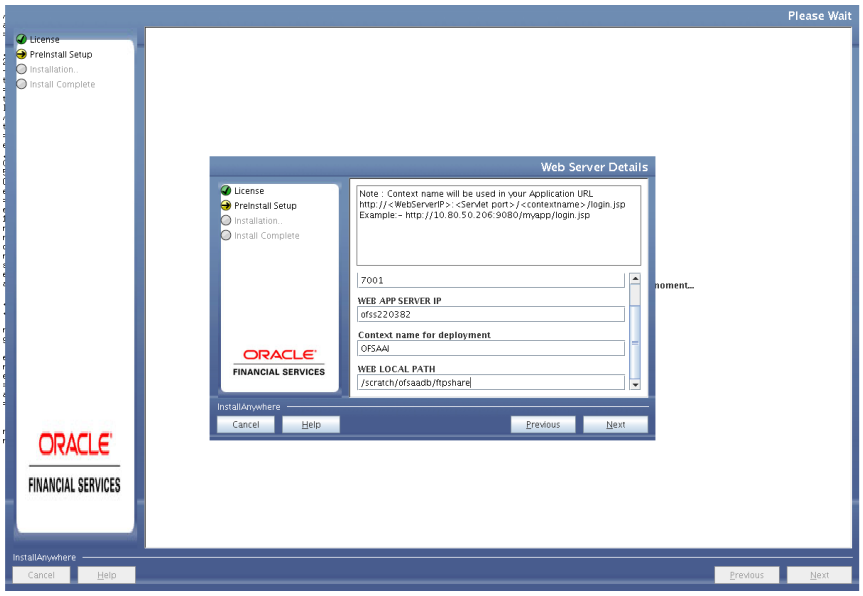


23. Enter the OLAP details. Enter 1 if you want to configure OFSAAI OLAP feature, using Oracle Hyperion Essbase. By default, 0 is displayed.



OLAP Details

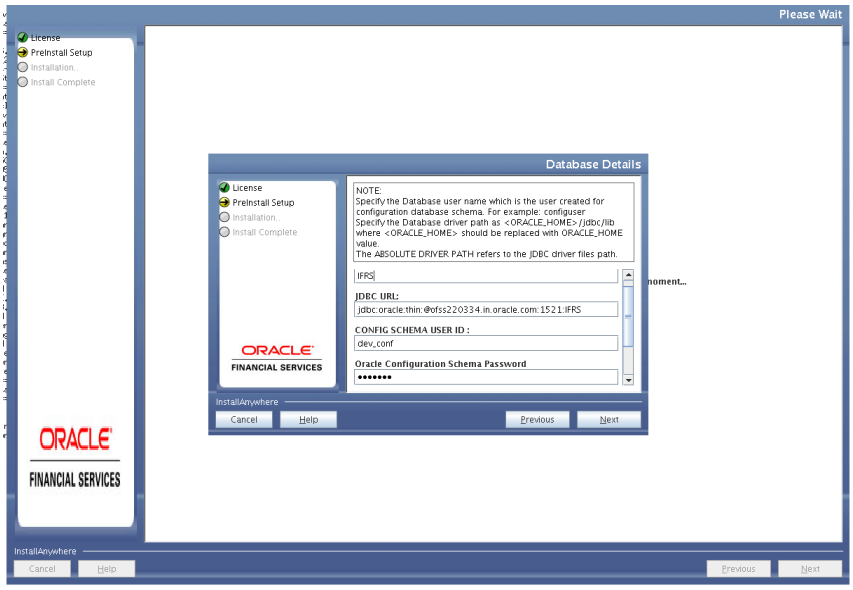
24. Click **Next**. The Web Server Details window is displayed.



Web Server Details

25. Enter the Web server details. Select Enable HTTPS checkbox if you want to configure HTTPS for the OFSAA application. Also, enter the Web Server (HTTP Server) Port, Web Server IP Address, Context name for deployment and Local path to any folder on the Web Application Server (Tomcat/ WebSphere/ WebLogic).

26. Click **Next**. The *Database Details* window is displayed.



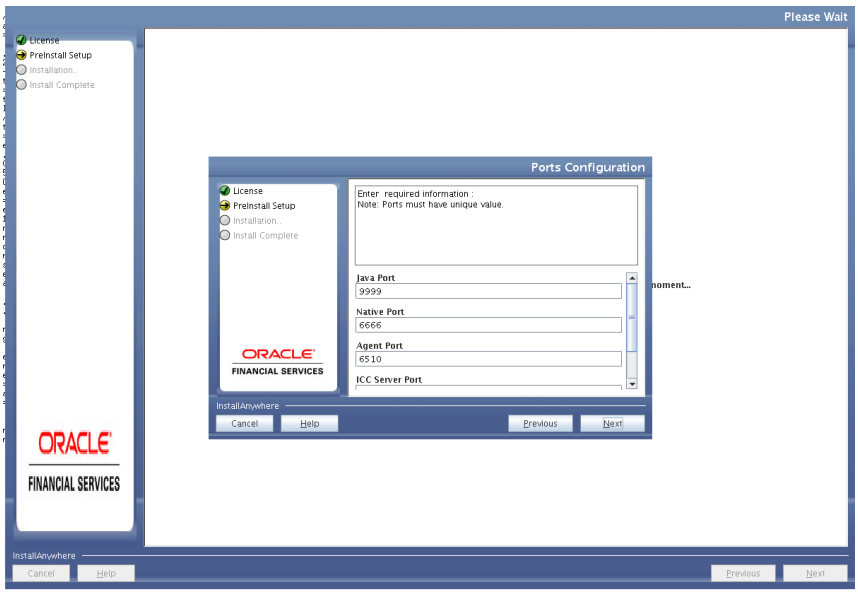
Database Details

27. Enter Oracle SID/Service Name, JDBC URL, Configuration Schema User ID and Password, and Absolute Driver Path.

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

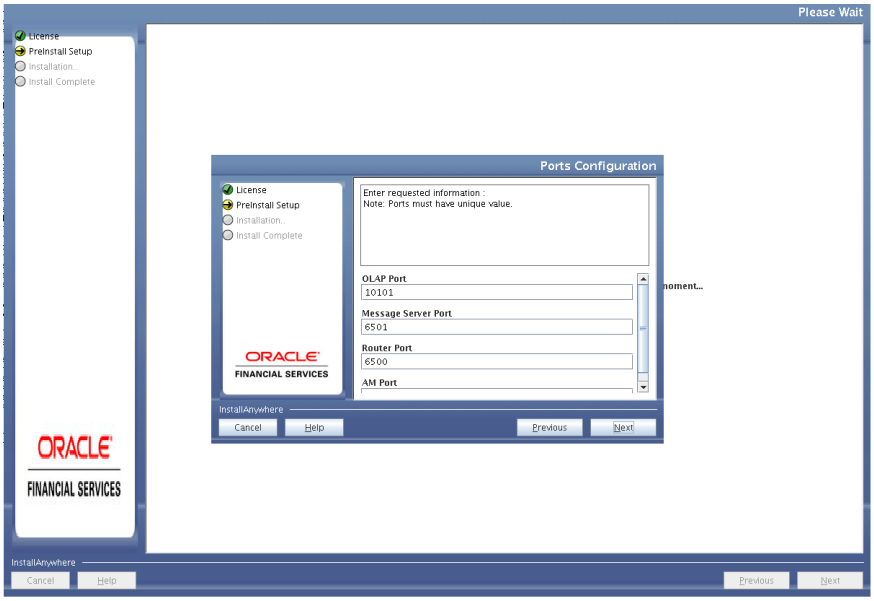
NOTE: Absolute Driver Path can be the path where Oracle DB client is installed or JDBC driver is installed. For example, /scratch/oracle/app/oracle/product/11.2.0/client_1/jdbc/lib.

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



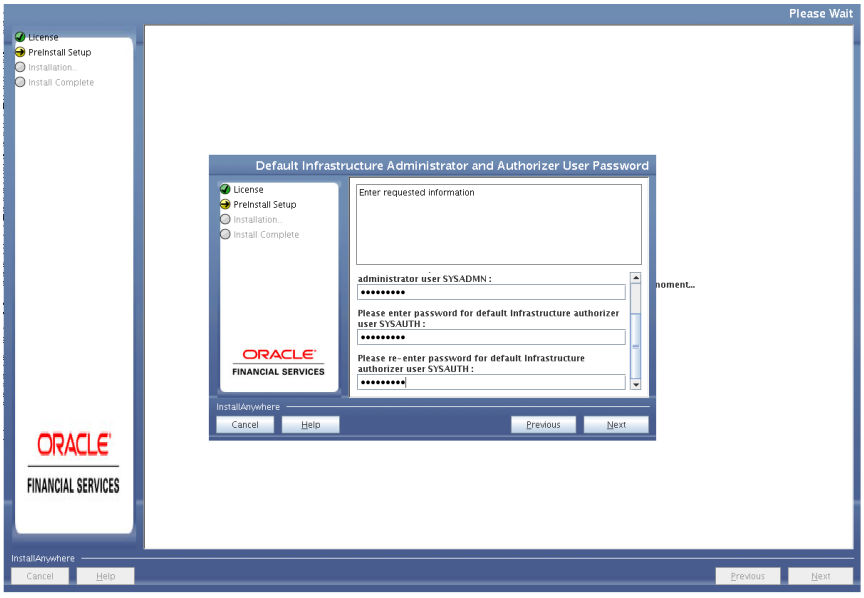
Ports Configuration

29. Enter Java Port, Native Port, Agent Port, ICC Server Port, and ICC Native Port. You can proceed with the default port values configured.
30. Click **Next**. The *Ports Configuration* window is displayed.



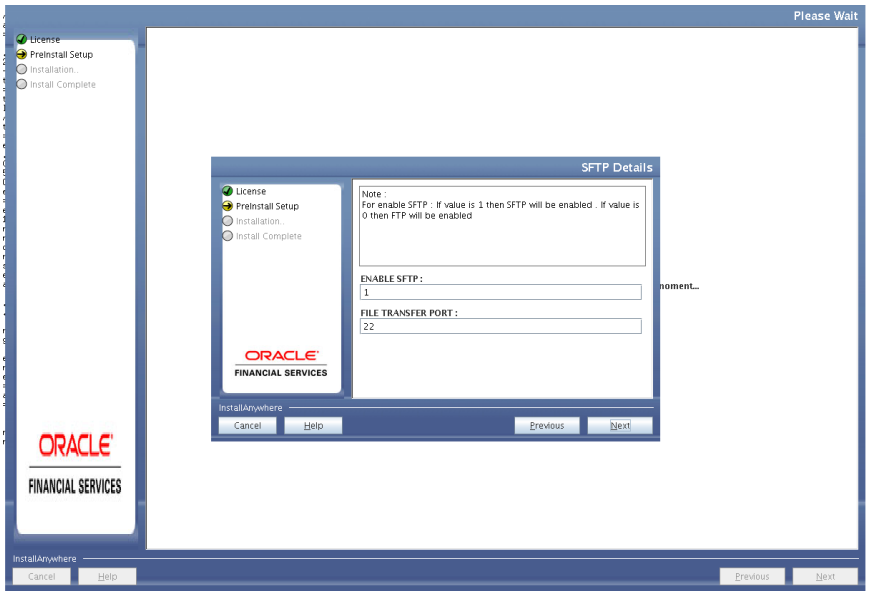
Ports Configuration_1

31. The OLAP Port, Message Server Port, Router Port, and AM Port details are auto-populated using default ports. You can also modify the Port settings.
32. Click **Next**. The *Default Infrastructure Administrator and Authorizer User Password* window is displayed.



Administrator and Authorizer User Password

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

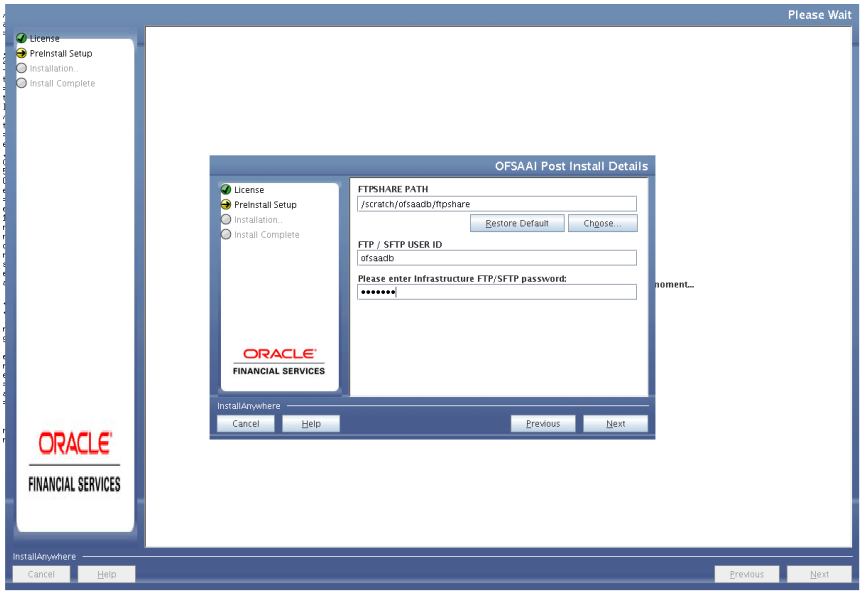


SFTP Detais

35. Enter 1 to enable SFTP or 0 to enable FTP. Enable SFTP and File Transfer Port details are auto-populated using default ports.

NOTE: Ensure the system on which the OFSAA Infrastructure is being installed, has either FTP/ SFTP enabled. You can also modify the SFTP settings.

36. Enter the port to be used for file transfer.
37. Click **Next**.

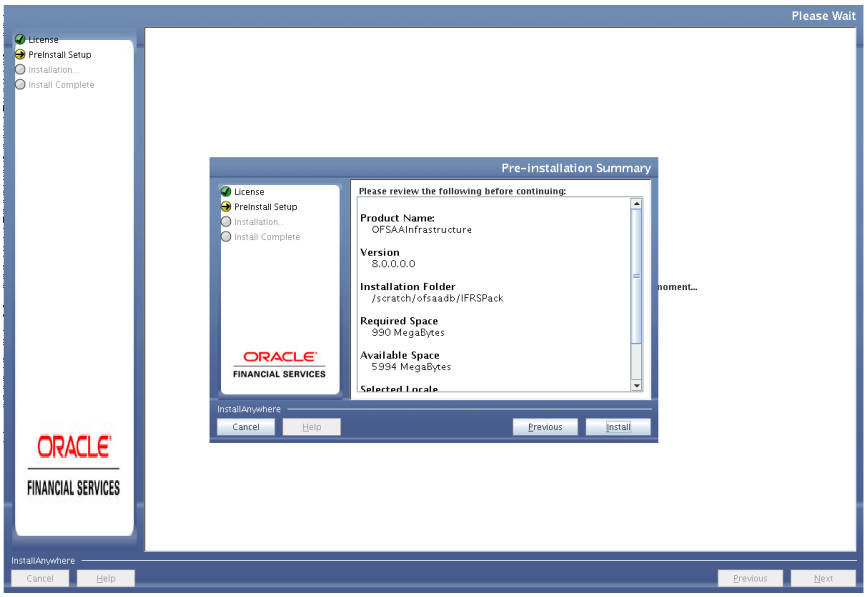


OFSAAI Post Install Details

38. Enter the path of the ftpshare directory and the User Id and password for OFSAAI Server. This is same as the OFSAA Staging/ Metadata Repository Directory.FTP/SFTP User ID and Password for FTPSHARE Directory access.

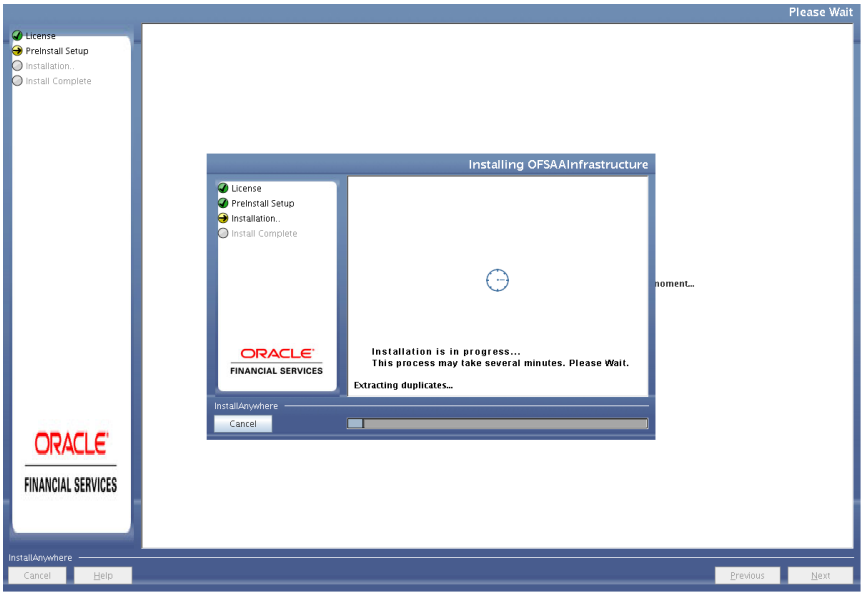
NOTE: The transfer of data (files) between the OFSAAI Server and the Web Application Server happens over FTP/ SFTP. Ensure the necessary host configurations are made for a successful handshake.

39. Click **Next**. The *Pre Installation* window is displayed.



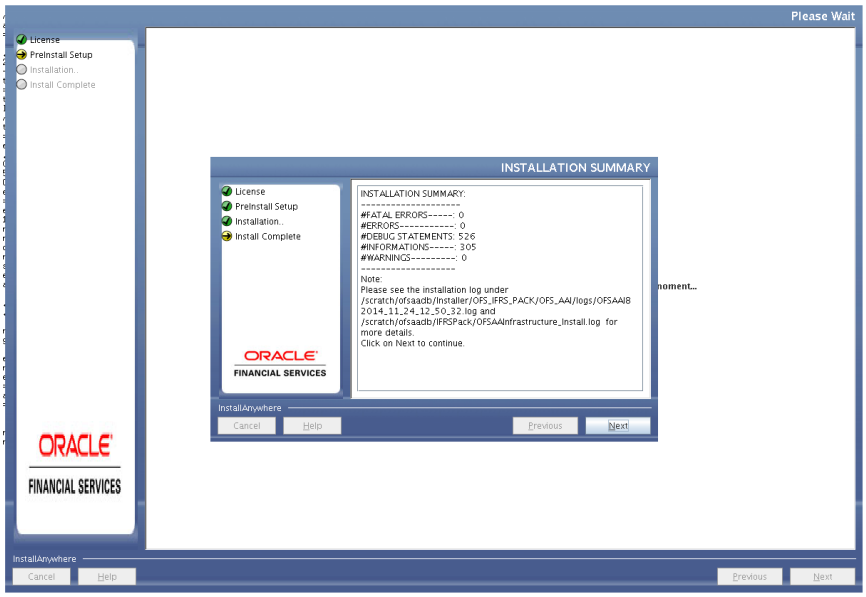
Pre Installation Summary

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



Installing OFSAAI Infrastructure

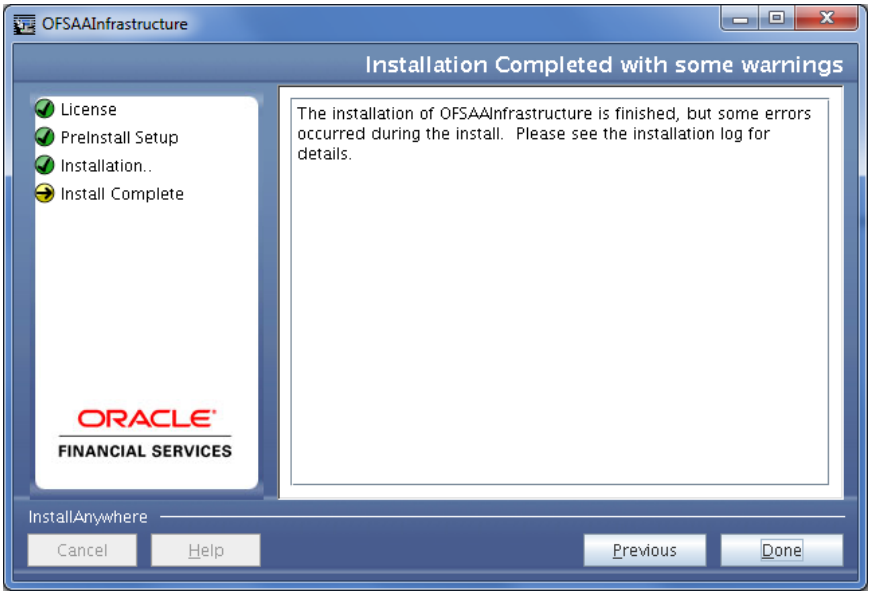
Anytime during the installation you can click **Cancel** to stop the installation. Once completed, the Installation Summary screen is displayed.



Installation Summary

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

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



Installation Completed with Warnings

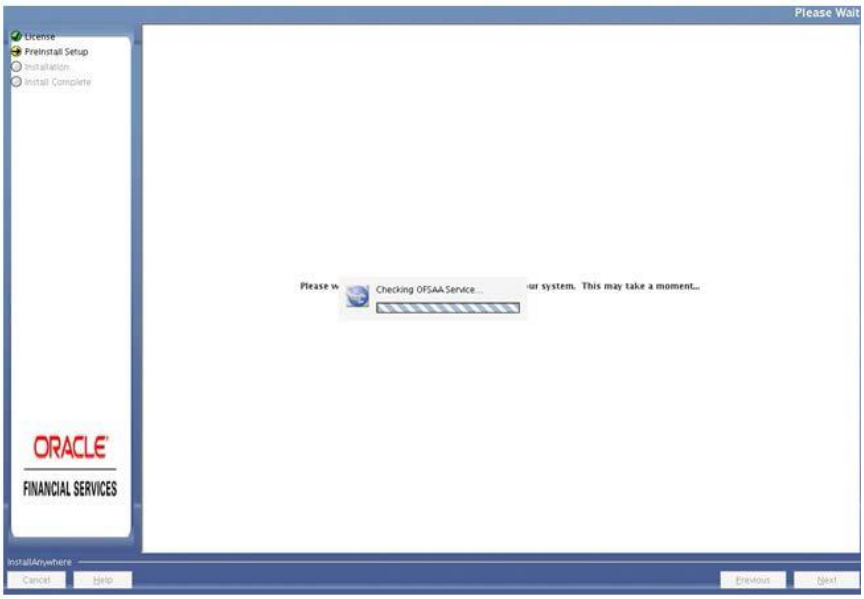
NOTE: If the installation is successful with some warnings, you can navigate to the installation log for more details and address them.

42. Click **Done**. You have successfully installed the OFS AAI Application Pack.

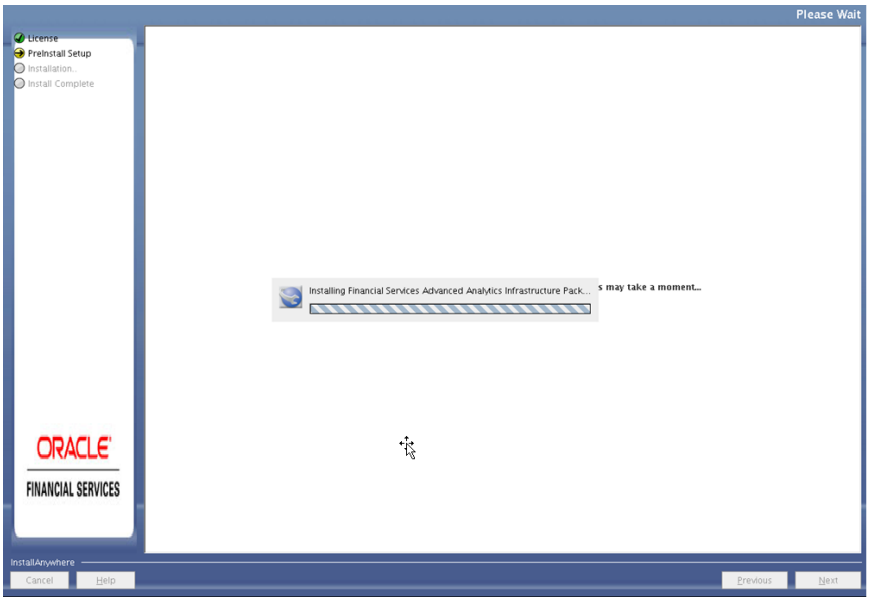
    Upon invoking the installer, the **Introduction** screen is displayed with the prerequisites for installation. Ensure that all the prerequisites are met before you proceed with the installation.

43. The Checking OFSAA Service screen is displayed.

NOTE: This step verifies the OFSAA services startup. In case of errors during services check, an appropriate error message is displayed.



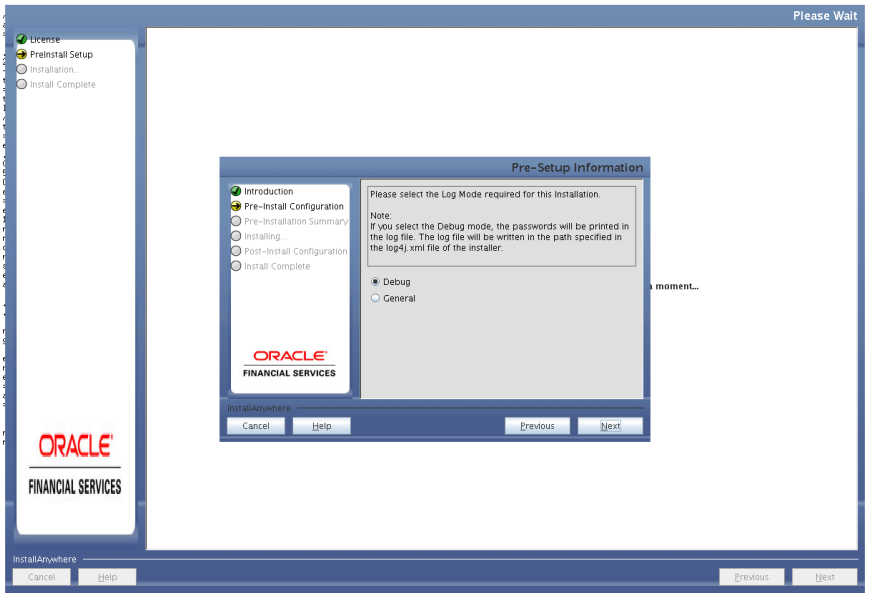
44. After checking the OFSAA services, installation proceeds with the Application Pack Installation. The Installing Financial Services Advanced Analytics Infrastructure Pack screen is displayed.



45. Click **Next**, to start solution setup.

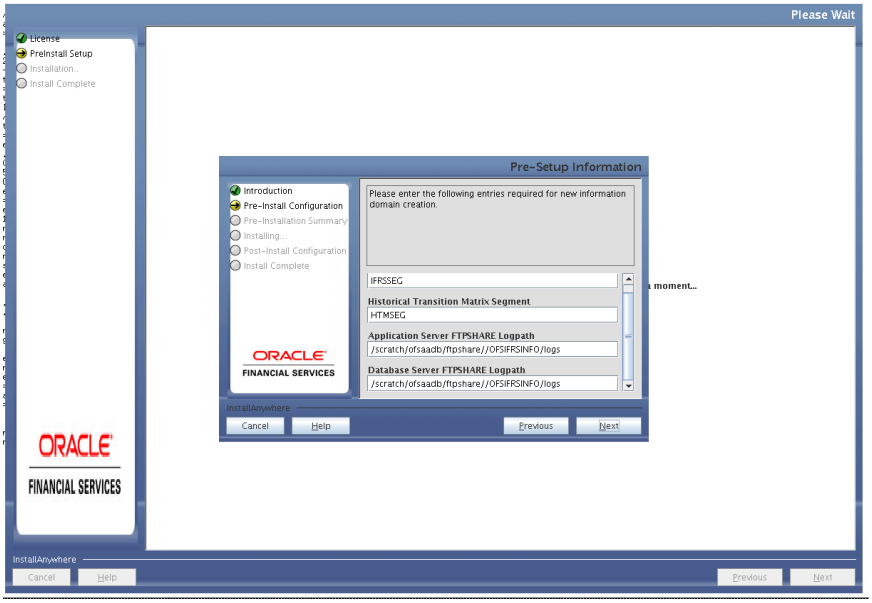
Solution Setup Introduction

46. Choose the log mode for this installer. If **Debug** is selected, the Passwords will be printed in the log file. Click **Next** to proceed.



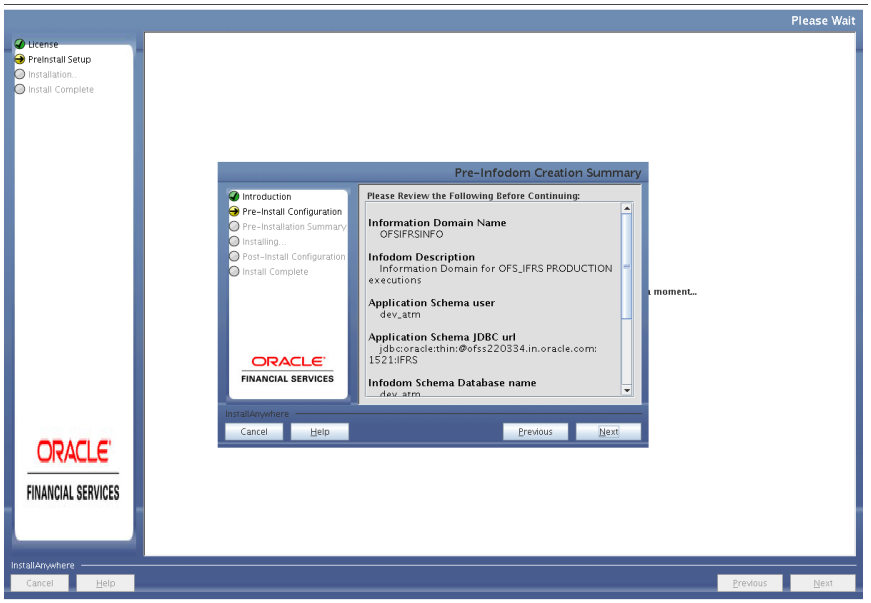
Log Mode

47. Enter the Data Management Segment, Tablespace, Application Server ftpshare log path and Database server ftpshare log path in the Information domain screen, and click **Next**.



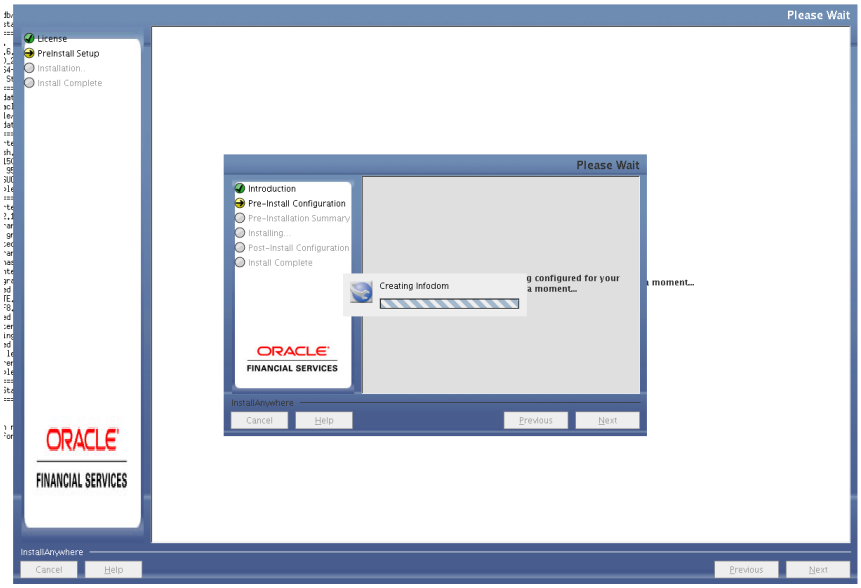
Pre-Setup Information

48. Verify the details, and click **Next**.



Pre-Infodom Creation Summary

49. Select **Yes**, if you want to perform model upload and click **Next**.



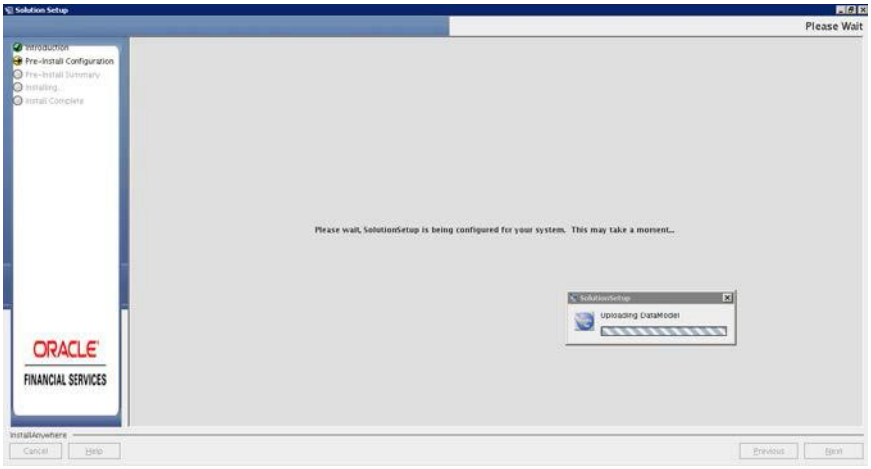
50. Select the type of data model, and click **Next**.

    If the option Customized Data Model was chosen, the following panel is displayed prompting the user to select the customized data model located in the machine.Choose the customized datamodel file from the server, and click **Next**.

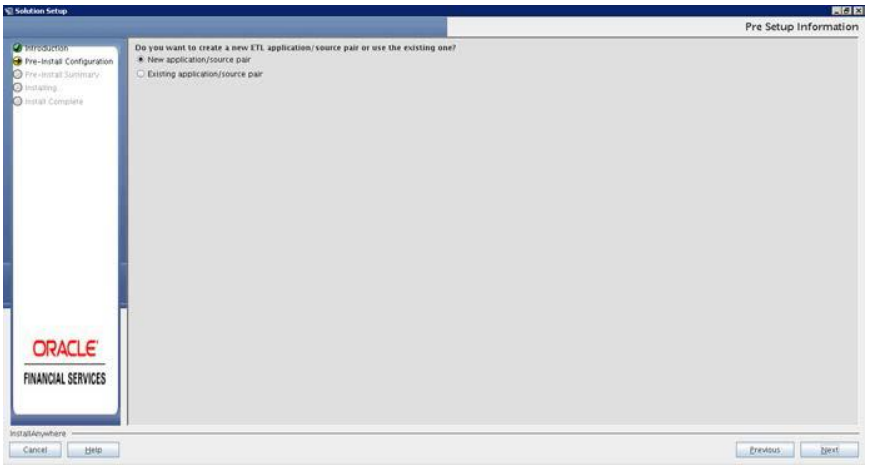
    NOTE: Data model xml file should be available in the server. In case the installation is being performed on an existing information domain, the data model that is planned to be selected in this panel should be merged with the data model that was previously uploaded in the information domain. In case the installation is being performed on a new information domain, data model that is either customized or merged with other data models can be selected in this panel.

51. The following panel displays *Pre-Model Upload Summary* details. Verify the summary details, and click **Next**.

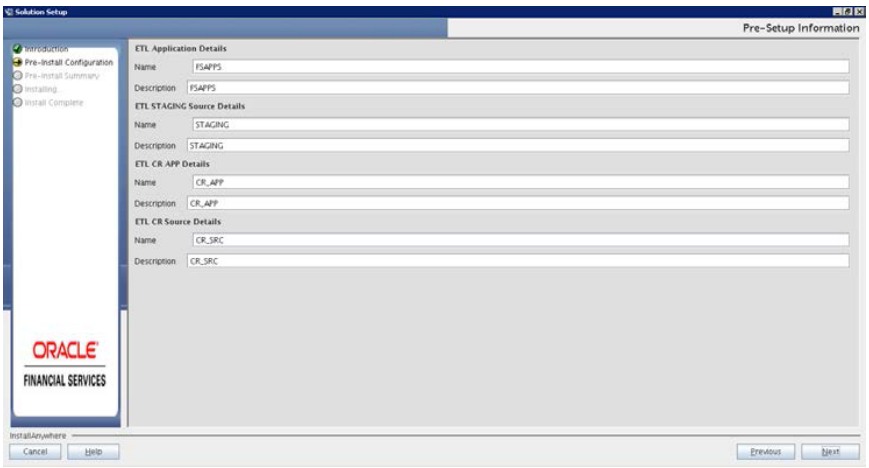
    The following message is displayed: *Please wait, solution setup is being configured for your system. This may take a moment.*



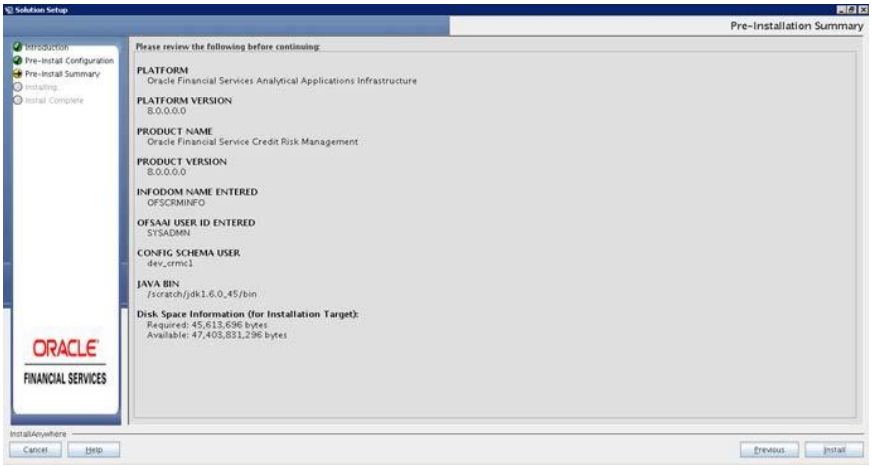
52. Select the ETL application/source, and click **Next**.



53. Enter the ETL application details, and click **Next**.

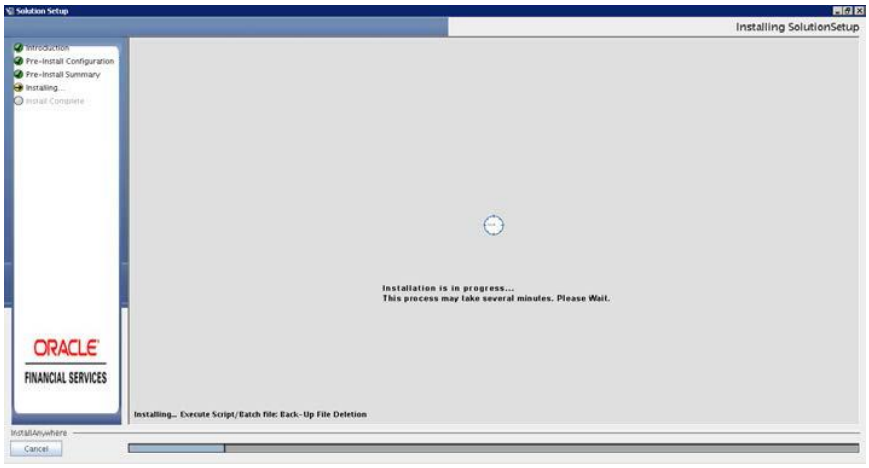


54. The *Pre-installation Summary* window is displayed. Verify the details.

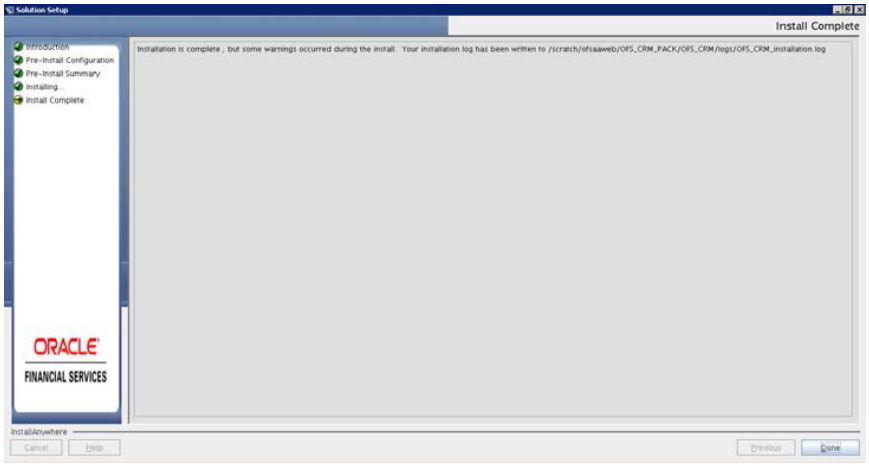


55. Click **Install**. The Installing OFSAA Infrastructure window is displayed. The message *Are you sure you wish to proceed with the installation?* is displayed.

56. Click **Yes,** to proceed. The *Installing Solution Setup* screen is displayed.

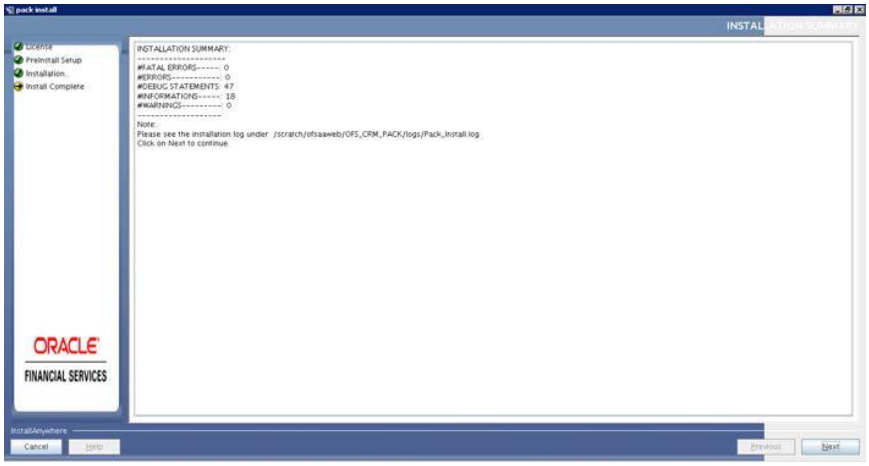


57. Anytime during the installation you can click **Cancel** to stop the installation. Once completed, the *Installation Complete* screen is displayed.

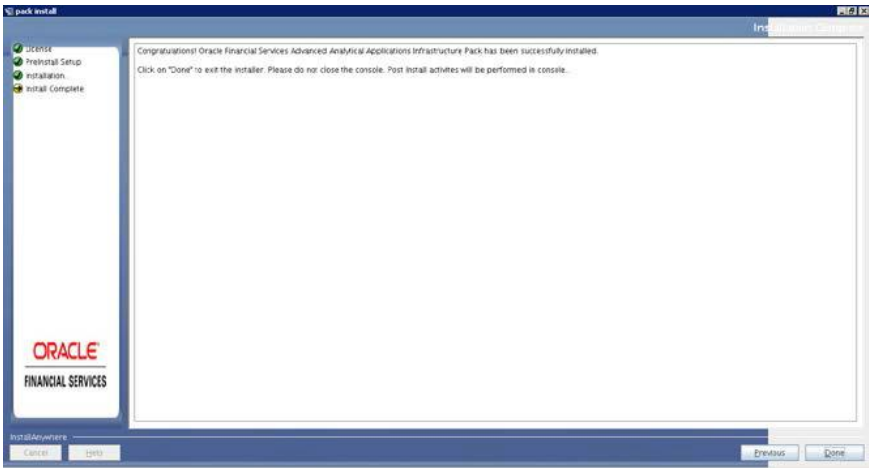


58. Click **Done**. The following message is displayed: *Please wait, pack_install is being configured for your system. This may take a moment.*

59. Click **Next**. The installation summary page is displayed.



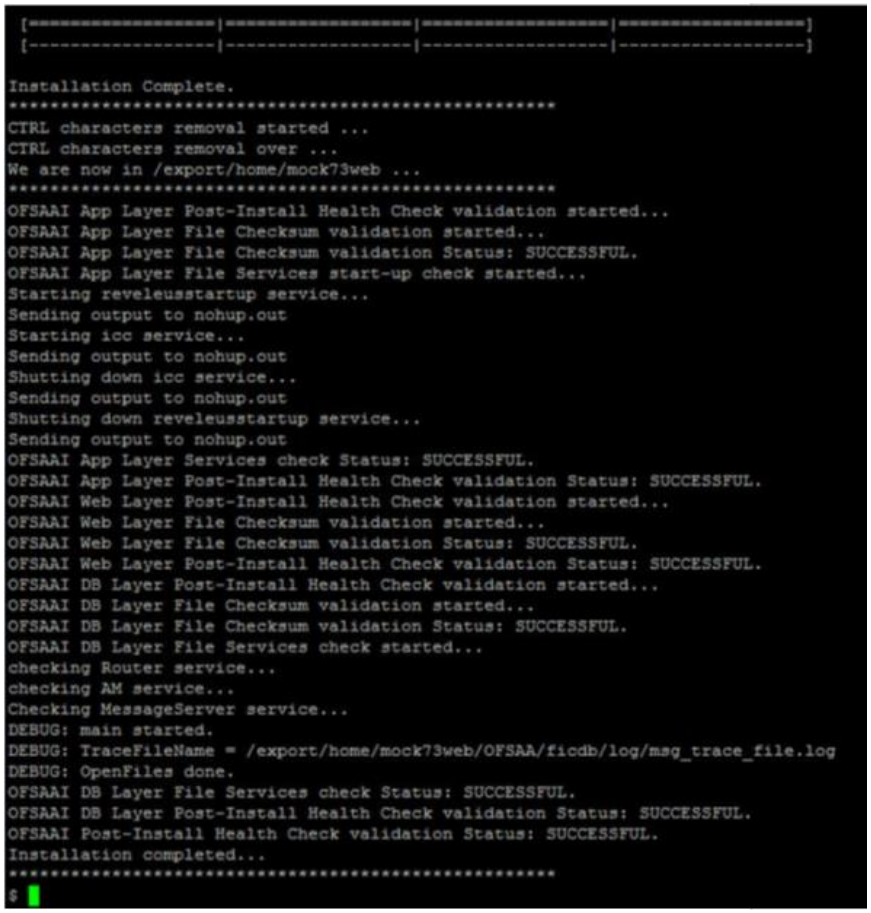
60. Click **Next**, to finish the installation. The *Installation Complete* screen is displayed.



61. Click **Done**.

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

62. Post Install Health checks are displayed:



4.3.2 Silent Mode Installation

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

Follow the below steps for installing the OFS IFRS Pack in SILENT mode:

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 below: FIC_HOME=< OFSAA Installation Directory > export FIC_HOME
3. Execute the user .profile.
4. Navigate to OFS_IFRS_PACK folder (installer folder).
5. Edit the OFS_IFRS_PACK/conf/OFS_IFRS_PACK.xml to enable the product licenses. Update the attribute ENABLE=YES/NO in OFS_IFRS_pack.xml for licensing the App in the pack.

NOTE: Refer to Configuring OFS_IFRS_PACK.XML File section for details on configuring this XML file.

NOTE: Update OFS_IFRS_PACK.XML, set the attribute "ENABLE=YES" of <APP_ID> tag for applications to be enabled during installation. If any application has mentioned OFS_AAI as PREREQ in the <APP_ID> tag, set the attribute "ENABLE=YES" for OFS_AAI. To install IFRS, ensure to enter "YES" in ENABLE tag for OFS_IFRS/APP_ID, and ensure to enter "YES" in ENABLE tag for OFS_AAI/APP_ID.

6. Edit the `OFS_IFRS_PACK/schema_creator/conf/OFS_IFRS_SCHEMA_IN.xml` file to set the appropriate attribute values. It is optional to include INFODOM = "<Infodom Name>" in OFS_IFRS_SCHEMA_IN.xml file. If not specified a default INFODOM name is generated.

NOTE: Refer to Configuring OFS_IFRS_SCHEMA_IN.XML section for details on configuring this XML file. Ensure to make TNS entries for the created users in TNSNAMES.ORA. For details, refer to Add TNS Entries in TNSNAMES.ORA File section.

7. Edit the `OFS_IFRS_PACK/OFS_AAI/conf/OFSAAI_InstallConfig.xml` file to set the appropriate infrastructure installation attribute values.

NOTE: This step can be ignored if an installation of OFSAA 8.0 already exists. Refer to Configuring OFSAAI_InstallConfig.xml section for details on configuring this XML file.

8. Execute the schema creator utility with **`-s`** option.

NOTE: This step is mandatory and should be executed before every additional OFSAA Application Pack installation. Refer to Executing the Schema Creator Utility section for more details.

9. The installer folder contains a template file "Silent.template"
10. Create a copy of this file and rename the copy as "Silent.props"
11. 11. Edit the file "Silent.props" and specify the parameters as per the requirements. For details, refer to Silent.props section.
12. On successful execution of the schema creator utility, navigate to `OFS_IFRS_PACK/bin/`.
13. To install IFRS Pack on:

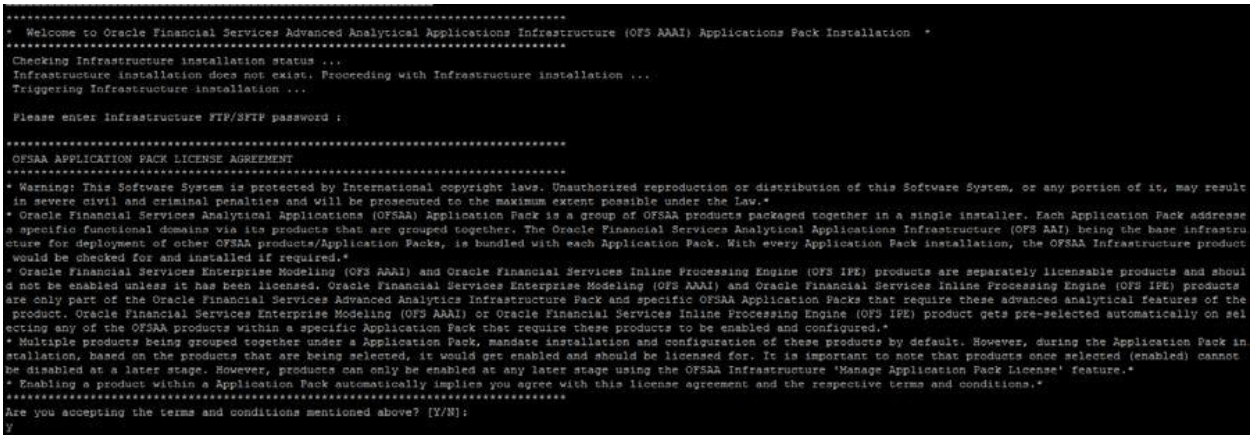
- Java 7: Proceed with step 14.
- Java 8: Edit the VerInfo.txt to modify the value of property JAVA_VERSION to 1.8. Save the changes and proceed with step 14.

14. Execute `./setup.sh SILENT` in the console.

15. Enter the Infrastructure FTP/SFTP password value, when prompted at the command prompt.

Console Prompts	User Inputs
Please enter Infrastructure FTP/SFTP password	Enter the password to access Product Staging/Metadata repository directory in the application server. Note: During installation stage, you need to enter the config schema password again.

16. Enter **Always,** when prompted to add host key fingerprint.
17. The OFSAAI License Agreement is displayed.



18. To accept the License Agreement, enter Y/y.
19. Enter the passwords for default Infrastructure administrator and authorizer users.

Console Prompts	User Inputs
Please enter password for default Infrastructure administrator user	Enter the password for the System Administrator.
Please re-enter password for default Infrastructure	Enter the same password again to confirm its validity.
Please enter password for default Infrastructure authorizer user	Enter the password for the System Authorizer.

Please enter password for default Infrastructure authorizer user	Enter the same password again to confirm its validity.

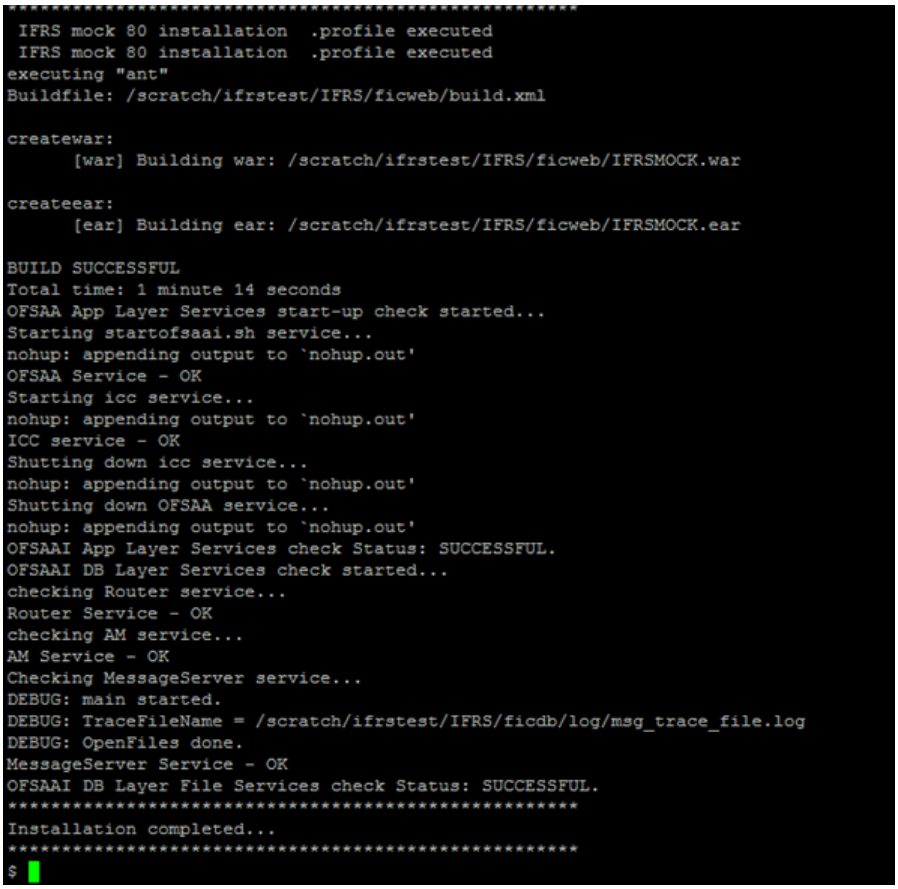
NOTE: SYSADMN and SYSAUTH are the two default OFSAAI administrative users created.

```
Please enter password for default Infrastructure administrator user SYSADMN:

Please re-enter password for default Infrastructure administrator user SYSADMN:

Please enter password for default Infrastructure authorizer user SYSAUTH:

Please re-enter password for default Infrastructure authorizer user SYSAUTH:
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...
-------------

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

Installation Complete.

*******************************************************************************
```

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

20. The following message is displayed in the console:

    Installation completed…



21. On completion of installation, refer the installation log files. For more information, refer to Verifying the Log Files section.

NOTE: Download and install patch for Bug 21160684 if installing this release of the OFS IFRS Application Pack version 8.0.0.0.0 on Java 8.

4.3.3 Silent.props

Silent installation is achieved via a properties file [Silent.props] that must be updated with proper values, before attempting to install using the silent mode. The following table lists all the properties that need to be specified:

Property Name	Description of Property	Permissible values	Comments
LOG_MODE	Specify Log Mode	1 = Debug Mode 0= General Mode	Password will be printed in the log file Password will not be printed in the log file. Default is GENERAL

SEGMENT_1_CODE	Specify the IFRS Segment Code	User Input	
SEGMENT_2_CODE	Specify the Transitional Matrix Segment Code	User Input	
APPFTP_LOG_PATH	Specify the Infodom Maintenance log path(to be created) for the new Infodom Please ignore if you are doing installation on an existing information domain	User Input	
DBFTP_LOG_PATH	Specify the Infodom Maintenance log path(to be created) for the new Infodom Please ignore if you are doing installation on an existing information domain	User Input	
UPLOAD_MODEL	Specify whether you want to perform Model Upload	0 = If you have already performed Model Upload and want to skip model upload process 1 = If you want to perform Model Upload	
MODEL_TYPE	Specify whether you want to use the released datamodel or customized datamodel for model upload process	0 = If you want to upload the released datamodel 1 = If you want to upload the customized datamodel	
DATAMODEL DM_DIRECTORY	Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel Mandatory only if you want to upload the customized datamodel i.e you have specified MODEL_TYPE=1	User Input	
OBI_HOST	Specify the Host Name of the	User Input	

	OBIEE Server		
OBI_PORT	Specify the Port Number of the OBIEE Server	User Input	
OBI_CONTEXT	Specify the Context Name of the OBIEE Server	User Input	
ETL_APPSRC_TYPE	Please specify if you want create new ETL App/Src pair or use an existing one.	0 = If you want to create a new ETL app/src pair 1 = If you want to use an existing pair	
ETL_APP_1_DESC	ETL IFRS Application description	User Input	Please give description for the ETL App/Src pair Mandatory if you want to create new ETL app/src pair i.e you have specified ETL_APPSRC_TYPE=0
ETL_SRC_1_1_DESC	ETL IFRS source description	User Input	Please give description for the ETL App/Src pair Mandatory if you want to create new ETL app/src pair i.e you have specified ETL_APPSRC_TYPE=0
ETL_SRC_1_2_DESC	ETL Processing source description	User Input	Please give description for the ETL App/Src pair. Mandatory if you want to create new ETL app/src pair. i.e you have specified ETL_APPSRC_TYPE=0
ETL_APP_1_NAME	ETL FSAPPS Application name	User Input	Specify the ETL Application and Source Name into ETL Area Definitions will be deployed
ETL_SRC_1_1_NAME	ETL FSAPPS Application name	User Input	Specify the ETL Application and Source Name into ETL Area Definitions will be deployed
ETL_SRC_1_2_NA	ETL FSAPPS Application	User Input	Specify the ETL Application

ME	name		and Source Name into ETL Area Definitions will be deployed
FV_SEGMENT	Specify name of the Segment for Fair Value sandbox infodom	User Input	
FV_APPSERVER_FTP_LOGPATH	Specify the sandbox Maintenance log path(to be created) for the Fair Value sandbox	User Input	
FV_DBSERVER_FTP_LOGPATH	Specify the sandbox Maintenance log path(to be created) for the Fair Value sandbox	User Input	
HISTIRC_SEGMENT	Specify name of the Segment for Historical Interest Rates sandbox infodom	User Input	
HISTIRC_APPSERVER_FTP_LOGPATH	Specify the sandbox Maintenance log path(to be created) for the Historical Interest Rates sandbox	User Input	
HISTIRC_DBSERVER_FTP_LOGPATH	Specify the sandbox Maintenance log path(to be created) for the Historical Interest Rates sandbox	User Input	
FCSTIRC_SEGMENT	Specify name of the Segment for Forecast Interest Rates sandbox infodom	User Input	
FCSTIRC_APPSERVER_FTP_LOGPATH	Specify the sandbox Maintenance log path(to be created) for the Forecast Interest Rates sandbox	User Input	
FCSTIRC_DBSERVER_FTP_LOGPAT	Specify the sandbox Maintenance log path(to be	User Input	

H	created) for the Forecast Interest Rates sandbox		

4.3.4 Verifying the Log File

Refer to the following logs files for more information:

- Refer to the `Pack_Install.log` located at `OFS_IFRS_PACK/ OFS_IFRS /logs/` folder for OFS IFRS Application Pack installation log file.
- Refer to the log file(s) located at `OFS_IFRS_PACK/OFS_AAI/logs/` folder for Infrastructure installation log.
- Refer to the `OFSAAInfrastucture_Install.log` located at `$FIC_HOME` folder for Infrastructure installation log.

NOTE: **Note**: For Pack on Pack installation, the following errors might be logged in the installation log and these can be ignored as this has no implication on the product:

```
'create sequence SEQ_DIM_GL_ACCOUNT
minvalue 1
maxvalue 999999999999999999999999999
start with 1
increment by 1
cache 20'
Warning:Object already exists

Query:'create sequence SEQ_DIM_PRODUCT
minvalue 1
maxvalue 999999999999999999999999999
start with 805
increment by 1
cache 20'
Warning:Object already exists

Query:'create table FSI_MESSAGES
(
  MESSAGE_ID          NUMBER(5) not null,
  MESSAGE_LOCALE      VARCHAR2(5 CHAR) not null,
  MESSAGE_CODE        VARCHAR2(50 CHAR),
  MESSAGE_DESCRIPTION VARCHAR2(1024 CHAR),
  MESSAGE_TYPE        CHAR(1) not null
)'
 Warning:Object already exists
```

4.3.5 Verifying the Installation

This section explains the steps to verify your installation of App. To verify that you have successfully installed the IFRS pack, follow the below steps:

1. Login in to the `atomic schema`.

2. Verify all the database objects like view, procedure, and functions must have been complied without any compilation error.
3. Deploy the war file and check the application screen is coming or not.

5 Post Installation Configuration

On successful installation of the Oracle Financial Services IFRS Application Pack, follow the post installation steps mentioned below.

This chapter includes the following sections:

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

5.1 Configuring Resource Reference

Configure the resource reference in the Web Application Server configured for OFSAA Applications. Refer to Configuring Web Application Servers for details on configuring the resource reference in WebSphere, WebLogic, and Tomcat Application Servers.

5.2 Start OFSAA Infrastructure Services

Start the OFSAA Infrastructure Services prior to deployment or accessing the OFSAA Applications.

Refer to Starting/Stopping Infrastructure Services section for details on Start/ Stop OFSAA Services.

5.3 Add TNS entries in TNSNAMES.ORA File

Add TNS entries in the `tnsnames.ora` file, for every schema created for the Application Pack

To find the tnsname for the entries, follow these steps:

1. Login to the application using System Administrator privileges.

2. Navigate to System Configuration & Identity Management tab.
3. Click Administration and Configuration >> System Configuration >> Database Details.
4. Expand the dropdown list for **Name** to get the list of TNS entry names.

Alternatively, you can connect to the CONFIG schema and execute the below query:

```
select dbname from db_master where dbname !='CONFIG'
```

5.4 Configuration for Oracle R distribution and Oracle R Enterprise (ORE)

This is an optional step. Skip and proceed with the next steps if OFS Enterprise Modeling Application with R scripting is not enabled during installation.

1. Install OFSAAIRunner Package. For more information, refer to Installing OFS AAAI Runner Package section. If you have already installed OFSAAIRunner package (as part of a previous installation), uninstall it (For more information, refer to Uninstalling OFS AAAI Runner Package section), and reinstall the latest available OFSAAIRunner package.
2. Log in to the database with dba privileges and provide the following privilege to Configuration Schema:
   - `RQADMIN` by executing the command:

     ```
     GRANT RQADMIN TO <config_schema>;
     ```
3. Log in to the database with dba privileges and provide the following privileges to Atomic Schema:
   - `CREATE UNLIMITED TABLESPACE` privilege by executing the command:

     ```
     GRANT CREATE UNLIMITED TABLESPACE TO <atomic_schema>;
     ```
   - `CREATE MINING MODEL` privilege (to execute the Data Mining models) by executing the command:

     ```
     GRANT CREATE MINING MODEL TO <atomic_schema>;
     ```

5.4.1 Installing OFS AAAI Runner Package

OFSAAIRunner is an R package built by the OFS Enterprise Modeling Application. It is a prerequisite for executing models developed using R scripts. This package helps in:

- Initializing inputs
- Mapping framework variables to R objects
- Configuring possible outputs of the script
- Storing results back to the Database

OFSAAIRunner package (OFSAAIRunner_1.0.0.tar.gz) is available under `$FIC_DB_HOME/lib`.

5.4.1.1 Prerequisite

Oracle R & ORE should be installed on the Oracle Database server before installing OFSAAIRunner package.

Refer to the following instructions to install OFSAAIRunner package:

1. Log in to the OFSAA Server. Navigate to the `folder $FIC_DB_HOME/lib.`
2. Copy the file `OFSAAIRunner_1.0.0.tar.gz` in **Binary** mode to the Oracle Database Server.
3. Log in to the Oracle Database Server with the user using which Oracle Database Server installation is done.
4. Navigate to the directory where the file `OFSAAIRunner_1.0.0.tar.gz` is copied.
5. Install the package by executing the command:

   ```
   ORE CMD INSTALL OFSAAIRunner_1.0.0.tar.gz
   ```

   Successful installation is indicated in the installation log as:

   ```
   * DONE (OFSAAIRunner)

   Making packages.html ... done
   ```

   NOTE: The OFSAAIRunner package is installed in `/usr/lib64/R/library`.

6. Navigate to the directory `$ORACLE_HOME/R/library` and check whether OFSAAIRunner package is listed there by executing the command:

   ```
   ls -l
   ```

5.4.2 Uninstalling OFSAAIRunner Package

Refer to the following instructions to uninstall the OFSAAIRunner package:

1. Log in to the Oracle Database Server with the same username, using which Oracle Database Server installation is done.
2. Enter ORE in command prompt and execute the command:

   ```
   #ORE
   ```

3. To save workspace image, enter the command:

   ```
   >remove.packages("OFSAAIRunner")
   ```

4. Enter y when prompted to save the workspace image.

   ```
   q()
   ```

5. Navigate to the directory $ORACLE_HOME/R/library and verify the package is not listed there by executing the command:
6. Save workspace image? [y/n/c]: y

```
ls –l
```

5.5 Updating OBIEE URL

To access the respective Business Intelligence Analytics Application, you need to update the OBIEE url in the table 'AAI_MENU_B', once the OBIEE environment is up and running.

Following statement needs to be executed in the config schema:

```
UPDATE AAI_MENU_B

SET V_MENU_URL = '<obieeURL>'

WHERE V_MENU_ID IN ('<List of enabled BI Analytical Links for a particular Media Pack >')

/

COMMIT

/

For IFRS Media Pack as an example:

UPDATE AAI_MENU_B

SET V_MENU_URL = ' http://IFRSIP:port/analytics'

WHERE V_MENU_ID IN ('OFS_IFRSBI_LINK','OFS_IFRSBI_ABI')

/

COMMIT

/
```

5.6 Configurations for Java 8

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

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

   For more informaiton on downloading the patch files, refer to Installer and Installation Prerequisites section >> Category - Others >> Sub-Category - OFSAA.
2. Follow the instructions given in the Readme to apply the patch.
3. If the Oracle Database version is 12c, copy ojdbc7.jar from $ORACLE_HOME/jdbc/lib to the following locations:

- $FIC_HOME/utility/OFSAAGenerateRepository/lib/
- $FIC_HOME/realtime_processing/WebContent/WEB-INF/lib/
- $FIC_HOME/ficdb/lib/
- $FIC_HOME/ficapp/icc/lib/
- $FIC_HOME/ficapp/common/FICServer/lib/
- $FIC_HOME/FMStandalone/FormsManager/WEB-INF/lib/
- $FIC_HOME/ficweb/webroot/WEB-INF/lib/
- $FIC_HOME/ficdb/etl/classes/

4. If the Oracle Database version is 11g, copy ojdbc6.jar from $ORACLE_HOME/jdbc/lib to the following locations:
   - $FIC_HOME/utility/OFSAAGenerateRepository/lib/
   - $FIC_HOME/realtime_processing/WebContent/WEB-INF/lib/
   - $FIC_HOME/ficdb/lib/
   - $FIC_HOME/ficapp/icc/lib/

5.7 Create and Deploy the Application Pack Web Archive

On successful installation of the OFSAA Application Pack, the web archive file is automatically generated. However, you need to deploy the generated web archive file on the Web Application Server.

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

1. Navigate to **FICWEBHOME**.
2. Execute **ant.sh** file.

For identifying the location of the generated web archive file and for generating and deploying the web archive file at any time later, refer to Creating and Deploying EAR/ WAR File section.

NOTE: Refer the *Oracle Financial Services Forms Manager User Guide* for instructions on Creating and Deploying the Forms Manager Web Archive.

5.8 Access the OFSAA Application

Prior to accessing the OFSAA application ensure the Internet Explorer Settings are configured.

Refer to Accessing OFSAA Application section for details on accessing the OFSAA Application on successful deployment of the application web archive.

5.9 Perform Post Deployment Configurations

Prior to using the OFSAA Application perform the Post Deployment Configuration steps detailed in Post Deployment Configurations section.

6 Appendix A - Configuring Web Server

This appendix includes the following sub-sections:

- Configuring Web Server
- Configuring Web Application Server

6.1 Configuring Web Server

This step assumes an installation of a Web Server exists as per the prerequisites.

Refer to the product specific Installation Guide/ Configuration Guide to install/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.

6.2 Configuring Web Application Server

This step assumes an installation of a web application server exists as per the prerequisites. To configure the Web Application Server for OFSAA Deployment refer to the sections below.

This section includes the following topics:

- Configuring WebSphere for Application Deployment
- Configuring WebLogic for Application Deployment
- Configuring Apache Tomcat Server for Application Deployment

NOTE: Make a note of the IP Address/ Hostname and Port of the web application server. This information is required during the installation process (required if Web Server is not configured).

Refer OFSAA Secure Configuration Guide/ Security Guide mentioned in the Related Documents section for additional information on securely configuring your Web Server.

6.2.1 Configuring WebSphere Application Server for Application Deployment

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:

6.2.1.1 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.

6.2.1.2 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)

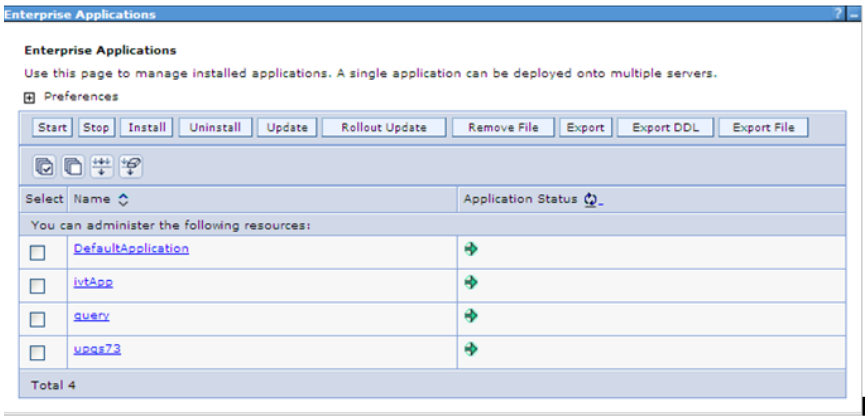
   NOTE: Administrative Console Port value is available in serverindex.xml file within <WebSphere Profile Directory>/config/cells/<Node Cell>/nodes/<Node Name> directory.

   The Integrated Solutions Console Login window is displayed.

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**.

4. The *Enterprise Applications* screen is displayed.



Enterprise Applications

5. This Enterprise Applications screen helps you to:

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

6.2.1.3 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:
4. `<WebSphere_Installation_Directory>/AppServer/bin/`
5. Execute the command:
6. `manageprofiles.sh -delete -profileName <profile_name>`
7. Delete profile folder.
8. Example:
   `<WebSphere_Installation_Directory>/AppServer/profiles/<profile_name>`
9. Execute the command:
10. `manageprofiles.sh -validateAndUpdateRegistry`

6.2.1.4 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.

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

6.2.1.5 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 =1024
   ```

6.2.2 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 includes the following topics:

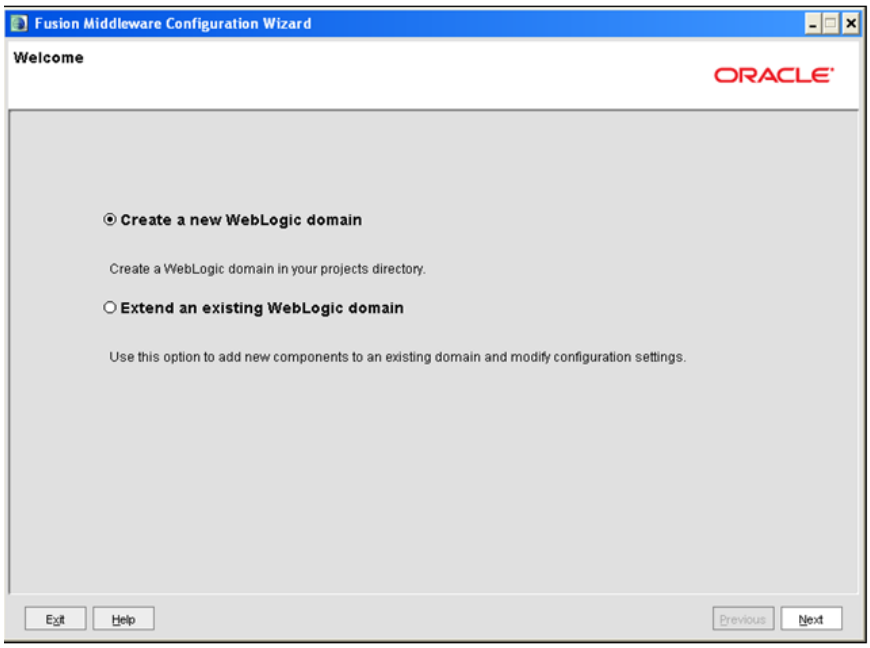
6.2.2.1 Creating Domain in WebLogic Server

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
   ```

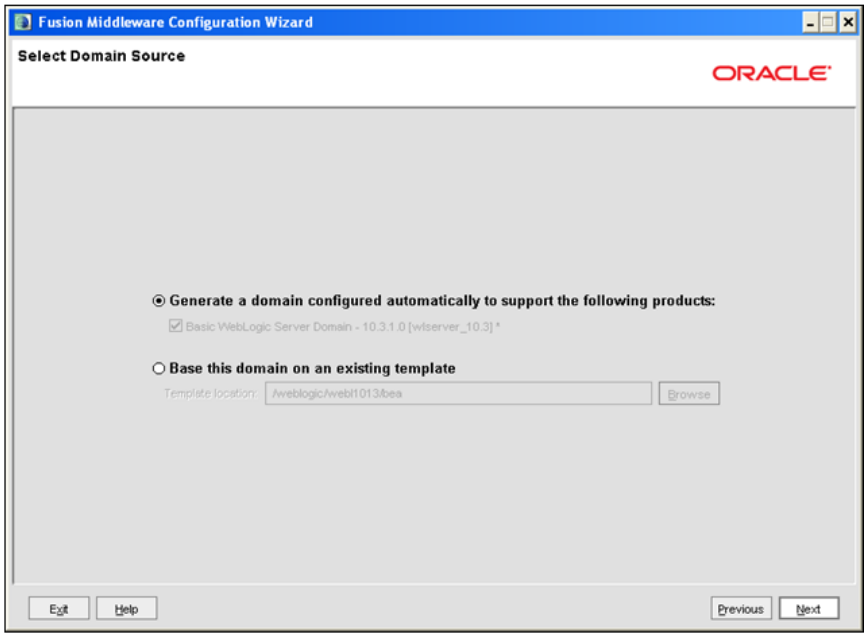
The *Welcome* window of the *Configuration Wizard* is displayed.



Welcome

2. Select Create a new WebLogic domain option and click Next.

The *Select Domain Source* window is displayed.



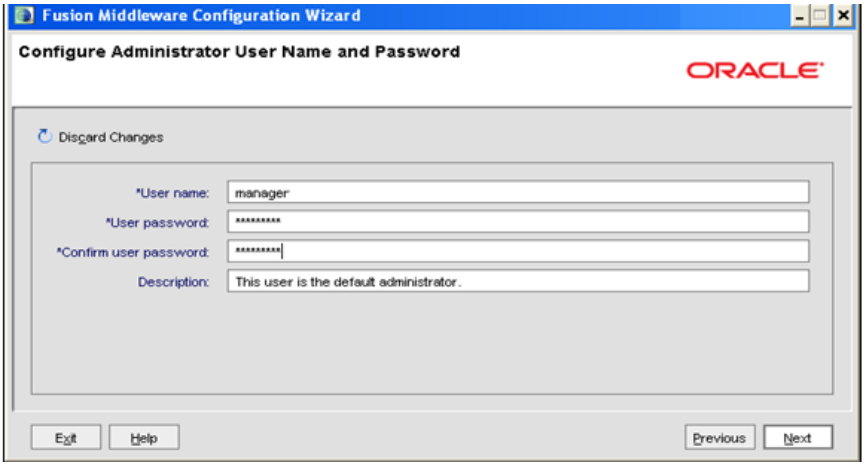
Select Domain Source

3. Select the Generate a domain configured automatically to support the following products option and click Next.
4. The *Specify Domain Name and Location* window is displayed.

Specify Domain Name and Location

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

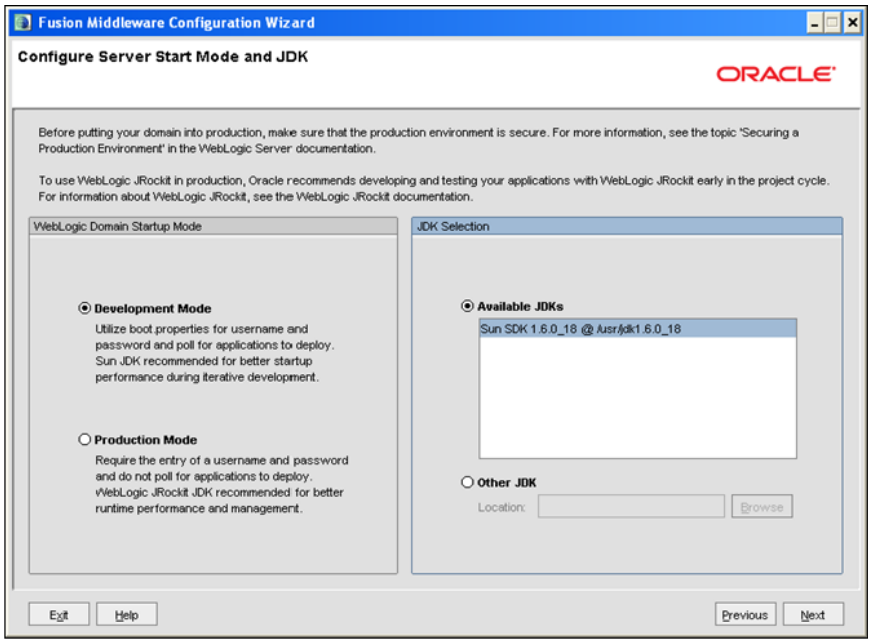
The *Configure Administrator Username and Password* window is displayed.



Configure Administrator Username and Password

6. Enter the **User name** and **User password** to be assigned to the Administrator. Ensure that the password is of minimum 8 characters in length.
7. Re-enter the password for confirmation and add a brief **Description**. Click **Next**.

The *Configure Server Start Mode and JDK* window is displayed.



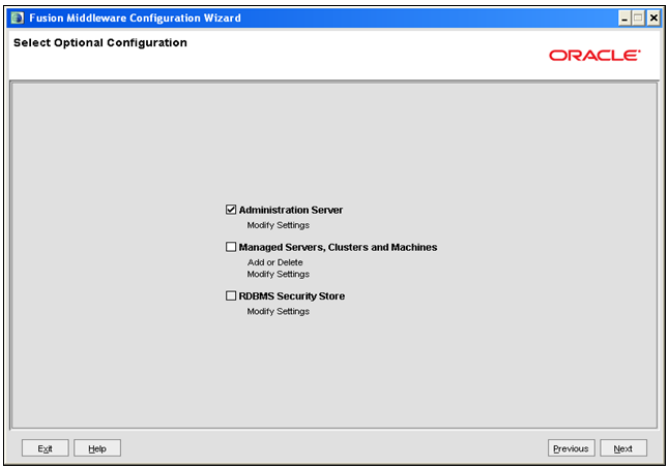
Configure Server Start Mode and JDK

8. 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**.

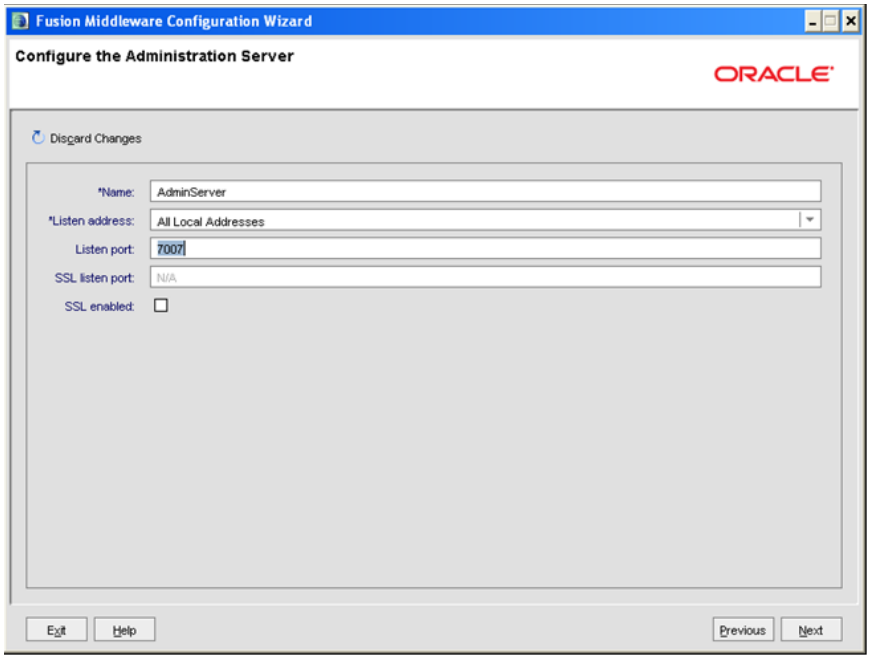
   The *Select Optional Configuration* window is displayed.



Select Optional Configuration

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

The *Configure the Administration Server* window is displayed.

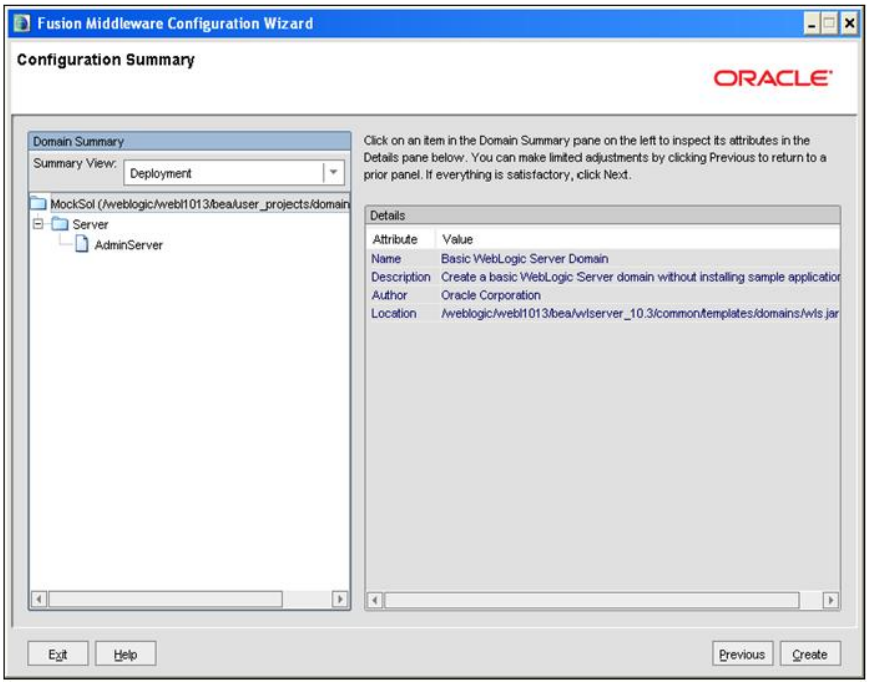


Configure the Administration Server

10. 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**.

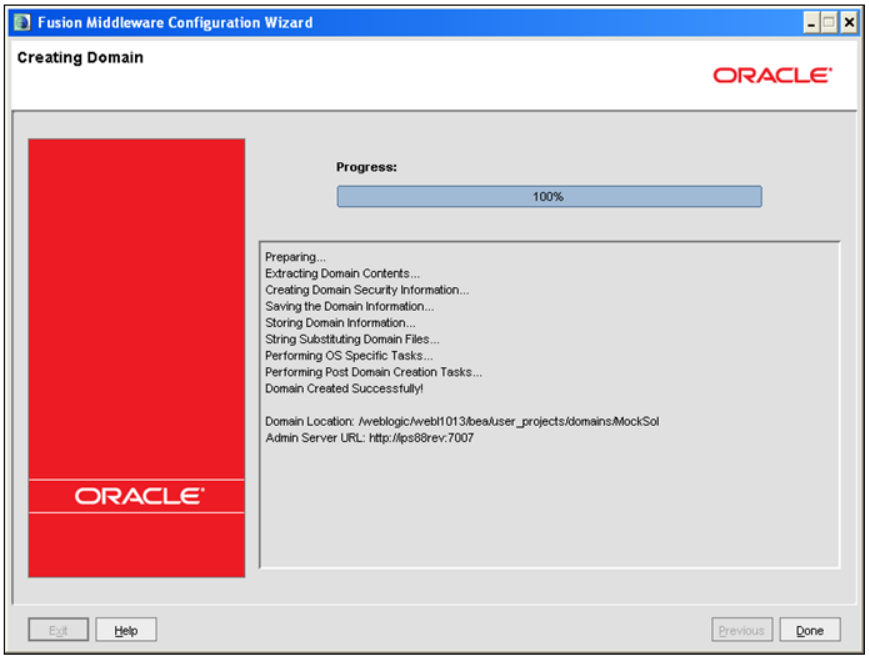
The *Configuration Summary* window is displayed.

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



Configure Server Start Mode and JDK

11. Verify the configuration details of the WebLogic domain and click **Create**.
12. The *Creating Domain* window is displayed with the status indication of the domain creation process.



Configure Server Start Mode and JDK

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

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

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

14. Add a java option entry `-DUseSunHttpHandler=true` in `WLS_HOME/bin/` "`setDomainEnv.sh`" file (Required only if self signed certificate is used).

6.2.2.2 Delete Domain in WebLogic

1. Navigate to the following directory:
2. `<WebLogic Installation directory>/user_projects/domains/<domain name>/bin`
3. Execute **stopWebLogic.sh** to stop the Weblogic domain.
4. Delete the Weblogic domain.

6.2.2.3 WebLogic Memory Settings

To configure the WebLogic Memory Settings:

1. Change the memory setting for Java Heap to `-Xms512m -Xmx1024m` 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.
3. 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"
```

6.2.3 Configuring Apache Tomcat Server for Application Deployment

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

This section includes the following topics:

- Tomcat User Administration
- Configure Tomcat to use JAVA 64 bit Executables
- Configure Servlet Port
- SSL Port Configuration
- Apache Tomcat Memory Settings
- Uninstalling WAR Files in Tomcat
- Configuration for Axis API

6.2.3.1 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 tag <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="manager-gui" />

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-gui 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.

6.2.3.2 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:

4. 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

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

6.2.3.3 Configure Servlet Port

The default servlet port configured for the Tomcat installation is 8080. Ignore this section if you need to use the default port.

If you need to use 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 will be used during the installation process.

3. Save your changes in "server.xml".

NOTE: Make a note of the servlet port configured. This information is required during the installation of OFSAA Application Pack.

6.2.3.4 SSL Port Configuration

If you need to configure and access your OFSAA setup for HTTPS access, 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: Make a note of the servlet port configured. This information would be required during the installation of OFSAA Application Pack. To enable https configuration on Infrastructure, assign value 1 to "HTTPS_ENABLE" in OFSAAI_InstallConfig.xml for SILENT mode OFSAAI installation.

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

6.2.3.5 Apache Tomcat Memory Settings

To configure the Apache Tomcat Memory Settings:

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. 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
```

6.2.3.6 Uninstalling WAR Files in Tomcat

To uninstall WAR files in tomcat, refer to Uninstalling WAR Files in Tomcat section.

6.2.3.7 Configuration for Axis API

This step is optional and required only if the web application server used in Apache Tomcat. If you use any other web application server, skip and proceed to next step.

Copy the jaxrpc.jar from the <OFSAA Installation Directory>/axis-1_4/webapps/axis/WEB-INF/lib and place it in under <Tomcat Installation Directory>/lib and restart the Tomcat Server.

7 Appendix B - Configuring Web Application Servers

7.1 Configuring Resource Reference in Web Application Server

This appendix includes the following topics:

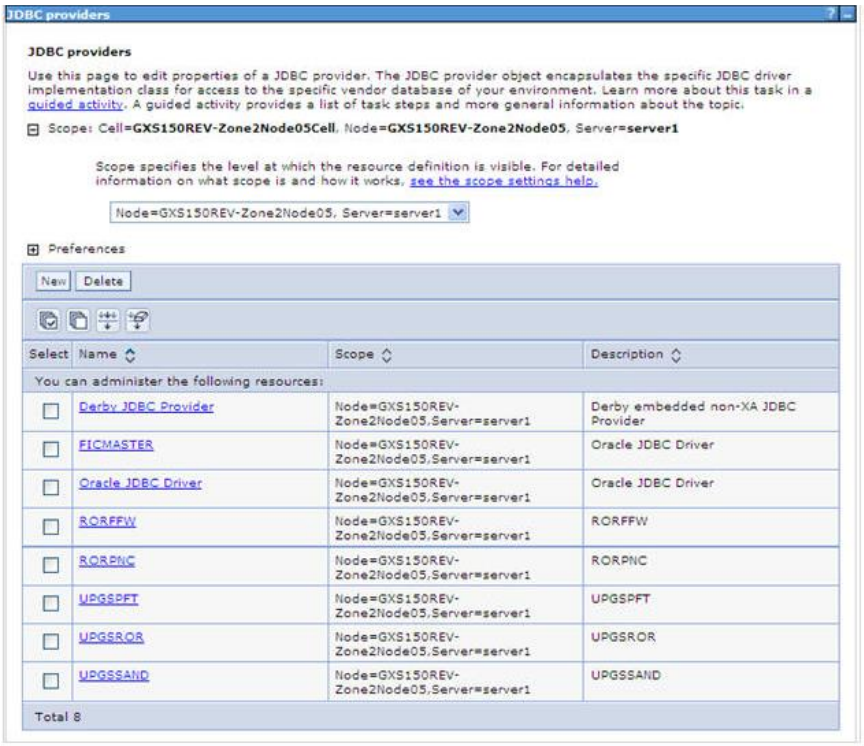
7.1.1 Configure Resource Reference in WebSphere Application Server

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

This section includes the following topics:

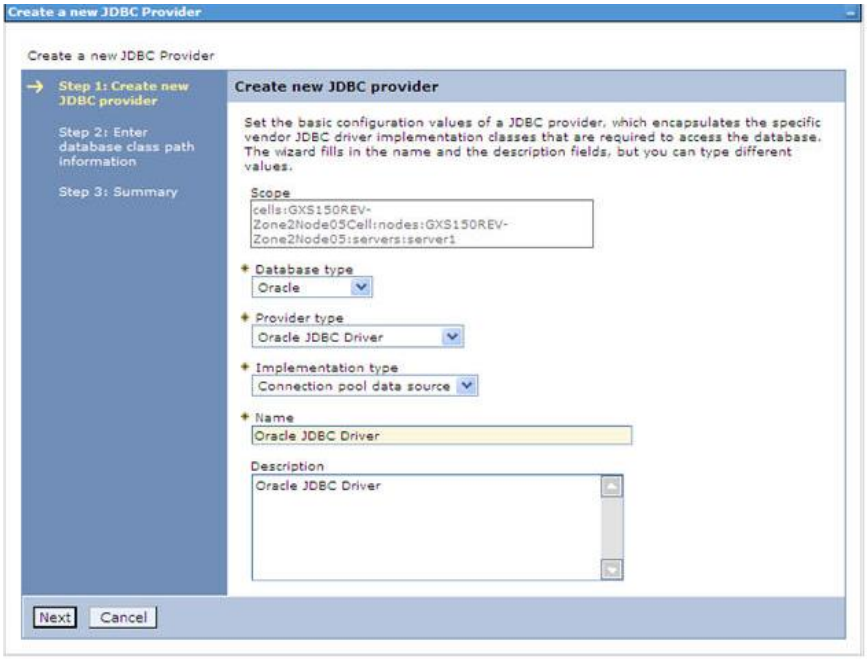
7.1.1.1 Create JDBC Provider

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.



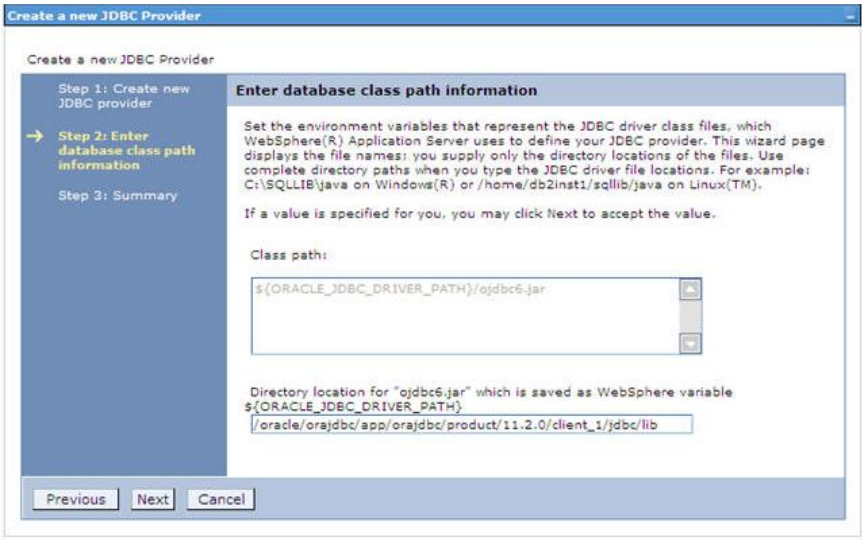
JDBC Providers

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:
   - 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.

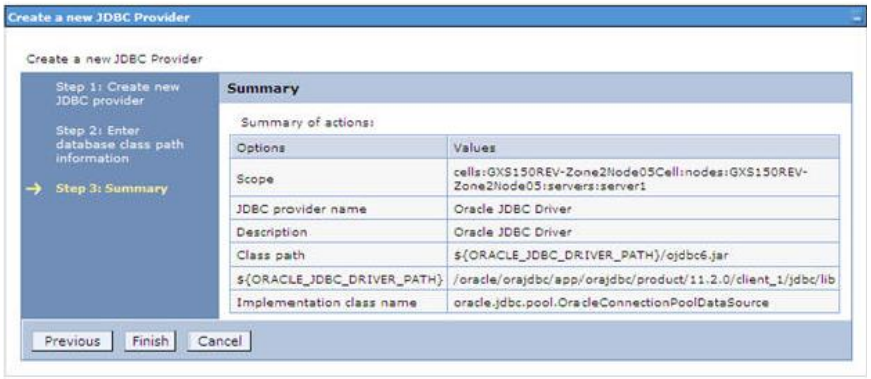
   The Oracle JDBC driver (Download "`ojdbc<version>.jar`") file corresponding to the required version of Oracle Client can be downloaded from the following Oracle Download site:

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

   NOTE: Refer to JDBC Jar Files section for identifying the correct "ojdbc<version>.jar" version to be copied.

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

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



Summary

10. Verify the details and click **Finish** to create the JDBC Provider.
11. The options to **Save** and **Review** are displayed. Click **Save**.

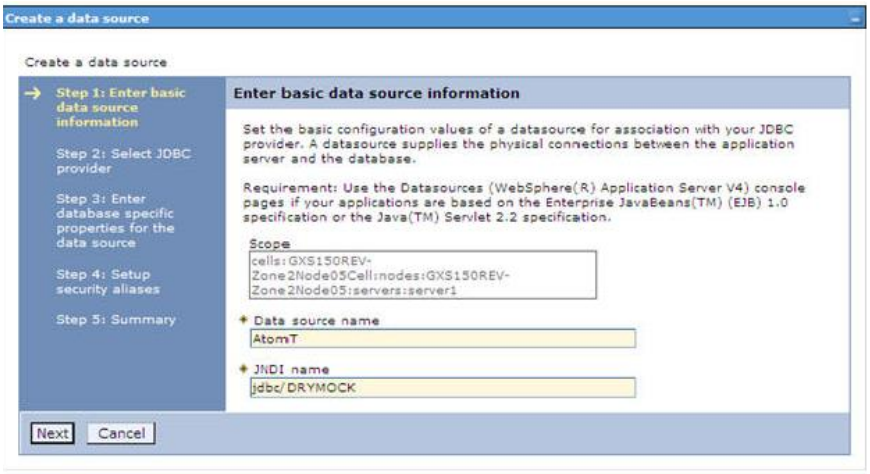
7.1.1.2 Create Data Source

The steps given below are applicable for both CONFIG and ATOMIC data source creation.

12. Expand the **Resources** option in the LHS menu and click **JDBC > Data sources** option. The *Data sources* page is displayed.

Data Sources

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



Create a data source

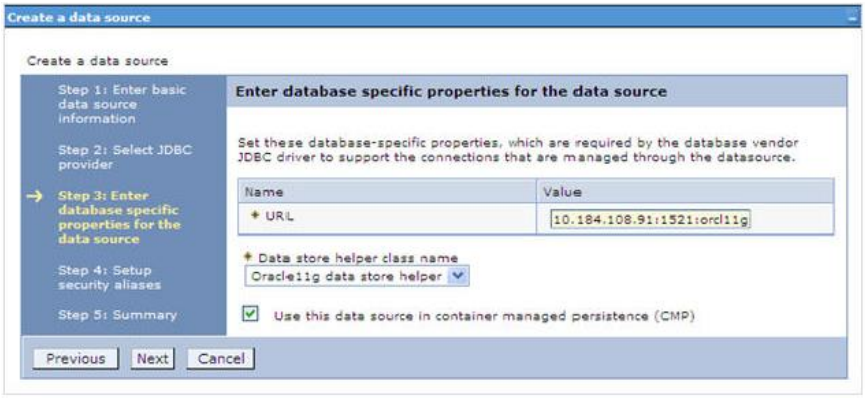
15. Specify **the Data Source name** and **JNDI name** for the new "Data Source".

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

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

Select JDBC provider

17. 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

18. Specify the database connection URL.

    For Example: `jdbc:oracle:thin:@<DB_SEREVER_IP>:<DB_SERVER_PORT>:<SID>`

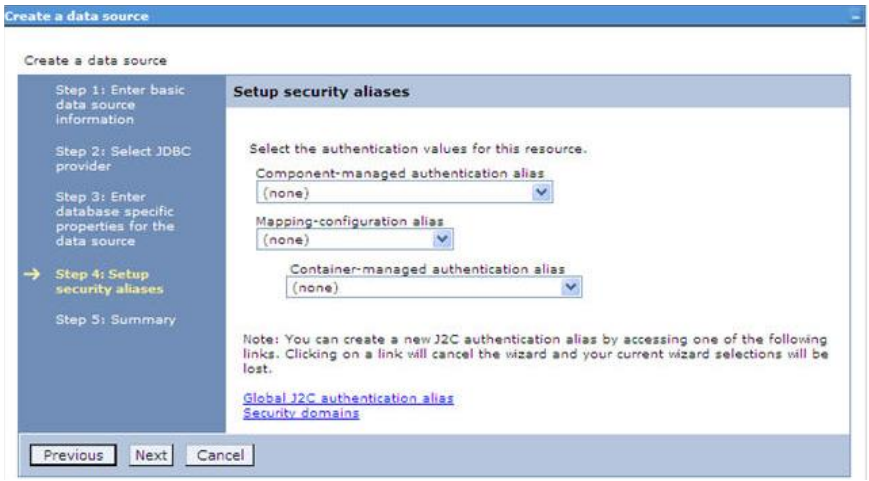
19. Select **Data Store Helper Class Name** from the drop-down list and ensure that the checkbox **Use this data source in container managed persistence (CMP)** is selected.

    NOTE: For RAC configuration, provide the RAC URL specified during installation

    For Example:

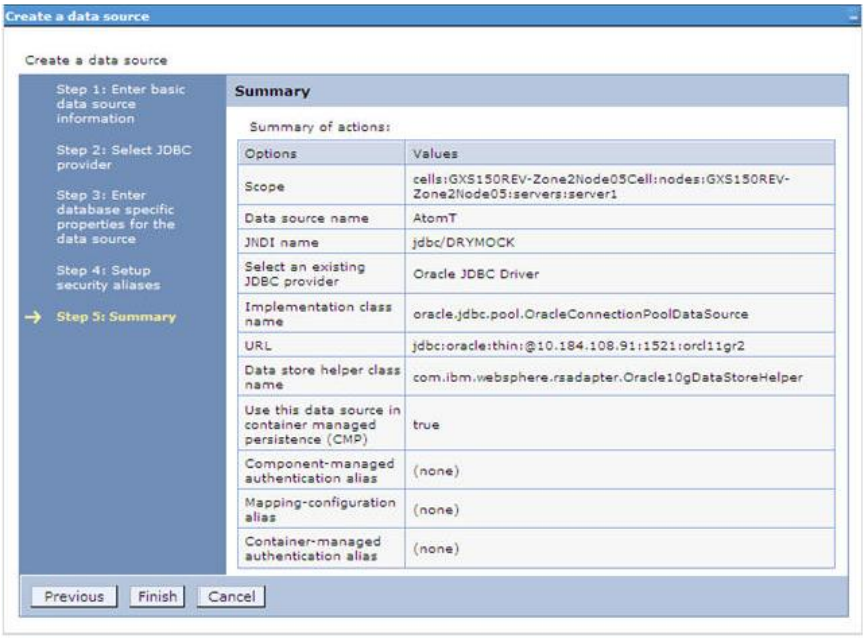
    ```
    jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=10
    .11.12.13)(port=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=10.11.12.14)(PORT=1521))(
    LOAD_BALANCE=no)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=pqadb)))
    ```

20. Click **Next**.



Setup security aliases

21. 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.

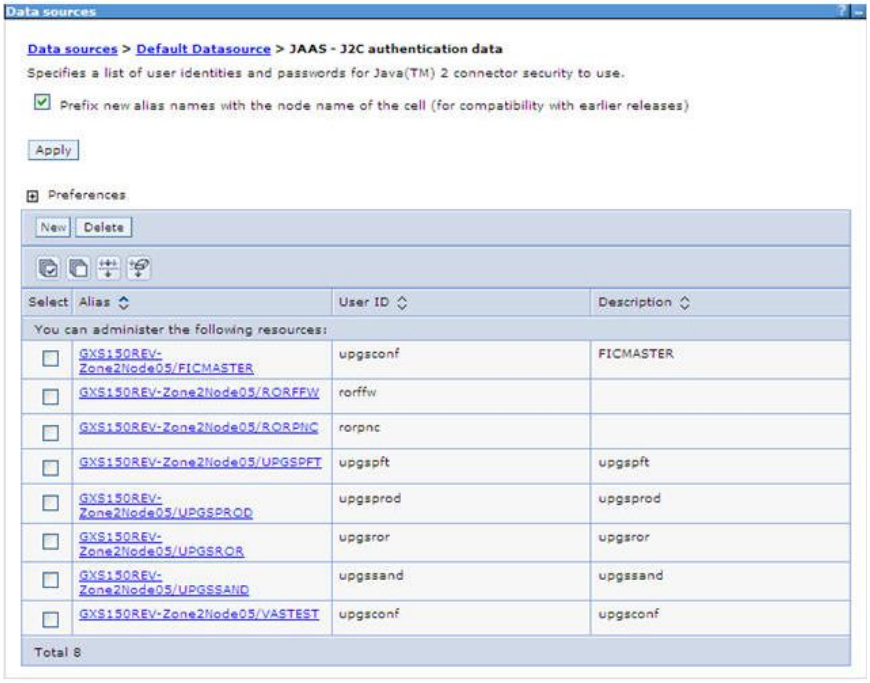
22. You must create another Data source by following the above procedure with jdbc/FICMASTER as JNDI name pointing to the "configuration schema" of Infrastructure.

7.1.1.3 J2C Authentication Details

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

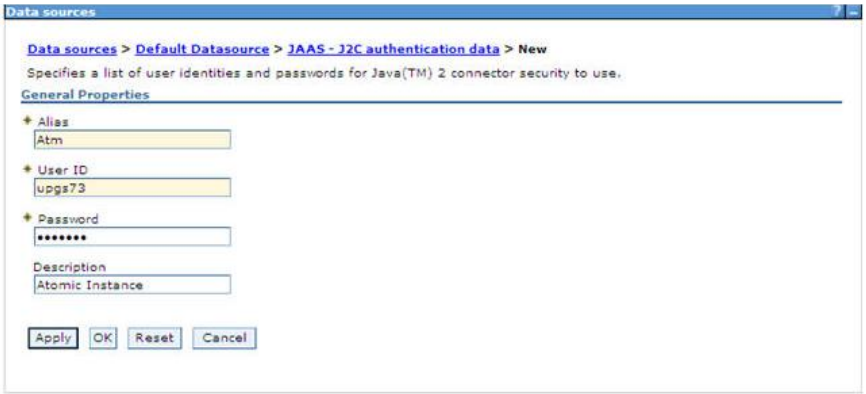
To create J2C Authentication details:

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

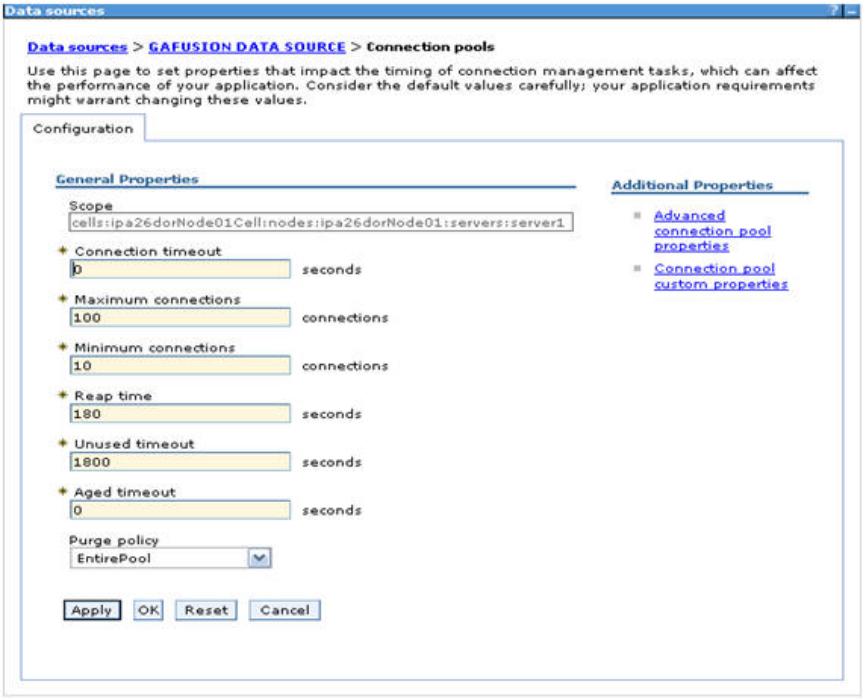
3. Enter the **Alias**, **User ID**, **Password**, and **Description**. Ensure the following:
   - User ID is the Oracle user ID created for the respective CONFIG and ATOMIC Schema for the “Information Domain”.
   - Specify the CONFIG database user ID and password information for the jdbc/FICMASTER data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

7.1.1.4 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.

5. Expand the **Resources** option in the LHS menu and click **JDBC > Data sources** option. The *Data sources* page is displayed.

6. Click the newly created Data Source `$DATA_SOURCE$` and navigate to the path `Data sources>$DATA_SOURCE$>Connection pools`.



Connection Pools

7. 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.

7.1.2 Configure Resource Reference in WebLogic Application Server

This section is applicable only when the Web Application Server 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

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

- For a Non RAC Database instance, Generic Data Source has to be created. Refer to Create Data Source section.
- For a RAC Database instance, Gridlink Data Source has to be created. Refer to Create GridLink Data Source section.
- When Load Balancing/Fail over is required, Multi Data Source has to be created. Refer to Configure Multi Data Sources section.

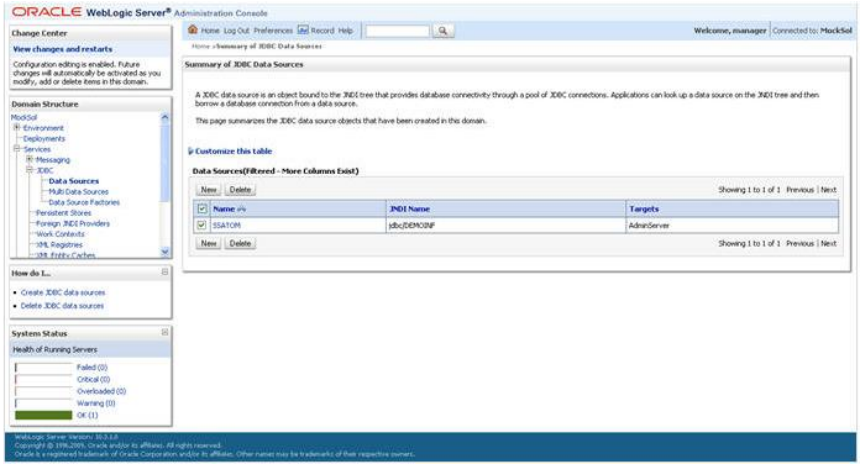
7.1.2.1 Create Data Source

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

1. Open WebLogic Admin Console 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

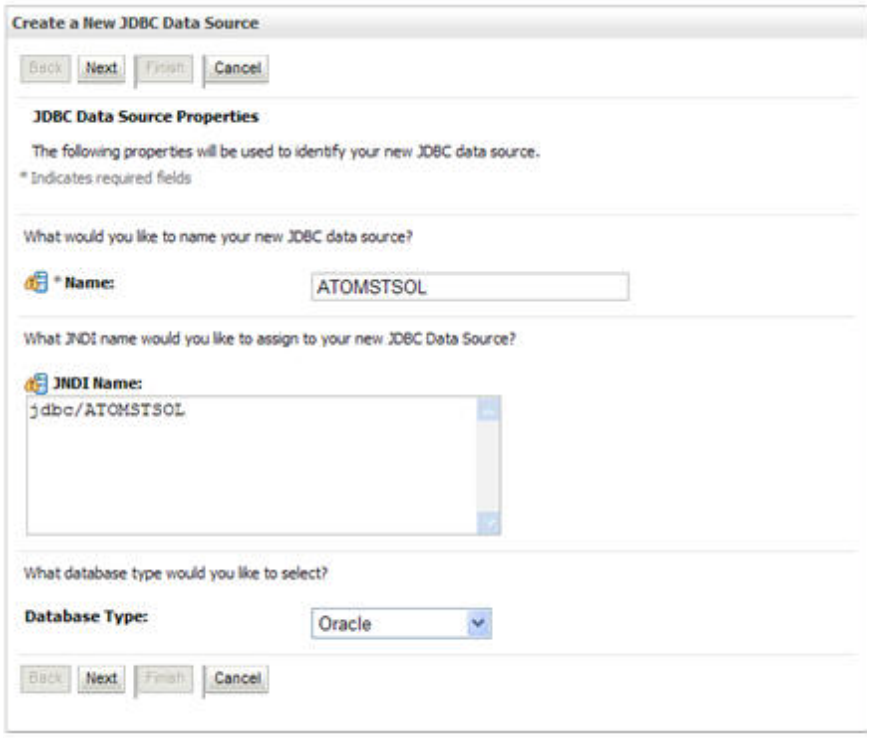
3. From the LHS menu (Domain Structure), click **Services** > **Data Sources**. The *Summary of JDBC Data Sources* window is displayed.



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, refer to **Error! Reference source not found.** or **Error! Reference source not found.**.



Create a New JDBC Data Source

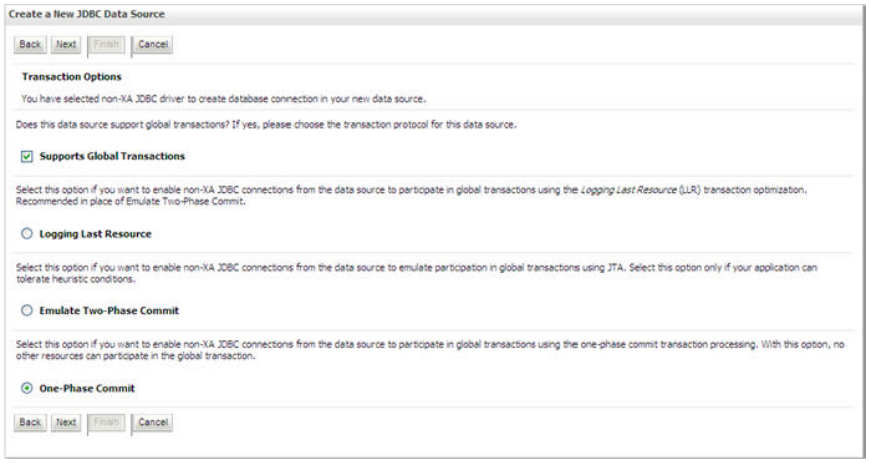
5. Enter JDBC data source **Name**, **JNDI Name**, and select the **Database Type** from the drop-down list. Click **Next**.

   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.

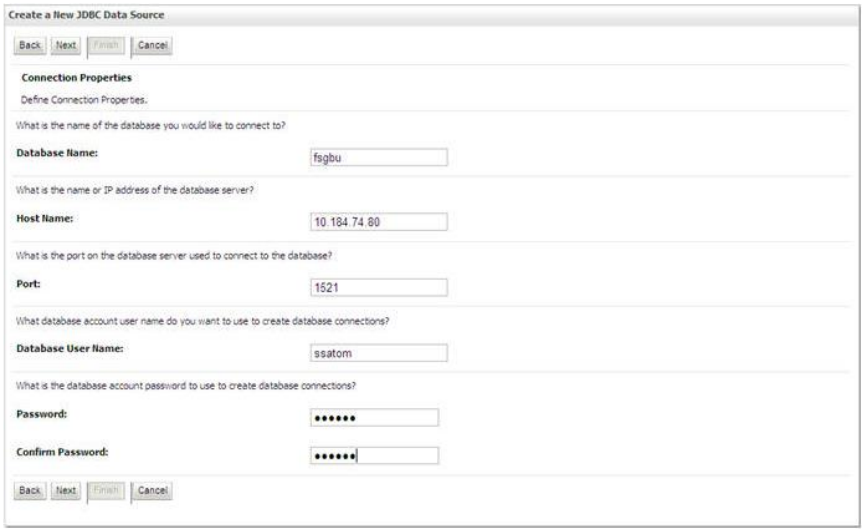
JDBC Data Source Properties

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**.



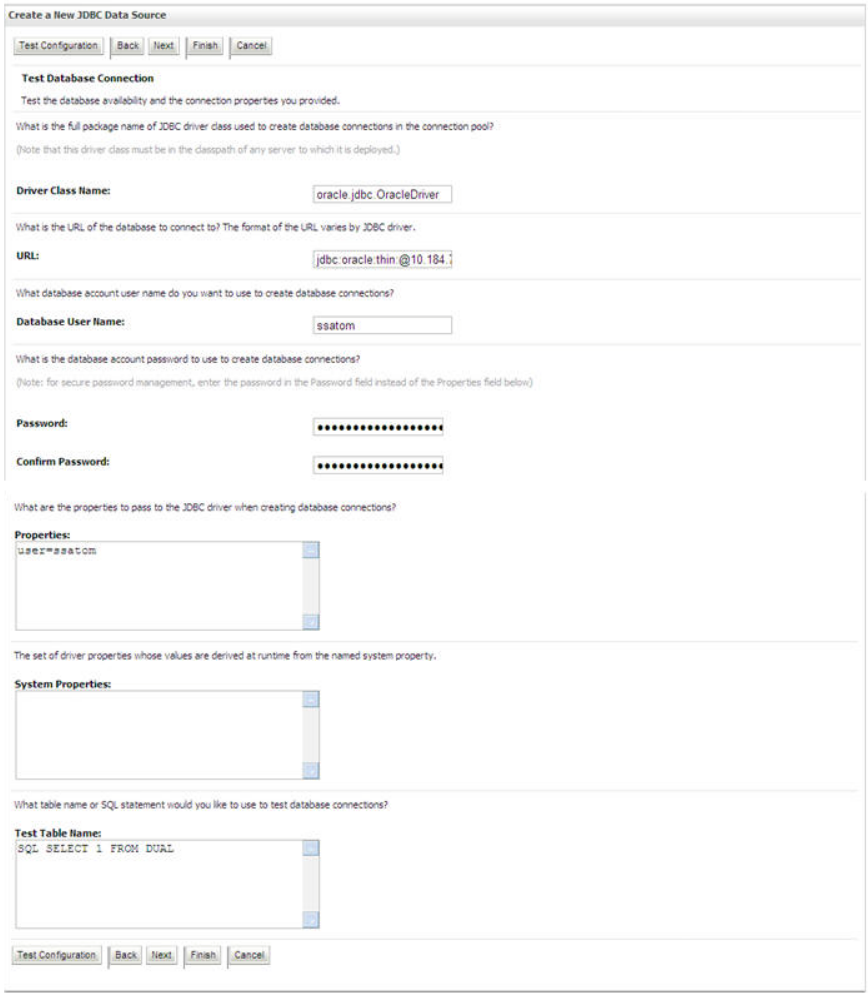
Transaction Options

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



Connection Properties

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

11. Verify the details and click **Test Configuration** and test the configuration settings.

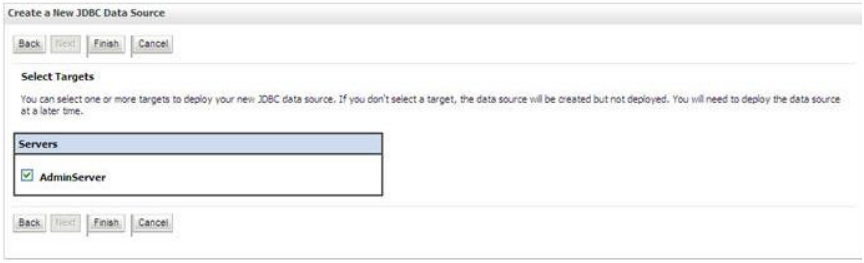
    A confirmation message is displayed stating "Connection test succeeded."

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

NOTE: "User ID" is the Oracle user ID that is created for the respective CONFIG and ATOMIC schema of 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 CONFIG schema.

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

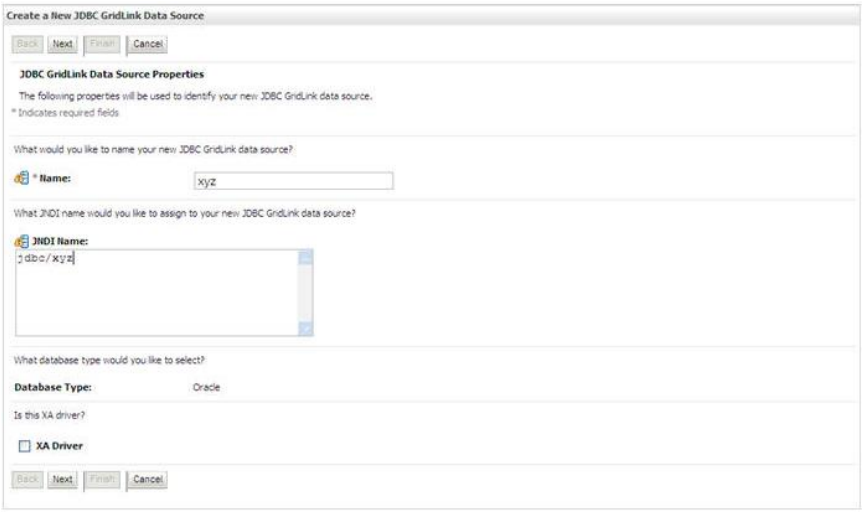


Select Targets

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

7.1.2.2 Create GridLink Data Source

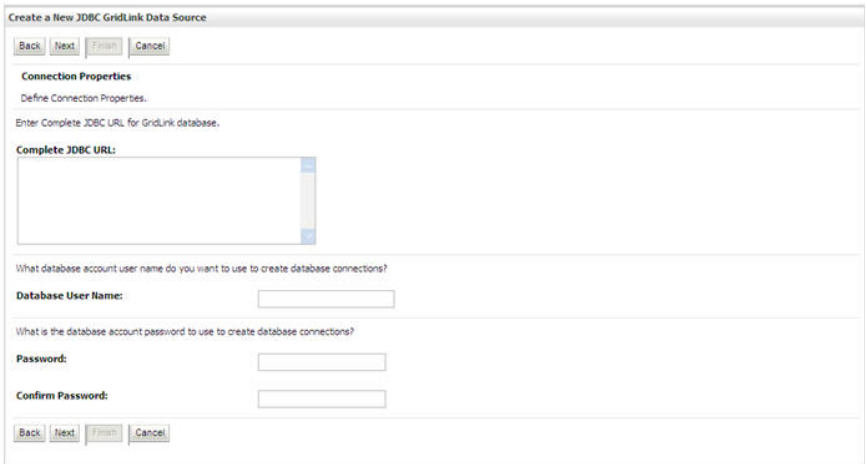
If you have selected the option, **New** > **GridLink Data Source** while creating the "Data Source", you can directly specify the JDBC URL as indicated.



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/infodomname" and the **XA Driver** checkbox is not selected. Click **Next**.



JDBC GridLinkData Source- Connection Properties

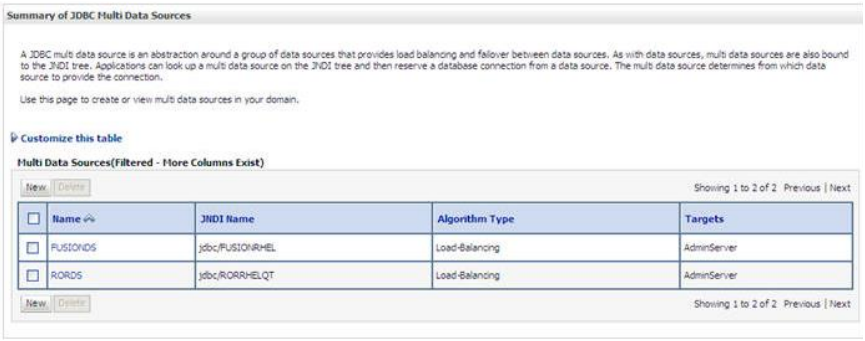
2. Specify **Complete JDBC URL**, **Database User Name**, and **Password**. Click **Finish**. The created "Data Source" is displayed in the list of Data Sources.

7.1.2.3 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.

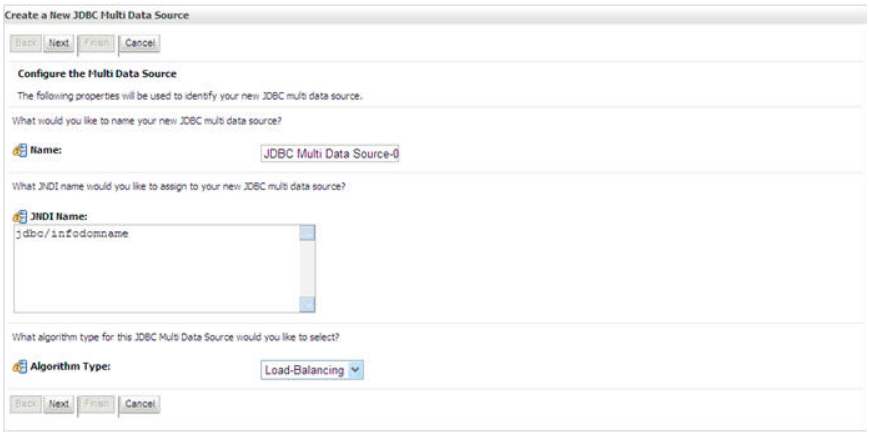
1. Open WebLogic Admin Console in the browser window: `http://<ipaddress>:<administrative console port>/console`. (https if SSL is enabled). The *Login* window is displayed.
2. Login with the "User ID" that has admin rights.
3. In the LHS menu (Domain Structure), select **Services** > **JDBC** > **Multi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

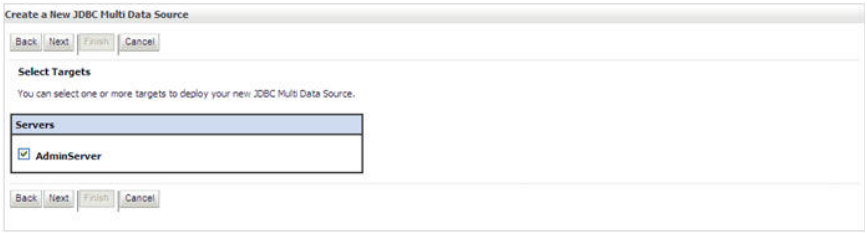


Configure the Multi Data Source

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

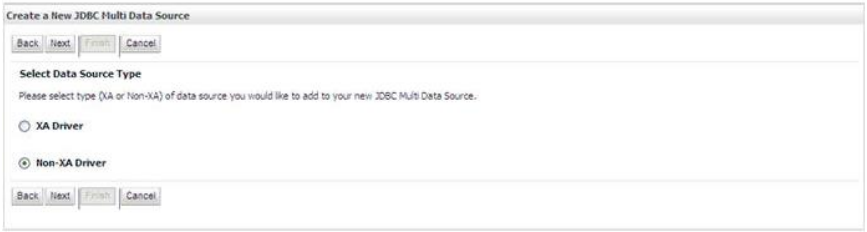
Note:

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



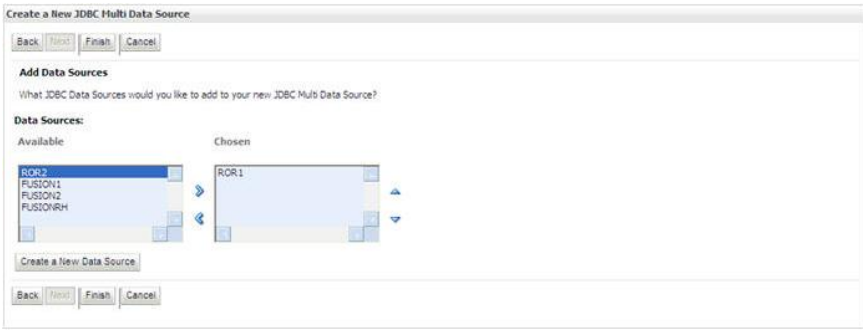
Select Targets

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

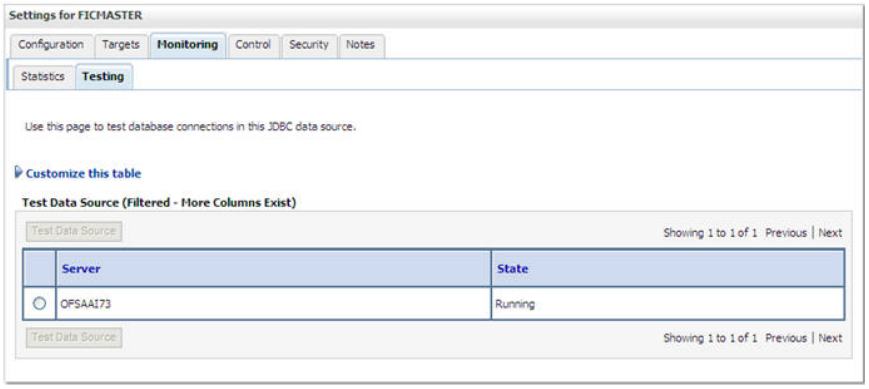
8. Map the required Data Source from the *Available* Data Sources. Click **Finish**.

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

7.1.2.4 Advanced Settings for Data Source

1. Click the new Data Source fromt 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).

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



Settings for <Data Source Name>

5. Select the server and click **Test Data Source**.
6. A message is displayed indicating that the test was successful.
7. 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.

7.1.2.5 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.

8. 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>
9. 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.
10. Click **Save**.

7.1.3 Configure Resource Reference in Tomcat Application Server

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

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

NOTE: Refer to JDBC Jar Files section for identifying the correct `ojdbc<version>.jar` version to be copied.

7.1.3.1 Create Data Source

To create "data source" for OFSAA application, navigate to `<Tomcat Home>/conf` and add the following block of text within <HOST> and </HOST> by replacing with 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 SETUPINFO NAME is DEV and PREFIX_SCHEMA_NAME is Y and the schema name was mentioned as ofsaaconf, then the actual schema created in the database would be DEV_ofsaaconf.

```
<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>"

    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>"

    username="<user id for the atomic schema>"

    password="<password for the above user id>"

    url="jdbc:oracle:thin:@<DB engine IP address>:<DB Port>:<SID>"

    maxActive="100"

    maxIdle="30"
```

```
    maxWait="10000"/>
</Context>
```

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

7.1.3.2 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 to JDBC Jar Files section 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:

- $TOMCAT_DIRECTORY$ should be replaced by Tomcat application installed path.
- $CONTEXTNAME$ should be replaced by OFSAAI context name.
- $APP_DEPLOYED_PATH$ 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 SETUPINFO NAME is DEV and PREFIX_SCHEMA_NAME is Y and the schema name was mentioned as ofsaaconf, then the actual schema created in the database would be DEV_ofsaaconf.

7.1.4 Class loader configuration for Apache Tomcat

Add tag <Loader delegate="true" /> within the <Context> tag, above the <Resource> tag in server.xml file.

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

8 Appendix C - Creating and Deploying EAR/ WAR File

8.1 Creating and Deploying EAR/WAR File

This appendix includes the following topics:

8.1.1 Creating EAR/WAR File

To create EAR/WAR File, follow these steps:

3. Navigate to the `$FIC_WEB_HOME` directory on the OFSAA Installed server.
4. Execute `./ant.sh` to trigger the creation of EAR/ WAR file.
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/ WAR file - `<contextname>.ear/ .war` - is created.

NOTE: The <contextname> is the name given during installation.
This process overwrites any existing version of EAR file that exists in the path.
In case of OFSAA configured onTomcat installation, `<contextname>.war` will be created.

8.1.2 Deploying EAR/WAR File

The OFSAA Application EAR/ WAR file is generated at `$FIC_WEB_HOME` on the OFSAA Installed server. Locate the `<contextname>.ear/ .war` file for deployment.

This section includes the following topics:

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

8.1.2.1 Deploying EAR/WAR Files on WebSphere

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

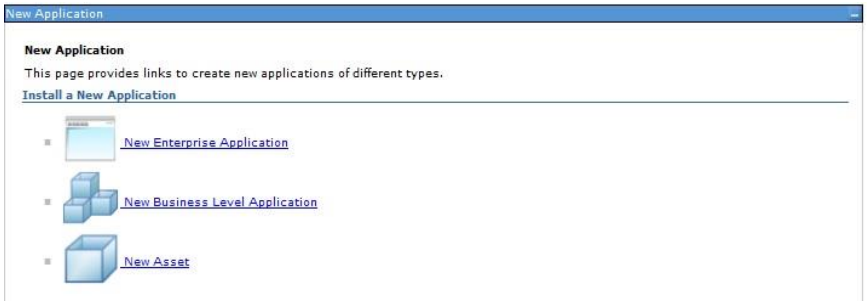
1. Start WebSphere Profile by navigating to the path "/<Websphere_Installation_Directory>/IBM/WebSphere/AppServer/profiles/<Profile_Name>/bin/" and execute the command:

   ```
   ./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.

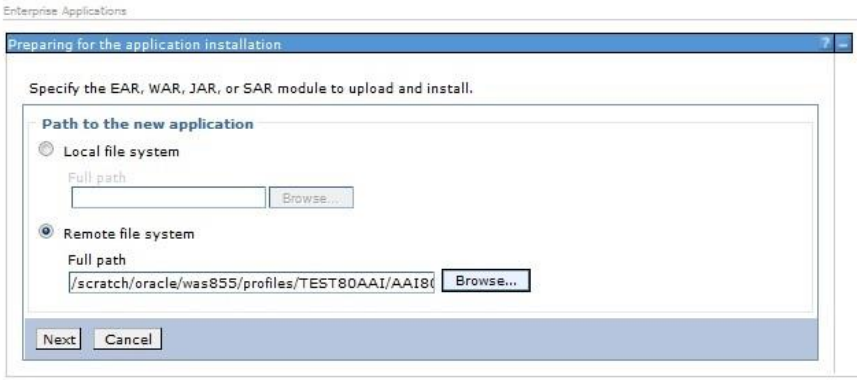
Login Window

3. Enter the user credentials with admin privileges and click **Log In**.
4. From the LHS menu, select **Applications** and click **New Application**. The *New Application* window is displayed.



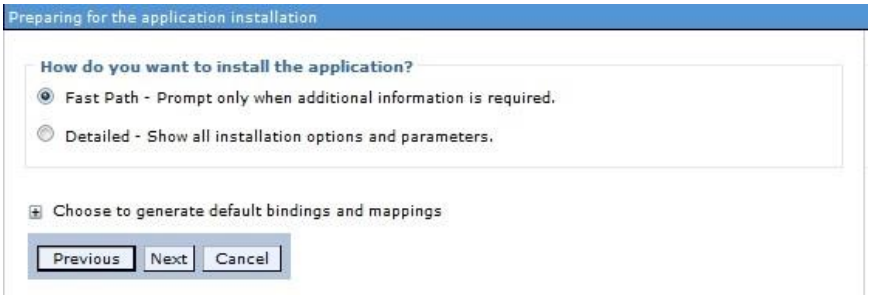
New Application

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



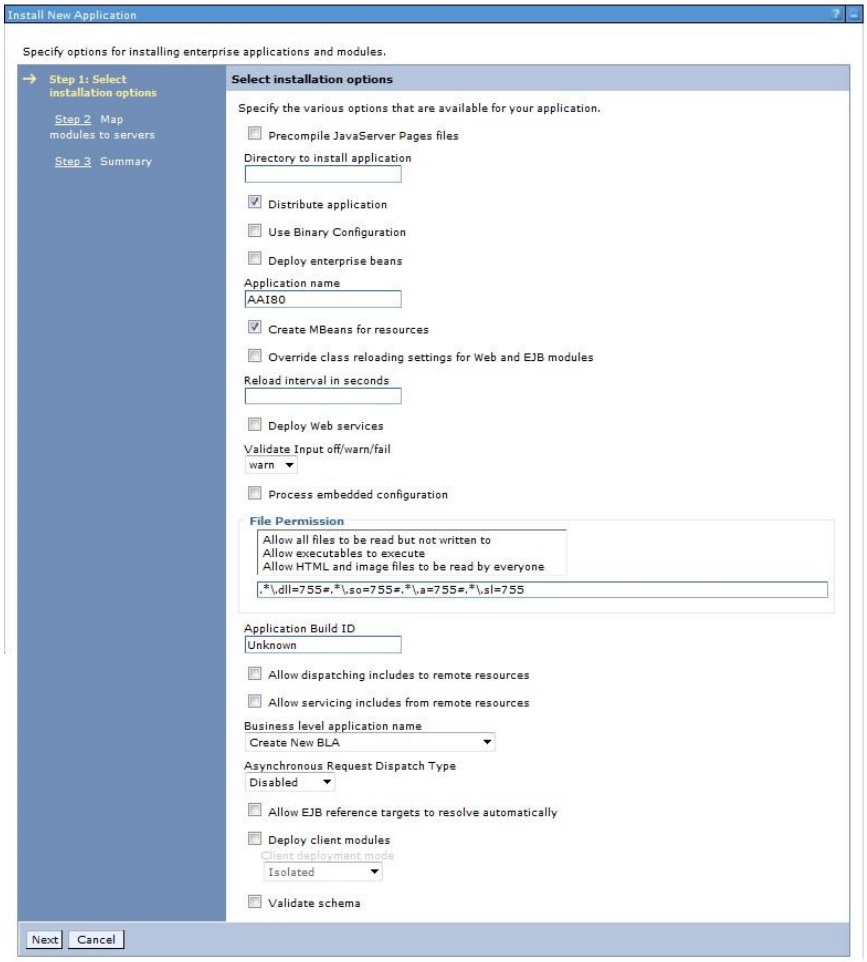
Preparing for the application installation

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



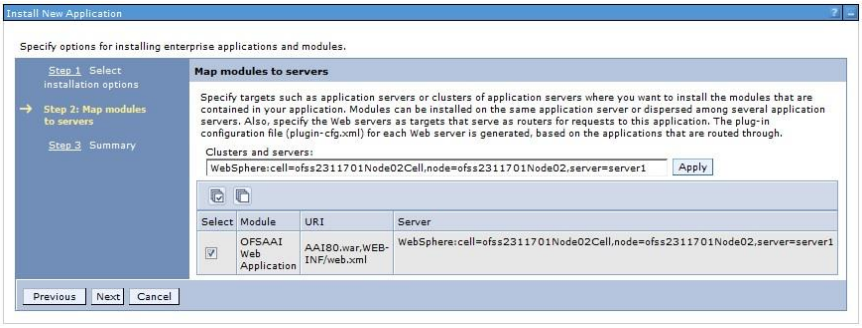
Installation Options

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



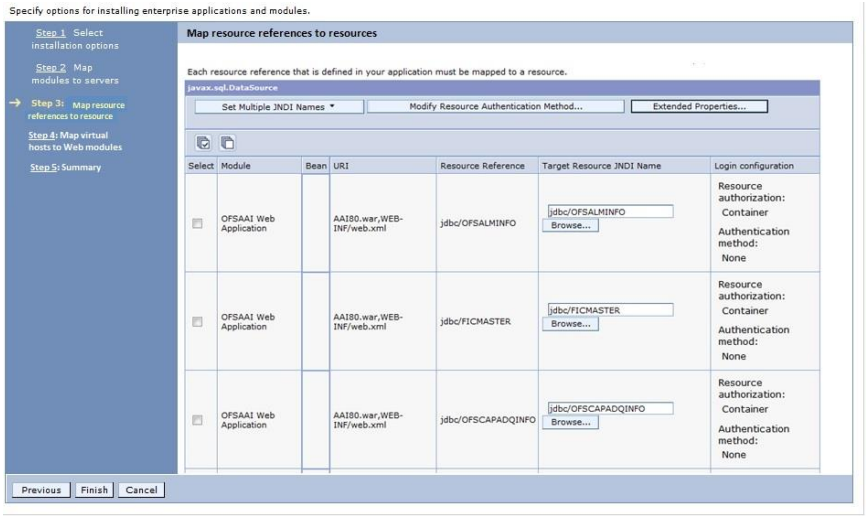
Install New Application

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



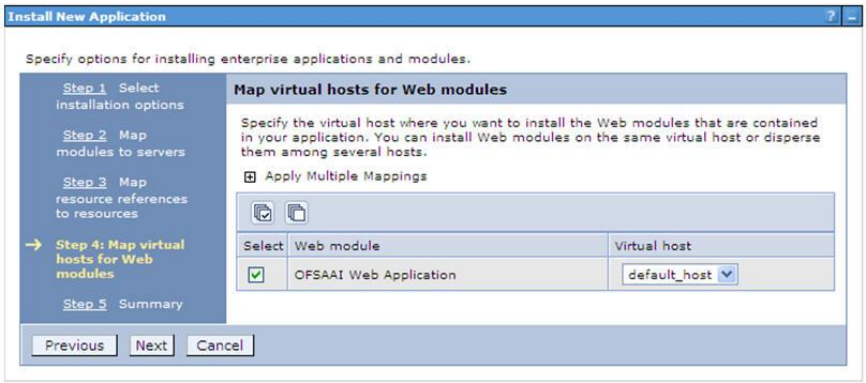
Map Modules to Servers

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



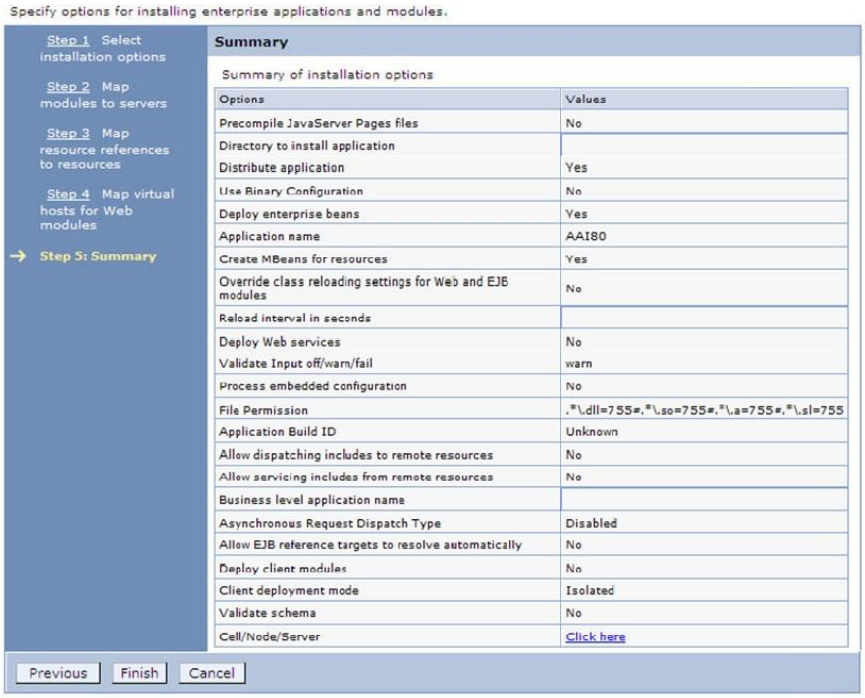
Map Resource References to Resources

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.
12. You can specify "config" for FICMASTER resource or "atomic" for atomic resource as the authentication method.
13. Select the **OFSAAI Web Application** check box and click **Next**. The *Map Virtual hosts for Web Modules* window is displayed.



Map Virtual host for Web Modules

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

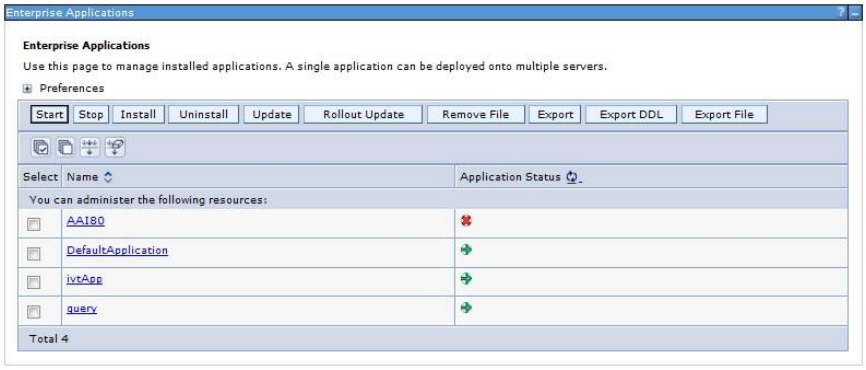


Summary

15. Click **Finish** and deploy the Infrastructure Application on WebSphere.
16. On successful installation, a message is displayed. Click **Save** and save the 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.



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.

8.1.2.2 Deploying WAR File on WebLogic

Explode EAR

To explode EAR, follow the below steps:

1. Create the "applications" folder under domain name. For example, `/Bea/user_projects/domains/ <Domain _name>/applications/<context_name>`.ear.
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/<context_name>.ear.`
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/<context_name>.ear.`
7. Copy `<$FIC_WEB_HOME/<context_name>.war file to <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear/<context_name>.war.`
8. Explode the `<context_name>.war` file by executing the following command to get the directory structure:

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

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

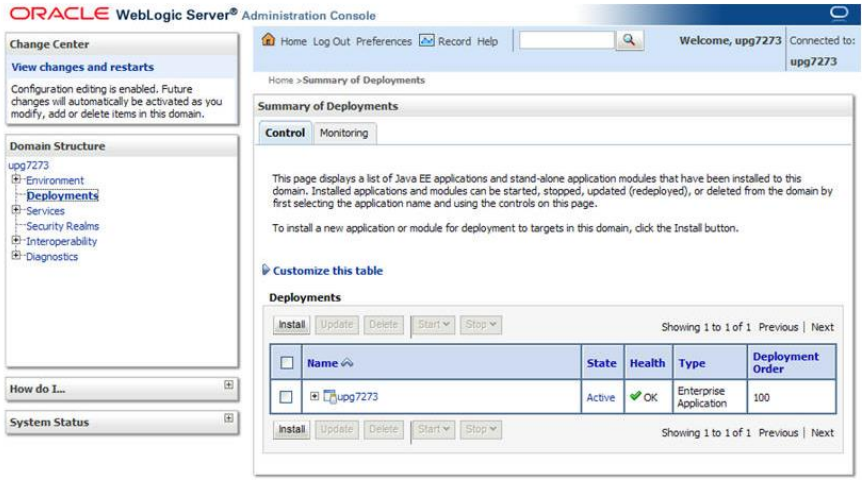
1. Navigate to the path `<WebLogic Installation directory>/user_projects/domains/<domain name>/bin` in the machine in which WebLogic is installed.
2. Start WebLogic by executing the command:

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

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

NOTE: Ensure that you have started Infrastructure Server by executing "./reveleusstartup.sh" as mentioned in Start Infrastructure section

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



Summary of Deployments

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

Explode EAR

To explode EAR, follow the below steps:

1. Create the "applications" folder under domain name. For example, /Bea/user_projects/domains/ <Domain _name>/applications.
2. Create <context_name>.ear folder under "applications" folder.
3. Copy the <$FIC_WEB_HOME/<context_name>.ear file to `<WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear`.
4. Explode the `<context_name>.ear` file by executing the command:

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

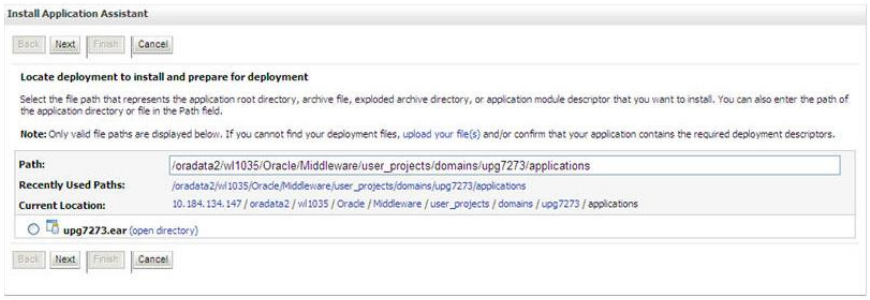
5. Delete the `<context>.ear` and `< context >.war` file (recently created).
6. Create a directory <context_name>.war under `<WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear`.
7. Copy `<$FIC_WEB_HOME/<context_name>.war` file to `<WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/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

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

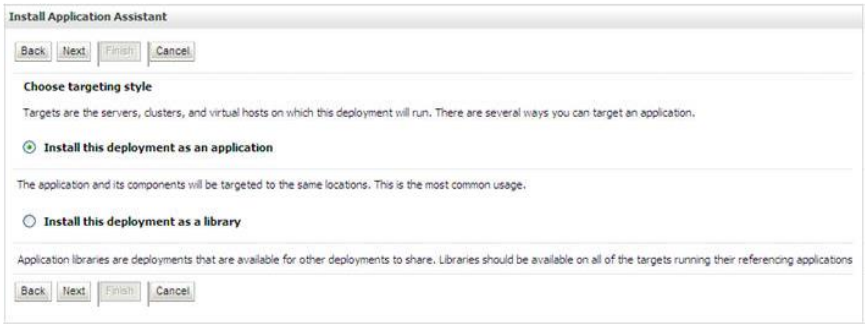
Install **Application**

To install Application:

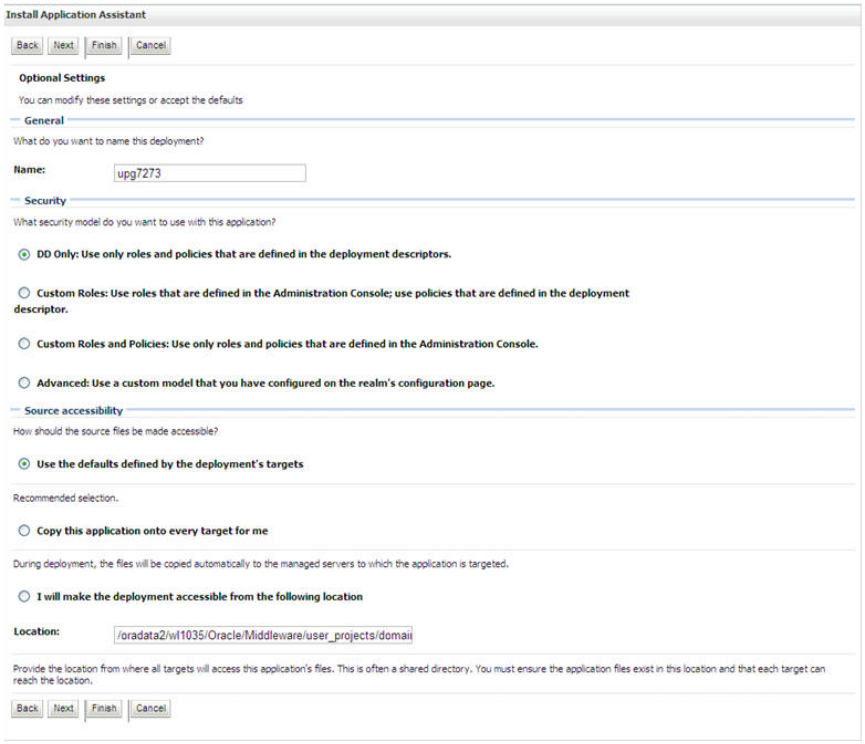
1. Open the Install Application Assistant.



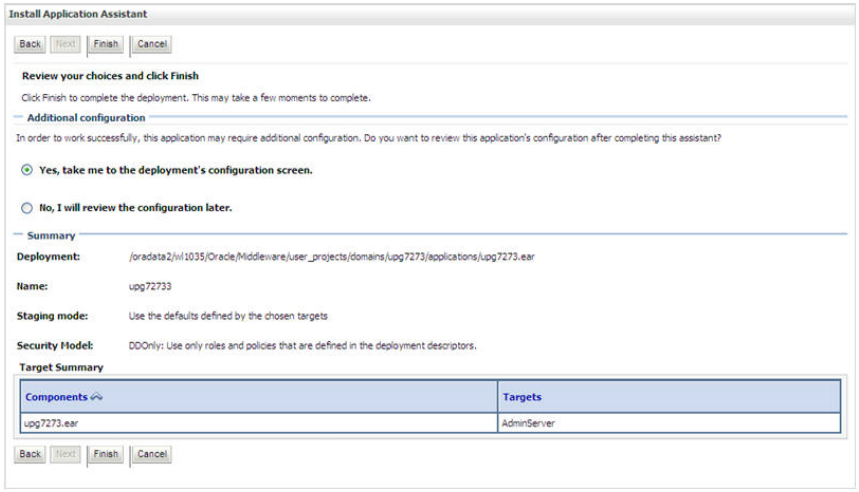
2. Click **Next**.



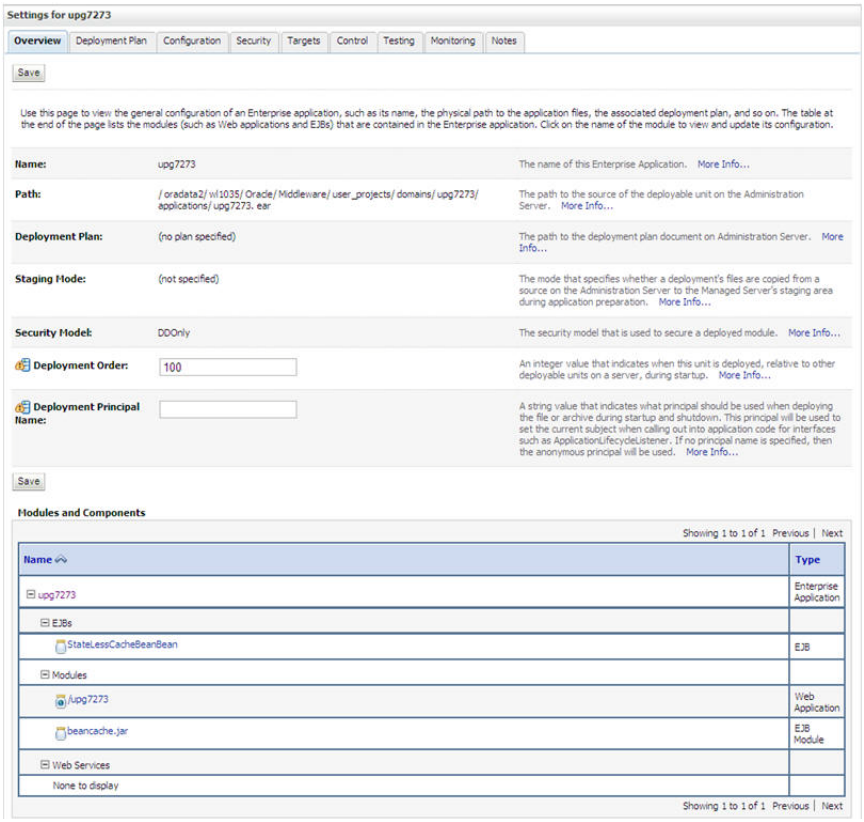
3. From the *Choose targeting style* section, select the **Install this deployment as an application** option and click **Next**. The *Optional Settings* window is displayed.



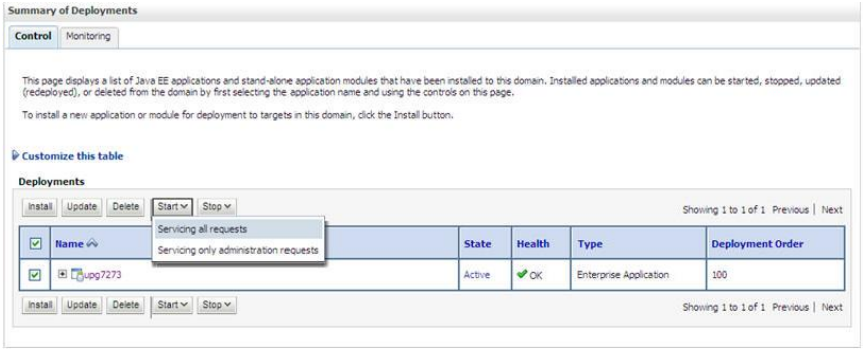
4. Enter a **Name** for the deployment if required.
5. Under the Security section, select the **DD only** option to specify that only roles and policies that are defined in the deployment descriptors should be used.
6. Select the **I will make the deployment available from the following location** option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



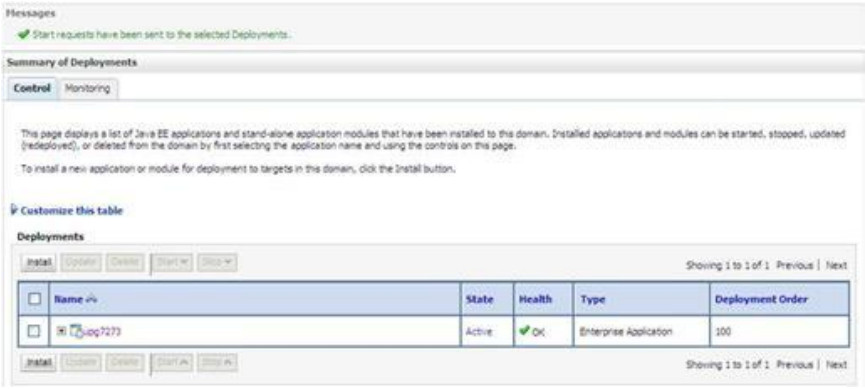
8. Select the **Yes, take me to the deployment's configuration screen** option and click **Finish**. The *Settings for <Deployment Name>* window is displayed.



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



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



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

8.1.2.3 Deploying WAR Files on Tomcat

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

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

1. Copy the `<context-name>.war` from `$FIC_WEB_HOME/<context-name.war>` to `<Tomcat Installation Directory>/webapps/` directory.

Start the Tomcat server. Refer Starting Web Application Servers for more details.

9 Appendix D - Starting/ Stopping Infrastructure Services

9.1 Start/Stop OFSAA Infrastructure Services

This chapter details on how to start and stop OFSAA Infrastructure services. This chapter includes the following sections:

- Starting Infrastructure Services
- Stopping Infrastructure Services

9.1.1 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 the following:

- When starting the server for the first time, it must be done in the foreground to answer prompts. Enter the password of the Oracle Configuration Schema, when it prompts for a system password. This password is asked only for the first time of starting Infrastructure server.
- If the Oracle Configuration Schema password is changed, delete the Reveleus.SEC file under $FIC_HOME/conf and start the server.
- When saving Database Server Details during Infrastructure Configuration, the Infrastructure server must also be started in the foreground (do not use nohup) to answer the following prompt which appears in the Unix server command on Save:

  ```
  The host 10.123.45.678 is currently unknown to the system

  The host key fingerprint is: 1023: 1e 35 46 7f 81 e7 16 6b 33 e8 59 f7 d cf 5b b1

  Do you want to allow this host key? [Yes|No|Always]:
  ```

  "Always" should be entered when prompted and Save operation will complete successfully in the Database Server Details screen.

- 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 table.

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 WebLogic Admin Console. 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:

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

     `./iccserver.sh`

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

4. To start Back-end Services:

   - 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 &`

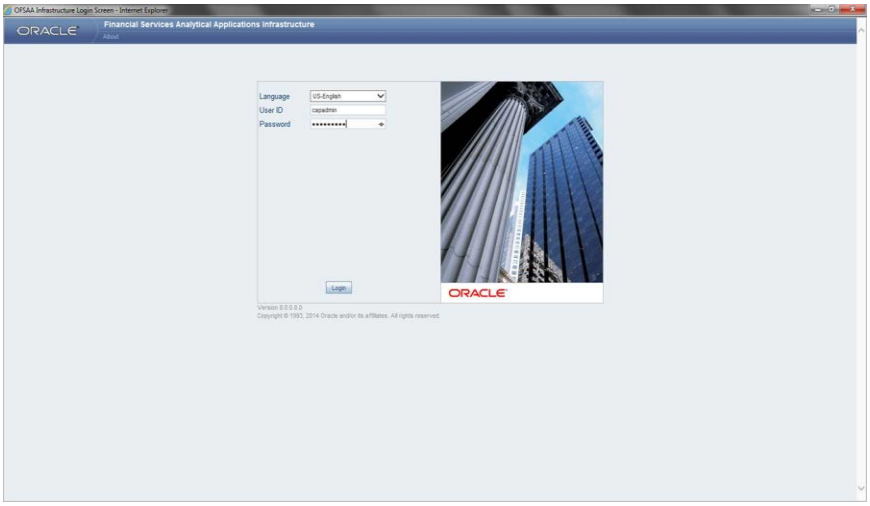
NOTE: This agent internally starts the Router, Message Server, OLAP data server and AM services.

5. From a client workstation, open the client browser and provide the URL as `http or https://<IP address>:<servlet port>/<context-name>/login.jsp`.

   For example, http://11.111.111.111:1111/ofsaai/login.jsp

   The OFSAAI login screen is displayed.

NOTE: If https configuration is enabled, the client browser will need to disable the proxy servers through the client browser's internet options.



There are two in-built system administration users profiles configured in the system:

- SYSADMN
- SYSAUTH

You can login to the system 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.

Once you have logged into the Infrastructure system, you need to perform the following additional configurations to setup the OFSAAI environment:

- Define Server Details for Database, Application and Web servers.
- Add Database Details.
- Create an Information Domain.
- Create a Segment.
- Create / Add User with access to all permissions.

NOTE: Each new file that is created in the ftpshare folder of any installation layer should be granted specific / explicit permission. If you encounter any problems during setup, please contact Infrastructure Support.

9.1.2 Starting Web Application Servers

Start the Web Application Server depending on the type from the following table.

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 WebLogic Admin Console. 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`

9.1.3 Stopping Infrastructure Services

To stop Infrastructure services:

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:

   `./iccservershutdown.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
```

9.1.4 Stopping Web Application Servers

Stop the Web Application Server depending on the type from the following table.

Stop Option	Description
Stopping 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: `./stopServer.sh server1`
Stopping 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 WebLogic Admin Console. Stop the application **<context name>.ear**.
Stopping Tomcat Application	On the machine in which Tomcat is installed, navigate to *<Tomcat_Install_Directory>/bin* and execute the command: `./shutdown.sh`

10 Appendix E - Accessing OFSAA Application

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

10.1 Access the OFSAA Application

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

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

   For example, `https://111.222.333.444:5555/ofsaa/login.jsp`

   The OFSAA login window is displayed as follows:

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

   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.

11 Appendix F - Post Deployment Configurations

11.1 Post Deployment Configuration

This chapter covers the following topics:

- Deploying the Application
- Logging as System Administrator
- Creating Application Users
- Mapping Application User(s) to User Group

11.2 Deploying the Application

This section explains steps to deploy the application.

To deploy the application, follow these steps:

1. Execute the below query:

   ```
   select * from aai_menu_b b where b.v_menu_id in ('OFS_IFRS');
   ```

2. Update the URL: "`V_MENU_URL`" and "`V_URL_PARAMETERS`".

11.3 Logging as System Administrator

Post installation, the first login into Infrastructure is possible only for a System Administrator through user id "**sysadmn**". This ID is created at the time of installation with the password provided during installation. Enter login id "**sysadmn**" and password that was provided during installation. Click **Login**.

11.4 Creating Application Users

Create the application users in the OFSAA setup prior to use.

NOTE: This step may not be required if you have already setup users in the OFSAA setup. For more information refer User Creation section from the *Oracle Financial Services Analytical Applications Infrastructure User Guide* at OTN Documentation Library.

11.5 Mapping Application User(s) to User Group

Starting the OFSAA 8.0 release, with installation of every OFSAA Application Pack, pre-configured application user groups are seeded. These user groups are unique to every OFSAA Application Pack and have application roles pre-configured. User Groups seeded with the OFS AAAI Application Pack are listed in the table.

Name	Description
Modeler Group	User mapped to this group will have access to all the menu items for Enterprise modeling but will not have authorization rights for sandbox population, model deployment and modeling technique authorization.
Modeling Administrator Group	User mapped to this group will have access to all the menu items for Enterprise modeling and will be have authorization rights for sandbox population, model deployment and modeling technique authorization.
Inline Processing Admin Group	User mapped to this group will have access to all the menu items and actions for Inline Processing module.
Business Administrator	User mapped to this group will have access to all the menu items and actions for advanced operations of metadata objects.
Business Authorizer	User mapped to this group will have access to all the menu items and actions for authorization of changes to metadata objects.
Business Owner	User mapped to this group will have access to all the menu items and actions for read and write of metadata objects.
Business User	User mapped to this group will have access to all the menu items and actions for access and read of metadata objects.
Identity Administrator	User mapped to this group will have access to all the menu items for managing User entitlements, User Group Entitlements and Access Management configurations.
Identity Authorizer	User mapped to this group will have access to all the menu items for authorizing User entitlements, User Group Entitlements and Access Management configurations.
System Administrator	User mapped to this group will have access to all menu items for managing the setup configurations.
Object Administrator	User mapped to this group will have access to all menu items for managing object migration and metadata traceability using metadata browser.
Guest Group	User mapped to this group will have access to certain menu items with only access privileges.

12 Appendix G - OFSAA Landing Page

This appendix includes the following topics:

12.1 Installation Checklist

Before starting on the OFSAAI Installation Kit, ensure that the following pre-installation activities checklist is completed successfully. It is recommended to take a print out of the checklist and follow the checklist step by step.

Table with (General, Pre-Install, Install, and Post Install) Checklist

Installation Checklist

Step No.	Task	Done
General		
1	Check the OFS IFRS Release Notes and Read Me document for any additional steps to be performed on OFS Treasury Pack or OFSAAI. Note: For more details, contact Oracle support.	☐
IFRS Pack Pre Installation + During Installation		
1	Prior to installation, ensure that sufficient free temp space (minimum 1 GB free) is available in /tmp directory of unix server hosting OFSAAI.	☐
IFRS Pack Post Installation		
1	Perform post-installation steps. For more information, refer to Post Installation.	☐

12.2 OFSAA Landing Page for IFRS Administrator

On successful authentication, the OFSAA 8.0 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 panel format.

12.2.1 Accessing OFSAA Infrastructure

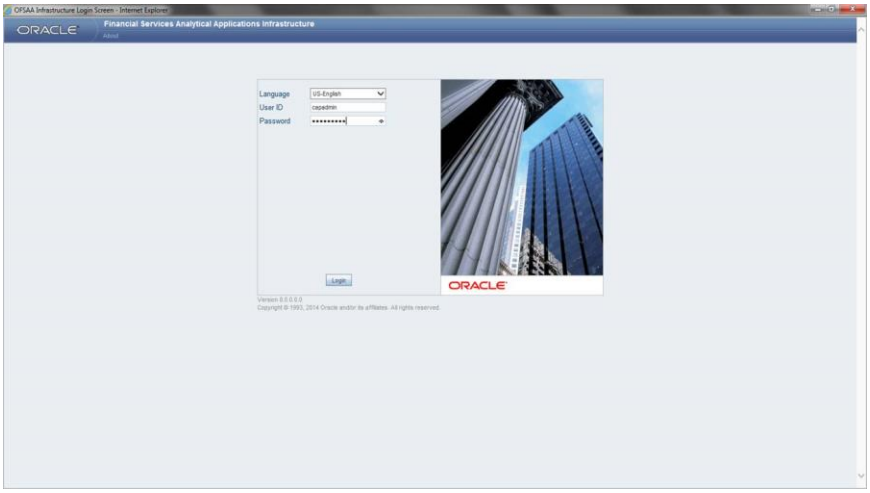
Infrastructure can be accessed through your web-browser as soon as the System Administrator (SA) installs and configures Oracle Financial Services Analytical Applications Infrastructure.

The SA will provide you with a link through which you can access Oracle Financial Services Analytical Applications Infrastructure. You can access the Infrastructure application login screen through your web-browser using the URL: <IP Address of the Web Server > :<servlet port>/<context name>/login.jsp.

You can also login to the Infrastructure application with the host name instead of the IP address. To do this, it is necessary to have the host name mapped to the IP address in the hosts file the client Windows machine. The hosts file will be in %systemroot%\system32\ drivers\etc\ directory.

12.2.2 OFSAAI Login

While accessing Oracle Financial Services Analytical Applications Infrastructure, the Splash screen is as displayed:



You can select the required language from the Language drop-down list. The language options displayed in the drop down are based on the license. Based on the selection of Language, the appropriate language login screen is displayed.

Enter the User ID and Password provided by the System Administrator and click Login. You will be prompted to change your password on your first login. Alternatively, you can also choose to change your password any time.

In the *Change Password* screen, enter a new password, confirm it and click **OK** to view the Splash screen. Refer to the following guidelines for Password Creation:

- Passwords are displayed as asterisks (stars) while you enter. This is to ensure that the password is not revealed to other users.
- Ensure that the entered password is at least six characters long.
- The password must be alphanumeric with a combination of numbers and characters.
- The password should not contain spaces.
- Passwords are case sensitive and ensure that the Caps Lock is not turned ON.
- By default the currently used password is checked for validity if password history is not set.
- New password should be different from previously used passwords based on the password history which can be configured.
- If you encounter any of the following problems, contact the System Administrator:
- Your user ID and password are not recognized.
- Your user ID is locked after three consecutive unsuccessful attempts.
- Your user ID has been disabled.
- Guest user cannot change the password.

12.3 Enabling a Product within an Application

Each product is marketed by a separate team and which is headed by a Sales Manager who reports to the Sales Head. Each Sales Manager in turn has two Sales Officers who are responsible for sales and profitability of the product.

The Sales Head has decided that the Sales Officer of each product will not have access to the information of other products. However, each Sales Manager will have access to Sales figures of the other products.

Using the Oracle Infrastructure Security Hierarchy feature Administrator can provide information security at hierarchy level by defining security options for each hierarchy node. Thus, the Bank can control access of information at a node level and not increase the overheads.

This is how it is done in Oracle Infrastructure:

- First, the users are created in Oracle Infrastructure and then, a business hierarchy (as defined above) is created.
- Now, the bank can restrict access of certain information to certain people in the Hierarchy Security configuration. In this window,
- The administrator can control security by mapping the users to various nodes in hierarchy.

For example, the administrator maps Sales Officer 1 and Sales Officer 2 to only the Personal Loans Node in the Product hierarchy. This restricts Sales Officer 1 and 2 to only viewing and maintaining their particular node in the hierarchy.

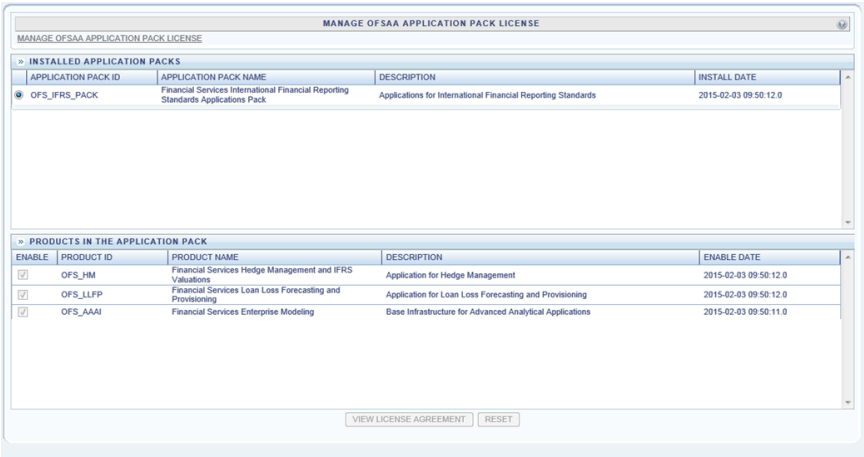
By default, all the users mapped to a domain can access all the hierarchy levels to which they are mapped. This function allows the administrator to restrict or exclude a user/s from accessing restricted nodes.

12.4 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 and expand** *Financial Services Analytical Applications Infrastructure >> Administration and Configuration >> System Configuration.*
3. Click **Manage OFSAA Product License(s)**
4. The **Manage OFSAA Product License(s)** page is displayed as below.



This page includes the following sections:

- INSTALLED APPLICATION PACKS
- PRODUCTS IN THE APPLICATION PACK

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

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

Field	Description
Enable	Select the checkbox to enable a product within an Application Pack.
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.

7. Select an Application Pack by clicking the radio button next to the Application Pack ID field.
8. Selecting an Application Pack will display below the products within the Application Pack.

   Products which were enabled at the time of installation will have the checkbox "ENABLE" disabled. You can enable any product within the selected Application Pack by clicking the "ENABLE" checkbox against the respective Product ID.
9. Click on **RESET** button to cancel the operation and refresh the screen.
10. Click **VIEW LICENSE AGREEMENT** button.

    The *License Agreement* section is displayed.
11. Select the option **I ACCEPT THE LICENSE AGREEMENT**.
12. Click **ENABLE**.
13. An appropriate 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 subsequently, authorize the actions by logging in as System Authorizer.

NOTE: For more information refer to *Mapping/Unmapping Users* section in the *Oracle Financial Services Analytical Applications Infrastructure User Guide 8.0*.
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.

13 Appendix H - Additional Configuration

13.1 Additional Configurations

The following sections provide detailed module specific post installation configurations.

This section includes the following topics:

13.1.1 FTP/SFTP Configuration for File Transfer

To perform Excel/Document upload in a multi-tier architecture, where App server and Web server are on different machines, the Webserver user should be provided with the App layer FTP / SFTP user credentials. File transfer to App layer will be performed during the Excel Upload.

In single-tier architecture with Webserver on remote machine, the file transfer is performed through FTP / SFTP while accessing the ExcelUpload functionality. Here the App, Web, and the DB layers are in the same machine, but the Webserver is in a different machine. Therefore, the files are transferred to App layer with App layer FTP / SFTP user credentials.

NOTE: In the above two scenarios, the UNIX user and FTP / SFTP user of the App layer can be same or different. In case the users are different, the FTP / SFTP user should have the write permission in the App layer.

In single-tier architecture, where Webservers are on same machine, the `ExcelUpload` folder will be created dynamically while accessing the Excel Upload functionality. Therefore, the Web server

user (WebLogic, WebSphere, or Tomcat) must have the read-write permissions assigned to facilitate the creation of `ExcelUpload` folder and its sub directories in the `App Layer>ftpshare>STAGE` path.

You can also create the `ExcelUpload` folder manually in the `App Layer> ftpshare>STAGE` path and the read-write permissions can manually be given for the Webserver user, to access the Excel Upload functionality.

1. Perform a manual SFTP (through PuTTY) from **Application layer User** profile to **Web Server User** profile which are present on different machines.
2. Example: `<App Layer path>scp nohup.out <user>@<Web Server path>:/export/home/<user>`
3. Specify **Yes** when prompted for permission to add entry into "known_host" file with the options Yes/No/Always.
4. A confirmation message is displayed "*Permanently added <Web Server path> (RSA) to the list of known hosts*".
5. Repeat the same process and perform manual SFTP from **Web Server User** profile to **Application Layer User** profile.
6. Restart the servers. For more information, refer Starting Infrastructure.

Once the entries of OFSAAI Application and Web Server machine's host key has been populated in the "known_host" files on both the machines, you can perform "Excel/Document upload" successfully.

13.1.2 Configure Infrastructure Server Memory

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

13.1.2.1 Infrastructure 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.

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

   ```
   X_ARGS_APP =" "$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.
For Run and Rule executions, the following value is recommended:

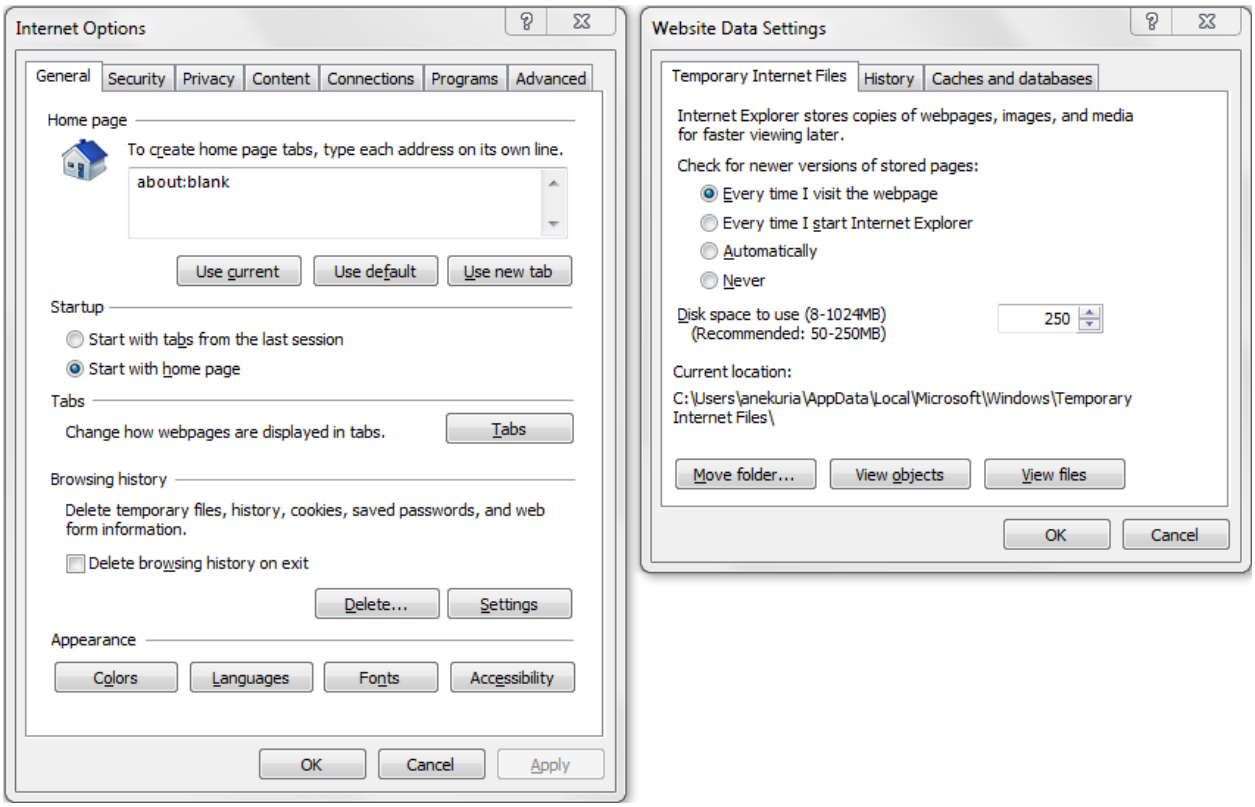
```
X_ARGS_RNEXE="-Xms1g -Xmx1g -XX:+UseAdaptiveSizePolicy -
XX:MaxPermSize=512M -XX:+UseParallelOldGC -
XX:+DisableExplicitGC"

X_ARGS_RLEXE="-Xms1g -Xmx1g -XX:+UseAdaptiveSizePolicy -
XX:MaxPermSize=512M -XX:+UseParallelOldGC -
XX:+DisableExplicitGC"
```

13.1.3 Internet Explorer Settings

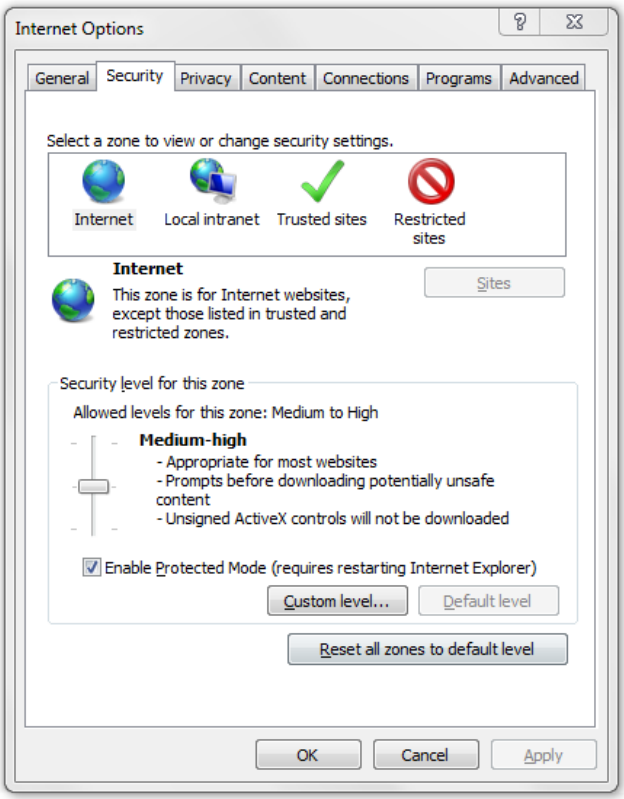
NOTE: OFSAAI supports only default zoom setting in Internet Explorer, that is, 100%. Cookies should be enabled.

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

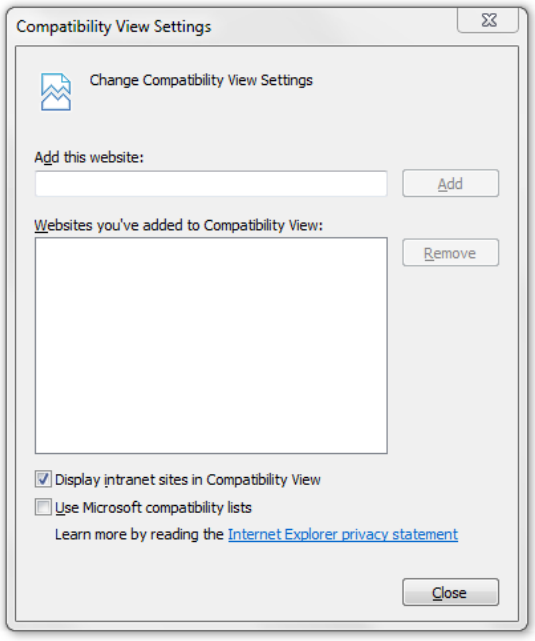
1. Open Internet Explorer. Select **Tools** > **Internet Options**. The *Internet Options* window is displayed.
2. Click the **Settings** button. The *Settings* window is displayed.
3. Select the option **Everytime I Visit the webpage** and click **OK**.



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**.



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. Click **Close** button.

13.1.4 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.

13.1.5 Configure Infrastructure Ports

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

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

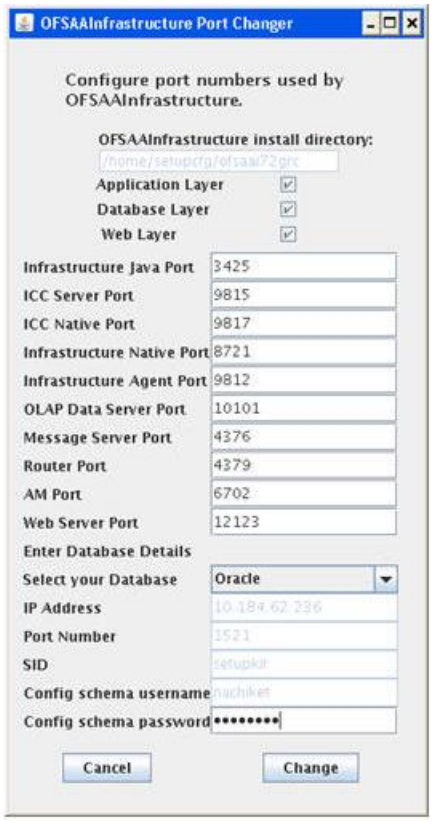
- GUI
- CMD

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

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

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

3. The OFSAA Infrastructure Port Changer window is displayed.



OFSAA Infrastructure Port Changer

The OFSAA Infrastructure Port Changer window displays the following:

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

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

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

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

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

To execute `PortC.jar` in CMD mode:

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

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

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

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

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

13.1.6 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.

13.1.7 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 to Create and Deploy EAR/ WAR files section.

13.1.8 Infrastructure LDAP Configuration

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

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

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

13.1.8.1 Configure Infrastructure "Configuration Schema"

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

Configuration Schema

PARAMNAME	Description	PARAM Value Example
AUTHENTICATIONTYPE	Authentication type	2 - AUTHENTICATIONTYPE value must be 2 for LDAP
ROOTCONTEXT	The Root Context for the LDAP Directory	dc=<Reveleus>, dc=<com>
ROOTDN	The Root dn for LDAP directory	cn=<Manager>, dc=<Reveleus>, dc=<com>
ROOTPASS	Password for the Root	<secret>
LDAPURL	LDAP URL	<ldap://10.80.193.35:389/>
LDAP_SSL_MODE	LDAP in SSL Mode	N for non - SSL and Y for SSL

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

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

13.1.8.2 Configure OpenLDAP Files

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

   Note: Make sure that the ROOTCONTEXT in the Domains.ldif and Reveleus.ldif files are the same as slapd.conf file.
3. Provide the appropriate entries for ROOTDN, ROOTPASS, and ROOTCONTEXT in `slapd.conf` file in the `OpenLDAPServer` folder.
4. Add the text "include schema/reveleusSchema.schema" as the first line of the `slapd.conf` file

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

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

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

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

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

NOTE: DSNID refers to Information Domain name.

```
dn: DSNID=<DSN ID>,ou=Domains,@LDAP_DIRECTORY_ROOTCONTEXT@

changetype: add

mappedsegments: <Mapped segments/~>

dsnid: <DSN ID>

infodomname: < Information Domain Name>

objectClass: Infodom

objectClass: top

infodomdescription: < Information Domain Description>
```

Example:

```
dn: DSNID=FUSIONMOCK, ou=Domains, dc=FTP1,dc=com

mappedsegments: ~

dsnid: FUSIONMOCK

infodomname: FUSIONMOCK

objectClass: Infodom

objectClass: top

infodomdescription: FUSIONMOCK
```

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

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

13.1.8.3 Migrate Data from CSSMS tables to LDAP server

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

To migrate data from CSSMS tables to LDAP server:

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

Select Source & Destination for Migration

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

Select Entities to Migrate

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

3. Select the entities that you wish to migrate and click Migrate. The data is migrated and a confirmation dialog is displayed.
4. You can verify the data migrated to LDAP server through the LDAP Browser.

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

13.1.9 Configure OFSAAI Web Services

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

13.1.9.1 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="$SERVICENAME" PORTTYPENAME="$PORTTYPENAME"

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"
RETURNTYPE="$RETURNTYPE"
CLASSNAME="$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.

13.1.9.2 Attributes for WEBSERVICE tag

WEBSERVICE tag

Placeholder	Description
$CODE	Unique number within the xml file and cannot be 999 or 0.

Placeholder	Description
$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.
$PORTTYPENAME	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).

13.1.9.3 Attributes for OPERATION tag

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

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.

$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.

13.1.9.4 Attributes for INPUT tag

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.

13.1.9.5 Attributes for OUTPUT tag

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.

13.1.9.6 web.xml Entries

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.

13.1.10 Deploy OFSAAI Web Services

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

1. Complete the manual configuration of OFSAAI Web Services.

2. Navigate to <OFSAAI Installation Directory>/EXEWebService/<WebServer> and execute the command:

   ./ant.sh

3. This will trigger the EAR/WAR file creation, which is required for the deployment.
4. 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.

13.1.11 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 form 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.

13.1.12 Configure Message Details in Forms Designer

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

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

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

NotificationConfig.cfg File

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

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.

13.1.13 Clearing Application Cache

This is applicable to all Web Servers (i.e. 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>`

13.1.14 Configuring Password changes

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

13.1.14.1 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:

   ./reveleusstartup.sh

   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.
5. Post successful startup of the service, if required, the Infrastructure server may be shut down and restarted in the background using nohup mode.

OFSAA Infrastructure Atomic Schema password modification

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

1. Change the Atomic schema User Password in the database.
2. Login to the application from the browser using SYSADMN account or any user id, which has System Administrator role mapped.
3. Navigate to System Configuration > Database Details window. Select the appropriate connection and edit the password.
4. Navigate to Unified Metadata Manager > Technical Metadata> Data Integrator > Define Sources window. Update the appropriate Source details.
5. If you are using Apache Tomcat as Web server, update the <Context> -> Resource tag details in Server.xml file from the $CATALINA_HOME/conf folder. (In case of Tomcat only Atomic <Resource> will exist).
6. 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:

d. Login to the WebLogic Administration Console, from the left side menu

e. 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.

f. Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources need to be modified).

7. Restart the OFSAAI services.

14 Appendix I - Patching OFSAA Infrastructure Installation

14.1 Patching Your OFS IFRS Pack Installation

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

Refer http://support.oracle.com for more information on latest releases.

15 Appendix J - Grants for Atomic/ Config Schema

This Appendix includes the following sections:

15.1 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

```
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
/
```

NOTE: If you intend to use Oracle OLAP feature, execute the below grant on all the ATOMIC schema(s):

```
grant olap_user to &database_username
```

15.2 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

/
```

15.3 Grants on 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 BATCH_TASK 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
/
```

16 Appendix K - Configuring Application Pack XML Files

16.1 OFS_IFRS_PACK.xml

The OFS_ IFRS _PACK.xml file holds details on the various products that are packaged together in IFRS Application Pack.

This section details the various tags/ parameters available in the file and the values that need to be updated. Prior to installing the IFRS Application Pack in SILENT mode, it is mandatory to update this file.

```
<APP_PACK_CONFIG>
        <APP_PACK_ID>OFS_IFRS_PACK</APP_PACK_ID>
        <APP_PACK_NAME>Financial Services International Financial Reporting Standards Applications</APP_PACK_NAME>
        <APP_PACK_DESCRIPTION>Applications for International Financial Reporting Standards Applications</APP_PACK_DESCRIPTION>
        <VERSION>8.0.0.0.0</VERSION>
        <APP>
                <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
                <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
                <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
                <VERSION>8.0.0.0.0</VERSION>
        </APP>
        <APP>
                <APP_ID PREREQ="OFS_AAI" DEF_SEL_FLG="NO" ENABLE="YES">OFS_AAAI</APP_ID>
                <APP_NAME>Financial Services Enterprise Modeling</APP_NAME>
                <APP_DESCRIPTION>Base Infrastructure for Advanced Analytical Applications</APP_DESCRIPTION>
                <VERSION>8.0.0.0.0</VERSION>
        </APP>
        <APP>
                <APP_ID PREREQ="OFS_AAAI" ENABLE="YES">OFS_LLFP</APP_ID>
                <APP_NAME>Financial Services Loan Loss Forecasting and Provisioning</APP_NAME>
                <APP_DESCRIPTION>Application for Loan Loss Forecasting and Provisioning</APP_DESCRIPTION>
                <VERSION>8.0.0.0.0</VERSION>
        </APP>
        <APP>
                <APP_ID PREREQ="OFS_AAAI" ENABLE="YES">OFS_HM</APP_ID>
                <APP_NAME>Oracle Financial Services Hedge Management and IFRS Valuations</APP_NAME>
                <APP_DESCRIPTION>Application for Hedge Management and IFRS Valuations</APP_DESCRIPTION>
                <VERSION>8.0.0.0.0</VERSION>
        </APP>
</APP_PACK_CONFIG>
```

16.1.1 Configuring OFS_ IFRS _PACK.XML file

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

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

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

OFS_IFRS_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	Y	Unique Seeded Value	DO NOT modify this

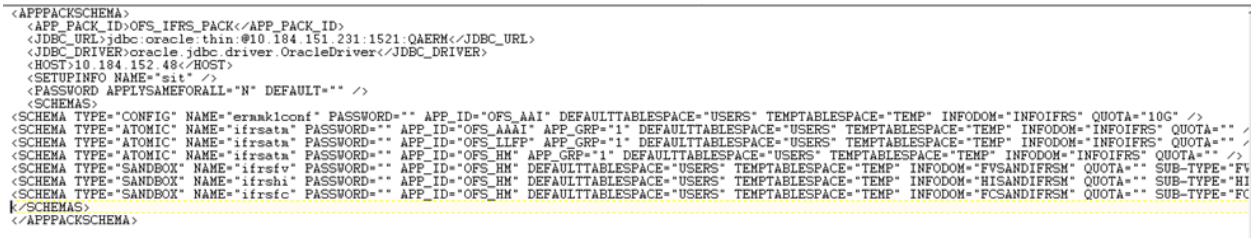
Tag Name/ Attribute Name	Description	Mandatory (Y/ N)	Default Value/ Permissible Value	Comments
	Pack Name			value.
APP_PACK_DESCRIPTION	Unique Application Pack Description	Y	Unique Seeded Value	DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value	DO NOT modify this value.
APP	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.
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.

Tag Name/ Attribute Name	Description	Mandatory (Y/ N)	Default Value/ Permissible Value	Comments
				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.

16.2 OFS_IFRS_SCHEMA_IN.xml

The OFS_IFRS_SCHEMA_IN.XML file contains details on the various application schemas that should be created prior to the IFRS Application Pack installation.

This section details 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.



16.2.1 Configuring OFS_IFRS_SCHEMA_IN.XML file

Creating database schemas, object within schemas, and assigning appropriate grants are the primary steps in the installation process of OFSAA Applications. The OFS_IFRS_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.

OFS_IFRS_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))(ADDRES	

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
			S=(PROTOCOL=TCP)(HOST=dbhost2.server.com)(PORT=1521))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=service1)))	
<JDBC_DRIVER>	By default this driver name is seeded. Note: Do not edit this attribute value.	Mandatory	Example, oracle.jdbc.driver.OracleDriver	Only JDBC Thin Driver is supported. DO NOT modify this value.
<HOST>	Enter the Hostname/ IP Address of the system on which you are installing the OFSAA components.	Mandatory	Host Name/ IP Address	
<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:	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.

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
	dev_ofsaaconf, uat_ofsaaatm.			
<SETUPINFO>/ PREFIX_SCHEMA_NAME	Identifies if the value specified in <SETUPINFO>/ NAME attribute should be prefixed to the schema name.	Optional	Y or N	Default value is N.
<PASSWORD>/ DEFAULT*	Enter the password if you want to set a default password for all schemas. Note: You also need to set APPLYSAMEFORALL 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.	
<PASSWORD>/ APPLYSAMEFORALL	Enter as Y if you want to apply the password specified in DEFAULT attribute for all the schemas. If you enter as N, you need to provide individual passwords for all	Mandatory	Default – N Permissible – Y or N	Note: Setting this attribute value is mandatory, If DEFAULT attribute is set.

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
	schemas. 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.			
<SCHEMA>/ TYPE	The different types of schemas that are supported in this release are ATOMIC, CONFIG, SANDBOX, and ADDON. By default, the schemas types are seeded based on the Application Pack. Note: Do not edit this attribute	Mandatory	ATOMIC/CONFIG/SANDBOX/ADDON Note: SANDBOX AND ADDON schemas are not applicable for OFS AAAI Application Pack.	Only One CONFIG schema can exist in the file. This schema identifies as the CONFIGURATION schema that holds the OFSAA setup details and other metadata information. Multiple ATOMIC/ SANDBOX/ ADDON schemas can exist in the file. ATOMIC schema refers to the Information Domain schema. SANDBOX

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
	value.			schema refers to the SANDBOX schema. ADDON schema refers to other miscellaneous schema (not applicable for this Application Pack).
<SCHEMA.>/ NAME	By default, the schemas names are seeded based on the Application Pack. You can edit the schema names if required. Note: The Schema Name will have a prefix of the SETUPINFO/ NAME attribute. SCHEMA NAME must be same for all the ATOMIC Schemas of applications within an Application Pack.	Mandatory	The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore '_'.	SETUPINFO/ NAME attribute value would be prefixed to the schema name being created. For E.g. if name is set as 'ofsaaatm' and setupinfo as 'uat' then schema being created would be 'uat_ofsaaatm'. NAME should be same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack).
<SCHEMA>/ PASSWORD*	Enter the password of the schema to be	Optional	The maximum length allowed is 30 characters. Special characters are not	Note: You need to mandatorily enter the password if you have

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
	created. Note: If this attribute is left blank, then the password specified in the <PASSWORD>/ DEFAULT attribute is applied as the Schema Password.		allowed.	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	Optional	Default – TEMP Permissible – Any existing	Modify this value to associate any valid

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
	temporary tablespace for the DB User. Note: If this attribute is left blank, then TEMP is set as the default tablespace.		valid temporary tablespace name.	tablespace with the schema.
<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	Optional	Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.	

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
	based on the Application Pack if no value is specified for this attribute.			

*On successful execution of the utility, the entered passwords in the **OFS_IFRS_SCHEMA_IN.xml** file are nullified.

17 Appendix L - Configuring OFSAAI_InstallConfig.xml File

17.1 Configuring OFSAAI_InstallConfig.xml file

1. Navigate to the folder *OFS_IFRS_PACK/OFS_AAI/conf/*.
2. Open the file **OFSAAI_InstallConfig.xml** in text editor.
3. Configure the **OFSAAI_InstallConfig.xml** as mentioned in the below table:
4. 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.

InteractionVariableName	Significance and Expected Value	Mandatory
<Layer name="GENERAL">		
WEBAPPSERVERTYPE	Identifies the web application server on which the OFSAA Infrastructure web components would be deployed. The below numeric value should be set depending on the type: ▪ Apache Tomcat = 1 ▪ IBM WebSphere Application Server = 2 ▪ Oracle WebLogic Server = 3 For example: <InteractionVariable name="WEBAPPSERVERTYPE">3</InteractionVariable>	Yes
DBSERVER_IP	Identifies the hostname or IP address of the system on which the Database Engine is hosted. **Note**: For RAC Database , the value should be NA. For example: <InteractionVariable name="DBSERVER_ IP">14.15.16.17</InteractionVariable> OR <InteractionVariable name="DBSERVER_ IP">dbhost.server.com</InteractionVariable>	Yes

InteractionVariableName	Significance and Expected Value	Mandatory
ORACLE_SID/SERVICE_ NAME	Identifies the Oracle DB Instance SID or SERVICE_NAME **Note**: The Oracle_SID value should be exactly the same as it is mentioned in JDBC_URL. For example: <InteractionVariable name="ORACLE_SID/SERVICE_NAME">ofsaser</InteractionVariable>	Yes
ABS_DRIVER_PATH	Identifies the directory where the JDBC driver (ojdbc<version>.jar) exists. This would typically be the $ORACLE_HOME/jdbc/lib For example: <InteractionVariable name="ABS_DRIVER_ PATH">">/oradata6/revwb7/oracle</InteractionVariable> **Note**: Refer to JDBC Jar Files section for identifying the correct “ojdbc<version>.jar” version to be copied.	Yes
OLAP_SERVER_ IMPLEMENTATION	Identifies if the OFSAA Infrastructure OLAP component needs to be configured depending on whether you intend to use the OLAP feature. The below numeric value should be set depending on the choice: YES - 1 NO - 0	No
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.		
SFTP_ENABLE	Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The below numeric value should be set depending on the choice: SFTP - 1 FTP - 0	Yes
Note: The default value set is 1 as this release of the OFSAA Infrastructure mandates the SFTP service be up and running on the system where OFSAA Infrastructure would be installed.		

InteractionVariableName	Significance and Expected Value	Mandatory
FILE_TRANSFER_PORT	Identifies the port used for the file transfer service. The default value specified is 22 (SFTP). Specify value as 21 or any other PORT value if value for SFTP_ENABLE is 0. For example: <InteractionVariable name="FILE_TRANSFER_ PORT">21</InteractionVariable>	Yes
LOCALE	Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English. For example: <InteractionVariable name="LOCALE">en_US</InteractionVariable>	Yes
Note: The below ports are used internally by the various OFSAA Infrastructure services. The default values mentioned below are set in the installation. If you intend to specify a different value, update the parameter value accordingly and ensure this port value is in the range of 1025 to 6553 and the respective port is enabled.		
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
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.		
HTTPS_ENABLE	Identifies if the UI should be accessed using HTTP or HTTPS scheme. The default value set is 0. The below numeric value should be set depending on the choice:	Yes

InteractionVariableName	Significance and Expected Value	Mandatory
WEB_SERVER_IP	Identifies the HTTP Server IP/ Hostname or Web Application Server IP/ Hostname, to be used for accessing the UI. This IP would typically be the HTTP Server IP. If no separate HTTP Server is available, the value should be Web Application Server IP/Hostname. For example: <InteractionVariable name="WEB_SERVER_ IP">10.11.12.13</InteractionVariable> OR <InteractionVariable name="WEB_SERVER_ IP">myweb.server.com</InteractionVariable>	No
WEB_SERVER_PORT	Identifies the Web Server Port. This would typically be 80 for non SSL and 443 for SSL. If no separate HTTP Server exists, the value should be the port configured for Web Server. **Note**: The port value will not be accepted as 80 if HTTPS_ENABLE is 1 and as 443, if HTTPS_ENABLE is 0. For example: <InteractionVariable name="WEB_ SERVER_PORT">80</InteractionVariable>	No
CONTEXT_NAME	Identifies the web application context name which will be used to build the URL to access the OFSAA applications. The context name can be identified from a URL as below: <scheme>://<host>:<port>/<context-name>/lo gin.jsp Sample URL: https://myweb:443/ofsaadev/login.jsp For example, <InteractionVariable name="CONTEXT_ NAME">ofsaadev</InteractionVariable>	Yes

InteractionVariableName	Significance and Expected Value	Mandatory
WEBAPP_CONTEXT_PATH	Identifies the absolute path of the exploded .ear file on the web application server. ▪ For Tomcat, specify the Tomcat directory path till /webapps, such as /oradata6/revwb7/tomcat/webapps/. ▪ 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. ▪ For WebLogic, provide the WebLogic home directory path as /<WebLogic home directory path>/bea/wlserver_10.3	Yes
WEB_LOCAL_PATH	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. **Note**: In case of a clustered deployment, ensure this path and directory is same on all the nodes.	Yes
WEBLOGIC_DOMAIN_HOME	Identifies the WebLogic Domain Home. Specify the value only if WEBSERVERTYPE is set as 3 (WebLogic). For example, <InteractionVariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bea/user_ projects/domains/mydomain </InteractionVariable>	No
OFSAAI_FTPSHARE_PATH	Identifies the absolute path to the directory identified as file system stage area. Note: 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 parameter below should have RWX permission on the directory. For example: <InteractionVariable name="APP_FTPSHARE_PATH">">/oradata6/revwb7/ftpshare</InteractionVariable>	Yes

InteractionVariableName	Significance and Expected Value	Mandatory
OFSAAI_SFTP_USER_ID	Identifies the user who has RWX permissions on the directory identified under parameter APP_FTPSHARE_PATH above.	Yes

18 Appendix M - Migration for Excel Upload

This appendix provides detailed instructions to migrate for excel upload.

18.1.1 Prerequisites

- 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.

18.1.2 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.

19 Appendix N - JDBC Jar Files

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

Oracle Database version	JDK Version supported	JDBC Jar files specific to the release
12.1 or 12cR1	JDK 8, JDK 7, and JDK 6	ojdbc7.jar for JDK 7/JDK 8 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

20 Appendix O – Upgrade 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.

20.1 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 http://support.oracle.com/ for the same.

NOTE: IBM WebSphere 8.5.x (Full Profile) on Java 8 is not available.

20.2 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 Web Application Server Configurations.
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.
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 Creating and Deploying EAR/WAR File section.

20.3 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

20.3.1 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.

   Edit the product.properties file. Set JAVA_HOME, WLS_JAVA_HOME, JAVAHOME properties to the new Java path and java.vm.version to the new Java version. For example,

   ```
   JAVA_HOME=/usr/java/jdk1.8.0_45WLS_JAVA_HOME=/usr/java/jdk1.8.0_45

   JAVAHOME=/usr/java/jdk1.8.0_45

   java.vm.version=1.8.0_45
   ```

2. Navigate to <WLS_HOME>/Middleware/Oracle_Home/user_projects/domains/<domain>/bin. Update SUN_JAVA_HOME, DEFAULT_JAVA_HOME, JAVA_HOME in the setDomainEnv.sh file to point to the new Java path.

   For example,

   ```
   SUN_JAVA_HOME="/usr/java/jdk1.8.0_45"

   DEFAULT_SUN_JAVA_HOME="/usr/java/jdk1.8.0_45"

   JAVA_HOME="/usr/java/jdk1.8.0_45"
   ```

3. 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 to Configuring Resource Reference in Weblogic Application Server section.

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.

20.3.2 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 to Configuring Resource Reference in Tomcat Application Server section.

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.

20.4 OFSAA Generic Configurations

This section consists of the following topics:

20.4.1 User .profile Settings

Perform the following configurations:

1. Login to the OFSAA Server as a non-root user.
2. Edit the user **.profile** file. Update the value for PATH variable from JRE 1.7 to JRE 1.8.

   For Example,

   ```
   PATH=/usr/java/jdk1.8.0_45/jre
   ```

```
JAVA_BIN=/usr/java/jdk1.8.0_45/jre/bin

LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/java/jdk1.8.0_45/jre/lib/amd64/server
```

20.4.2 Configurations for Java 8

Perform the configurations explained in the section Configurations for Java 8.

20.5 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

21 Appendix P - Removing OFSAA

This chapter includes the following sections:

21.1 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:

```
/scratch/ofsaadb/OFSAAI>./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/ofsaadb/OFSAAI>
```

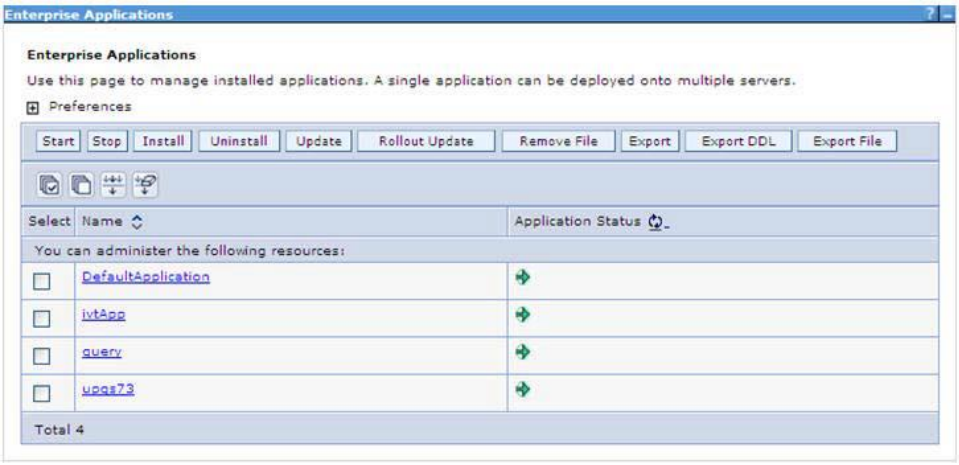
NOTE: Uninstallation does not remove the Infrastructure application from the Web Application Server. This has to be done manually.
The entries in the .profile file will have to be removed manually.
The files/ folders under the file system staging area (ftpshare) have to be deleted manually.

All the Database objects from Atomic Schemas have to be dropped manually.

21.2 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.



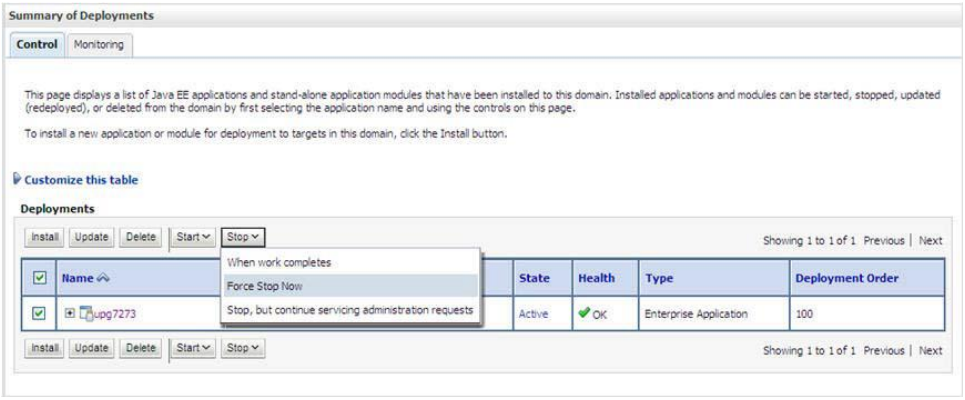
4. Select the checkbox adjacent to the application to be uninstalled and click Stop.
5. Click **Uninstall**. The *Uninstall Application* window is displayed.

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

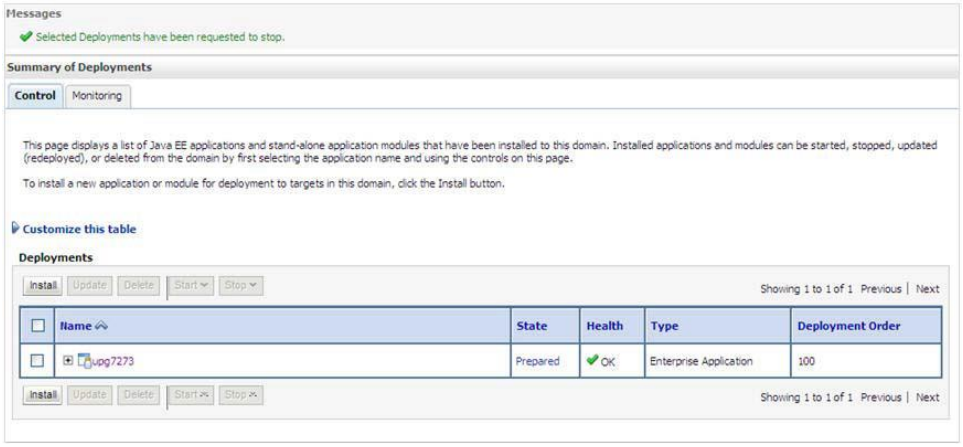
21.3 Uninstalling EAR Files in WebLogic

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* screen is displayed.



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.



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.

21.4 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:

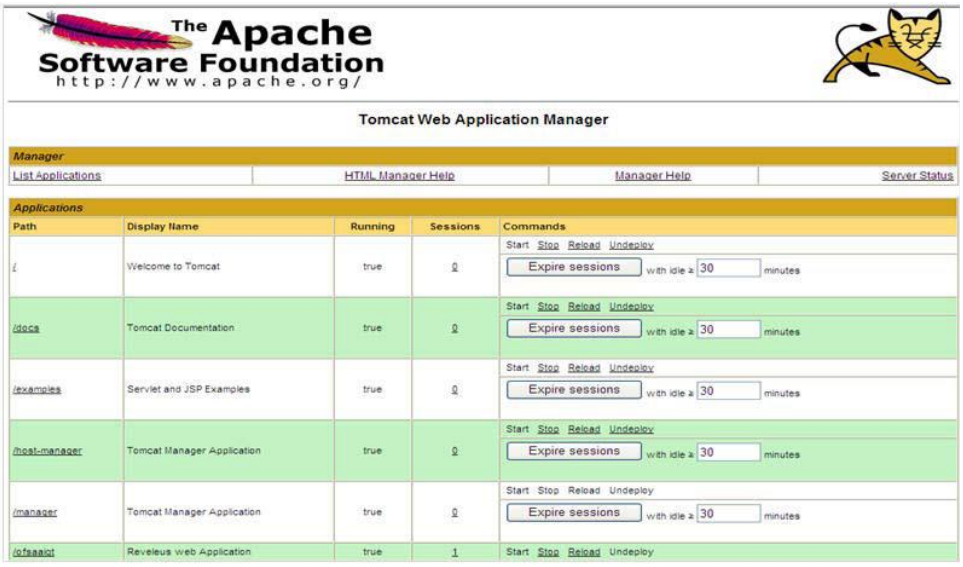
```
<!--
<Context path ="/pr2test"
docB
ase="/home/perfuser/tomcat-7.0.19/webapps/pr2test" debug="0"
reloadable="true" crossContext="true">
<Resource auth="Container"
name="jdbc/PR2ATM"
type="javax.sql.DataSource"
driverClassName="oracle.jdbc.driver.OracleDriver"
username="pr2atm"
password="pr2atm"
url="jdbc:oracle:thin:@10.184.74.99:1521:PERFTEST"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

   Restart the Tomcat service by doing the following:
   a. Login to the "Unix server" through a terminal emulator.
   b. Navigate to $catalina_home/bin directory.
   c. Stop the tomcat services using the command ./shutdown.sh.
   d. 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.



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

22 Appendix Q

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.

22.1 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.

This section includes the following topics:

- OFSAAI FAQs
- Application Pack 8.0.0.0.0 FAQs

22.1.1 OFSAAI FAQs

What are the different components that get installed during OFSAAI?

The different components of OFSAAI are illustrated in Figure 1–2, "Components of OFSAAI".

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

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

For Solaris OS, only one installer OFSAAI_73300_Solaris is available and it can be used to install OFSAAI on both versions of Solaris, that is, v5.10 or v5.11. Similarly, the installer OFSAAI_73300_Linux can be used to install OFSAAI on all supported versions of Oracle Linux, that is, v 5.3 up to 5.10 and v6.0 and above. The installer OFSAAI_73300_AIX can be used to install OFSAAI on all supported versions of AIX, that is, v5.3 and v6.1.

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

What are the different modes of OFSAAI installation?

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

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 the tables Configurations Supported for Java 7, Configurations Supported for Java 8, and 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

Is OFSAAI license specific to Applications?

No, OFSAAI license is not specific to any application.

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

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

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

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

To give execute permissions,

Navigate to the path OFSAAI_73300 and execute the command

chmod 755

"Graphical installers are not.."

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

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

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

"No Java virtual machine could be…"

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

Check whether "java path" is set in PATH variable. Refer to Installer and Installation Prerequisites 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.

Refer to Installer and Installation Prerequisites 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. Refer to Post Installation Configuration chapter.

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 *Removing OFSAA* section in the OFS AAAI Installation and Configuration Guide Release 8.0.

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?

Refer to the Multiple Language Support (MLS) Utility section in *OFSAAI Administration Guide* in the *Related Documents* section.

Does OFSAAI support Oracle Linux versions other than 5.5?

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

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

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

   <Unix User> soft 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.

Refer to Verifying System Environment section for additional information.

How does one know if the installation is completed successfully?

The OFSAA Infrastructure installation performs a post install health check automatically

on successful installation of the product. To rerun the post install verification at a later time, perform the following steps:

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

   ./piverify.sh

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

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

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

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

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

"Error: OFSAAI-1108

ORA-00604: error occurred at recursive SQL level 1

ORA-01882: timezone region not found"

Or

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

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

TZ=Asia/Calcutta

export TZ

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

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

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

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

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

What should one do if the database connection from connection pool throws an error

"java.sql.SQLRecoverableException: IO Error: Connection reset"?

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

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:

Login to the server where the installer is copied. **b.** Navigate to the directory OFSAAI_73300. **c.** Open the setup.sh file in the **vi** editor using the command: vi setup.sh. **d.** Inside vi editor in Esc mode, type: **%s/^M//g**

Note: To enter ^M, hold the CTRL key then press V and M in succession.
Save the setup.sh file by typing: wq!.

Does OFSAA support Oracle DB 11g Standard edition?

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

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

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

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

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

This could be due to 2 reasons:

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

To correct them, follow the below steps:

A. Steps to replace the hostnames with IP address:

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

B. Steps to correct the port number conflicts

1. Stop all the OFSAA services.
2. Refer to the port numbers stated in the document (Where to find port, IP address, HTTPS Configuration for OFSAAI 7.2 Installation (DOC ID 1500479.1)) and check on the discrepancy in the port numbers and correct them.
3. Restart all the OFSAAI services.

What happens when the OFSAAI Application Server does not proceed even after providing the system password?

Ensure that, the System Password provided when prompted should match with the "Oracle Configuration password" provided during installation. Also check whether the connection to the "configuration schema" can be established through sqlplus.

Although the OFSAAI installation has completed successfully, when OFSAAI servers are started, and the application URL is accessed, it gives an error message "the page cannot be found or displayed" or "Could not retrieve list of languages from Server. Please contact the system administrator". What should one do?

Ensure OFSAAI servers have been started and are running successfully. On the server start up parameters options, refer to Starting Infrastructure Services section.

For more details on the issue, refer 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 to *Configure Infrastructure Ports* section.

Are there any in-built system administration users within OFSAAI Application?

The three in-built system administration users are provided to configure and setup OFSAAI.

- SYSADMN
- SYSAUTH
- GUEST

Does OFSAAI Application support both FTP and SFTP?

OFSAAI supports both FTP and SFTP configuration.

Is it necessary to enable the FTP/SFTP services to use the OFSAAI?

Yes, enabling of FTP/SFTP services and its ports is a pre-requisite step towards using the OFSAAI.

OFSAAI Configuration: Unable to save the server details?

Ensure the input User ID, Password, and Share Name are correct.

- Ensure FTP/SFTP services are enabled.
- Have a test FTP/SFTP connection made and confirm if they are successful.

During Information Domain creation, the message "Please create a database and then create the information domain" appears. What should be done?

Information Domain is mapped to only one Database; and thus before the creation of Information Domain, at least one database details would need to exist.

The message "ConnectToDatabase: FatalError, could not connect to the DB server" appears during startup of backend engine message server. What does one need to do?

Verify whether connection to the "configuration schema" can be established through sqlplus.

- Verify "configuration schema" password is modified post installation.
- Ensure oracle database alias name created for oracle instance and oracle service name are same.
- On a multi tier Installation mode, ensure TNSNAME and SID are the same in both the Application and Database Layers.

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 to 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.

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).

*****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).

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).

Restart the OFSAAI services

Note: If the modified passwords are not updated, OFSAAI logs displays the message ORA-28000: the account is locked.

Does the upload of Business Data model depend on Java Memory?

Business data model upload through OFSAAI depends on the Java memory settings on the client and server machines. Java memory setting varies with the data model size and the available RAM. Contact OFSAAI support for more details.

Why do the Business Metadata Management screens (Business Processors screen) in User Interface, takes longer time to load?

The Log file in DynamicServices.xml which resides in $FIC_HOME/conf is continuously being updated/refreshed to cache metadata. This can be observed when you are starting reveleusstartup.sh and if any of the log file (Ex: SMSService.log) in DynamicServices.xml is being continuously refreshed for longer time.

By default, the Metadata Log file cache size is set to 1000. If in case the log is being updated beyond this limit, retrospectively the preceding entries are overwritten. For example, the 1001th entry is overwritten by deleting the first entry. This results in the application screen taking a longer time to load.

Increase the cache size limit in Dynamicservices.xml located at <FIC_HOME>/conf, depending on the currently logged count for the specific metadata.

1. Generate the Log report by executing the below query in config schema.

   select count(1), t.metadata_name, m.dsn_id

   from metadata_master m, metadata_type_master t

   where m.metadata_type = t.metadata_type

   group by t.metadata_name, m.dsn_id
2. The above query returns a list of codes with their respective metadata count. You can refer to "metadata_type_master" table to identify the metadata name.
3. View the log report to identify the metadata which is being updated/refreshed beyond the specified cache size limit. Accordingly increase the cache size limit in Dynamicservices.xml depending on the currently logged count for the specific metadata.

   For example, if the "MEASURE_CACHE_SIZE" is set to 1000 and total measure reported in log is 1022, increase the limit to 2000 (approximately).
4. Restart Reveleus/OFSAAI servers (Web and APP) and check the issue.

What should I do if I get OutOfMemoryError while deploying EAR file in WebSphere application server?

The Java memory needs to be increased in ejbdeploy.sh file which is present under <WebSphere Install directory>/AppServer/deploytool/itp. For example,

$JAVA_CMD \

-Xbootclasspath/a:$ejbd_bootpath \

Xms256m -Xmx1024m \

What configurations should I ensure if my data model size is greater than 2GB?

In order to upload data model of size greater than 2GB in OFSAAI Unified Metadata Manager-Import Model, you need to configure the required model size in struts.xml file available in the path $FIC_WEB_HOME/webroot/WEB-INF/classes.

Note:

The size requirements have to be always specified in bytes.

For example, if you need to configure for model size of 2.5GB, then you can approximately set the max size to 3GB (3221225472 bytes) as indicated below, in order to avoid size constraints during model upload.

<constant name="struts.multipart.maxSize" value="3221225472"/>

After configuring struts.xml file, generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, refer to Configuring Web Application Servers section.

What should I do if my Hierarchy filter is not reflecting correctly after I make changes to the underlying Hierarchy?

In some cases, the Hierarchy Filters do not save the edits correctly if the underlying Hierarchy has been changed. This can occur in hierarchy maintenance, where you have moved a member to another hierarchy branch, and that member was explicitly selected in the Filter and is now a child of a node which is already selected in the Filter.

Please refer to Support Note for the workaround.

What should I do to change context name for a cloned environment?

Refer to Support Note.

How do you turn off unused information domains (infodoms) from cache?

Follow the below steps to turn off unused infodoms from cache:

Navigate to $FIC_HOME/conf in the APP layer of your OFSAAI installation.

1. In the DynamicServices.xml file, identify the section for <Service code="20">.
2. Modify the value of parameter CACHE_ON_STARTUP to 0 (default is 1).
3. Repeat the same in the WEB layer too. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, refer to Configuring Web Application Servers section.

Restart the OFSAAI Services (APP and WEB). For more information, refer to Start/Stop OFSAA 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 provided 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>
```

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.

When trying to view the model outputs in Model Outputs screen, I get "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 screen. This folder needs to be created under the local path on every node ,in case of web application server clustering.

During OFSAA services startup, I get 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.

Upload Options	Size of Data Model	X_ARGS_APP ENV Variable in

	XML File	OFSAAI 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 is the resolution if I get the error - ORA 01792 maximum number of columns in a table or view is 1000 during T2T execution?

You should apply the below 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*.

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

Execute the below 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 to the Post Installation Configuration section.
5. Restart the OFSAAI Services (APP and WEB). For more information, refer to the Start OFSAA 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 provided 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 + version.

22.1.2 Application Pack 8.0.0.0.0 FAQs

What is an Application pack?

An Application Pack is suite of products. For more information, refer to About Oracle Financial Services Advanced Analytical Applications (OFSAA) Application Packs section.

Can I get a standalone installer for OFSAA 8.0?

No. AAI is part of every application pack and installs automatically.

How does OFSAA 8.0 Application pack relate to OFSAA 7.x series?

8.0 is a new major release consolidating all products from OFSAA product suite.

Can existing OFSAA 7.x customers upgrade to OFSAA 8.0 Application Pack?

There is no upgrade path available. However, we will have migration kit / path for every product to 8.0 application pack. Further details will be available with Oracle Support.

Does OFSAA 8.0 Application pack UPGRADE's automatically existing environments?

No. 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?

OSDC

What are the minimum system and software requirements for OFSAA 8.0 Application Pack?

Refer to installation guide section *Hardware and Software Requirements* section.

Is my environment compatible with OFSAA 8.0 Application Pack?

Environment Check utility performs the task. It is part of install and can also be run separately.

Has OFSAA 8.0 Application Pack is supports all Operating systems?

LINUX, AIX, SOLARIS 10, 11. Refer to Technology Matrix for the technology matrix that OFSAA suite products are/ will be qualified on.

How can I install OFSAA 8.0 Application Pack?

Refer to Oracle Financial Services Advanced Analytical Infrastructure Installation And Configuration Guide published in OTN for the application pack installers.

Do we need any License Key to install?

No, you do not need any License Key to install.

Does this installation require any Third party Software's?

Installation Guide lists the third party software that needs to be installed.

What languages are supported during OFSAA 8.0 Application Pack installation?

US English is the language supported.

What mode of installations OFSAA Application Pack supports? [i.e., Silent , GUI]

OFSAA Application Packs supports both, GUI and Silent Mode.

Does OFSAA 8.0 Application Pack support Multi tier Installations?

OFSAA 8.0 does single tier installation. For more information refer to *OFSAAI FAQs* section.

Does this Application Pack validate all Pre-requisites required for this installation i.e., Memory, Disk Space etc.?

Yes. The pre-requisite checks are done by the respective application pack installer.

What happens if it aborts during installation of any application with in Application pack?

Customer needs to restore the system and retrigger the installation

Does this Application pack 'Rolls Back' if any of application installation fails due to errors?

Rollback of installation is not supported.

Does the Application pack installs all applications bundled?

All application pack file system files are installed but there is an option to enable the licensed products.

How can I re-install any of the Application Pack?

You can retrigger in case of failure.

Does Application pack allow enabling / disabling any of the applications installed?

Yes. You cannot disable once the product is enabled in an environment.

I have installed one application in a Application pack and can I install any of new applications within the Application pack later point of time?

No, installation is not required. Enabling the application is an option to use it later.

Is it possible to Install OFSAA 8.0 Application pack on any one of the existing 'Infodom' where another OFSAA 8.0 application is installed?

Yes. But Behavioral Detection Pack and Compliance Regulatory Reporting pack are the exceptions. They need to be installed in a different INFODOM.

Is there any option in Application pack for the user to select Infodom during installations?

Yes. You can select or change the required infodom.

Can I install all Application Packs in a 'Single Infodom'?

Yes. But Behavioural Detection Pack and Compliance Regulatory Reporting Pack are the exceptions. They need to be installed in a different INFODOM.

Is it possible to install applications on different Infodom within the Application pack? (That is if you want to install LRM & MR in two infodoms)

Applications within application pack have to be installed in the same information domain in the same environment.

Does 'Data Model' bundled is Application pack Specific or Specific to individual application?

A merged data model for all applications within the application pack is bundled and uploaded.

Is it possible to install OFS Enterprise Modeling in later point of time?

OFS Enterprise Modeling as separate product and can be enabled as on option at later point of time from any application pack that bundles Enterprise Modeling.

Does OFS Enterprise Modeling is required for all applications?

This product is enabled depending on the applications that use the features of OFS Enterprise Modeling.

Will Application pack creates sandbox automatically for the required applications?

Yes, Sandbox creation is part of application install process.

Do we have upgrade Kits for individual applications or it's a Application Pack Upgrade?

ML/ IR releases / upgrades will be across Packs.

Can I upgrade AAI only?

Yes, you can upgrade AAI alone.

Can I upgrade one application within the Application Pack? i.e., LRM will be upgraded in Treasury Application pack, but MR won't be upgraded.

No. Not possible Upgrade is applied across packs.

Is it possible to uninstall any Application from the Application pack?

No, it is not possible to uninstall any Application from the Application Pack.

Can I uninstall entire Application Pack?

No, you cannot uninstall the Application Pack.

Is it possible to uninstall only application and retain AAI in the installed environment?

No, you cannot uninstall only the application and retain AAI in the installed environment.

Does Application Pack contain all Language Packs supported?

Language Packs are installed on top of 8.0 application pack. Releases are planned post the 8.0 availability.

Can I install an Application Pack over another Application Pack (that is same infodom or different information)?

Yes, you can install an Application Pack over another Application Pack in the same information domain or different information domain.

Can I use an existing manually created schema as information domain for application pack installation?

No. Schemas required by OFSAA applications have to be created using Schema Creator Utility.

Does OFSAA 8.0 support on WebLogic 10.3.6 with Oracle 12c?

Yes, OFSAA 8.0 will support on WebLogic 10.3.6 with Oracle 12c. WebLogic 10.3.6 supports oracle 12c with some additional configurations. Refer to the link http://docs.oracle.com/cd/E28280_01/web.1111/e13737/ds_12cdriver.htm#JDBCA655 for additional configurations.

While running the schema creator utility, I get an error "HostName in input xml is not matching with the local hostname"?

One possible reason could be the machine is configured for zonal partitioning. Ensure all the known IP Addresses of the machine are present in the /etc/hosts file.

"While creating an Excel Mapping, after specifying the excel worksheet, the target table, and mapping each column in the worksheet to a target table, I click SAVE and nothing happens. But when I click CANCEL, a message pops up informing me that all changes will be discarded", what is to be done?

Check if the excel mapping creation is done using I.E 8 with JRE 1.4 plug in enabled on machine. If so, upgrade the JRE plug in to 1.7 + version.

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

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

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

Yes. To install this release of the OFS AAAI Application Pack version 8.0.0.0.0 on Java 8. For more information, refer to specific notes mentioned in the sections Installer and Installation Prerequisites, Configurations supported for Java 8, Configuring the Schema Creator Utility, GUI Mode Installation, SILENT Mode Installation.

22.1.3 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 by Field Chooser option?

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

22.2 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.

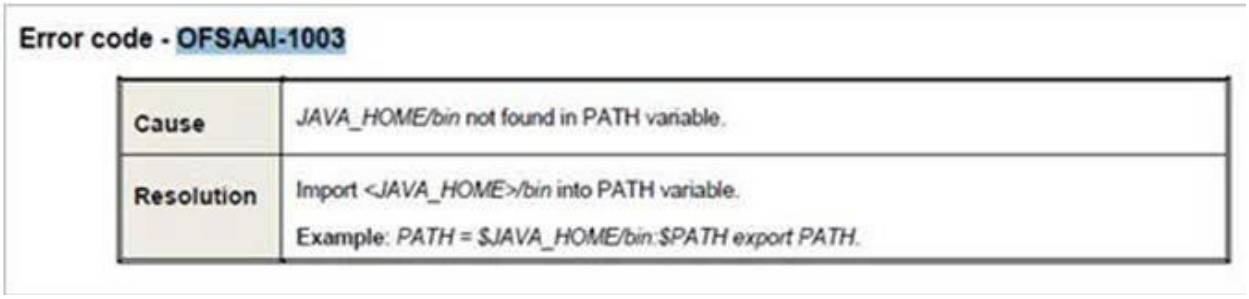
This section includes the following topics:

- Accessing Error Dictionary
- Error Code Dictionary

22.2.1 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.



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.

22.2.2 Error Code Dictionary

Error code - OFSAAI-1001

Cause	Unix s hell is not "korn" shell.
Resolution	Change the shell type to "korn". Use chsh unix command to change SHELL type. Shell type can also be changed by specifying shell path for the Unix user in /etc/passwd file. Note: chsh command is not available in Solaris OS.

Error code - OFSAAI-1002

Cause	No proper arguments are available.
Resolution	Provide proper arguments. Invoke Setup.sh using either SILENT or GUI mode. Example: ./Setup.sh SILENT or ./Setup.sh GUI

Error code - OFSAAI-1004

Cause	File .profile is not present in $HOME.
Resolution	Create .profile in $HOME, i.e. in the home directory of user.

Error code - OFSAAI-1005

Cause	File OFSAAInfrastructure.bin is not present in current folder.
Resolution	Copy OFSAAInfrastructure.bin into installation kit directory.

Error code - OFSAAI-1006

Cause	File CustReg.DAT is not present in current folder.
Resolution	Copy CustReg.DAT into installation kit directory

Error code - OFSAAI-1007

Cause	File OFSAAI_InstallConfig.xml is not present in current folder.
Resolution	Copy OFSAAI_InstallConfig.xml into installation kit directory.

5 **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.

Oracle Financial Services IFRS Application Pack - 8.0.0.0.0 Installation Guide

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